Supplementary Material for "Alteraxial Phonons in Collinear Magnets"

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CONTENTS

I. MAGNETIC POINT GROUP (MPG) ANALYSIS OF PHONON ANGULAR MOMENTUM (PAM)

A. Constraints on PAM from MPG Symmetry

In this section, we demonstrate that magnetic point group (MPG) symmetries can produce nodal surfaces with vanishing phonon angular momentum (PAM) in the three-dimensional (3D) Brillouin zone (BZ). By treating the magnetization direction $\mathbf{e}_\mathrm{m}$ in collinear magnets as the quantization axis for the PAM, it can then be obtained from the phononic circular polarization along the $\mathbf{e}_\mathrm{m}$ direction as

$$j_\mathrm{m}(\boldsymbol{q}) = \hbar\langle\epsilon_{\boldsymbol{q}}|\big(|\mathrm{R_m}\rangle\langle\mathrm{R_m}| - |\mathrm{L_m}\rangle\langle\mathrm{L_m}|\big)|\epsilon_{\boldsymbol{q}}\rangle \tag{S1}$$

Here, $\boldsymbol{q}$ is the phonon wavevector, $|\epsilon_{\boldsymbol{q}}\rangle$ denotes the phonon-mode eigenvector, $\hbar$ is the Planck's constant, and $|\mathrm{R_m}\rangle$ ($|\mathrm{L_m}\rangle$) represents the right-handed (left-handed) circularly polarized eigenstate. We focus on the Γ-centered phonon modes, whose symmetry properties can be characterized by the MPG. For a symmetry operation $\mathcal{G}$ within the MPG (denoted as G) of a collinear magnet, the PAM must satisfy

$$j_\mathrm{m}(\mathcal{G}\mathbf{q}) = \eta(\mathcal{T})\chi(\mathcal{R})j_\mathrm{m}(\mathbf{q}). \tag{S2}$$

Here, $\mathcal{T}$ is the time-reversal operation, and $\eta(\mathcal{T}) = -1$ $(+1)$ when $\mathcal{T}$ operation is (not) contained in $\mathcal{G}$. $\mathcal{R}$ denotes the point-group part operation in $\mathcal{G}$, and $\chi(\mathcal{R}) = +1$ (-1) if $\mathcal{R}$ preserves (switches) the handedness of the circularly polarized states $|\mathrm{R_m}\rangle$ and $|\mathrm{L_m}\rangle$.

Specifically, time-reversal symmetry $\mathcal{T}$ enforces $j_\mathrm{m}(-\mathbf{q}) = -j_\mathrm{m}(\mathbf{q})$, while inversion symmetry $\mathcal{P}$ gives $j_\mathrm{m}(-\mathbf{q}) = j_\mathrm{m}(\mathbf{q})$. Consequently, in the presence of the combined $\mathcal{PT}$ symmetry, the PAM $j_\mathrm{m}(\mathbf{q})$ is forced to vanish. A nonzero $j_\mathrm{m}(\mathbf{q})$ becomes possible only when $\mathcal{PT}$ symmetry is broken in collinear magnets. Notably, when any symmetry operation within G yields $\eta(\mathcal{T})\chi(\mathcal{R}) = -1$, it inevitably results in nodal surface of vanishing $j_\mathrm{m}(\mathbf{q})$ crossing the Γ point in the 3D BZ, as we demonstrate below.

First, for a MPG operation $\mathcal{G}$ to satisfy $\eta(\mathcal{T})\chi(\mathcal{R}) = -1$, either $\eta(\mathcal{T}) = 1, \chi(\mathcal{R}) = -1$ or $\eta(\mathcal{T}) = -1, \chi(\mathcal{R}) = 1$ should be required. For simplicity, the magnetization axis $\mathbf{e}_\mathrm{m}$ is taken as the z axis, and j_m is rewritten as j_z. Within this representation, we can list relevant MPG operations as

- $\eta(\mathcal{T}) = 1, \chi(\mathcal{R}) = -1$: $C_{2\perp}$, σ_v.
- $\eta(\mathcal{T}) = -1, \chi(\mathcal{R}) = 1$: $\mathcal{T}$, $\sigma_h\mathcal{T}$, $C_{nz}\mathcal{T}(n = 2, 3, 4)$ and $S_{nz}\mathcal{T}(n = 3, 4, 6)$.

Here, $C_{2\perp}$ denotes a two-fold rotational axis within the xy plane. Without loss of generality, it is defined (and henceforth taken to be) the C_{2x} axis. Since $\eta(\mathcal{T})\chi(\mathcal{R}) = -1$ for these symmetries, the constraint of Eq. (S2) requires that PAM $j_\mathrm{m}(\mathbf{q}) = 0$ on corresponding symmetry-invariant $\mathbf{q}$ points ($\mathcal{G}\mathbf{q} = \mathbf{q}$). Based on this, in the following, we will show that some (σ_v and $C_{2z}\mathcal{T}$) of the above symmetries can generate symmetry-enforced nodal surfaces of vanishing PAM crossing the Γ point, while the rest symmetries only produce symmetry-protected nodal surfaces. The term symmetry-enforced means the nodal surfaces must reside on a high-symmetry plane, whereas symmetry-protected indicates they are guaranteed by symmetry but are not pinned to a specific plane.

1. *Symmetry-enforced PAM Nodal Surfaces*

Symmetry-enforced PAM nodal surfaces arise from σ_v and $C_{2z}\mathcal{T}$ symmetries, as detailed below respectively.

- ⋆ Under each σ_v symmetry, Eq. (S2) yields $j_z(\sigma_v\mathbf{q}) = -j_z(\mathbf{q})$. On the σ_v-invariant plane where $\sigma_v\mathbf{q} = \mathbf{q}$, this constraint forces $j_z(\mathbf{q}) = 0$, thereby giving rise to a symmetry-enforced nodal plane with vanishing PAM. Moreover, the number of such σ_v symmetries leads to an identical number of symmetry-enforced PAM nodal surfaces.
- ⋆ Under $C_{2z}\mathcal{T}$ symmetry, the PAM obeys $j_z(C_{2z}\mathcal{T}\mathbf{q}) = -j_z(\mathbf{q})$, which vanishes on the $C_{2z}\mathcal{T}$-invariant plane where $C_{2z}\mathcal{T}\mathbf{q} = \mathbf{q}$ ($q_z = -q_z$). This generates one symmetry-enforced zero-PAM plane crossing the Γ-point ($q_z = 0$ plane).

2. *Symmetry-protected PAM Nodal Surfaces*

Symmetry-protected PAM nodal surfaces originate from five types of symmetries, which fall into two cases: C_{2x}, $\sigma_h\mathcal{T}$, and $S_{nz}\mathcal{T}$ (with $n = 3, 4, 6$) each preserve a high-symmetry axis; $\mathcal{T}$ and $C_{nz}\mathcal{T}$ $(n = 3, 4)$ preserve only the high-symmetry Γ point. We now consider these two cases in turn.

- ⋆ C_{2x}, $\sigma_h\mathcal{T}$, and $S_{nz}\mathcal{T}$ (with $n = 3, 4, 6$) possess invariant high-symmetry axes around the BZ center that enclose the Γ point, specifically the q_x-, q_z-, and q_z-axis, respectively. According to Eq. (S2), the PAM must vanish along each of these axes. Further, considering that $j_z(\mathcal{G}\mathbf{q}) = -j_z(\mathbf{q})$, the PAM must flip sign between $\mathbf{q}$ points connected by each of these symmetries. For phonon spectra with continuous PAM values around the Γ point, this inevitably results in PAM nodal surfaces enclosing these high-symmetry axes, which separate Γ-centered BZ regions into positive and negative values of PAM connected by these symmetries. Even if these PAM nodal surfaces are not pinned to specific planes and can deform around the Γ-centered BZ with the high-symmetry axis fixed, their existence remains protected by the corresponding symmetries. Therefore, they are termed symmetry-protected nodal surfaces.
- ⋆ For the symmetries $\mathcal{T}$ and $C_{nz}\mathcal{T}$ ($n = 3, 4$), their only invariant $\mathbf{q}$ point around the BZ-center is the Γ point. Similar to the discussion above, since these symmetries flip PAM, there must exist nodal surfaces separating Γ-centered BZ regions with positive and negative values of PAM connected by these symmetries. However, these symmetry-protected PAM nodal surfaces are not pinned to any specific planes and are free to deform in the Γ-centered BZ regions with the only requirement that they enclose the Γ point.

B. From MPG-Governed Nodal Surfaces to PAM Wave-like Patterns

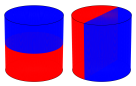
The emergent multipolar structure (including wave-like nodal features) of the PAM pattern is set by the total number of PAM nodal surfaces through the Γ point. This number, which includes both symmetry-enforced and symmetry-protected types as defined above, is solely determined by the corresponding MPG and is therefore termed the MPG integer n_{MPG}. This integer runs from zero to seven, corresponding respectively to s-, p-, d-, f-, g-, i-, and j-wave-like PAM patterns, encompassing both even- and odd-wave types. The upper bound of seven comes from having at most seven MPG-governed PAM nodal surfaces enclosing the Γ point, composed of six vertical mirror planes and one horizontal $q_z = 0$ plane.

In Table S1, we provide a more detailed classification for all collinear MPGs into the four types proposed in the main text, namely, nonaxial phonon, centrosymmetric even-wave axial phonon, noncentrosymmetric odd-wave axial phonon, and noncentrosymmetric even-wave axial phonon. For each type, we list all different wave types along with typical PAM patterns and candidate materials. Specifically, for d-, f-, and g-wave PAM, two distinct configurations exist, distinguished by the presence or absence of the horizontal $q_z = 0$ nodal plane.

TABLE S1: Complete classification of phonons in collinear magnets based on magnetic point group (MPG) symmetry. According to the symmetry conditions and the PAM wave pattern (even or odd), phonons in collinear magnets are categorized into four types: (i) $\mathcal{PT}$-symmetric nonaxial phonon; (ii) Centrosymmetric (CS) even-wave axial phonon; (iii) Noncentrosymmetric (NCS) odd-wave axial phonon; (iv) NCS even-wave axial phonon. For each case, we also include the associated wave type, representative PAM patterns, and candidate materials from MAGNDATA [1, 2]. MPGs are given in the UNI notation [3]. Parentheses are used to specify the orientation of the corresponding magnetic axis.

Phonon Type	Wave	Pattern	MPGs	Materials
Nonaxial	0		4/m.1′, $\bar{3}$m.1′, 6/m′m′m′, 4/m′, 6/m.1′, 6/m′, mmm.1′, 2/m.1′, 6′/m, m′m′m′, 4′/m′, 4′/m′m′m, 4/mmm.1′, 4/m′mm, 6/m′mm, 2/m′, 2′/m, m′mm, $\bar{3}$′m, $\bar{3}$.1′, $\bar{3}$′m′, $\bar{3}$′, $\bar{1}$.1′, 4/m′m′m′, $\bar{1}$′, 6/mmm.1′, 6′/mmm′	Mg_2Nd_2, Er_2Rh_2
CS even-wave axial	s		2′/m′(xz), 6/mm′m′, 4/mm′m′, 4/m.1, $\bar{3}$.1, $\bar{1}$.1, m′m′m(z), 6/m.1, 2/m.1(y), $\bar{3}$m′	B_2Ho, Mn_4N
	d		mmm.1(xy), m′m′m(y), 2/m.1(xz), 2′/m′(y), m′m′m(x)	Mn_2Te_2, $AlMn_3N$
			mmm.1(z), 4′/m, 4′/mm′m	Co_2F_4

Continued on next page

Phonon Type	Wave	Pattern	MPGs	Materials
	g		4/mmm.1	$Mn_4F_{12}K_4$
			$\bar{3}$m.1, 6′/m′mm′, 6′/m′	Cr_2Sb_2
	i		6/mmm.1	-
NCS odd-wave axial	p		4′22′, 32.1, 32.1′, 422.1, 6.1′, 622.1, 6′, 3.1′, 422.1′, 2.1′, 622.1′, m.1′, 222.1′, 4′, 1.1′, 4.1′, 2.1(xz), 6′22′, 222.1, 2′2′2(xy), 2′(y), m′m2′(x), mm2.1(xy), m′m′2(xy), m′(y), m.1(xz), mm2.1′(xy)	$Fe_{18}Nd_6$, $In_3Nd_3Pd_3$, Mn_8S_{16}
	f		mm2.1′(z), $\bar{4}$.1′, $\bar{4}$2m.1′, $\bar{4}$2m.1	$Cu_4Fe_4S_8$
			3m.1′, $\bar{6}$m2.1′, 3m.1, $\bar{6}$m2.1, $\bar{6}$′m2′, $\bar{6}$′m′2, $\bar{6}$.1′, $\bar{6}$′	$Ni_6O_{18}Pb_6$
	h		4mm.1′	$Bi_4Co_4O_{12}$
	j		6mm.1′	-
NCS even-wave axial	s		m.1(y), $\bar{6}$.1, 2′(xz), m′m′2(z), $\bar{6}$m′2′, 3.1, 2′2′2(z), 4.1, m′(xz), $\bar{4}$2′m′, 62′2′, 6m′m′, 4m′m′, 2.1(y), 42′2′, m′m2′(y), 32′, $\bar{4}$.1, 3m′, 1.1, 6.1	$Al_2Co_2Cr_4$
	d		$\bar{4}$′2m′, mm2.1(z), $\bar{4}$′, 4′m′m, $\bar{4}$′2′m	$Ce_{16}Sb_{12}$
			m′m2′(z)	$Ge_4Mn_4N_8$, $Mn_4N_8Si_4$
	g		4mm.1	-
			6′mm′	$Co_4Mo_6O_{16}$, $Fe_4Mo_6O_{16}$
	i		6mm.1	-

C. Compatibility Relations

In this section, we show that standard phonon calculations based on the force-constant matrix explicitly preserve time-reversal symmetry $\mathcal{T}$. Thus, the Γ-centered phonons are described by a gray MPG. In contrast, when $\mathcal{T}$-breaking

TABLE S2. Compatibility relations between centrosymmetric (CS) gray MPG and black-and-white MPG for phonons in collinear magnets. The left column lists all CS gray MPGs, while the right two columns list their possible reduced black-and-white MPGs exhibiting nonaxial and CS even-wave axial phonons. Here, the prime symbol ($'$) indicates the presence of time-reversal operation in the MPG.

Gray MPG	Nonaxial phonon	CS even-wave axial phonon
$\bar{1}.1'$	$\bar{1}'$	$\bar{1}.1$
$2/\mathrm{m}.1'$	$2'/\mathrm{m}$, $2/\mathrm{m}'$	$2/\mathrm{m}.1$, $2'/\mathrm{m}'$
$\mathrm{mmm}.1'$	$\mathrm{m}'\mathrm{mm}$, $\mathrm{m}'\mathrm{m}'\mathrm{m}'$	$\mathrm{mmm}.1$, $\mathrm{m}'\mathrm{m}'\mathrm{m}$
$4/\mathrm{m}.1'$	$4/\mathrm{m}'$, $4'/\mathrm{m}'$	$4/\mathrm{m}.1$, $4'/\mathrm{m}$
$4/\mathrm{mmm}.1'$	$4/\mathrm{m}'\mathrm{mm}$, $4'/\mathrm{m}'\mathrm{m}'\mathrm{m}$, $4/\mathrm{m}'\mathrm{m}'\mathrm{m}'$	$4/\mathrm{mmm}.1$, $4'/\mathrm{mm}'\mathrm{m}$, $4/\mathrm{mm}'\mathrm{m}'$
$\bar{3}.1'$	$\bar{3}'$	$\bar{3}.1$
$\bar{3}\mathrm{m}.1'$	$\bar{3}'\mathrm{m}$, $\bar{3}'\mathrm{m}'$	$\bar{3}\mathrm{m}.1$, $\bar{3}\mathrm{m}'$
$6/\mathrm{m}.1'$	$6'/\mathrm{m}$, $6/\mathrm{m}'$	$6/\mathrm{m}.1$, $6'/\mathrm{m}'$
$6/\mathrm{mmm}.1'$	$6/\mathrm{m}'\mathrm{mm}$, $6'/\mathrm{mmm}'$, $6/\mathrm{m}'\mathrm{m}'\mathrm{m}'$	$6/\mathrm{mmm}.1$, $6'/\mathrm{m}'\mathrm{mm}'$, $6/\mathrm{mm}'\mathrm{m}'$

terms are introduced, the system's symmetry reduces to a black-and-white MPG. As a subgroup of the parent gray MPG, the black-and-white MPG must obey the corresponding compatibility relations, as detailed below.

We begin by demonstrating that the harmonic phonon Hamiltonian derived from the force-constant matrix always obeys $\mathcal{T}$ symmetry. For simplicity, we consider a crystal with a single-atom unit cell, and the corresponding lattice-vibration Hamiltonian is given by

$$H_{\mathrm{ph}} = \sum_{l,a} \frac{p_{la}^2}{2} + \frac{1}{2} \sum_{l,l',a,b} D_{la,l'b} u_{la} u_{l'b}. \tag{S3}$$

Here, $a, b = x, y, z$ are Cartesian indices and l, l' label unit cells. u_{la} is the renormalized atomic displacement along the a-th direction of the l-th unit cell, and p_{la} is the corresponding renormalized momentum. $D_{la,l'b} = \partial^2 V / \partial u_{la} \partial u_{l'b}$ is the mass-weighted (or mass-reduced) force constant matrix derived from the potential energy V. Since V is real, D is a real matrix.

Under time-reversal operation, $u \mapsto u,\ p \mapsto -p$, and the phonon Hamiltonian transforms as

$$\mathcal{T} H_{\mathrm{ph}} \mathcal{T}^{-1} = \sum_{l,a} \frac{\left(-p_{la}\right)^2}{2} + \frac{1}{2} \sum_{l,l',a,b} \left(D_{la,l'b}\right)^* u_{la} u_{l'b} = \sum_{l,a} \frac{p_{la}^2}{2} + \frac{1}{2} \sum_{l,l',a,b} D_{la,l'b} u_{la} u_{l'b} = H_{\mathrm{ph}}. \tag{S4}$$

Thus, standard phonon spectra derived from the force-constant matrix exhibit time-reversal symmetry, and hence Γ-centered phonons in magnetic systems are described by a gray MPG in the absence of $\mathcal{T}$-breaking terms. Once realistic $\mathcal{T}$-breaking perturbations (e.g., spin-phonon and magnon-phonon couplings) are included, time-reversal symmetry is broken in the phonon Hamiltonian. Such couplings are ubiquitous for axial phonons that host nonzero PAM. In this case, Γ-centered phonons are described by a black-and-white MPG. Since this induced MPG is a subgroup of the original gray group, it must obey the corresponding compatibility relations.

We summarize in Tables S2 and S3 all compatibility relations connecting centrosymmetric (CS) and noncentrosymmetric (NCS) gray MPGs to their corresponding black-and-white MPGs in collinear magnets, respectively. Specifically, for CS gray groups, the phonons are nonaxial with vanishing PAM when $\mathcal{T}$ symmetry is preserved. Once $\mathcal{T}$ is broken, the gray MPG reduces to a black-and-white subgroup, yielding two distinct scenarios: if $\mathcal{PT}$ is preserved, phonons remain nonaxial (type I); if $\mathcal{PT}$ is broken, phonons become axial with even-wave symmetry under the CS constraint

TABLE S3. Compatibility relations between noncentrosymmetric (NCS) gray MPG and black-and-white MPG for phonons in collinear magnets. The left column lists all NCS gray MPGs, while the right two columns list their reduced black-and-white MPGs describing NCS odd-wave and NCS even-wave axial phonons, respectively. Here, the prime symbol ($'$) indicates the presence of time-reversal operation in the MPG.

Gray MPG	NCS odd-wave axial phonon	NCS even-wave axial phonon
$1.1'$	-	1.1
$2.1'$	2.1(xz), $2'$(y)	2.1(y), $2'$(xz)
$m.1'$	m.1(xz), m'(y)	m.1(y), m'(xz)
$222.1'$	222.1, $2'2'2$(xy)	$2'2'2$(z)
$mm2.1'$	mm2.1(xy), $m'm2'$(x), $m'm'2$(xy)	mm2.1(z), $m'm2'$(yz), $m'm'2$(z)
$4.1'$	$4'$	4.1
$\overline{4}.1'$	-	$\overline{4}.1$, $\overline{4}'$
$422.1'$	422.1, $4'22'$	$42'2'$
$4mm.1'$	-	4mm.1, $4'm'm$, $4m'm'$
$\overline{42}m.1'$	$\overline{42}m.1$	$\overline{4}'2'm$, $\overline{4}'2m'$, $\overline{42}'m'$
$3.1'$	-	3.1
$32.1'$	32.1	$32'$
$3m.1'$	3m.1	$3m'$
$6.1'$	$6'$	6.1
$\overline{6}.1'$	$\overline{6}'$	$\overline{6}.1$
$622.1'$	622.1, $6'22'$	$62'2'$
$6mm.1'$	-	6mm.1, $6'mm'$, $6m'm'$
$\overline{6}m2.1'$	$\overline{6}$m2.1, $\overline{6}'m'2$, $\overline{6}'m2'$	$\overline{6}m'2'$

(type II). For an NCS gray MPG, the phonons exhibit odd-wave PAM patterns when $\mathcal{T}$-symmetry is preserved. Breaking the T-symmetry reduces the gray MPG to a black-and-white subgorup describing either NCS odd-wave (type III) or an NCS even-wave (type IV) axial phonons. Below, we use three representative materials from the main text to demonstrate how time-reversal symmetry breaking alters the phonon wave type via compatibility relations.

For CrSb, the $\mathcal{PT}$-preserving gray group $6/mmm.1'$ describes a non-axial phonon. Once time-reversal symmetry is broken, the symmetry lowers to the black-and-white magnetic group $6'/m'mm'$, and as a result the phonon becomes CS even-wave (g-wave) axial. This exemplifies a $\mathcal{T}$-breaking driven transition from non-axial phonons to CS even-wave axial phonons.

For the NCS odd-wave material Cr_2SbAs, the initial gray group $\bar{6}m2.1'$ corresponds to an odd f-wave PAM pattern. Breaking $\mathcal{T}$ symmetry reduces it to the black-and-white group $\bar{6}'m'2$, yet the wave type remains an f-wave. Thus, in this case, time-reversal symmetry breaking leaves the wave type unchanged.

For MnSe, the initial gray group $6mm.1'$ yields an odd j-wave PAM pattern. Breaking $\mathcal{T}$ reduces it to the black-and-white group $6'mm'$, and the wave type changes to a g-wave. This change originates from the changes of symmetry operations: the gray group $6mm.1'$ contains three σ_d mirror planes, each contributing a PAM nodal plane. In the MPG $6'mm'$, σ_d is not an independent symmetry; only the combined operation $\sigma_d\mathcal{T}$ remains. Since $\sigma_d\mathcal{T}$ does not enforce PAM nodal planes, three nodal planes shift from the Γ point, driving the j- to g-wave transition.

II. METHODS

A. Symmetry-adapted Basis Polynomials Method

Given a magnetic point group $G = \{(R_n, \eta_n)\}$, where R_n is a spatial operation and $\eta_n = +1(-1)$ indicates whether the operation excludes (includes) time reversal, we construct homogeneous polynomials $f(\mathbf{r})$ in the coordinates (x, y, z) that transform according to a specified one-dimensional representation (character) of G. Such polynomials serve as symmetry-adapted basis functions for the analysis of band degeneracies and PAM nodal surfaces in the Brillouin zone.

Concretely, considering an additional sign $\chi_n = \pm 1$ encoding spatial operation behavior R_n acting on an axial vector, we require

$$f\left(R_n^{-1}\mathbf{r}\right) = \eta_n\,\chi_n\,f(\mathbf{r}). \tag{S5}$$

We search for the polynomial of lowest total degree d satisfying this condition. For each d, the set of homogeneous polynomials of degree d forms a finite-dimensional representation of G. In the basis $\{x^i y^j z^k \mid i + j + k = d\}$, each symmetry operation acts as a linear transformation. The invariant subspace corresponding to the prescribed character is obtained by solving the linear system

$$\left[\rho_d(R_n, \eta_n) - \eta_n\chi_n I\right]\mathbf{c} = 0, \tag{S6}$$

where $\mathbf{c}$ is the coefficient vector of $f(\mathbf{r})$ with degree d and ρ_d is the matrix representation for basis of $x^i y^j z^k \mid i+j+k = d$. The lowest-degree nontrivial solution gives the desired symmetry-adapted polynomial.

Once $f(\mathbf{r})$ is determined, we identify its nodal planes enclosing the origin. To find them, we substitute $z = -Ax - By$ into $f(\mathbf{r}) = 0$ and require all coefficients in the resulting polynomial in x, y to vanish. The real solutions (A, B) yield the distinct plane. The number of independent nodal planes through the Γ point is defined as MPG integer n_{MPG}, which determines the wave type. Therefore, by analyzing the symmetry-adapted polynomials for each MPG and polarization direction, we classify all possible MPGs with different polarization direction (most MPGs only have one polarization direction) in collinear magnets based on wave types in the Brillouin zone.

B. Real Space Spin-Phonon-Coupling Calculations

In this work, we employ the symmetry-adapted real space spin-phonon-correction method to calculate the PAM in collinear magnetic materials. This method transformed the momentum-space spin-phonon coupling into real-space corrections to the phonon Hamiltonian. In Ref. [4], we can obtain the momentum-space spin-phonon coupling coefficient $\eta(\omega_n, \boldsymbol{q})$ for phonon mode $(\omega_n, \boldsymbol{q})$ where n is band index of phonon and $\boldsymbol{q}$ is the wavevector of phonon. Firstly, we transformed it into contribution by atoms in the unit cell as spin-phonon coupling matrix $\boldsymbol{\eta}_{\kappa\kappa'}(\boldsymbol{q})$, where κ and κ' are atom index in single cell. The spin-phonon coefficient $\eta(\omega_n, \boldsymbol{q})$ could be calculated by spin-phonon coupling matrix $\boldsymbol{\eta}_{\kappa\kappa'}(\boldsymbol{q})$ by $\eta(\omega_n, \boldsymbol{q}) = \sum_{\kappa\kappa'} \zeta^*_{\kappa'}(\omega_n, \boldsymbol{q})\boldsymbol{\eta}(\boldsymbol{q})\zeta_\kappa(\omega_n, \boldsymbol{q})$ where $\zeta(\omega_n, \boldsymbol{q})$ is the eigenvector of phonon mode. Therefore, we could get spin-phonon coupling matrix based on spin-phonon coefficient $\eta(\omega_n, \boldsymbol{q})$ and phonon eigenvector $|\zeta(\omega_n, \boldsymbol{q}))\rangle$. After the calcualtion of spin-phonon coupling matrix $\boldsymbol{\eta}_{\kappa\kappa'}(\boldsymbol{q})$ on a $\boldsymbol{q}$ mesh, we performed the inverse Fourier transformation to get the real-space spin-phonon coupling coefficient $\boldsymbol{\eta}_{\kappa\kappa'}(\boldsymbol{R})$ for atoms κ and κ' at lattice vector $\boldsymbol{R}$,

$$\boldsymbol{\eta}_{\kappa\kappa',l} = \frac{1}{N_{\boldsymbol{q}}}\sum_{\boldsymbol{q}} \boldsymbol{\eta}_{\kappa,\kappa'}(\boldsymbol{q})e^{i\boldsymbol{q}\cdot\boldsymbol{R}_l}. \tag{S7}$$

Here, $N_{\boldsymbol{q}}$ is the number of $\boldsymbol{q}$ points in the first Brillouin zone, l is the site index. After adding the real-space spin-phonon correction to the bare phonon Hamiltonian, we transform the total Hamiltonian into momentum space to calculate the phonon spectra and PAM throughout the whole Brillouin zone.

C. First-principles Calculations

We perform our calculation based on Quantum ESPRESSO [5, 6] that employs DFPT+U [7, 8] to calculate time-reversal-breaking spin-phonon correction [4]. During our calcualtions, we employed the generalized gradient approximation (GGA) [9] pseudopotential. When calculating the force constants using the finite-displacement supercell approach, we use Phonopy [10, 11] to obtain the dynamical matrix where we adopted 3×3×3 supercell expansion for bulk materials. Then we construct the Schrödinger-like phonon motion equation [12] based on the dynamical matrix and spin-phonon correction, then we finally obtain the magnetic phonon dispersion and PAM pattern by solving the Schrödinger-like phonon motion equation.

III. CATALOG OF PHONONS IN COLLINEAR MAGNETIC MATERIALS

A. Results for MAGNDATA Database

For the MAGNDATA database [1, 2], we identified a total of 1,029 collinear magnetic materials. Using the magnetic configurations provided by MAGNDATA, we determined the MPG and magnetic axis orientation for each material, and subsequently classified the PAM wave type of each system. The results are summarized in the following four tables.

1. Nonaxial Phonon Materials

TABLE S4: List of materials with non-axial phonon. Magtype indicates the magnetic ordering type. FM, Fim, AM, and CFM stand for ferromagnetic, ferrimagnetic, antiferromagnetic, and compensated ferrimagnetic orderings, respectively. PG indicates the point group of the magnetic space group.

ID	Material	MPG	PG	Magtype
1.162	Mg_2Nd_2	4/mmm.1'	D_{4h}	AFM
1.575	Er_2Rh_2	mmm.1'	D_{2h}	AFM
0.485	N_2SeU_2	$\bar{3}$'m'	D_{3d}	AFM
0.523	$CaMn_2Sb_2$	$\bar{1}$'	C_i	AFM
0.482	As_2Mn_2Sr	2'/m	C_{2h}	AFM
0.484	N_2SU_2	$\bar{3}$'m'	D_{3d}	AFM
0.483	Mn_2Sb_2Yb	$\bar{1}$'	C_i	AFM
0.92	$CaMn_2Sb_2$	2'/m	C_{2h}	AFM
0.598	Al_2Cr_4	2/m.1'	C_{2h}	AFM
1.242	Br_4Fe_2	$\bar{3}$m.1'	D_{3d}	AFM

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ID	Material	MPG	PG	Magtype
1.53	C_4Ce_2	4/mmm.1’	D_{4h}	AFM
1.245	Br_4Co_2	2/m.1’	C_{2h}	AFM
1.531	C_4Pr_2	4/mmm.1’	D_{4h}	AFM
0.634	$Bi_2Mn_2Na_2$	4’/m’m’m	D_{4h}	AFM
1.532	C_4Nd_2	4/mmm.1’	D_{4h}	AFM
0.602	$Ca_2Ge_2Mn_2$	2/m’	C_{2h}	AFM
0.881	$As_2Cu_2Mn_2$	m’mm	D_{2h}	AFM
0.639	Au_2Mn_4	m’mm	D_{2h}	AFM
0.635	$Bi_2Mn_2Na_2$	4’/m’m’m	D_{4h}	AFM
0.628	$Mn_2Na_2P_2$	4’/m’m’m	D_{4h}	AFM
0.618	$Bi_2K_2Mn_2$	4’/m’m’m	D_{4h}	AFM
0.599	$Ca_2Mn_2Si_2$	4’/m’m’m	D_{4h}	AFM
0.222	$As_2Cu_2Mn_2$	m’mm	D_{2h}	AFM
0.629	$As_2Mn_2Na_2$	4’/m’m’m	D_{4h}	AFM
0.626	$Mn_2Na_2P_2$	4’/m’m’m	D_{4h}	AFM
0.63	$As_2Mn_2Na_2$	4’/m’m’m	D_{4h}	AFM
0.631	$Mn_2Na_2Sb_2$	4’/m’m’m	D_{4h}	AFM
0.1081	Au_2Mn_4	m’mm	D_{2h}	AFM
0.617	$K_2Mn_2Sb_2$	4’/m’m’m	D_{4h}	AFM
0.64	Au_2Mn_4	m’mm	D_{2h}	AFM
0.601	$Ca_2Ge_2Mn_2$	2/m’	C_{2h}	AFM
0.378	Bi_4U_2	4/m’m’m’	D_{4h}	AFM
0.627	$Mn_2Na_2P_2$	4’/m’m’m	D_{4h}	AFM

Continued on next page

ID	Material	MPG	PG	Magtype
0.632	$Mn_2Na_2Sb_2$	4'/m'm'm	D_{4h}	AFM
0.6	$Ca_2Mn_2Si_2$	4'/m'm'm	D_{4h}	AFM
1.8	Ni_4O_4	2/m.1'	C_{2h}	AFM
1.143	Mn_6Pt_2	4/mmm.1'	D_{4h}	AFM
1.69	Co_4O_4	2/m.1'	C_{2h}	AFM
1.428	N_4U_4	4/mmm.1'	D_{4h}	AFM
1.799	Mn_4O_4	2/m.1'	C_{2h}	AFM
1.208	As_4U_4	4/mmm.1'	D_{4h}	AFM
1.16	P_4U_4	4/mmm.1'	D_{4h}	AFM
1.678	Cr_4N_4	mmm.1'	D_{2h}	AFM
1.803	$Cr_2Li_2Te_4$	$\bar{3}$m.1'	D_{3d}	AFM
1.423	Pb_6U_2	4/mmm.1'	D_{4h}	AFM
1.15	Ag_4Pr_4	mmm.1'	D_{2h}	AFM
0.622	$As_2Mn_2Nd_2O_2$	m'mm	D_{2h}	AFM
0.72	$Bi_4Ca_2Mn_2$	4'/m'm'm	D_{4h}	AFM
0.766	$Mn_2Sb_4Yb_2$	4'/m'm'm	D_{4h}	AFM
0.621	$As_2Mn_2Nd_2O_2$	m'mm	D_{2h}	AFM
0.619	$As_2La_2Mn_2O_2$	4'/m'm'm	D_{4h}	AFM
0.62	$As_2Mn_2Nd_2O_2$	4'/m'm'm	D_{4h}	AFM
0.187	$As_2Ce_2Mn_2O_2$	m'mm	D_{2h}	AFM
0.451	$As_2Dy_2O_2Ru_2$	m'mm	D_{2h}	AFM
0.922	$As_2Mn_2N_2Th_2$	4'/m'm'm	D_{4h}	AFM
0.666	$Ce_2Mn_2O_2Sb_2$	m'mm	D_{2h}	AFM

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ID	Material	MPG	PG	Magtype
0.667	$La_2Mn_2O_2Sb_2$	4'/m'm'm	D_{4h}	AFM
0.923	$As_2Mn_2N_2Th_2$	4'/m'm'm	D_{4h}	AFM
0.267	$Bi_4Mn_2Yb_2$	4'/m'm'm	D_{4h}	AFM
0.668	$Mn_2O_2Pr_2Sb_2$	m'mm	D_{2h}	AFM
0.92	$Mn_2N_2P_2Th_2$	4'/m'm'm	D_{4h}	AFM
0.921	$Mn_2N_2P_2Th_2$	4'/m'm'm	D_{4h}	AFM
0.624	$As_2La_2Mn_2O_2$	4'/m'm'm	D_{4h}	AFM
0.665	$Ce_2Mn_2O_2Sb_2$	4'/m'm'm	D_{4h}	AFM
0.452	$As_2O_2Ru_2Tb_2$	m'mm	D_{2h}	AFM
0.623	$As_2Mn_2Nd_2O_2$	4'/m'm'm	D_{4h}	AFM
0.186	$As_2Ce_2Mn_2O_2$	4'/m'm'm	D_{4h}	AFM
1.471	$As_4Cd_4Eu_2$	2/m.1'	C_{2h}	AFM
1.514	$Co_4Ho_2Si_4$	4/mmm.1'	D_{4h}	AFM
1.492	$Mn_4Pr_2Si_4$	4/mmm.1'	D_{4h}	AFM
1.187	$Rh_4Si_4Tb_2$	4/mmm.1'	D_{4h}	AFM
1.421	$Nd_2Rh_4Si_4$	4/mmm.1'	D_{4h}	AFM
1.636	$Er_2Mn_4Si_4$	4/mmm.1'	D_{4h}	AFM
1.495	$Mn_4Si_4Y_2$	4/mmm.1'	D_{4h}	AFM
1.64	$Er_2Ge_4Mn_4$	4/mmm.1'	D_{4h}	AFM
1.513	$Co_4Ho_2Si_4$	4/mmm.1'	D_{4h}	AFM
1.512	$Co_4Si_4Tb_2$	4/mmm.1'	D_{4h}	AFM
1.21	$Co_4Dy_2Si_4$	4/mmm.1'	D_{4h}	AFM
1.494	$Mn_4Nd_2Si_4$	4/mmm.1'	D_{4h}	AFM

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ID	Material	MPG	PG	Magtype
1.637	$Er_2Mn_4Si_4$	4/mmm.1'	D_{4h}	AFM
1.488	$Ce_2Mn_4Si_4$	4/mmm.1'	D_{4h}	AFM
1.694	$Ge_4Mn_4Tb_2$	4/mmm.1'	D_{4h}	AFM
1.689	$Ge_4Lu_2Mn_4$	4/mmm.1'	D_{4h}	AFM
1.468	$Mn_4Si_4Tb_2$	4/mmm.1'	D_{4h}	AFM
1.427	$Co_4Ge_4Ho_2$	4/mmm.1'	D_{4h}	AFM
1.458	$Co_4Cs_2Se_4$	mmm.1'	D_{2h}	AFM
1.638	$Er_2Ge_4Mn_4$	4/mmm.1'	D_{4h}	AFM
1.291	$Au_4Ce_2Si_4$	4/mmm.1'	D_{4h}	AFM
1.442	$Ru_4Si_4U_2$	4/mmm.1'	D_{4h}	AFM
1.252	$Ca_2Co_4P_4$	mmm.1'	D_{2h}	AFM
1.213	$Ho_4O_4Se_2$	2/m.1'	C_{2h}	AFM
1.497	$Bi_4Eu_2Mg_4$	2/m.1'	C_{2h}	AFM
1.496	$Ge_4Mn_4Y_2$	4/mmm.1'	D_{4h}	AFM
1.253	$Ce_2Co_4P_4$	4/mmm.1'	D_{4h}	AFM
1.639	$Er_2Ge_4Mn_4$	4/mmm.1'	D_{4h}	AFM
1.623	$Bi_4Eu_2Mg_4$	2/m.1'	C_{2h}	AFM
1.69	$Ge_4Mn_4Tm_2$	4/mmm.1'	D_{4h}	AFM
1.491	$Mn_4Pr_2Si_4$	4/mmm.1'	D_{4h}	AFM
1.777	$Al_4Eu_2Si_4$	2/m.1'	C_{2h}	AFM
1.673	$Cd_4Eu_2Sb_4$	2/m.1'	C_{2h}	AFM
1.464	$N_4P_2U_4$	$\bar{3}$m.1'	D_{3d}	AFM
1.576	$O_4S_2Yb_4$	2/m.1'	C_{2h}	AFM

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ID	Material	MPG	PG	Magtype
1.515	$Co_4Er_2Si_4$	2/m.1'	C_{2h}	AFM
1.692	$Ge_4Mn_4Y_2$	4/mmm.1'	D_{4h}	AFM
1.411	$Eu_2Mn_4P_4$	2/m.1'	C_{2h}	AFM
1.493	$Mn_4Nd_2Si_4$	4/mmm.1'	D_{4h}	AFM
1.453	$Eu_2Mn_4Si_4$	4/mmm.1'	D_{4h}	AFM
1.516	$Co_4Er_2Si_4$	mmm.1'	D_{2h}	AFM
1.489	$Ce_2Mn_4Si_4$	4/mmm.1'	D_{4h}	AFM
1.691	$Ge_4Mn_4Y_2$	4/mmm.1'	D_{4h}	AFM
1.214	$O_4Se_2Yb_4$	2/m.1'	C_{2h}	AFM
1.49	$Ce_2Mn_4Si_4$	4/mmm.1'	D_{4h}	AFM
1.672	$As_4Eu_2Zn_4$	2/m.1'	C_{2h}	AFM
1.465	$As_2N_4U_4$	$\bar{3}$m.1'	D_{3d}	AFM
1.536	$Pd_4Si_4U_2$	4/mmm.1'	D_{4h}	AFM
1.537	$Rh_4Si_4U_2$	4/mmm.1'	D_{4h}	AFM
1.469	$Mn_4Si_4Y_2$	4/mmm.1'	D_{4h}	AFM
1.422	$Er_2Rh_4Si_4$	mmm.1'	D_{2h}	AFM
1.37	$Cu_2Li_4O_4$	mmm.1'	D_{2h}	AFM
0.47	$Ba_2Mn_4Sb_4$	4'/m'm'm	D_{4h}	AFM
0.498	$La_2Mn_4Si_4$	4'/m'm'm	D_{4h}	AFM
0.769	$Bi_4Mn_2Yb_4$	4'/m'm'm	D_{4h}	AFM
0.365	$As_4Ba_2Cr_4$	4'/m'm'm	D_{4h}	AFM
0.518	$Cr_4Si_4Tb_2$	4'/m'm'm	D_{4h}	AFM
0.519	$Cr_4Ho_2Si_4$	4'/m'm'm	D_{4h}	AFM

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ID	Material	MPG	PG	Magtype
0.364	$As_4Cr_4Sr_2$	4'/m'm'm	D_{4h}	AFM
0.466	$Cr_4Si_4Th_2$	m'mm	D_{2h}	AFM
0.89	$Ba_2Bi_4Mn_4$	4'/m'm'm	D_{4h}	AFM
0.606	$Ba_2Ge_4Mn_4$	4'/m'm'm	D_{4h}	AFM
0.605	$Ba_2Ge_4Mn_4$	4'/m'm'm	D_{4h}	AFM
0.486	$Cr_4Er_2Si_4$	4'/m'm'm	D_{4h}	AFM
0.465	$Cr_4Ho_2Si_4$	4'/m'm'm	D_{4h}	AFM
0.472	$La_2Mn_4Si_4$	4'/m'm'm	D_{4h}	AFM
0.464	$Ba_2Mn_4P_4$	4'/m'm'm	D_{4h}	AFM
0.603	$Ca_2Ge_4Mn_4$	4'/m'm'm	D_{4h}	AFM
0.18	$As_4Ba_2Mn_4$	4'/m'm'm	D_{4h}	AFM
0.194	$Pt_4Si_4U_2$	4/m'm'm'	D_{4h}	AFM
0.474	$Eu_2Ge_4Mn_4$	4'/m'm'm	D_{4h}	AFM
0.102	$Cu_4Eu_2Sb_4$	m'mm	D_{2h}	AFM
0.604	$Ca_2Ge_4Mn_4$	4'/m'm'm	D_{4h}	AFM
1.4	Cu_{12}	mmm.1'	D_{2h}	AFM
1.541	$Mn_4P_4Rb_4$	4/mmm.1'	D_{4h}	AFM
1.629	Fe_6Ge_6	6/mmm.1'	D_{6h}	AFM
1.296	$C_2B_4Ni_4Pr_2$	mmm.1'	D_{2h}	AFM
1.384	Sb_8U_4	4/mmm.1'	D_{4h}	AFM
1.141	$Mg_4Pb_4Pr_4$	2/m.1'	C_{2h}	AFM
1.546	$Bi_4Cs_4Mn_4$	4/mmm.1'	D_{4h}	AFM
1.55	$As_4Li_4Mn_4$	4/mmm.1'	D_{4h}	AFM

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ID	Material	MPG	PG	Magtype
0.454	$Pr_4Sb_4Sc_4$	4/mmm.1’	D_{4h}	AFM
1.557	Fe_4Ge_8	mmm.1’	D_{2h}	AFM
1.643	$Cl_4Dy_4O_4$	mmm.1’	D_{2h}	AFM
1.543	$As_4Mn_4Rb_4$	4/mmm.1’	D_{4h}	AFM
1.551	$As_4Li_4Mn_4$	4/mmm.1’	D_{4h}	AFM
1.539	$K_4Mn_4P_4$	4/mmm.1’	D_{4h}	AFM
1.14	$Mg_4Pb_4Pr_4$	2/m.1’	C_{2h}	AFM
1.547	$Cs_4Mn_4P_4$	4/mmm.1’	D_{4h}	AFM
1.54	$K_4Mn_4P_4$	4/mmm.1’	D_{4h}	AFM
1.452	Fe_6Sn_6	mmm.1’	D_{2h}	AFM
1.556	Fe_4Sn_8	mmm.1’	D_{2h}	AFM
1.215	P_8U_4	4/mmm.1’	D_{4h}	AFM
1.425	$Ge_4Te_4U_4$	4/mmm.1’	D_{4h}	AFM
1.13	As_4Cr_8	mmm.1’	D_{2h}	AFM
1.802	$Br_4Cr_4S_4$	mmm.1’	D_{2h}	AFM
1.554	$As_4K_4Mn_4$	4/mmm.1’	D_{4h}	AFM
1.544	$As_4Mn_4Rb_4$	4/mmm.1’	D_{4h}	AFM
1.542	$Mn_4P_4Rb_4$	4/mmm.1’	D_{4h}	AFM
0.29	Ce_4Cu_8	m’m’m’	D_{2h}	AFM
0.413	$Ge_4Se_4U_4$	4/m’m’m’	D_{4h}	AFM
0.798	Mn_4Pd_8	m’mm	D_{2h}	AFM
1.271	$Ce_4Sb_4Te_4$	4/mmm.1’	D_{4h}	AFM
1.553	$As_4K_4Mn_4$	4/mmm.1’	D_{4h}	AFM

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ID	Material	MPG	PG	Magtype
1.295	$C_2B_4Dy_2Ni_4$	mmm.1’	D_{2h}	AFM
1.292	$C_2B_4Ho_2Ni_4$	mmm.1’	D_{2h}	AFM
1.4	Ag_8Tb_4	mmm.1’	D_{2h}	AFM
1.219	Cu_4F_8	$\bar{1}$.1’	C_i	AFM
1.552	$As_4Li_4Mn_4$	4/mmm.1’	D_{4h}	AFM
1.548	$Cs_4Mn_4P_4$	4/mmm.1’	D_{4h}	AFM
1.765	$Dy_4Sb_4Te_4$	mmm.1’	D_{2h}	AFM
1.749	$Ho_4Sb_4Te_4$	2/m.1’	C_{2h}	AFM
1.294	$C_2B_4Ho_2Ni_4$	mmm.1’	D_{2h}	AFM
1.778	$C_2Cr_4Si_4Th_2$	mmm.1’	D_{2h}	AFM
1.426	$Ge_4S_4U_4$	4/mmm.1’	D_{4h}	AFM
1.132	As_4Mn_8	mmm.1’	D_{2h}	AFM
1.545	$Bi_4Mn_4Rb_4$	4/mmm.1’	D_{4h}	AFM
1.131	As_4Fe_8	mmm.1’	D_{2h}	AFM
1.671	$Co_2Ga_{10}Np_2$	4/mmm.1’	D_{4h}	AFM
1.261	$Ga_{10}Np_2Rh_2$	4/mmm.1’	D_{4h}	AFM
1.555	B_8Mn_6	mmm.1’	D_{2h}	AFM
1.255	$Ga_{10}Pt_2U_2$	4/mmm.1’	D_{4h}	AFM
1.262	$Ga_{10}Np_2Rh_2$	mmm.1’	D_{2h}	AFM
1.278	$C_4Cu_2N_4S_4$	$\bar{1}$.1’	C_i	AFM
1.838	$Au_8La_2Mn_4$	mmm.1’	D_{2h}	AFM
1.784	$Cl_8Co_2Li_4$	mmm.1’	D_{2h}	AFM
1.767	$Cl_8Co_2Li_4$	mmm.1’	D_{2h}	AFM

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ID	Material	MPG	PG	Magtype
0.423	$Eu_4Mn_4Sb_8$	m'm'm'	D_{2h}	AFM
0.566	$Ge_8Ni_4Tb_4$	m'mm	D_{2h}	AFM
0.638	$Fe_4Rb_4Se_8$	2/m'	C_{2h}	AFM
0.585	$Cl_{12}Yb_4$	2'/m	C_{2h}	AFM
0.91	$Ni_4Si_8Tb_4$	m'mm	D_{2h}	AFM
2.5	$Bi_8Eu_4Mn_4$	4'/m'm'm	D_{4h}	AFM
0.636	$Fe_4Rb_4S_8$	2'/m	C_{2h}	AFM
0.426	$Bi_8Eu_4Mn_4$	4'/m'm'm	D_{4h}	AFM
0.611	$Ba_4Mn_4Sb_8$	4'/m'm'm	D_{4h}	AFM
0.399	$H_4Fe_4O_8$	m'mm	D_{2h}	AFM
0.723	$Cl_{12}Yb_4$	2'/m	C_{2h}	AFM
0.919	$Bi_8Eu_4Mn_4$	4'/m'm'm	D_{4h}	AFM
2.98	$Bi_8Eu_4Mn_4$	4'/m'm'm	D_{4h}	AFM
0.73	$Bi_8Mn_4Sr_4$	4'/m'm'm	D_{4h}	AFM
0.453	$Co_4Dy_4Si_8$	m'mm	D_{2h}	AFM
0.633	$Fe_4K_4S_8$	2'/m	C_{2h}	AFM
0.421	$Eu_4Mn_4Sb_8$	m'm'm'	D_{2h}	AFM
0.33	Er_4Ge_{12}	2/m'	C_{2h}	AFM
0.444	$Cl_{12}Yb_4$	2'/m	C_{2h}	AFM
1.714	$Au_4Bi_8Ce_4$	4/mmm.1'	D_{4h}	AFM
1.419	Gd_4In_{12}	4/mmm.1'	D_{4h}	AFM
1.696	$Ho_4Ni_4Si_8$	mmm.1'	D_{2h}	AFM
1.146	$As_4Cr_4La_4O_4$	4/mmm.1'	D_{4h}	AFM

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ID	Material	MPG	PG	Magtype
1.81	Gd_4In_{12}	4/mmm.1’	D_{4h}	AFM
1.361	Dy_8Ge_8	2/m.1’	C_{2h}	AFM
1.585	$As_4Fe_4O_4Pr_4$	mmm.1’	D_{2h}	AFM
1.487	$Al_8Ce_2Ir_2Si_4$	4/mmm.1’	D_{4h}	AFM
1.596	$Cu_4Sb_8Tb_4$	$\bar{1}$.1’	C_i	AFM
1.179	$As_4Co_4Nd_4O_4$	mmm.1’	D_{2h}	AFM
1.486	$Al_8Ce_2Rh_2Si_4$	4/mmm.1’	D_{4h}	AFM
1.628	$Mn_4Pr_4Si_8$	mmm.1’	D_{2h}	AFM
1.461	$As_4Cr_6O_4Sr_4$	4/mmm.1’	D_{4h}	AFM
1.247	$Cl_{12}Ni_6$	2/m.1’	C_{2h}	AFM
1.569	$O_{12}Ru_4Sr_2$	$\bar{3}$m.1’	D_{3d}	AFM
1.248	$Br_{12}Ni_6$	2/m.1’	C_{2h}	AFM
1.241	$Cl_{12}Fe_6$	$\bar{3}$m.1’	D_{3d}	AFM
1.246	$Cl_{12}Co_6$	2/m.1’	C_{2h}	AFM
0.76	$Cr_4O_{12}Te_2$	m’mm	D_{2h}	AFM
0.143	$Cr_4O_{12}Te_2$	m’mm	D_{2h}	AFM
0.144	$Cr_4O_{12}W_2$	m’mm	D_{2h}	AFM
0.471	$Ba_4Mn_6O_4Sb_4$	4’/m’m’m	D_{4h}	AFM
0.959	$Cr_4O_{12}Te_2$	m’mm	D_{2h}	AFM
0.96	$Fe_4O_{12}Te_2$	4/m’m’m’	D_{4h}	AFM
0.75	$Cr_4O_{12}W_2$	m’mm	D_{2h}	AFM
0.212	$As_4Mn_6O_4Sr_4$	4’/m’m’m	D_{4h}	AFM
0.966	$O_{12}V_4W_2$	m’mm	D_{2h}	AFM

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ID	Material	MPG	PG	Magtype
1.186	$O_{12}Ru_4Sr_2$	$\bar{3}$m.1'	D_{3d}	AFM
0.1023	$Cr_4Mo_2O_{12}$	m'mm	D_{2h}	AFM
0.142	$Fe_4O_{12}Te_2$	4/m'm'm'	D_{4h}	AFM
0.146	$Eu_4O_{12}Zr_4$	m'mm	D_{2h}	AFM
0.406	$Gd_4Ni_4Si_{12}$	m'mm	D_{2h}	AFM
0.163	$Mn_4P_4S_{12}$	2'/m	C_{2h}	AFM
0.41	$Al_4Gd_4O_{12}$	m'm'm'	D_{2h}	AFM
0.16	$Eu_4O_{12}Ti_4$	m'mm	D_{2h}	AFM
0.1059	$Ba_2Mn_4O_{12}Pr_2$	m'mm	D_{2h}	AFM
1.212	$Dy_8O_8Se_4$	2/m.1'	C_{2h}	AFM
1.527	$Cs_4F_{12}Ni_4$	mmm.1'	D_{2h}	AFM
0.346	$C_8Re_4Tb_8$	m'mm	D_{2h}	AFM
0.469	$B_{16}Tb_4$	m'm'm'	D_{2h}	AFM
1.334	$In_4Pd_8Pr_8$	mmm.1'	D_{2h}	AFM
1.508	$Al_4B_8Mn_8$	mmm.1'	D_{2h}	AFM
1.23	$Ni_4P_4S_{12}$	2/m.1'	C_{2h}	AFM
1.251	$Co_8Nd_4P_8$	4/mmm.1'	D_{4h}	AFM
1.103	$Rh_8Sn_4U_8$	4/mmm.1'	D_{4h}	AFM
1.416	$O_8S_4Tb_8$	2/m.1'	C_{2h}	AFM
1.417	$O_8S_4Tb_8$	2/m.1'	C_{2h}	AFM
1.211	$Dy_8O_8S_4$	2/m.1'	C_{2h}	AFM
1.16	$As_8Ba_4Fe_8$	mmm.1'	D_{2h}	AFM
1.2	$Ni_8Sn_4U_8$	mmm.1'	D_{2h}	AFM

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ID	Material	MPG	PG	Magtype
1.47	$Fe_2O_{12}Os_2Sr_4$	4/m.1’	C_{4h}	AFM
1.47	$Cr_8Si_8U_4$	2/m.1’	C_{2h}	AFM
1.52	$As_8Ca_4Fe_8$	mmm.1’	D_{2h}	AFM
1.367	$O_{12}Pu_8$	2/m.1’	C_{2h}	AFM
1.648	Nd_8O_{12}	2/m.1’	C_{2h}	AFM
1.12	$Ba_4Mo_2Nd_2O_{12}$	4/m.1’	C_{4h}	AFM
1.635	$Er_4Fe_8Si_8$	mmm.1’	D_{2h}	AFM
1.414	$Ce_4Ge_{12}Ni_4$	mmm.1’	D_{2h}	AFM
1.479	$Ni_8Sn_4U_8$	4/mmm.1’	D_{4h}	AFM
2.1	$As_8Eu_4Fe_8$	mmm.1’	D_{2h}	AFM
1.287	$O_{12}V_8$	2/m.1’	C_{2h}	AFM
1.264	$Co_4P_4S_{12}$	2/m.1’	C_{2h}	AFM
0.468	$B_{16}Er_4$	m’mm	D_{2h}	AFM
0.147	$Eu_4O_{12}Zr_4$	m’m’m’	D_{2h}	AFM
0.1017	$Al_{12}Ce_4Pd_4$	m’mm	D_{2h}	AFM
0.22	$B_{16}Dy_4$	m’mm	D_{2h}	AFM
1.222	$Co_2Er_4Ga_{16}$	mmm.1’	D_{2h}	AFM
1.139	$Ho_4In_{16}Rh_2$	mmm.1’	D_{2h}	AFM
0.65	$Er_4O_{14}Si_4$	2’/m	C_{2h}	AFM
0.527	$Er_4O_{14}Si_4$	2’/m	C_{2h}	AFM
1.5	Cu_{24}	mmm.1’	D_{2h}	AFM
1.35	$Er_4F_{16}Li_4$	2/m.1’	C_{2h}	AFM
1.475	$Al_{16}Dy_4Ni_4$	mmm.1’	D_{2h}	AFM

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ID	Material	MPG	PG	Magtype
1.526	$Co_4F_{16}Li_4$	2/m.1’	C_{2h}	AFM
1.766	$Dy_8Sb_8Te_8$	2/m.1’	C_{2h}	AFM
1.413	$Ce_6Ge_{14}Ni_4$	mmm.1’	D_{2h}	AFM
1.653	$Fe_4O_{16}W_4$	2/m.1’	C_{2h}	AFM
1.346	$F_{16}Mn_4Tl_4$	2/m.1’	C_{2h}	AFM
1.521	$Fe_4O_{16}S_4$	mmm.1’	D_{2h}	AFM
1.52	$Ni_4O_{16}S_4$	mmm.1’	D_{2h}	AFM
1.664	$Dy_4O_{16}V_4$	mmm.1’	D_{2h}	AFM
1.75	$Ho_8Sb_8Te_8$	2/m.1’	C_{2h}	AFM
1.194	$Ni_4O_{16}W_4$	2/m.1’	C_{2h}	AFM
1.534	$C_{16}Ho_8$	mmm.1’	D_{2h}	AFM
1.379	$Er_8Ge_8Ni_8$	2/m.1’	C_{2h}	AFM
1.807	$Fe_4O_{16}W_4$	2/m.1’	C_{2h}	AFM
0.343	$Ge_{16}Tb_8$	m’mm	D_{2h}	AFM
0.284	$K_4O_{16}Os_4$	4’/m’	C_{4h}	AFM
0.285	$K_4O_{16}Ru_4$	4’/m’	C_{4h}	AFM
0.467	$O_{16}P_4Tb_4$	4’/m’m’m	D_{4h}	AFM
0.372	$Cr_4Dy_4O_{16}$	2’/m	C_{2h}	AFM
0.126	$Co_{16}Np_8$	4’/m’m’m	D_{4h}	AFM
0.198	$Gd_4O_{16}V_4$	4’/m’m’m	D_{4h}	AFM
1.46	$Cu_8Pr_8Si_8$	mmm.1’	D_{2h}	AFM
1.312	$C_4B_8Ho_4Ni_8$	mmm.1’	D_{2h}	AFM
0.264	$Fe_6O_{16}P_4$	2/m’	C_{2h}	AFM

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ID	Material	MPG	PG	Magtype
1.11	$Ge_{12}Mn_{12}Sc_2$	6/mmm.1’	D_{6h}	AFM
1.631	$Ge_{12}Mn_{12}Y_2$	6/mmm.1’	D_{6h}	AFM
1.63	$Lu_2Mn_{12}Sn_{12}$	mmm.1’	D_{2h}	AFM
1.449	$Cu_2Li_4O_{16}W_4$	$\overline{1}$.1’	C_i	AFM
1.225	$Ge_{12}Mn_{12}Sc_2$	6/mmm.1’	D_{6h}	AFM
0.695	$Bi_8Cu_4O_{16}$	m’mm	D_{2h}	AFM
0.694	$Bi_8Cu_4O_{16}$	4/m’m’m’	D_{4h}	AFM
0.95	$Fe_4Li_4O_{16}P_4$	m’mm	D_{2h}	AFM
0.821	$Gd_8O_{16}Sr_4$	m’mm	D_{2h}	AFM
0.216	$Er_8O_{16}Sr_4$	m’mm	D_{2h}	AFM
0.24	$Li_4Mn_4O_{16}P_4$	m’m’m’	D_{2h}	AFM
0.969	$Ca_4Fe_8O_{16}$	m’mm	D_{2h}	AFM
0.1103	$Eu_4Sc_8Te_{16}$	m’mm	D_{2h}	AFM
0.384	$Co_4Li_4O_{16}P_4$	2’/m	C_{2h}	AFM
0.193	$Co_4Li_4O_{16}P_4$	m’mm	D_{2h}	AFM
0.348	$Bi_8Cu_4O_{16}$	4/m’m’m’	D_{4h}	AFM
1.403	$Co_4La_8O_{16}$	mmm.1’	D_{2h}	AFM
1.356	$Ge_{16}Ho_{12}$	mmm.1’	D_{2h}	AFM
0.382	$Li_4Mn_4O_{16}P_4$	m’m’m’	D_{2h}	AFM
1.23	$Cu_4La_8O_{16}$	mmm.1’	D_{2h}	AFM
1.249	$F_{16}K_8Ni_4$	mmm.1’	D_{2h}	AFM
1.42	$La_8Ni_4O_{16}$	mmm.1’	D_{2h}	AFM
1.398	$Cu_4O_{16}Pr_8$	mmm.1’	D_{2h}	AFM

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ID	Material	MPG	PG	Magtype
1.171	$C_4Fe_8Si_8Tb_8$	2/m.1’	C_{2h}	AFM
1.371	$Nd_8Ni_4O_{16}$	mmm.1’	D_{2h}	AFM
1.404	$Cl_8Cu_4O_8Sr_8$	mmm.1’	D_{2h}	AFM
1.668	$Co_4Ga_{20}Ho_4$	mmm.1’	D_{2h}	AFM
1.667	$Ga_{20}Pt_4U_4$	mmm.1’	D_{2h}	AFM
1.67	$Fe_4Ga_{20}Np_4$	mmm.1’	D_{2h}	AFM
1.729	$C_4Fe_8Gd_8Si_8$	2/m.1’	C_{2h}	AFM
1.206	$C_4Dy_8Fe_8Si_8$	$\overline{1}$.1’	C_i	AFM
1.205	$C_4Dy_8Fe_8Si_8$	2/m.1’	C_{2h}	AFM
0.383	$Co_4Li_4O_{16}P_4$	m’mm	D_{2h}	AFM
1.389	$Cl_4Co_4O_{12}Sr_8$	mmm.1’	D_{2h}	AFM
0.59	$Cr_{12}O_{18}$	$\overline{3}$’m’	D_{3d}	AFM
1.624	$Eu_6P_{12}Sn_{12}$	2/m.1’	C_{2h}	AFM
1.644	$As_{12}Eu_6Sn_{12}$	2/m.1’	C_{2h}	AFM
0.19	$Mn_6O_{18}Ti_6$	$\overline{3}$’	C_{3i}	AFM
0.507	$Mn_8Nb_4O_{18}$	$\overline{3}$’m’	D_{3d}	AFM
0.443	$Fe_8Nb_4O_{18}$	2/m’	C_{2h}	AFM
0.526	$Mn_8O_{18}Ta_4$	$\overline{3}$’m’	D_{3d}	AFM
0.11	$Cr_{12}O_{18}$	2’/m	C_{2h}	AFM
0.111	$Co_8Nb_4O_{18}$	$\overline{3}$’m’	D_{3d}	AFM
0.125	$Ge_6Mn_6O_{18}$	$\overline{3}$’	C_{3i}	AFM
0.18	$Mn_6P_6Se_{18}$	$\overline{1}$’	C_i	AFM
0.524	$Mn_6P_6Se_{18}$	$\overline{1}$’	C_i	AFM

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ID	Material	MPG	PG	Magtype
0.477	$Mn_8O_{18}Ta_4$	$\overline{3}$'m'	D_{3d}	AFM
0.277	$Mg_6Mn_6O_{18}$	$\overline{3}$'	C_{3i}	AFM
1.305	$Mn_{20}Si_{12}$	mmm.1'	D_{2h}	AFM
1.594	$Ba_8Co_8O_8S_8$	mmm.1'	D_{2h}	AFM
1.388	$F_8La_8Ni_4O_{12}$	mmm.1'	D_{2h}	AFM
1.28	$Cr_{16}N_{16}$	mmm.1'	D_{2h}	AFM
1.125	$As_8Fe_8La_8O_8$	mmm.1'	D_{2h}	AFM
1.507	$Al_8Nd_4Pd_{20}$	mmm.1'	D_{2h}	AFM
1.401	$Nd_{20}Pb_{12}$	mmm.1'	D_{2h}	AFM
1.448	$Ho_{16}Si_{16}$	2/m.1'	C_{2h}	AFM
0.161	$Co_4O_{20}Se_8$	m'mm	D_{2h}	AFM
1.339	$As_{24}Eu_8$	2/m.1'	C_{2h}	AFM
1.409	$Mn_8Na_8O_{16}$	$\overline{1}$.1'	C_i	AFM
1.588	$As_8Fe_8Nd_8O_8$	mmm.1'	D_{2h}	AFM
1.121	$F_4Fe_4Na_4O_{16}S_4$	2/m.1'	C_{2h}	AFM
1.402	$Nd_{20}Pb_{12}$	mmm.1'	D_{2h}	AFM
1.62	$Cu_{16}O_{16}$	2/m.1'	C_{2h}	AFM
1.593	$Ba_8Co_8O_8S_8$	mmm.1'	D_{2h}	AFM
1.59	$F_{24}K_2Tb_6$	4/m.1'	C_{4h}	AFM
1.65	$Fe_8O_{16}Sr_8$	mmm.1'	D_{2h}	AFM
0.801	$Fe_8S_{16}Tl_{12}$	m'mm	D_{2h}	AFM
0.816	$Mn_4O_{24}Ta_8$	m'mm	D_{2h}	AFM
0.814	$Fe_8O_{24}W_4$	m'mm	D_{2h}	AFM

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ID	Material	MPG	PG	Magtype
0.815	$Mn_4Nb_8O_{24}$	m'mm	D_{2h}	AFM
1.703	$Ba_4Co_8O_{20}Y_4$	mmm.1'	D_{2h}	AFM
1.7	$Co_4O_{24}V_8$	2/m.1'	C_{2h}	AFM
1.397	$H_{12}Br_4Cu_6Mg_2O_{12}$	2/m.1'	C_{2h}	AFM
1.17	$Co_4O_{24}V_8$	2/m.1'	C_{2h}	AFM
1.702	$Ba_4Co_8O_{20}Y_4$	mmm.1'	D_{2h}	AFM
0.14	$Gd_{20}Ge_{16}$	m'mm	D_{2h}	AFM
0.401	$Fe_8O_{22}Sr_8$	m'm'm'	D_{2h}	AFM
0.215	$Ba_3Ni_6O_{24}P_6$	$\bar{1}$'	C_i	AFM
1.706	$Ba_8Mn_4O_{24}Te_4$	mmm.1'	D_{2h}	AFM
1.511	$Ni_{16}Si_{16}Tb_8$	mmm.1'	D_{2h}	AFM
1.22	$Cu_{16}Dy_8Si_{16}$	2/m.1'	C_{2h}	AFM
1.795	$Bi_2Cr_8Mn_6O_{24}$	$\bar{3}$.1'	C_{3i}	AFM
1.195	$Er_{16}In_8Ni_{16}$	mmm.1'	D_{2h}	AFM
1.535	$Ge_{16}Pd_{16}U_8$	4/mmm.1'	D_{4h}	AFM
0.562	$Ce_8Ge_{20}Ni_{12}$	mmm.1'	D_{2h}	AFM
1.364	$Cu_{16}Ho_8Si_{16}$	$\bar{1}$.1'	C_i	AFM
1.46	$Fe_4O_{24}Os_4Sr_8$	4/m.1'	C_{4h}	AFM
1.365	$Cu_{16}Si_{16}Tb_8$	$\bar{1}$.1'	C_i	AFM
0.563	$Ce_8Ge_{20}Ni_{12}$	mmm.1'	D_{2h}	AFM
1.369	$Fe_{16}Ge_{16}Ho_8$	mmm.1'	D_{2h}	AFM
1.289	$Ce_8Pd_{16}Si_{16}$	mmm.1'	D_{2h}	AFM
1.568	$Cu_{16}Gd_8Si_{16}$	2/m.1'	C_{2h}	AFM

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ID	Material	MPG	PG	Magtype
1.25	$F_{24}K_8Ni_8$	4/mmm.1’	D_{4h}	AFM
1.154	$Fe_4Na_4O_{24}Si_8$	2/m.1’	C_{2h}	AFM
1.314	$Fe_4Na_4O_{24}Si_8$	2/m.1’	C_{2h}	AFM
1.183	$Fe_8P_8S_{24}$	2/m.1’	C_{2h}	AFM
1.288	$Ce_8Pd_{16}Si_{16}$	mmm.1’	D_{2h}	AFM
1.368	$Ni_{12}Si_{20}Tb_8$	mmm.1’	D_{2h}	AFM
1.169	$Ca_4Co_4Ge_8O_{24}$	2/m.1’	C_{2h}	AFM
1.566	$Ba_8O_{24}Ru_4Yb_4$	4/mmm.1’	D_{4h}	AFM
1.776	$Ba_8Er_4O_{24}Ru_4$	mmm.1’	D_{2h}	AFM
1.625	$Fe_{12}O_{12}S_8Sr_8$	mmm.1’	D_{2h}	AFM
1.432	$Ba_8Lu_4O_{24}Ru_4$	mmm.1’	D_{2h}	AFM
1.188	$Ce_8Rh_{16}Si_{16}$	mmm.1’	D_{2h}	AFM
1.433	$Ba_8O_{24}Ru_4Y_4$	mmm.1’	D_{2h}	AFM
1.366	$Cu_{16}Ho_8Si_{16}$	2/m.1’	C_{2h}	AFM
1.567	$Ba_8O_{24}Ru_4Tm_4$	4/mmm.1’	D_{4h}	AFM
1.51	$Ge_{16}Ni_{16}Tb_8$	4/mmm.1’	D_{4h}	AFM
1.29	$Ce_8Rh_{16}Si_{16}$	mmm.1’	D_{2h}	AFM
1.363	$Cu_{16}Si_{16}Tb_8$	$\bar{1}$.1’	C_i	AFM
1.796	$Bi_2Cr_8Mn_6O_{24}$	$\bar{3}$.1’	C_{3i}	AFM
1.153	$C_8Ga_8Mn_{24}$	$\bar{3}$m.1’	D_{3d}	AFM
0.1078	$C_6H_{12}Mn_2N_6Na_2O_8S_6$	$\bar{3}$’	C_{3i}	AFM
0.504	$Cr_4Na_4O_{24}Si_8$	$\bar{1}$’	C_i	AFM
0.155	$Ca_4Ge_8Mn_4O_{24}$	$\bar{1}$’	C_i	AFM

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ID	Material	MPG	PG	Magtype
0.964	$Cr_4Ge_8Li_4O_{24}$	2'/m	C_{2h}	AFM
0.312	$Ge_8Mn_8O_{24}$	2'/m	C_{2h}	AFM
0.963	$Cr_4Ge_8Li_4O_{24}$	2'/m	C_{2h}	AFM
0.962	$Cr_4Ge_8Li_4O_{24}$	2'/m	C_{2h}	AFM
0.961	$Cr_4Ge_8Li_4O_{24}$	2'/m	C_{2h}	AFM
0.156	$Ca_4Ge_8Mn_4O_{24}$	2'/m	C_{2h}	AFM
0.217	$Cr_4Ge_8Li_4O_{24}$	2'/m	C_{2h}	AFM
1.308	$Bi_{12}Mn_6Te_{24}$	$\bar{3}$m.1'	D_{3d}	AFM
0.651	$Cu_{16}Er_{12}Sn_{16}$	2/m.1'	C_{2h}	AFM
0.363	$H_8Cl_{20}Fe_4K_8O_4$	m'm'm'	D_{2h}	AFM
0.362	$H_8Cl_{20}Fe_4O_4Rb_8$	m'm'm'	D_{2h}	AFM
1.728	$Cu_{16}Sn_{16}Tm_{12}$	2/m.1'	C_{2h}	AFM
1.134	$C_{20}H_4Co_4O_{16}$	2/m.1'	C_{2h}	AFM
1.223	$Co_4Ga_{32}Tm_8$	mmm.1'	D_{2h}	AFM
1.727	$Cu_{16}Ge_{16}Tm_{12}$	mmm.1'	D_{2h}	AFM
0.208	$Fe_{16}Se_{20}Tl_{10}$	2'/m	C_{2h}	AFM
0.209	$Fe_{16}Se_{20}Tl_{10}$	4/m'	C_{4h}	AFM
1.782	$Br_{36}Fe_{12}$	$\bar{3}$.1'	C_{3i}	AFM
1.239	$Br_{32}Mn_{16}$	2/m.1'	C_{2h}	AFM
1.523	$O_{32}P_8V_8$	mmm.1'	D_{2h}	AFM
1.228	$Cl_{36}Ru_{12}$	2/m.1'	C_{2h}	AFM
1.244	$Cl_{36}Cr_{12}$	$\bar{1}$.1'	C_i	AFM
1.209	$Fe_{16}I_{32}$	2/m.1'	C_{2h}	AFM

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ID	Material	MPG	PG	Magtype
1.558	$Mn_{16}Sn_{32}$	mmm.1’	D_{2h}	AFM
0.23	$Co_4K_8O_{28}P_8$	m’mm	D_{2h}	AFM
1.97	$Li_{16}Mn_8O_{24}$	2/m.1’	C_{2h}	AFM
1.142	$Ce_{16}Mg_{16}Pb_{16}$	mmm.1’	D_{2h}	AFM
1.351	$Ba_8Cl_4Co_8F_{28}$	2/m.1’	C_{2h}	AFM
1.293	$C_8B_{16}Nd_8Ni_{16}$	2/m.1’	C_{2h}	AFM
1.786	$Br_{36}Ru_{12}$	$\bar{1}$.1’	C_i	AFM
1.773	$B_{16}Ir_{24}Pr_8$	$\bar{1}$.1’	C_i	AFM
1.144	$C_4H_{20}Cl_8Fe_4N_4O_8$	2/m.1’	C_{2h}	AFM
1.83	$Bi_{16}Fe_4S_{28}$	2/m.1’	C_{2h}	AFM
1.627	$Ce_{12}K_{12}S_{24}$	2/m.1’	C_{2h}	AFM
1.787	$Cl_{36}Ru_{12}$	$\bar{1}$.1’	C_i	AFM
1.37	$Cl_{16}O_{16}V_{16}$	2/m.1’	C_{2h}	AFM
1.617	$Fe_4Li_4Mo_8O_{32}$	$\bar{1}$.1’	C_i	AFM
1.42	$Ba_8Cu_{12}O_{24}Y_4$	mmm.1’	D_{2h}	AFM
1.446	$Al_{32}Ce_8Co_8$	mmm.1’	D_{2h}	AFM
1.578	$Er_{12}K_{12}Se_{24}$	2/m.1’	C_{2h}	AFM
1.24	$Fe_{16}I_{32}$	$\bar{1}$.1’	C_i	AFM
1.755	$Er_{12}K_{12}Se_{24}$	2/m.1’	C_{2h}	AFM
1.355	$Dy_{12}Ge_{36}$	2/m.1’	C_{2h}	AFM
1.744	$Pd_{16}Pr_{16}Sn_{16}$	2/m.1’	C_{2h}	AFM
1.0.1	$Ag_{20}Cr_{10}O_{20}$	2’/m	C_{2h}	AFM
1.634	$Fe_{24}Ge_{24}Y_4$	mmm.1’	D_{2h}	AFM

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ID	Material	MPG	PG	Magtype
1.8	$Al_{40}Ce_4Ru_8$	mmm.1’	D_{2h}	AFM
1.814	$Fe_{24}Ge_{24}Tb_4$	mmm.1’	D_{2h}	AFM
1.159	$Li_8Ni_4O_{32}W_8$	$\bar{1}$.1’	C_i	AFM
0.463	$Co_{24}O_{32}$	4’/m’m’m	D_{4h}	AFM
0.58	$Al_{16}Co_8O_{32}$	4’/m’m’m	D_{4h}	AFM
0.462	$Al_{16}Mn_8O_{32}$	4’/m’m’m	D_{4h}	AFM
0.933	$Na_{16}O_{32}Ru_8$	2/m’	C_{2h}	AFM
0.211	$Ca_{16}Mn_8O_{32}$	4’/m’m’m	D_{4h}	AFM
0.461	$Co_8O_{32}Rh_{16}$	4’/m’m’m	D_{4h}	AFM
0.505	$O_{36}P_8Pb_8V_4$	2/m’	C_{2h}	AFM
1.106	$Cu_8O_{32}Pr_{16}$	mmm.1’	D_{2h}	AFM
1.104	$Cu_8Gd_{16}O_{32}$	mmm.1’	D_{2h}	AFM
1.254	$Ga_{40}Ni_8U_8$	4/mmm.1’	D_{4h}	AFM
1.408	$Cu_8Nd_{16}O_{32}$	mmm.1’	D_{2h}	AFM
1.3	$Ir_8O_{32}Sr_{16}$	mmm.1’	D_{2h}	AFM
1.107	$Cu_8O_{32}Sm_{16}$	mmm.1’	D_{2h}	AFM
1.399	$Cu_8O_{32}Pr_{16}$	mmm.1’	D_{2h}	AFM
1.407	$Cu_8Nd_{16}O_{32}$	mmm.1’	D_{2h}	AFM
1.482	$C_8Er_{16}Fe_{16}Si_{16}$	$\bar{1}$.1’	C_i	AFM
1.1	$Mn_{24}O_{32}$	mmm.1’	D_{2h}	AFM
1.683	$Ga_{40}Pd_8U_8$	4/mmm.1’	D_{4h}	AFM
1.406	$Cu_8Nd_{16}O_{32}$	mmm.1’	D_{2h}	AFM
1.62	$Cu_{40}Nd_{20}$	mmm.1’	D_{2h}	AFM

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ID	Material	MPG	PG	Magtype
0.749	$Ba_{12}Co_4O_{36}Ru_8$	mmm.1’	D_{2h}	AFM
1.94	$Ba_{12}La_4O_{36}Ru_8$	2/m.1’	C_{2h}	AFM
1.58	$Ni_{12}O_{36}Ti_{12}$	$\bar{1}$.1’	C_i	AFM
1.722	$Ba_{12}La_4O_{36}Ru_8$	2/m.1’	C_{2h}	AFM
1.19	$B_{12}Cr_6O_{36}Y_6$	$\bar{1}$.1’	C_i	AFM
1.49	$Ag_{24}Ni_{12}O_{24}$	2/m.1’	C_{2h}	AFM
0.75	$Ba_{12}Co_4O_{36}Ru_8$	mmm.1’	D_{2h}	AFM
1.191	$B_{12}Cr_6Ho_6O_{36}$	$\bar{1}$.1’	C_i	AFM
0.442	$Fe_{16}Nb_8O_{36}$	2/m’	C_{2h}	AFM
0.733	$Ag_{12}O_{36}Ru_{12}$	$\bar{3}$’m’	D_{3d}	AFM
0.1001	$Mn_4Ni_{12}O_{36}Pb_2Te_6$	6/m’	C_{6h}	AFM
1.31	$Mn_{32}O_{32}$	2/m.1’	C_{2h}	AFM
0.455	$Fe_{16}O_{32}Rb_{16}$	m’m’m’	D_{2h}	AFM
0.459	$Fe_{16}K_{16}O_{32}$	m’mm	D_{2h}	AFM
0.46	$Fe_{16}K_{16}O_{32}$	m’mm	D_{2h}	AFM
1.597	$Cu_{16}Sb_{32}Tb_{16}$	2/m.1’	C_{2h}	AFM
1.618	$Co_{32}O_{32}$	2/m.1’	C_{2h}	AFM
1.642	$Fe_{16}S_{32}Tl_{16}$	2/m.1’	C_{2h}	AFM
1.155	$F_8Fe_8Li_8O_{32}S_8$	$\bar{1}$.1’	C_i	AFM
1.6	$Ni_{32}O_{32}$	2/m.1’	C_{2h}	AFM
1.753	$Bi_{32}Ho_{32}$	2/m.1’	C_{2h}	AFM
1.57	$Cu_{16}Mn_{16}O_{32}$	$\bar{1}$.1’	C_i	AFM
0.457	$Cs_{16}Fe_{16}O_{32}$	m’m’m’	D_{2h}	AFM

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ID	Material	MPG	PG	Magtype
0.1102	$Co_{12}La_{16}O_{36}$	m'mm	D_{2h}	AFM
0.692	$Ba_{16}O_{40}Ru_{12}$	m'mm	D_{2h}	AFM
0.693	$Ba_{16}O_{40}Ru_{12}$	m'mm	D_{2h}	AFM
0.932	$Er_{16}Ge_{48}Pt_8$	m'mm	D_{2h}	AFM
0.386	$B_8Fe_{24}O_{40}$	m'mm	D_{2h}	AFM
0.83	$F_8Mn_8Na_{16}O_{32}P_8$	2/m'	C_{2h}	AFM
0.827	$F_8Mn_8Na_{16}O_{32}P_8$	2/m'	C_{2h}	AFM
0.828	$F_8Mn_8Na_{16}O_{32}P_8$	2/m'	C_{2h}	AFM
0.829	$F_8Mn_8Na_{16}O_{32}P_8$	2/m'	C_{2h}	AFM
0.476	$Cl_{40}Cs_{16}Fe_8O_8$	2'/m	C_{2h}	AFM
0.909	$Er_{16}Ge_{48}Pt_8$	m'mm	D_{2h}	AFM
1.9	$Li_{16}O_{40}Si_8V_8$	mmm.1'	D_{2h}	AFM
1.654	$Nb_{16}Ni_8O_{48}$	2/m.1'	C_{2h}	AFM
1.785	$Cl_{48}K_{16}Re_8$	$\bar{1}$.1'	C_i	AFM
1.762	$Ca_8Fe_{24}O_{40}$	mmm.1'	D_{2h}	AFM
1.113	$Ni_8O_{48}Sb_{16}$	$\bar{1}$.1'	C_i	AFM
1.656	$Co_8Nb_{16}O_{48}$	2/m.1'	C_{2h}	AFM
1.848	$Ba_8La_8Mn_{16}O_{44}$	mmm.1'	D_{2h}	AFM
1.256	$Ba_6Ni_{12}O_{48}V_{12}$	$\bar{1}$.1'	C_i	AFM
1.633	$Fe_{36}Sn_{36}Y_6$	mmm.1'	D_{2h}	AFM
1.462	$Co_8La_{16}O_{48}Pt_8$	2/m.1'	C_{2h}	AFM
1.321	$Ba_{16}Fe_8O_{48}W_8$	$\bar{1}$.1'	C_i	AFM
2.3	$Ce_{16}Rh_{32}Si_{32}$	mmm.1'	D_{2h}	AFM

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ID	Material	MPG	PG	Magtype
1.77	$In_{16}Ni_{32}Tb_{32}$	2/m.1’	C_{2h}	AFM
1.715	$Co_8O_{48}Sr_{16}W_8$	$\bar{1}$.1’	C_i	AFM
1.663	$In_{16}Ni_{32}Tb_{32}$	2/m.1’	C_{2h}	AFM
1.168	$Cu_8O_{48}Sr_{16}Te_8$	2/m.1’	C_{2h}	AFM
1.199	$Mn_8Ni_8O_{48}Sc_{16}$	2/m.1’	C_{2h}	AFM
1.32	$Fe_8O_{48}Sr_{16}W_8$	$\bar{1}$.1’	C_i	AFM
1.166	$La_{16}Li_8O_{48}Os_8$	$\bar{1}$.1’	C_i	AFM
1.485	$Mn_{24}O_{48}Te_8$	2/m.1’	C_{2h}	AFM
1.26	$Ge_{16}Mn_8Na_8O_{48}$	$\bar{1}$.1’	C_i	AFM
1.719	$Ca_{16}Mn_8O_{48}W_8$	$\bar{1}$.1’	C_i	AFM
1.177	$Cu_8O_{48}Sr_{16}W_8$	$\bar{1}$.1’	C_i	AFM
1.806	$Cr_8Mo_8O_{56}V_8$	$\bar{1}$.1’	C_i	AFM
1.451	$Fe_{52}Nd_{24}Sn_4$	4/mmm.1’	D_{4h}	AFM
0.86	$K_4Mn_{16}O_{48}P_{12}$	m’mm	D_{2h}	AFM
2.106	$Ca_4Co_{12}O_{48}V_{16}$	m’m’m’	D_{2h}	AFM
1.679	$Ir_8Nd_{16}Ni_8O_{48}$	$\bar{1}$.1’	C_i	AFM
1.741	$As_{12}K_{12}Ni_{12}O_{48}$	$\bar{1}$.1’	C_i	AFM
1.742	$As_{12}K_{12}Ni_{12}O_{48}$	$\bar{1}$.1’	C_i	AFM
0.252	$H_{16}Cl_{40}Cs_{16}Fe_8O_8$	2’/m	C_{2h}	AFM
1.8	$Co_8Dy_{16}Ga_{64}$	4/mmm.1’	D_{4h}	AFM
1.87	$Co_8Ga_{64}Tb_{16}$	4/mmm.1’	D_{4h}	AFM
1.82	$In_{64}Nd_{16}Rh_8$	4/mmm.1’	D_{4h}	AFM
1.43	$H_{16}Mn_{20}O_{48}V_8$	2/m.1’	C_{2h}	AFM

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ID	Material	MPG	PG	Magtype
1.347	$Cu_{24}Fe_{24}O_{48}$	2/m.1’	C_{2h}	AFM
1.573	$Fe_{16}O_{64}S_{16}$	2/m.1’	C_{2h}	AFM
1.841	$Cl_{16}Fe_{16}O_{40}Sr_{24}$	2/m.1’	C_{2h}	AFM
1.18	$Co_{16}Na_{24}O_{48}Sb_8$	$\bar{1}$.1’	C_i	AFM
1.826	$Nd_{24}O_{24}P_{24}Zn_{24}$	2/m.1’	C_{2h}	AFM
1.26	$Cs_{16}Fe_{32}Se_{48}$	2/m.1’	C_{2h}	AFM
2.36	$Ge_{72}Tb_{24}$	mmm.1’	D_{2h}	AFM
1.849	$Na_{24}Ni_{16}O_{48}Sb_8$	$\bar{1}$.1’	C_i	AFM
0.246	$Fe_8Li_8O_{64}S_{16}$	m’m’m’	D_{2h}	AFM
1.63	$Mn_4Pb_{16}S_{56}Sb_{24}$	2/m.1’	C_{2h}	AFM
1.736	$H_{40}Mn_4N_{16}O_{32}S_8$	$\bar{1}$.1’	C_i	AFM
0.243	$Fe_8Li_{16}O_{64}S_{16}$	2’/m	C_{2h}	AFM
1.3	$Ba_8Co_{16}O_{64}V_{16}$	mmm.1’	D_{2h}	AFM
0.71	$Li_{16}Ni_8O_{64}S_{16}$	m’m’m’	D_{2h}	AFM
0.734	$Mn_{24}O_{64}Ta_{16}$	2’/m	C_{2h}	AFM
0.244	$Co_8Li_{16}O_{64}S_{16}$	m’m’m’	D_{2h}	AFM
1.473	$C_{32}H_{32}B_4Br_4Cu_4F_{16}N_{16}$	mmm.1’	D_{2h}	AFM
1.474	$C_{32}H_{32}B_4Cl_4Cu_4F_{16}N_{16}$	mmm.1’	D_{2h}	AFM
1.76	$Fe_{32}O_{64}Zn_{16}$	4/mmm.1’	D_{4h}	AFM
1.66	$H_{48}Fe_8N_{16}O_{32}P_8$	$\bar{1}$.1’	C_i	AFM
1.454	$Mn_{24}Ni_{64}Si_{28}$	mmm.1’	D_{2h}	AFM
1.145	$Mn_{12}Ni_{80}P_{24}$	mmm.1’	D_{2h}	AFM
1.21	$Fe_{24}P_{24}Se_{72}$	$\bar{1}$.1’	C_i	AFM

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ID	Material	MPG	PG	Magtype
1.348	$Cu_{30}Fe_{30}O_{60}$	2/m.1’	C_{2h}	AFM
1.304	$Mn_{24}O_{72}Zn_{24}$	$\overline{1}$.1’	C_i	AFM
1.538	$Ba_{24}Mn_{12}O_{72}Te_{12}$	2/m.1’	C_{2h}	AFM
1.724	$Ba_{24}Ni_{12}O_{72}Te_{12}$	2/m.1’	C_{2h}	AFM
0.1015	$Co_6O_{78}Te_{36}$	$\overline{3}$’	C_{3i}	AFM
1.286	$C_{24}H_{32}Fe_8O_{64}$	$\overline{1}$.1’	C_i	AFM
1.478	$Co_{16}O_{80}Ti_{32}$	2/m.1’	C_{2h}	AFM
1.189	$Mg_{96}Tb_{32}$	$\overline{3}$m.1’	D_{3d}	AFM
1.457	$Mg_{120}Nd_8Ni_8$	mmm.1’	D_{2h}	AFM
1.445	$Ba_{16}Cu_{16}O_{80}Y_{32}$	2/m.1’	C_{2h}	AFM
1.344	$Ba_{12}Co_{54}O_{84}$	2/m.1’	C_{2h}	AFM
1.257	$As_{24}Ba_{12}Ni_{24}O_{96}$	$\overline{1}$.1’	C_i	AFM
1.805	$Fe_{16}Mo_{16}O_{112}V_{16}$	$\overline{1}$.1’	C_i	AFM
1.176	$Co_{64}Si_{64}Yb_{32}$	mmm.1’	D_{2h}	AFM
1.297	$Cu_8Fe_{16}O_{112}P_{32}$	2/m.1’	C_{2h}	AFM
1.571	$La_{48}O_{112}Os_{16}$	2/m.1’	C_{2h}	AFM
1.681	$Al_{128}Fe_{32}Pr_{16}$	2/m.1’	C_{2h}	AFM
1.57	$La_{48}O_{112}Os_{16}$	2/m.1’	C_{2h}	AFM
1.61	$Mn_{32}O_{128}W_{32}$	2/m.1’	C_{2h}	AFM
1.559	$Mn_{64}Sn_{128}$	mmm.1’	D_{2h}	AFM
1.311	$Ba_{16}Mo_{16}O_{128}P_{32}$	$\overline{1}$.1’	C_i	AFM
1.229	$Ba_{16}Mo_{16}O_{128}P_{32}$	$\overline{1}$.1’	C_i	AFM
0.804	$Mo_{12}O_{132}P_{36}Si_{12}$	2/m’	C_{2h}	AFM

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ID	Material	MPG	PG	Magtype
0.728	$Mo_{12}O_{132}P_{36}Si_{12}$	2/m'	C_{2h}	AFM
0.1083	$O_{132}P_{36}Ru_{12}Si_{12}$	$\bar{3}$'m'	D_{3d}	AFM
0.1064	$O_{132}P_{36}Ru_{12}Si_{12}$	$\bar{3}$'m'	D_{3d}	AFM
1.318	$O_{128}Ru_{32}Sr_{64}$	mmm.1'	D_{2h}	AFM
1.319	$O_{128}Ru_{32}Sr_{64}$	mmm.1'	D_{2h}	AFM
1.193	$Cr_{64}Te_{192}$	$\bar{1}$.1'	C_i	AFM
1.6	$Ca_{72}Co_{48}O_{144}$	2/m.1'	C_{2h}	AFM
1.707	$Ba_{64}Mn_{32}O_{192}W_{32}$	2/m.1'	C_{2h}	AFM
1.415	$In_{64}Pd_{128}Tb_{128}$	mmm.1'	D_{2h}	AFM
1.0.21	$C_{18}K_{36}Mn_{54}O_{198}V_6$	6'/m	C_{6h}	AFM
1.112	$Ni_{64}O_{384}Ta_{128}$	2/m.1'	C_{2h}	AFM

2. *Centrosymmetric Even-Wave Axial Phonon Materials*

TABLE S5: List of materials with CS even-wave axial phonon. Wave and Wave (no Tbp) indicates the wave type determined with and without considering time-reversal-breaking perturbation. Magtype indicates the magnetic ordering type. FM, FiM, AM, and CFM stand for ferromagnetic, ferrimagnetic, antiferromagnetic, and compensated ferrimagnetic orderings, respectively. PG indicates the point group of the magnetic space group.

ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
0.274	Mn_4N	$\bar{3}$m'	s	-	D_{3d}	FiM
0.897	$Ge_4Mn_4Tb_2$	4/mm'm'	s	-	D_{4h}	FiM
2.103	$Eu_6O_2Pb_2$	m'm'm	d	-	D_{2h}	FiM
2.95	$Ge_4Mn_4Tb_2$	4/mm'm'	s	-	D_{4h}	FiM
0.902	$Dy_2Ge_4Mn_4$	4/mm'm'	s	-	D_{4h}	FiM
0.701	Mn_6Sn_6Tb	6/mm'm'	s	-	D_{6h}	FiM

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ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
0.705	$HoMn_6Sn_6$	m'm'm	d	-	D_{2h}	FiM
0.7	Mn_6Sn_6Tb	6/mm'm'	s	-	D_{6h}	FiM
0.1031	Mn_6Sn_6Tb	6/mm'm'	s	-	D_{6h}	FiM
3.23	$Eu_{12}O_4Pb_4$	4/mm'm'	s	-	D_{4h}	FiM
0.176	$Mn_6Si_4Te_{12}$	2'/m'	s	-	C_{2h}	FiM
0.835	$Dy_{10}In_8Pd_4$	m'm'm	s	-	D_{2h}	FiM
0.439	$Ge_8Ni_4Tb_{12}$	m'm'm	d	-	D_{2h}	FiM
0.895	$Cr_8Ni_4O_{16}$	m'm'm	d	-	D_{2h}	FiM
0.4	$Cr_8Ni_4O_{16}$	m'm'm	d	-	D_{2h}	FiM
1.0.43	$Pd_{12}Si_{12}U_6$	4/mm'm'	s	-	D_{4h}	FiM
1.0.12	$Au_{12}Si_{12}U_6$	m'm'm	s	-	D_{2h}	FiM
2.65	$Pd_{12}Si_{12}U_6$	4/mm'm'	s	-	D_{4h}	FiM
0.859	$Co_{27}Y_9$	$\bar{3}$m'	s	-	D_{3d}	FiM
0.857	$Fe_{34}Tm_4$	6/mm'm'	s	-	D_{6h}	FiM
0.856	$Fe_{34}Tm_4$	6/mm'm'	s	-	D_{6h}	FiM
0.235	$Mn_8O_{24}Pr_4Sb_4$	4/m.1	s	-	C_{4h}	FiM
0.231	$Mn_{12}O_{24}Tm_4$	m'm'm	d	-	D_{2h}	FiM
0.232	$Mn_{12}O_{24}Tm_4$	m'm'm	s	-	D_{2h}	FiM
1.0.54	$Ho_{20}Ni_{20}Pb_{10}$	m'm'm	s	-	D_{2h}	FiM
1.0.53	$Ho_{20}Ni_{20}Pb_{10}$	m'm'm	s	-	D_{2h}	FiM
1.0.6	$Co_6O_{36}V_{12}$	2'/m'	d	-	C_{2h}	FiM
0.893	$Cr_{16}Ni_8O_{32}$	m'm'm	d	-	D_{2h}	FiM
0.615	$Cr_{16}Fe_8S_{32}$	4/mm'm'	s	-	D_{4h}	FiM

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ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
0.614	$Cr_{16}Fe_8S_{32}$	4/mm'm'	s	-	D_{4h}	FiM
0.613	$Cr_{16}Fe_8S_{32}$	4/mm'm'	s	-	D_{4h}	FiM
0.1051	$Fe_{24}S_{32}$	4/mm'm'	s	-	D_{4h}	FiM
0.1053	$Fe_{24}S_{32}$	4/mm'm'	s	-	D_{4h}	FiM
0.1054	$Fe_{24}S_{32}$	4/mm'm'	s	-	D_{4h}	FiM
0.892	$Cr_{16}Ni_8O_{32}$	m'm'm	d	-	D_{2h}	FiM
0.989	$Cr_{16}Mn_8O_{32}$	m'm'm	d	-	D_{2h}	FiM
0.1052	$Fe_{24}S_{32}$	4/mm'm'	s	-	D_{4h}	FiM
0.509	$Ba_2Fe_{24}O_{38}$	6/mm'm'	s	-	D_{6h}	FiM
1.0.13	$Fe_{25}I_{50}$	2'/m'	s	-	C_{2h}	FiM
3.15	$Fe_{25}I_{50}$	$\bar{3}$m'	s	-	D_{3d}	FiM
3.3	$Ho_{16}In_{64}Rh_8$	m'm'm	s	-	D_{2h}	FiM
3.14	$Fe_{36}I_{72}$	2'/m'	s	-	C_{2h}	FiM
1.0.7	$Fe_{54}Lu_{27}O_{108}$	2'/m'	s	-	C_{2h}	FiM
1.0.18	$Cs_{36}F_{288}Mn_{18}U_{54}$	6/mm'm'	s	-	D_{6h}	FiM
1.0.19	$Co_{18}Cs_{36}F_{288}U_{54}$	6/mm'm'	s	-	D_{6h}	FiM
0.855	Mn_4Sb_2	4/mm'm'	s	-	D_{4h}	CFM
0.781	$Ce_4Mn_4Si_8$	m'm'm	d	-	D_{2h}	CFM
0.776	$Ce_4Mn_4Si_8$	m'm'm	d	-	D_{2h}	CFM
0.739	$Ba_2Mn_4O_{10}Y_2$	4/mm'm'	s	-	D_{4h}	CFM
0.797	$Ba_2Mn_4O_{10}Sm_2$	4/mm'm'	s	-	D_{4h}	CFM
0.735	$Ba_2La_2Mn_4O_{10}$	4/mm'm'	s	-	D_{4h}	CFM
0.543	$Fe_2Mn_4O_{12}Re_2$	$\bar{1}$.1	s	-	C_i	CFM

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ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
0.541	$Fe_2Mn_4O_{12}Re_2$	2'/m'	d	-	C_{2h}	CFM
0.796	$Ca_4Ni_2O_{12}Os_2$	2'/m'	d	-	C_{2h}	CFM
0.542	$Fe_2Mn_4O_{12}Re_2$	$\bar{1}$.1	s	-	C_i	CFM
0.867	$Ir_2Nd_4Ni_2O_{12}$	2/m.1	s	-	C_{2h}	CFM
0.512	As_8Mn_{12}	2/m.1	s	-	C_{2h}	CFM
0.682	$Ca_4Fe_2O_{12}Os_2$	2'/m'	d	-	C_{2h}	CFM
2.26	$Co_8P_8Pr_4$	4/mm'm'	s	-	D_{4h}	CFM
0.968	$Ca_4Fe_8O_{16}$	m'm'm	s	-	D_{2h}	CFM
0.5	$Cr_{12}S_{18}$	$\bar{1}$.1	s	-	C_i	CFM
0.139	$Bi_8Cr_8O_{24}$	$\bar{1}$.1	s	-	C_i	CFM
0.138	$Bi_8Cr_8O_{24}$	2/m.1	s	-	C_{2h}	CFM
0.234	$La_4Mn_8O_{24}Sb_4$	2'/m'	d	-	C_{2h}	CFM
1.0.1-	$Ir_6Ni_6O_{36}Sr_{18}$	$\bar{3}$m'	s	-	D_{3d}	CFM
1.0.5	$Co_6Ir_6O_{36}Sr_{18}$	$\bar{3}$m'	s	-	D_{3d}	CFM
0.258	$Fe_8Li_{12}O_{48}P_{12}$	2'/m'	d	-	C_{2h}	CFM
0.428	$Ba_8Mn_{16}O_{56}Si_{16}$	2/m.1	s	-	C_{2h}	CFM
0.259	$Fe_{12}Li_{18}O_{72}P_{18}$	$\bar{3}$.1	s	-	C_{3i}	CFM
2.15	$Mn_{24}Ni_{160}P_{48}$	m'm'm	d	-	D_{2h}	CFM
0.528	Cr_2Sb_2	6'/m'mm'	g	-	D_{6h}	AM
0.8	Mn_2Te_2	mmm.1	d	-	D_{2h}	AM
0.178	Co_2F_4	4'/mm'm	d	-	D_{4h}	AM
0.499	CCr_2Si_2U	m'm'm	d	-	D_{2h}	AM
0.607	O_4Ru_2	4'/mm'm	d	-	D_{4h}	AM

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ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
0.15	F_4Mn_2	4'/mm'm	d	-	D_{4h}	AM
0.553	$I_{12}K_4Re_2$	2/m.1	s	-	C_{2h}	AM
0.1091	$La_4Mn_4O_6Se_4$	4'/mm'm	d	-	D_{4h}	AM
0.1093	$La_4Mn_4O_6Se_4$	4'/mm'm	d	-	D_{4h}	AM
0.1092	$La_4Mn_4O_6Se_4$	4'/mm'm	d	-	D_{4h}	AM
0.501	$F_{12}Fe_4Li_2$	4'/mm'm	d	-	D_{4h}	AM
0.434	$I_{12}K_4Re_2$	2/m.1	s	-	C_{2h}	AM
0.982	$O_{12}Tm_4V_4$	2/m.1	s	-	C_{2h}	AM
0.795	$O_{12}Ru_2Sr_4Y_2$	2/m.1	s	-	C_{2h}	AM
0.309	$Cr_4O_{12}Tl_4$	mmm.1	d	-	D_{2h}	AM
0.671	$O_{12}Ru_2Sr_4Tm_2$	2/m.1	s	-	C_{2h}	AM
0.1008	$Er_2O_{12}Ru_2Sr_4$	2/m.1	s	-	C_{2h}	AM
0.148	$La_4Li_2O_{12}Ru_2$	2/m.1	s	-	C_{2h}	AM
0.934	$Ni_2O_{12}Sr_4Te_2$	2/m.1	s	-	C_{2h}	AM
0.308	$Cr_4In_4O_{12}$	mmm.1	d	-	D_{2h}	AM
0.758	$Ce_4Fe_4O_{12}$	mmm.1	d	-	D_{2h}	AM
0.1013	$Ba_4Nd_2O_{12}Ru_2$	$\bar{1}$.1	s	-	C_i	AM
0.105	$Er_4O_{12}V_4$	2/m.1	d	-	C_{2h}	AM
0.98	$O_{12}Tm_4V_4$	m'm'm	s	-	D_{2h}	AM
0.979	$O_{12}Tm_4V_4$	m'm'm	s	-	D_{2h}	AM
0.837	$Dy_4Fe_4O_{12}$	m'm'm	s	-	D_{2h}	AM
0.351	$Fe_4O_{12}Tb_4$	m'm'm	s	-	D_{2h}	AM
0.1085	$Fe_4O_{12}Pr_4$	m'm'm	s	-	D_{2h}	AM

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ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
0.936	$Mn_2O_{12}Sr_4Te_2$	2/m.1	s	-	C_{2h}	AM
0.432	$F_{12}K_4Mn_4$	m'm'm	d	-	D_{2h}	AM
0.792	$Ho_2O_{12}Ru_2Sr_4$	2/m.1	s	-	C_{2h}	AM
0.1104	$Cr_4Gd_4O_{12}$	m'm'm	d	-	D_{2h}	AM
0.784	$Co_4Nd_4O_{12}$	mmm.1	d	-	D_{2h}	AM
0.839	$Dy_4Fe_4O_{12}$	m'm'm	s	-	D_{2h}	AM
0.301	$Co_2O_{12}Sr_4Te_2$	2/m.1	s	-	C_{2h}	AM
0.1	$La_4Mn_4O_{12}$	m'm'm	d	-	D_{2h}	AM
0.838	$Dy_4Fe_4O_{12}$	m'm'm	s	-	D_{2h}	AM
0.642	$La_4Mn_4O_{12}$	m'm'm	d	-	D_{2h}	AM
0.592	$Cr_4Dy_4O_{12}$	m'm'm	d	-	D_{2h}	AM
0.984	$Lu_4O_{12}V_4$	m'm'm	d	-	D_{2h}	AM
0.947	$Cr_4O_{12}Y_4$	m'm'm	d	-	D_{2h}	AM
0.793	$Ho_2O_{12}Ru_2Sr_4$	2/m.1	s	-	C_{2h}	AM
0.1022	$Fe_4O_{12}Tm_4$	m'm'm	d	-	D_{2h}	AM
0.475	$Ir_2O_{12}Sr_4Tb_2$	2/m.1	s	-	C_{2h}	AM
0.336	$Fe_4Nd_4O_{12}$	m'm'm	s	-	D_{2h}	AM
0.79	$Ca_4Ir_4O_{12}$	m'm'm	d	-	D_{2h}	AM
0.669	$O_{12}Ru_2Sr_4Yb_2$	2/m.1	s	-	C_{2h}	AM
0.794	$Ho_2O_{12}Ru_2Sr_4$	2/m.1	s	-	C_{2h}	AM
0.25	$Na_4O_{12}Os_4$	m'm'm	d	-	D_{2h}	AM
0.917	$O_{12}Os_2Sc_2Sr_4$	2/m.1	s	-	C_{2h}	AM
0.983	$O_{12}Tm_4V_4$	2/m.1	s	-	C_{2h}	AM

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ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
0.757	$Ce_4Fe_4O_{12}$	m'm'm	s	-	D_{2h}	AM
0.307	$Cr_4O_{12}Sc_4$	mmm.1	d	-	D_{2h}	AM
0.937	$Co_2O_{12}Sr_4Te_2$	2/m.1	s	-	C_{2h}	AM
0.608	$Mn_4O_{12}Pr_4$	m'm'm	s	-	D_{2h}	AM
0.433	$F_{12}K_4Mn_4$	4/mmm.1	g	-	D_{4h}	AM
0.1021	$Fe_4O_{12}Tm_4$	m'm'm	s	-	D_{2h}	AM
0.323	$Cr_4La_4O_{12}$	mmm.1	d	-	D_{2h}	AM
0.609	$Mn_4Nd_4O_{12}$	2/m.1	s	-	C_{2h}	AM
0.587	$Cr_4O_{12}Tm_4$	m'm'm	s	-	D_{2h}	AM
0.991	$Fe_4Ho_4O_{12}$	m'm'm	s	-	D_{2h}	AM
0.42	$Lu_2O_{12}Ru_2Sr_4$	2/m.1	s	-	C_{2h}	AM
0.836	$Dy_4Fe_4O_{12}$	m'm'm	s	-	D_{2h}	AM
0.38	$Fe_4O_{12}Sm_4$	m'm'm	s	-	D_{2h}	AM
0.787	$O_{12}V_4Y_4$	m'm'm	d	-	D_{2h}	AM
0.841	$Dy_4Fe_4O_{12}$	mmm.1	d	-	D_{2h}	AM
0.791	$O_{12}Ru_2Sr_4Tb_2$	2/m.1	s	-	C_{2h}	AM
0.586	$Cr_4O_{12}Y_4$	m'm'm	s	-	D_{2h}	AM
0.79	$Dy_2O_{12}Ru_2Sr_4$	2'/m'	d	-	C_{2h}	AM
0.513	$O_{12}Ru_4Y_4$	m'm'm	d	-	D_{2h}	AM
0.84	$Dy_4Fe_4O_{12}$	mmm.1	d	-	D_{2h}	AM
0.786	$Nd_4O_{12}V_4$	2'/m'	d	-	C_{2h}	AM
0.417	$Cr_4La_4O_{12}$	m'm'm	s	-	D_{2h}	AM
0.354	$Cr_4O_{12}Tb_4$	m'm'm	d	-	D_{2h}	AM

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ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
0.379	$Fe_4O_{12}Sm_4$	m'm'm	d	-	D_{2h}	AM
0.591	$Cr_4Er_4O_{12}$	m'm'm	s	-	D_{2h}	AM
0.131	$C_8Mn_2N_{12}$	m'm'm	d	-	D_{2h}	AM
0.334	Co_6F_{18}	$\bar{3}$m.1	g	-	D_{3d}	AM
0.329	$F_{16}Mn_4Rb_4$	$\bar{1}$.1	s	-	C_i	AM
0.581	$F_{18}Fe_6$	2'/m'	s	-	C_{2h}	AM
0.896	$Cr_4Ni_4O_{16}$	mmm.1	d	-	D_{2h}	AM
0.335	$F_{18}Fe_6$	2'/m'	s	-	C_{2h}	AM
1.522	$Cr_4O_{16}V_4$	$\bar{1}$.1	s	-	C_i	AM
0.358	$Ca_2Fe_{10}O_{14}$	2'/m'	d	-	C_{2h}	AM
0.1036	$Co_2Se_{16}Ta_8$	6'/m'mm'	g	-	D_{6h}	AM
0.708	$Cr_2Nb_8S_{16}$	6'/m'mm'	g	-	D_{6h}	AM
0.714	$Li_4Ni_2O_{16}S_4$	2/m.1	s	-	C_{2h}	AM
0.128	$F_4Fe_4O_{16}S_4$	2'/m'	d	-	C_{2h}	AM
0.45	$La_8Ni_4O_{16}$	m'm'm	s	-	D_{2h}	AM
0.1071	$Fe_8O_{16}Si_4$	mmm.1	d	-	D_{2h}	AM
0.116	$C_6Fe_6O_{18}$	$\bar{3}$m.1	g	-	D_{3d}	AM
1.0.9	$Cl_{18}Co_6Cs_6$	6'/m'mm'	g	-	D_{6h}	AM
0.748	$Ba_6Ni_2O_{18}Ru_4$	6'/m'mm'	g	-	D_{6h}	AM
1.0.38	$Cl_{18}Co_6Cs_6$	6'/m'mm'	g	-	D_{6h}	AM
0.416	$Cr_6La_6O_{18}$	$\bar{3}$m.1	g	-	D_{3d}	AM
0.114	$C_6Co_6O_{18}$	2/m.1	d	-	C_{2h}	AM
0.112	$B_6Fe_6O_{18}$	2'/m'	s	-	C_{2h}	AM

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ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
1.0.39	$Ba_6Mn_6O_{18}$	6'/m'mm'	g	-	D_{6h}	AM
0.113	$C_6Ni_6O_{18}$	2/m.1	d	-	C_{2h}	AM
0.65	$Fe_{12}O_{18}$	2'/m'	s	-	C_{2h}	AM
1.0.26	$Br_{18}Co_6Rb_6$	6'/m'mm'	g	-	D_{6h}	AM
0.66	$Fe_{12}O_{18}$	$\bar{1}$.1	s	-	C_i	AM
0.115	$C_6Mn_6O_{18}$	2/m.1	d	-	C_{2h}	AM
0.755	$F_8Mn_8O_{12}Se_4$	m'm'm	d	-	D_{2h}	AM
0.26	$Cu_4Fe_4O_{20}P_4$	mmm.1	d	-	D_{2h}	AM
0.76	$H_4Fe_4O_{20}S_4$	2'/m'	d	-	C_{2h}	AM
0.261	$Fe_4Ni_4O_{20}P_4$	mmm.1	d	-	D_{2h}	AM
0.263	$Fe_8O_{20}P_4$	mmm.1	d	-	D_{2h}	AM
0.392	$H_4Fe_6O_{20}P_4$	2/m.1	s	-	C_{2h}	AM
0.582	$H_8F_{16}Fe_6O_4$	2'/m'	d	-	C_{2h}	AM
0.811	$Fe_8O_{24}W_4$	m'm'm	d	-	D_{2h}	AM
1.0.47	$Mn_{12}Se_{24}$	mmm.1	d	-	D_{2h}	AM
0.825	$Ca_8Ga_4Mn_4O_{20}$	m'm'm	d	-	D_{2h}	AM
0.813	$Fe_8O_{24}W_4$	m'm'm	d	-	D_{2h}	AM
0.108	$Ca_8Fe_8O_{20}$	m'm'm	d	-	D_{2h}	AM
0.189	$Ce_2Ge_8Mn_4O_{24}$	4'/mm'm	d	-	D_{4h}	AM
0.402	$Fe_8O_{22}Sr_8$	m'm'm	d	-	D_{2h}	AM
0.315	$Ge_8Mn_4O_{24}Zr_2$	4'/mm'm	d	-	D_{4h}	AM
0.118	$Ba_{10}Cl_2Co_{10}O_{26}$	6'/m'mm'	g	-	D_{6h}	AM
0.706	$Ga_{36}Ir_{12}Tb_8$	m'm'm	d	-	D_{2h}	AM

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ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
0.747	$Ba_{12}Co_4Ir_8O_{36}$	2/m.1	s	-	C_{2h}	AM
0.361	$Li_6O_{36}Ru_6Sr_{18}$	2'/m'	s	-	C_{2h}	AM
0.3	$Ca_{18}Li_6O_{36}Os_6$	2'/m'	s	-	C_{2h}	AM
0.404	$Na_6O_{36}Ru_6Sr_{18}$	2'/m'	s	-	C_{2h}	AM
0.239	$Ca_{18}Li_6O_{36}Ru_6$	2'/m'	s	-	C_{2h}	AM
0.927	$Ge_{48}Nd_{16}Pd_8$	m'm'm	s	-	D_{2h}	AM
0.904	$Ge_{48}Nd_{16}Pd_8$	m'm'm	s	-	D_{2h}	AM
0.109	$H_{32}Cr_8F_{24}N_8$	m'm'm	d	-	D_{2h}	AM
0.154	$Er_{16}O_{56}Ru_{16}$	4'/mm'm	d	-	D_{4h}	AM
0.955	$C_{24}H_{32}Mn_4Na_8O_{40}$	mmm.1	d	-	D_{2h}	AM
0.616	B_2Ho	2'/m'	s	-	C_{2h}	FM
0.276	$AlMn_3N$	m'm'm	d	-	D_{2h}	FM
0.863	As_2Cd_2Eu	2'/m'	s	-	C_{2h}	FM
0.275	$AlMn_3N$	$\bar{3}$m'	s	-	D_{3d}	FM
0.593	$P_2Se_2U_2$	4/mm'm'	s	-	D_{4h}	FM
0.789	$Ce_2Cu_2Si_2$	m'm'm	d	-	D_{2h}	FM
0.833	$Ce_2Cu_2Ge_2$	m'm'm	d	-	D_{2h}	FM
0.594	$As_2S_2U_2$	4/mm'm'	s	-	D_{4h}	FM
0.447	$Co_2Ge_2Mn_2$	6/mm'm'	s	-	D_{6h}	FM
0.1097	Ga_4Nd_4	m'm'm	s	-	D_{2h}	FM
0.689	Pr_4Pt_4	m'm'm	s	-	D_{2h}	FM
0.1046	Ga_4Gd_4	m'm'm	d	-	D_{2h}	FM
0.1089	Ga_4Tm_4	m'm'm	d	-	D_{2h}	FM

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ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
0.69	Nd_4Pt_4	2'/m'	s	-	C_{2h}	FM
0.1047	Ga_4Ho_4	m'm'm	s	-	D_{2h}	FM
0.971	Ho_4P_4	4/mm'm'	s	-	D_{4h}	FM
0.1041	Er_4Ga_4	m'm'm	d	-	D_{2h}	FM
0.1098	Ga_4Nd_4	2'/m'	s	-	C_{2h}	FM
0.1042	Er_4Ga_4	2'/m'	s	-	C_{2h}	FM
0.1048	Ga_4Ho_4	$\bar{1}$.1	s	-	C_i	FM
0.737	$BaLaMn_2O_6$	4/mm'm'	s	-	D_{4h}	FM
0.1058	$BaMn_2O_6Pr$	4/mm'm'	s	-	D_{4h}	FM
0.738	$BaLaMn_2O_6$	4/mm'm'	s	-	D_{4h}	FM
0.1037	$Cu_4In_2Tm_4$	4/mm'm'	s	-	D_{4h}	FM
0.414	$Al_2B_4Fe_4$	m'm'm	d	-	D_{2h}	FM
0.415	$Eu_2Fe_4P_4$	2'/m'	s	-	C_{2h}	FM
0.97	$Pr_2Ru_4Si_4$	4/mm'm'	s	-	D_{4h}	FM
0.731	$B_2Ho_2Ni_8$	2'/m'	s	-	C_{2h}	FM
0.1094	Eu_8In_4	m'm'm	d	-	D_{2h}	FM
0.73	$B_2Ni_8Tb_2$	2'/m'	s	-	C_{2h}	FM
0.395	$Ga_4Mn_4Pt_4$	m'm'm	s	-	D_{2h}	FM
0.595	$P_4Te_4U_4$	4/mm'm'	s	-	D_{4h}	FM
0.403	Co_8Nd_4	m'm'm	d	-	D_{2h}	FM
0.445	$Co_4Ge_4Mn_4$	m'm'm	s	-	D_{2h}	FM
0.227	Co_8Nd_4	4/mm'm'	s	-	D_{4h}	FM
0.374	$Ni_8Si_2Y_2$	m'm'm	d	-	D_{2h}	FM

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ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
0.729	$B_2Er_2Ni_8$	6/mm'm'	s	-	D_{6h}	FM
0.1107	$Nd_2Ni_8Si_2$	m'm'm	d	-	D_{2h}	FM
0.436	$Ni_8Si_2Tb_2$	m'm'm	d	-	D_{2h}	FM
0.596	$As_4Te_4U_4$	4/mm'm'	s	-	D_{4h}	FM
0.699	$LiMn_6Sn_6$	m'm'm	d	-	D_{2h}	FM
0.266	$BaCoNa_2O_8V_2$	$\bar{3}$m'	s	-	D_{3d}	FM
0.771	$Mn_4Pr_4Si_8$	m'm'm	d	-	D_{2h}	FM
0.767	$Mn_4Sb_8Sr_4$	m'm'm	d	-	D_{2h}	FM
0.777	$Ce_4Mn_4Si_8$	m'm'm	d	-	D_{2h}	FM
0.561	$Ge_8Nd_4Ni_4$	m'm'm	s	-	D_{2h}	FM
0.78	$La_4Mn_4Si_8$	m'm'm	d	-	D_{2h}	FM
0.286	Ge_6Mn_{10}	6/mm'm'	s	-	D_{6h}	FM
0.775	$Mn_4Nd_4Si_8$	m'm'm	d	-	D_{2h}	FM
0.774	$Mn_4Nd_4Si_8$	m'm'm	d	-	D_{2h}	FM
0.778	$La_4Mn_4Si_8$	m'm'm	d	-	D_{2h}	FM
0.772	$Mn_4Pr_4Si_8$	m'm'm	d	-	D_{2h}	FM
0.779	$La_4Mn_4Si_8$	m'm'm	d	-	D_{2h}	FM
0.228	$Co_{12}Tb_6$	$\bar{3}$m'	s	-	D_{3d}	FM
0.317	$Co_2Ho_4Mn_2O_{12}$	2'/m'	d	-	C_{2h}	FM
0.662	$Mn_{12}Sn_8$	m'm'm	d	-	D_{2h}	FM
0.834	$Cr_4Sb_4Se_{12}$	m'm'm	d	-	D_{2h}	FM
0.111	$Co_2Mn_2O_{12}Tb_4$	2'/m'	d	-	C_{2h}	FM
0.732	$O_{12}Ru_4Sr_4$	m'm'm	s	-	D_{2h}	FM

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ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
0.861	$Co_9S_6Sn_6$	$\overline{3}$m'	s	-	D_{3d}	FM
0.86	$Co_9S_6Sn_6$	$\overline{3}$m'	s	-	D_{3d}	FM
0.914	$In_8Ni_4Tb_{10}$	m'm'm	s	-	D_{2h}	FM
0.911	$In_8Pd_4Tb_{10}$	m'm'm	s	-	D_{2h}	FM
0.327	$Cs_4F_{16}Mn_4$	m'm'm	d	-	D_{2h}	FM
0.985	$Eu_4Pd_{12}Si_8$	m'm'm	d	-	D_{2h}	FM
0.711	$Mn_2S_{16}Ta_8$	m'm'm	d	-	D_{2h}	FM
0.709	$Mn_2Nb_8S_{16}$	m'm'm	d	-	D_{2h}	FM
0.173	$Al_{24}Pr_6Ru_8$	m'm'm	s	-	D_{2h}	FM
0.858	$Fe_{34}Tm_4$	6/mm'm'	s	-	D_{6h}	FM
0.149	$Al_{24}Nd_6Ru_8$	m'm'm	s	-	D_{2h}	FM
0.297	$Cr_4Ge_8Na_4O_{24}$	2'/m'	d	-	C_{2h}	FM

3. Noncentrosymmetric Odd-Wave Axial Phonon Materials

TABLE S6: List of materials with NCS odd-wave axial phonon. Wave and Wave (no Tbp) indicates the wave type determined with and without considering time-reversal-breaking perturbation. Magtype indicates the magnetic ordering type. FM, FiM, AM, and CFM stand for ferromagnetic, antiferromagnetic, and compensated ferrimagnetic orderings, respectively. PG indicates the point group of the magnetic space group.

ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
1.506	$Au_4Gd_4Sn_4$	mm2.1'	f	f	C_{2v}	AFM
1.33	$Au_4Er_4Ge_4$	mm2.1'	f	f	C_{2v}	AFM
1.574	$Bi_4Nd_4Pt_4$	$\overline{42}$m.1'	f	f	D_{2d}	AFM
1.505	$Ag_4Gd_4Sn_4$	mm2.1'	f	f	C_{2v}	AFM
1.504	$Cu_4Gd_4Sn_4$	mm2.1'	f	f	C_{2v}	AFM

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ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
1.586	$As_4Fe_4O_4Pr_4$	mm2.1’	p	p	C_{2v}	AFM
1.811	$Bi_4Co_4O_{12}$	4mm.1’	h	h	C_{4v}	AFM
1.81	$Bi_4Co_4O_{12}$	4mm.1’	h	h	C_{4v}	AFM
1.809	$Bi_4Co_4O_{12}$	4mm.1’	h	h	C_{4v}	AFM
1.7	$Fe_{18}Nd_6$	2.1’	p	p	C_2	AFM
1.18	Mn_8S_{16}	mm2.1’	p	p	C_{2v}	AFM
1.24	$O_{16}V_8Zn_4$	422.1’	p	p	D_4	AFM
1.472	$Ca_8Fe_8O_8S_8$	mm2.1’	f	f	C_{2v}	AFM
1.136	$Ag_8Cr_8S_{16}$	m.1’	p	p	C_s	AFM
1.738	$Al_{12}Ni_{12}Tb_{12}$	mm2.1’	f	f	C_{2v}	AFM
0.799	$Co_8O_{20}Sr_8$	mm2.1’	f	f	C_{2v}	AFM
1.2	$Ho_8Mn_8O_{24}$	mm2.1’	f	f	C_{2v}	AFM
1.797	$Bi_2Cr_8Mn_6O_{24}$	3.1’	p	p	C_3	AFM
1.349	$Co_4Nb_{12}S_{24}$	222.1’	p	p	D_2	AFM
1.743	$Ce_8Ge_{24}Rh_8$	4mm.1’	h	h	C_{4v}	AFM
1.32	$Co_4Lu_8Mn_4O_{24}$	2.1’	p	p	C_2	AFM
1.156	$Cr_8La_2Mn_6O_{24}$	3.1’	p	p	C_3	AFM
1.101	$Lu_8Mn_8O_{24}$	mm2.1’	p	p	C_{2v}	AFM
1.341	$Mn_8O_{24}Tm_8$	mm2.1’	f	f	C_{2v}	AFM
1.697	$In_{16}Pd_8Tb_{20}$	mm2.1’	p	p	C_{2v}	AFM
1.794	$Ca_{12}O_{28}Ru_8$	mm2.1’	f	f	C_{2v}	AFM
1.699	$Cu_{32}Gd_8In_8$	$\overline{4}2$m.1’	f	f	D_{2d}	AFM
1.44	$Cr_8P_8S_{32}$	2.1’	p	p	C_2	AFM

Continued on next page

ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
1.641	$Ba_8Fe_4O_{28}Si_8$	mm2.1’	f	f	C_{2v}	AFM
1.374	$Ge_{16}Ho_{16}Ni_{16}$	m.1’	p	p	C_s	AFM
1.708	$Cr_8P_8S_{32}$	2.1’	p	p	C_2	AFM
1.5	$Ag_{12}Ni_{12}O_{24}$	222.1’	p	p	D_2	AFM
1.793	$Ca_{12}O_{28}Ru_8$	mm2.1’	f	f	C_{2v}	AFM
1.439	$Ba_8Co_8F_{32}$	mm2.1’	f	f	C_{2v}	AFM
1.7	$Cu_{32}Ho_8In_8$	222.1’	p	p	D_2	AFM
1.263	$Ca_{12}O_{28}Ru_8$	mm2.1’	f	f	C_{2v}	AFM
1.86	$Ge_4S_{32}V_{16}$	mm2.1’	f	f	C_{2v}	AFM
1.754	$Ba_8Fe_{16}O_{32}$	mm2.1’	f	f	C_{2v}	AFM
0.965	$Fe_{16}Lu_8O_{32}$	1.1’	p	p	C_1	AFM
1.685	$Cr_{16}Ni_8O_{32}$	422.1’	p	p	D_4	AFM
1.808	$Ba_{12}Fe_{12}O_{36}$	mm2.1’	p	p	C_{2v}	AFM
1.165	$Ni_{18}O_{36}Te_6$	3.1’	p	p	C_3	AFM
1.192	$Mn_{16}O_{40}Sm_8$	mm2.1’	p	p	C_{2v}	AFM
1.74	$Au_{16}Ce_{16}Sb_{32}$	mm2.1’	f	f	C_{2v}	AFM
1.734	$Cu_{16}Fe_8Ge_8S_{32}$	1.1’	p	p	C_1	AFM
1.325	$Mn_{16}O_{40}Pr_8$	m.1’	p	p	C_s	AFM
1.732	$Cu_{16}Mn_8S_{32}Sn_8$	2.1’	p	p	C_2	AFM
1.1	$Cu_{16}Mn_8S_{32}Sn_8$	2.1’	p	p	C_2	AFM
1.55	$F_{40}Mn_8Na_{16}$	m.1’	p	p	C_s	AFM
2.99	$Al_{24}Ni_{24}Tb_{24}$	m.1’	p	p	C_s	AFM
1.281	$Ba_8Cu_8Fe_8O_{40}Y_8$	mm2.1’	f	f	C_{2v}	AFM

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ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
1.58	$Fe_{16}La_{16}O_{24}Se_{16}$	m.1’	p	p	C_s	AFM
1.655	$Fe_8Nb_{16}O_{48}$	222.1’	p	p	D_2	AFM
1.659	$C_8H_{32}Cl_8Mn_4N_{16}O_8$	mm2.1’	f	f	C_{2v}	AFM
1.565	$Co_8O_{48}Os_8Pb_{16}$	m.1’	p	p	C_s	AFM
1.43	$Ni_{16}O_{48}Pr_{16}$	mm2.1’	p	p	C_{2v}	AFM
1.45	$Nd_{16}Ni_{16}O_{48}$	mm2.1’	p	p	C_{2v}	AFM
1.626	$Fe_{24}O_{24}Se_{16}Sr_{16}$	mm2.1’	p	p	C_{2v}	AFM
1.353	$Ni_{16}O_{48}Sm_{16}$	mm2.1’	p	p	C_{2v}	AFM
1.354	$Eu_{16}Ni_{16}O_{48}$	mm2.1’	p	p	C_{2v}	AFM
1.682	$Cl_{16}Cu_8Na_{16}O_{32}S_8$	mm2.1’	f	f	C_{2v}	AFM
1.463	$Fe_{24}O_{24}Se_{16}Sr_{16}$	mm2.1’	p	p	C_{2v}	AFM
1.233	$Cu_{32}Mn_{32}Sb_{32}$	3m.1’	f	f	C_{3v}	AFM
1.438	$Ba_{16}Co_{16}F_{64}$	2.1’	p	p	C_2	AFM
1.265	$Cu_{32}Mn_{32}Sb_{32}$	3m.1’	f	f	C_{3v}	AFM
1.64	$Ba_{16}F_{64}Ni_{16}$	2.1’	p	p	C_2	AFM
1.71	$Co_{16}O_{64}Sr_8V_{16}$	mm2.1’	f	f	C_{2v}	AFM
1.761	$Fe_{32}O_{64}Zn_{16}$	222.1’	p	p	D_2	AFM
1.82	$Ba_{24}O_{72}Ru_{18}Tb_6$	m.1’	p	p	C_s	AFM
1.459	$B_{24}Ce_6Fe_{18}O_{72}$	2.1’	p	p	C_2	AFM
1.9	$B_{24}Fe_{18}O_{72}Y_6$	2.1’	p	p	C_2	AFM
1.91	$B_{24}Fe_{18}O_{72}Tb_6$	32.1’	p	p	D_3	AFM
1.735	$Fe_{16}Ge_{16}Li_{32}S_{64}$	m.1’	p	p	C_s	AFM
1.79	$Co_{16}Li_{32}O_{64}Si_{16}$	m.1’	p	p	C_s	AFM

Continued on next page

ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
1.172	$Ni_{16}O_{96}Ta_{32}$	mm2.1’	f	f	C_{2v}	AFM
1.335	$In_{32}Nd_{64}Pd_{64}$	mm2.1’	p	p	C_{2v}	AFM
1.424	$Cu_{160}U_{32}$	3m.1’	f	f	C_{3v}	AFM
1.12	$Ba_{32}Fe_{64}Se_{96}$	m.1’	p	p	C_s	AFM
1.429	$Ba_{32}Fe_{64}Se_{96}$	m.1’	p	p	C_s	AFM
1.721	$Cu_{160}U_{32}$	3m.1’	f	f	C_{3v}	AFM
1.701	$Cd_{32}Cu_{128}Ho_{32}$	m.1’	p	p	C_s	AFM
1.723	$Mn_{64}Na_{32}O_{128}$	m.1’	p	p	C_s	AFM
1.298	$Ba_{16}Cd_{16}O_{144}P_{32}$	Vm2.1’	p	p	C_{2v}	AFM
0.802	$Cu_4Fe_4S_8$	$\overline{4}2$m.1	f	f	D_{2d}	AM
0.229	$Ba_4Mn_2O_{14}Si_4$	$\overline{4}2$m.1	f	f	D_{2d}	AM
0.448	$Ce_{16}Ge_{12}$	$\overline{4}2$m.1	f	f	D_{2d}	AM
0.303	$Ba_4Cr_4F_{20}$	2’2’2	p	p	D_2	AM
0.21	$Ni_6O_{18}Pb_6$	3m.1	f	f	C_{3v}	AM
0.1018	$Mn_8O_{24}Sr_8$	2’2’2	p	p	D_2	AM
0.1019	$Mn_8O_{24}Sr_8$	2’2’2	p	p	D_2	AM
2.88	$Ga_{18}Ni_{18}U_{18}$	$\overline{6}$’m’2	f	f	D_{3h}	AM
0.13	$Ca_{18}Co_6Mn_6O_{36}$	3m.1	f	f	C_{3v}	AM
0.976	$In_3Nd_3Pd_3$	m’m’2	p	p	C_{2v}	FM

4. Noncentrosymmetricc Even-Wave Axial Phonon Materials

TABLE S7: List of materials with NCS even-wave axial phonon. Wave and Wave (no Tbp) indicates the wave type determined with and without considering time-reversal-breaking perturbation. Magtype indicates the magnetic ordering type. FM, FiM, AM, and CFM stand for ferromagnetic, ferrimagnetic, antiferromagnetic, and compensated ferrimagnetic orderings, respectively. PG indicates the point group of the magnetic space group.

ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
0.1073	$Al_2Co_2Cr_4$	$\overline{4}2$'m'	s	f	D_{2d}	FiM
0.367	$As_4Cr_4Eu_2$	$\overline{4}2$'m'	s	f	D_{2d}	FiM
1.0.11	$Ce_6Co_6Ge_{18}$	4m'm'	s	h	C_{4v}	FiM
1.0.29	$Ce_6Ge_{18}Ir_6$	4m'm'	s	h	C_{4v}	FiM
1.0.28	$C_9H_9O_{18}Tb_3$	3m'	s	f	C_{3v}	FiM
0.38	$Fe_8Ga_8O_{24}$	m'm2'	d	f	C_{2v}	FiM
1.277	$Cr_{16}Fe_4Li_4O_{32}$	$\overline{4}2$'m'	s	f	D_{2d}	FiM
0.35	$Cu_{16}O_{32}Se_8$	3.1	s	p	C_3	FiM
2.74	$Ba_{12}Dy_{24}O_{48}$	2'	s	p	C_2	FiM
1.0.57	$Al_{36}Ge_{36}Nd_{36}$	m'm'2	s	f	C_{2v}	FiM
0.333	$Mn_4Mo_6O_{16}$	6m'm'	s	j	C_{6v}	CFM
0.31	$F_{18}Fe_3Mn_3Na_3$	32'	s	p	D_3	CFM
0.1084	$Fe_8O_{20}Sr_8$	m'm'2	s	f	C_{2v}	CFM
0.3	$Fe_{16}O_{24}$	m'm2'	d	f	C_{2v}	CFM
0.299	$Fe_{16}O_{24}$	m'm2'	d	f	C_{2v}	CFM
0.1065	$Ge_4Mn_4N_8$	m'm2'	d	f	C_{2v}	AM
0.1066	$Mn_4N_8Si_4$	m'm2'	d	f	C_{2v}	AM
0.712	$Nb_6S_{12}V_2$	2'2'2	s	p	D_2	AM
0.83	$Fe_2Li_2O_{14}P_4$	2.1	s	p	C_2	AM
0.56	$Ba_4Co_2Ge_4O_{14}$	m'm2'	d	f	C_{2v}	AM

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ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
0.338	$Co_4Mo_6O_{16}$	6'mm'	g	j	C_{6v}	AM
0.332	$Co_4Mo_6O_{16}$	6'mm'	g	j	C_{6v}	AM
0.331	$Fe_4Mo_6O_{16}$	6'mm'	g	j	C_{6v}	AM
0.681	$Ce_{16}Sb_{12}$	$\overline{4}$'2m'	d	f	D_{2d}	AM
0.5	$Mn_6O_{18}Ti_6$	m'	s	p	C_s	AM
0.241	$Cu_8O_{20}Y_8$	mm2.1	d	f	C_{2v}	AM
1.0.48	$Mn_{12}Se_{24}$	m'm2'	d	f	C_{2v}	AM
0.999	$Fe_{16}O_{20}$	m'm2'	d	f	C_{2v}	AM
0.1082	$Cr_4Lu_4O_{24}W_4$	mm2.1	d	f	C_{2v}	AM
0.823	$Ga_4Mn_4O_{20}Sr_8$	m'm2'	d	f	C_{2v}	AM
0.23	$Ca_{12}Mn_8O_{28}$	m'm2'	d	f	C_{2v}	AM
0.575	$H_{16}F_{20}Fe_4O_8Zn_4$	mm2.1	d	f	C_{2v}	AM
0.722	$Mn_{16}Nb_8O_{36}$	m.1	s	p	C_s	AM
0.137	$Cu_{16}O_{56}V_{16}$	m'm'2	s	f	C_{2v}	AM
0.254	$C_{16}H_{36}Cu_4N_{12}O_{24}$	mm2.1	d	f	C_{2v}	AM
0.255	$C_{16}H_{36}Cu_4N_{12}O_{24}$	m'm'2	s	f	C_{2v}	AM
0.967	$Ba_8Mn_{16}O_{64}V_{16}$	m'm2'	d	f	C_{2v}	AM
0.62	$Mn_{16}O_{64}Sr_8V_{16}$	m'm2'	d	f	C_{2v}	AM
0.405	$Co_{20}Cs_{20}F_{80}$	$\overline{4}$'	d	f	S_4	AM
0.973	$Ho_3In_3Pd_3$	$\overline{6}$m'2'	s	f	D_{3h}	FM
0.977	$In_3Nd_3Pd_3$	m'	s	p	C_s	FM
0.978	$Er_3In_3Ni_3$	$\overline{6}$m'2'	s	f	D_{3h}	FM
0.974	$Er_3In_3Pd_3$	$\overline{6}$m'2'	s	f	D_{3h}	FM

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ID	Material	MPG	Wave	Wave (no Tbp)	PG	Magtype
0.975	$Er_3In_3Pd_3$	$\bar{6}$m'2'	s	f	D_{3h}	FM
0.972	$Ho_3In_3Pd_3$	$\bar{6}$m'2'	s	f	D_{3h}	FM
0.832	$Au_4Ce_4Ge_4$	m'm2'	d	f	C_{2v}	FM

B. Results for Material Project Database

For the Materials Project database [13], we focused on compounds with no more than ten atoms per unit cell and two magnetic atoms. Through high-throughput calculations, we screened 4,228 candidate collinear magnetic materials, together with their MPGs and magnetic axis orientations, and further classified the PAM wave type of each material. The corresponding results are summarized in the following four tables.

1. *Nonaxial Phonon Materials*

TABLE S8: List of materials with non-axial phonon. Magtype indicates the magnetic ordering type. FM, AM, and CFM stand for ferromagnetic, antiferromagnetic, and compensated ferrimagnetic orderings, respectively. PG indicates the point group of the magnetic space group.

Id	Material	MPG	Magtype	PG
mp-1274857	$Ni(HO)_2$	$\bar{1}$.1'	AFM	C_i
mp-755520	$NaMnO_2$	$\bar{1}$.1'	AFM	C_i
mp-1003311	$CaMn_2O_4$	$\bar{1}$'	AFM	C_i
mp-1173360	$Os(OF)_2$	$\bar{1}$'	AFM	C_i
mp-1178374	$CuCO_3$	$\bar{1}$'	AFM	C_i
mp-1179381	$TiCoO_3$	$\bar{1}$'	AFM	C_i
mp-1180203	MoO_4	$\bar{1}$'	AFM	C_i
mp-1181816	$MnSnO_3$	$\bar{1}$'	AFM	C_i
mp-1300873	MoO_4	$\bar{1}$'	AFM	C_i
mp-1404938	$AlCoO_3$	$\bar{1}$'	AFM	C_i
mp-1405591	$MnAlO_3$	$\bar{1}$'	AFM	C_i

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Id	Material	MPG	Magtype	PG
mp-487	MnP_4	$\overline{1}$'	AFM	C_i
mp-697089	$TiMnO_3$	$\overline{1}$'	AFM	C_i
mp-743867	$TiMnO_3$	$\overline{1}$'	AFM	C_i
mp-757083	$CoBO_3$	$\overline{1}$'	AFM	C_i
mp-774250	$MnAlO_3$	$\overline{1}$'	AFM	C_i
mp-776216	$AlCoO_3$	$\overline{1}$'	AFM	C_i
mp-867782	MnOF	$\overline{1}$'	AFM	C_i
mp-1178576	$AlCoO_3$	$\overline{3}$'	AFM	C_{3i}
mp-1220950	$NaPr_2Cl_6$	$\overline{3}$'	AFM	C_{3i}
mp-18732	$TiNiO_3$	$\overline{3}$'	AFM	C_{3i}
mp-19082	$TiMnO_3$	$\overline{3}$'	AFM	C_{3i}
mp-20569	$MnSnO_3$	$\overline{3}$'	AFM	C_{3i}
mp-20798	$MnGeO_3$	$\overline{3}$'	AFM	C_{3i}
mp-23204	$FeCl_3$	$\overline{3}$'	AFM	C_{3i}
mp-752607	$LiVF_3$	$\overline{3}$'	AFM	C_{3i}
mp-752829	$LiMnF_3$	$\overline{3}$'	AFM	C_{3i}
mp-753992	$CoAgO_3$	$\overline{3}$'	AFM	C_{3i}
mp-754051	$LiFeF_3$	$\overline{3}$'	AFM	C_{3i}
mp-754636	$ErBiO_3$	$\overline{3}$'	AFM	C_{3i}
mp-754915	$NaFeO_3$	$\overline{3}$'	AFM	C_{3i}
mp-754980	$ZrMnO_3$	$\overline{3}$'	AFM	C_{3i}
mp-755657	$TiVO_3$	$\overline{3}$'	AFM	C_{3i}
mp-761524	$MgCoO_3$	$\overline{3}$'	AFM	C_{3i}

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Id	Material	MPG	Magtype	PG
mp-8695	$MnPSe_3$	$\bar{3}$’	AFM	C_{3i}
mp-998602	$RbOsO_3$	$\bar{3}$’	AFM	C_{3i}
mp-1101339	$TbGaO_3$	$\bar{3}$’m	AFM	D_{3d}
mp-3466	$PrAlO_3$	$\bar{3}$’m	AFM	D_{3d}
mp-1008632	V_2C	$\bar{3}$’m’	AFM	D_{3d}
mp-1025163	$Gd_2C(NO)_2$	$\bar{3}$’m’	AFM	D_{3d}
mp-1072114	HoOF	$\bar{3}$’m’	AFM	D_{3d}
mp-1072193	ErOF	$\bar{3}$’m’	AFM	D_{3d}
mp-10733	Sm_2O_3	$\bar{3}$’m’	AFM	D_{3d}
mp-1077381	Eu_2BBrN_2	$\bar{3}$’m’	AFM	D_{3d}
mp-1078896	$Mn_2Ga_2S_5$	$\bar{3}$’m’	AFM	D_{3d}
mp-1079795	$Ga_2Fe_2S_5$	$\bar{3}$’m’	AFM	D_{3d}
mp-10933	Nd_2TeS_2	$\bar{3}$’m’	AFM	D_{3d}
mp-1101455	NdIO	$\bar{3}$’m’	AFM	D_{3d}
mp-1178362	DyClO	$\bar{3}$’m’	AFM	D_{3d}
mp-1178920	$TlFeO_2$	$\bar{3}$’m’	AFM	D_{3d}
mp-1206235	PrSiI	$\bar{3}$’m’	AFM	D_{3d}
mp-1206452	Gd_2GeBr_2	$\bar{3}$’m’	AFM	D_{3d}
mp-1207031	GdGaI	$\bar{3}$’m’	AFM	D_{3d}
mp-1216546	Tm_2C	$\bar{3}$’m’	AFM	D_{3d}
mp-1216616	V_2CN	$\bar{3}$’m’	AFM	D_{3d}
mp-1216970	TiGaCu	$\bar{3}$’m’	AFM	D_{3d}
mp-1217683	Tb_2Al_3Pt	$\bar{3}$’m’	AFM	D_{3d}

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Id	Material	MPG	Magtype	PG
mp-1217695	Tb_2Mg_5Ag	$\bar{3}$'m'	AFM	D_{3d}
mp-1218997	SmSbPd	$\bar{3}$'m'	AFM	D_{3d}
mp-1219107	SmCdIn	$\bar{3}$'m'	AFM	D_{3d}
mp-1219144	Sm_2AsSe	$\bar{3}$'m'	AFM	D_{3d}
mp-1219724	PrCdIn	$\bar{3}$'m'	AFM	D_{3d}
mp-1219836	Pr_2Y	$\bar{3}$'m'	AFM	D_{3d}
mp-1220072	NdSnAu	$\bar{3}$'m'	AFM	D_{3d}
mp-1220073	NdZnSn	$\bar{3}$'m'	AFM	D_{3d}
mp-1220079	Ni_2H	$\bar{3}$'m'	AFM	D_{3d}
mp-1220200	NdAsPd	$\bar{3}$'m'	AFM	D_{3d}
mp-1220203	NdCdIn	$\bar{3}$'m'	AFM	D_{3d}
mp-1220274	Nd_2Y	$\bar{3}$'m'	AFM	D_{3d}
mp-1220320	Nd_2Al_3Ga	$\bar{3}$'m'	AFM	D_{3d}
mp-1221540	Mn_2SeS	$\bar{3}$'m'	AFM	D_{3d}
mp-1221790	Mn_2TeSe	$\bar{3}$'m'	AFM	D_{3d}
mp-1221793	Mn_2N	$\bar{3}$'m'	AFM	D_{3d}
mp-1221890	Mn_2CdTe_3	$\bar{3}$'m'	AFM	D_{3d}
mp-1222074	$Mn_2In_2Se_5$	$\bar{3}$'m'	AFM	D_{3d}
mp-1223868	HoCdIn	$\bar{3}$'m'	AFM	D_{3d}
mp-1223948	HoAgSn	$\bar{3}$'m'	AFM	D_{3d}
mp-1225037	Er_2Al_3Ga	$\bar{3}$'m'	AFM	D_{3d}
mp-1225317	DyAgSn	$\bar{3}$'m'	AFM	D_{3d}
mp-1225429	Eu_2Al_3Ag	$\bar{3}$'m'	AFM	D_{3d}

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Id	Material	MPG	Magtype	PG
mp-1225605	ErAgPb	$\bar{3}$'m'	AFM	D_{3d}
mp-1226378	Cr_2C	$\bar{3}$'m'	AFM	D_{3d}
mp-1227043	$CaSm_2S_3$	$\bar{3}$'m'	AFM	D_{3d}
mp-1227083	$CaMn_2Te_3$	$\bar{3}$'m'	AFM	D_{3d}
mp-1235237	$LiPr_2Zn_2(PO)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-1235478	$LiDy_2(OF)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-1235976	$LiHo_2O_3$	$\bar{3}$'m'	AFM	D_{3d}
mp-1245585	Mn_2InN_2	$\bar{3}$'m'	AFM	D_{3d}
mp-1245923	$Sr(CrN)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-1245930	$Ba(FeN)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-1246182	$Ba(MnN)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-1246467	$Ba(CrN)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-1246511	$Sr(CoN)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-1246548	$In(FeN)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-1246719	$Cd(CoN)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-1246881	Fe_2PbN_2	$\bar{3}$'m'	AFM	D_{3d}
mp-1246947	$In(CoN)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-1247374	$Sr(MnN)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-1247409	Co_2PbN_2	$\bar{3}$'m'	AFM	D_{3d}
mp-1247441	$Zr(CoN)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-12668	Tb_2SO_2	$\bar{3}$'m'	AFM	D_{3d}
mp-12670	Ho_2SO_2	$\bar{3}$'m'	AFM	D_{3d}
mp-12672	Yb_2SO_2	$\bar{3}$'m'	AFM	D_{3d}

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Id	Material	MPG	Magtype	PG
mp-13039	$Tm_2C(NO)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-13041	$Yb_2C(NO)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-13065	Ho_2O_3	$\bar{3}$'m'	AFM	D_{3d}
mp-13067	Tm_2O_3	$\bar{3}$'m'	AFM	D_{3d}
mp-13206	PrZnPO	$\bar{3}$'m'	AFM	D_{3d}
mp-13971	Nd_2SeO_2	$\bar{3}$'m'	AFM	D_{3d}
mp-13973	Gd_2SeO_2	$\bar{3}$'m'	AFM	D_{3d}
mp-13974	Ho_2SeO_2	$\bar{3}$'m'	AFM	D_{3d}
mp-13976	Yb_2SeO_2	$\bar{3}$'m'	AFM	D_{3d}
mp-1640	Ho_2C	$\bar{3}$'m'	AFM	D_{3d}
mp-19366	$Lu(FeO_2)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-20374	$Ho_2C(NO)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-20470	Gd_2O_3	$\bar{3}$'m'	AFM	D_{3d}
mp-2063	Pr_2O_3	$\bar{3}$'m'	AFM	D_{3d}
mp-20693	$In(FeO_2)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-21071	Eu_2SO_2	$\bar{3}$'m'	AFM	D_{3d}
mp-2223690	$MgTl_2(FeO_2)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-2225849	$MgCr_2O_4$	$\bar{3}$'m'	AFM	D_{3d}
mp-22338	EuOF	$\bar{3}$'m'	AFM	D_{3d}
mp-2763	Nd_2O_3	$\bar{3}$'m'	AFM	D_{3d}
mp-29394	Gd_2CCl_2	$\bar{3}$'m'	AFM	D_{3d}
mp-29615	$Ca(MnBi)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-2968	$Sr(MnSb)_2$	$\bar{3}$'m'	AFM	D_{3d}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-3211	Nd_2SO_2	$\bar{3}$'m'	AFM	D_{3d}
mp-3236	Pr_2SO_2	$\bar{3}$'m'	AFM	D_{3d}
mp-3556	Tm_2SO_2	$\bar{3}$'m'	AFM	D_{3d}
mp-4150	$Ca(MnSb)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-4343	$Sr(MnAs)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-4805	Gd_2SO_2	$\bar{3}$'m'	AFM	D_{3d}
mp-545506	GdZnPO	$\bar{3}$'m'	AFM	D_{3d}
mp-5498	$Ca(MnAs)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-550820	SmZnPO	$\bar{3}$'m'	AFM	D_{3d}
mp-5589	$Sr(MnP)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-5598	Sm_2SO_2	$\bar{3}$'m'	AFM	D_{3d}
mp-5634	NdOF	$\bar{3}$'m'	AFM	D_{3d}
mp-607310	$TlFeO_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-608823	$Ga_2Fe_2S_5$	$\bar{3}$'m'	AFM	D_{3d}
mp-6953	$Ca(MnP)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-753721	GdOF	$\bar{3}$'m'	AFM	D_{3d}
mp-753890	Ni_2H	$\bar{3}$'m'	AFM	D_{3d}
mp-754827	Tm_2TeO_2	$\bar{3}$'m'	AFM	D_{3d}
mp-755340	Tb_2SeO_2	$\bar{3}$'m'	AFM	D_{3d}
mp-755565	HoBrO	$\bar{3}$'m'	AFM	D_{3d}
mp-756381	$LiFe_2O_3$	$\bar{3}$'m'	AFM	D_{3d}
mp-768908	Ho_2TeO_2	$\bar{3}$'m'	AFM	D_{3d}
mp-769173	PrOF	$\bar{3}$'m'	AFM	D_{3d}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-772295	TmClO	$\bar{3}$'m'	AFM	D_{3d}
mp-8301	Gd_2CF_2	$\bar{3}$'m'	AFM	D_{3d}
mp-8322	Mn_2ZnAs_2	$\bar{3}$'m'	AFM	D_{3d}
mp-9006	Ho_2CF_2	$\bar{3}$'m'	AFM	D_{3d}
mp-9488	SmOF	$\bar{3}$'m'	AFM	D_{3d}
mp-9497	$Pr_2C(NO)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-9498	$Nd_2C(NO)_2$	$\bar{3}$'m'	AFM	D_{3d}
mp-9518	NdZnPO	$\bar{3}$'m'	AFM	D_{3d}
mp-1221953	$MgNiO_2$	$\bar{3}$m.1'	AFM	D_{3d}
mp-1232560	CrN	$\bar{3}$m.1'	AFM	D_{3d}
mp-19006	MnO	$\bar{3}$m.1'	AFM	D_{3d}
mp-19079	CoO	$\bar{3}$m.1'	AFM	D_{3d}
mp-19184	VO	$\bar{3}$m.1'	AFM	D_{3d}
mp-19308	Li_2NiO_2	$\bar{3}$m.1'	AFM	D_{3d}
mp-2065	MnS	$\bar{3}$m.1'	AFM	D_{3d}
mp-23789	$Mn(HO)_2$	$\bar{3}$m.1'	AFM	D_{3d}
mp-714885	VO	$\bar{3}$m.1'	AFM	D_{3d}
mp-1025023	TbCBr	2'/m	AFM	C_{2h}
mp-1025175	$Lu_2Cr_2C_3$	2'/m	AFM	C_{2h}
mp-1025290	$La_2Fe_2Si_2C$	2'/m	AFM	C_{2h}
mp-1025339	$Y_2Fe_2Si_2C$	2'/m	AFM	C_{2h}
mp-1025461	$PrBrO_2$	2'/m	AFM	C_{2h}
mp-1025493	$HoClO_2$	2'/m	AFM	C_{2h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-1025511	$NdBrO_2$	2'/m	AFM	C_{2h}
mp-1039304	$CeMg_2$	2'/m	AFM	C_{2h}
mp-1048	TiNi	2'/m	AFM	C_{2h}
mp-1048410	VN	2'/m	AFM	C_{2h}
mp-1072023	$CrPb_2$	2'/m	AFM	C_{2h}
mp-1072660	VAs_2	2'/m	AFM	C_{2h}
mp-1077235	SmO_2	2'/m	AFM	C_{2h}
mp-1078670	$EuHO_3$	2'/m	AFM	C_{2h}
mp-1078838	$TiFeH_2$	2'/m	AFM	C_{2h}
mp-1079326	$GdClO_2$	2'/m	AFM	C_{2h}
mp-1079427	Na_2CuO_2	2'/m	AFM	C_{2h}
mp-1079621	$SmClO_2$	2'/m	AFM	C_{2h}
mp-1079939	FeH_4	2'/m	AFM	C_{2h}
mp-1080020	$LiMoO_2$	2'/m	AFM	C_{2h}
mp-1080180	$Eu(GePt)_2$	2'/m	AFM	C_{2h}
mp-1087474	$PrClO_2$	2'/m	AFM	C_{2h}
mp-1091386	Lu_2CoGe_2	2'/m	AFM	C_{2h}
mp-1101075	$Y_3(CoGe_2)_2$	2'/m	AFM	C_{2h}
mp-1120786	VBi_2	2'/m	AFM	C_{2h}
mp-1173362	PrSO	2'/m	AFM	C_{2h}
mp-12004	$Er_2Al_3Si_2$	2'/m	AFM	C_{2h}
mp-12005	$Tm_2Al_3Si_2$	2'/m	AFM	C_{2h}
mp-1206067	$NdClO_2$	2'/m	AFM	C_{2h}

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Id	Material	MPG	Magtype	PG
mp-1206243	HoO_2	2'/m	AFM	C_{2h}
mp-1206296	Y_2CoSi_2	2'/m	AFM	C_{2h}
mp-1206313	TmO_2	2'/m	AFM	C_{2h}
mp-1206663	$GdBrO_2$	2'/m	AFM	C_{2h}
mp-1206731	DyO_2	2'/m	AFM	C_{2h}
mp-1206782	La_2Co_2Si	2'/m	AFM	C_{2h}
mp-1206816	$TbClO_2$	2'/m	AFM	C_{2h}
mp-1209538	Rb_2Mo	2'/m	AFM	C_{2h}
mp-1216557	TmAlGa	2'/m	AFM	C_{2h}
mp-1216607	TmGePd	2'/m	AFM	C_{2h}
mp-1217526	TbGePd	2'/m	AFM	C_{2h}
mp-1219017	SmGePd	2'/m	AFM	C_{2h}
mp-1219110	SmAlZn	2'/m	AFM	C_{2h}
mp-1219999	PrGePd	2'/m	AFM	C_{2h}
mp-1220139	NdGePt	2'/m	AFM	C_{2h}
mp-1220396	$NbMoSe_3$	2'/m	AFM	C_{2h}
mp-1223915	HoGePd	2'/m	AFM	C_{2h}
mp-1223942	HoGaAu	2'/m	AFM	C_{2h}
mp-1223950	HoGaAg	2'/m	AFM	C_{2h}
mp-1224404	GeMoAs	2'/m	AFM	C_{2h}
mp-1225251	EuAgSn	2'/m	AFM	C_{2h}
mp-1225254	EuAgGe	2'/m	AFM	C_{2h}
mp-1225473	ErSiPd	2'/m	AFM	C_{2h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-1225546	ErGaAg	2'/m	AFM	C_{2h}
mp-1225581	DyGePd	2'/m	AFM	C_{2h}
mp-1225600	ErGePd	2'/m	AFM	C_{2h}
mp-1232136	$PrMgSe_3$	2'/m	AFM	C_{2h}
mp-1232160	$TbMgS_3$	2'/m	AFM	C_{2h}
mp-1232164	$ErMgS_3$	2'/m	AFM	C_{2h}
mp-1232282	$NdMgSe_3$	2'/m	AFM	C_{2h}
mp-1232288	$PmMgS_3$	2'/m	AFM	C_{2h}
mp-1232482	$CaMnBi_2$	2'/m	AFM	C_{2h}
mp-1235641	$LiNd_2O_6$	2'/m	AFM	C_{2h}
mp-1236316	$LiNd_2O_6$	2'/m	AFM	C_{2h}
mp-1236616	$LiNd_2O_6$	2'/m	AFM	C_{2h}
mp-1237572	TbSbPd	2'/m	AFM	C_{2h}
mp-1237948	$PmMgSe_3$	2'/m	AFM	C_{2h}
mp-1238023	$DyMgSe_3$	2'/m	AFM	C_{2h}
mp-1238813	$Li(CrS_2)_2$	2'/m	AFM	C_{2h}
mp-1238847	$Na(CrS_2)_2$	2'/m	AFM	C_{2h}
mp-1238855	$K(CrS_2)_2$	2'/m	AFM	C_{2h}
mp-1238890	Cr_2HgS_4	2'/m	AFM	C_{2h}
mp-1245929	$Cd(FeN)_2$	2'/m	AFM	C_{2h}
mp-1246604	Mn_2CdN_2	2'/m	AFM	C_{2h}
mp-1383267	Mg_2VN_2	2'/m	AFM	C_{2h}
mp-1385921	Ca_2NiN_2	2'/m	AFM	C_{2h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-1392436	Zn_2NiN_2	2'/m	AFM	C_{2h}
mp-1393899	$V(ZnN)_2$	2'/m	AFM	C_{2h}
mp-1394183	$Mn(ZnN)_2$	2'/m	AFM	C_{2h}
mp-1397348	Mg_2NiN_2	2'/m	AFM	C_{2h}
mp-1399565	CrO_2	2'/m	AFM	C_{2h}
mp-1400520	Ca_2CoN_2	2'/m	AFM	C_{2h}
mp-1402707	Mg_2MnN_2	2'/m	AFM	C_{2h}
mp-1408692	Zn_2FeN_2	2'/m	AFM	C_{2h}
mp-1408987	Mg_2FeN_2	2'/m	AFM	C_{2h}
mp-1412190	Mg_2CoN_2	2'/m	AFM	C_{2h}
mp-1446497	Ca_2MnN_2	2'/m	AFM	C_{2h}
mp-15681	$CrAs_2$	2'/m	AFM	C_{2h}
mp-2050200	VI_3	2'/m	AFM	C_{2h}
mp-2210627	$Mg(CoO_2)_2$	2'/m	AFM	C_{2h}
mp-2217264	$Na_2Mg(CuO_2)_2$	2'/m	AFM	C_{2h}
mp-2217427	$Rb_2Mg(FeO_2)_2$	2'/m	AFM	C_{2h}
mp-2222759	$K_2Mg(CoO_2)_2$	2'/m	AFM	C_{2h}
mp-2223319	$Mg(CoO_2)_2$	2'/m	AFM	C_{2h}
mp-2223614	$MgV_2H_2O_5$	2'/m	AFM	C_{2h}
mp-2225302	MgV_2O_4	2'/m	AFM	C_{2h}
mp-2225977	$Mg(VS_2)_2$	2'/m	AFM	C_{2h}
mp-2227097	$MgMn_2O_4$	2'/m	AFM	C_{2h}
mp-2227184	$Mg(FeO_2)_2$	2'/m	AFM	C_{2h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-2234285	$TiMnO_3$	2'/m	AFM	C_{2h}
mp-2240155	$K_2Mg(CuO_2)_2$	2'/m	AFM	C_{2h}
mp-2240470	$K_2Mg(FeO_2)_2$	2'/m	AFM	C_{2h}
mp-25228	$KMnO_2$	2'/m	AFM	C_{2h}
mp-25544	$KMnO_2$	2'/m	AFM	C_{2h}
mp-28770	Ca_2FeN_2	2'/m	AFM	C_{2h}
mp-29152	Zr_2CoP	2'/m	AFM	C_{2h}
mp-30410	Mn_2Au_5	2'/m	AFM	C_{2h}
mp-3194	$Tb_2Al_3Si_2$	2'/m	AFM	C_{2h}
mp-32564	NdO_3	2'/m	AFM	C_{2h}
mp-32749	NdO_3	2'/m	AFM	C_{2h}
mp-3328	$Ho_2Al_3Si_2$	2'/m	AFM	C_{2h}
mp-3618	Sc_2FeSi_2	2'/m	AFM	C_{2h}
mp-504801	$ErHO_2$	2'/m	AFM	C_{2h}
mp-549711	$CaFeClO_2$	2'/m	AFM	C_{2h}
mp-550454	$Ba_2Mn_2As_2O$	2'/m	AFM	C_{2h}
mp-611062	$EuSb_2$	2'/m	AFM	C_{2h}
mp-625147	$GdHO_2$	2'/m	AFM	C_{2h}
mp-626173	$HoHO_2$	2'/m	AFM	C_{2h}
mp-632348	$YbHO_2$	2'/m	AFM	C_{2h}
mp-638253	$EuIn_4$	2'/m	AFM	C_{2h}
mp-642644	V_2H	2'/m	AFM	C_{2h}
mp-643945	$TiFeH_2$	2'/m	AFM	C_{2h}

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Id	Material	MPG	Magtype	PG
mp-644762	$Eu(ZnSn)_2$	2'/m	AFM	C_{2h}
mp-676273	Pr_2SbO_2	2'/m	AFM	C_{2h}
mp-733415	$SmClO_2$	2'/m	AFM	C_{2h}
mp-752790	$LiFeO_3$	2'/m	AFM	C_{2h}
mp-753408	$KLiCoO_2$	2'/m	AFM	C_{2h}
mp-753595	$Mg_3Fe_2O_5$	2'/m	AFM	C_{2h}
mp-754483	$Na_3(CuO_2)_2$	2'/m	AFM	C_{2h}
mp-755177	$EuSeO_3$	2'/m	AFM	C_{2h}
mp-755179	$LiFeF_3$	2'/m	AFM	C_{2h}
mp-759749	$KFeO_2$	2'/m	AFM	C_{2h}
mp-771131	$NdZrO_3$	2'/m	AFM	C_{2h}
mp-774467	$LiVO_2$	2'/m	AFM	C_{2h}
mp-8848	$TaFeTe_3$	2'/m	AFM	C_{2h}
mp-989589	$LaMnN_3$	2'/m	AFM	C_{2h}
mp-989643	$LaCoN_3$	2'/m	AFM	C_{2h}
mp-1176388	Na_2FeO_2	2/m.1'	AFM	C_{2h}
mp-1178763	VS_2	2/m.1'	AFM	C_{2h}
mp-1272749	CoO_2	2/m.1'	AFM	C_{2h}
mp-1272771	LiFeOF	2/m.1'	AFM	C_{2h}
mp-1273062	$Co(HO)_2$	2/m.1'	AFM	C_{2h}
mp-2039668	VF_4	2/m.1'	AFM	C_{2h}
mp-25234	CoO_2	2/m.1'	AFM	C_{2h}
mp-715262	FeO	2/m.1'	AFM	C_{2h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-753393	$NaVO_2$	2/m.1’	AFM	C_{2h}
mp-754400	KVO_2	2/m.1’	AFM	C_{2h}
mp-755372	Li_2MnO_2	2/m.1’	AFM	C_{2h}
mp-865631	$LiNiO_2$	2/m.1’	AFM	C_{2h}
mp-867719	$FePtO_2$	2/m.1’	AFM	C_{2h}
mp-1077301	EuC_2	2/m’	AFM	C_{2h}
mp-1078971	VPS_3	2/m’	AFM	C_{2h}
mp-1079754	$NiPSe_3$	2/m’	AFM	C_{2h}
mp-1226225	CrBW	2/m’	AFM	C_{2h}
mp-22853	$MoCl_3$	2/m’	AFM	C_{2h}
mp-27182	$GdBr_3$	2/m’	AFM	C_{2h}
mp-3827	$KFeS_2$	2/m’	AFM	C_{2h}
mp-3849	$TlFeS_2$	2/m’	AFM	C_{2h}
mp-5372	$RbFeS_2$	2/m’	AFM	C_{2h}
mp-676040	$NiPS_3$	2/m’	AFM	C_{2h}
mp-676437	$CoPS_3$	2/m’	AFM	C_{2h}
mp-7086	$RbFeSe_2$	2/m’	AFM	C_{2h}
mp-7302	CrP_4	2/m’	AFM	C_{2h}
mp-8251	VP_4	2/m’	AFM	C_{2h}
mp-8613	$MnPS_3$	2/m’	AFM	C_{2h}
mp-9810	$TlFeSe_2$	2/m’	AFM	C_{2h}
mp-9884	$KFeSe_2$	2/m’	AFM	C_{2h}
mp-1077893	$Ba(FeSe_2)_2$	4’/m’	AFM	C_{4h}

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Id	Material	MPG	Magtype	PG
mp-27660	$Ba(FeS_2)_2$	4'/m'	AFM	C_{4h}
mp-1005693	Sm_2InHg	4'/m'm'm	AFM	D_{4h}
mp-1018658	CaCoSi	4'/m'm'm	AFM	D_{4h}
mp-1018720	HfVSi	4'/m'm'm	AFM	D_{4h}
mp-1018726	HfVGe	4'/m'm'm	AFM	D_{4h}
mp-1018739	KMnBi	4'/m'm'm	AFM	D_{4h}
mp-1018740	LaCoSi	4'/m'm'm	AFM	D_{4h}
mp-1018786	LiMnSb	4'/m'm'm	AFM	D_{4h}
mp-1018802	MnGaGe	4'/m'm'm	AFM	D_{4h}
mp-1018808	MgCoGe	4'/m'm'm	AFM	D_{4h}
mp-1018949	RbMnBi	4'/m'm'm	AFM	D_{4h}
mp-1025165	$Zr(VGa_2)_2$	4'/m'm'm	AFM	D_{4h}
mp-1025167	$Hf(VGa_2)_2$	4'/m'm'm	AFM	D_{4h}
mp-1025365	$Sc(VGa_2)_2$	4'/m'm'm	AFM	D_{4h}
mp-1061	$PrPt_2$	4'/m'm'm	AFM	D_{4h}
mp-10633	TmS_2	4'/m'm'm	AFM	D_{4h}
mp-1065115	MoPb	4'/m'm'm	AFM	D_{4h}
mp-1068010	$Ba(MnBi)_2$	4'/m'm'm	AFM	D_{4h}
mp-1068250	$Ca(FeSi)_2$	4'/m'm'm	AFM	D_{4h}
mp-1070151	$K(FeS)_2$	4'/m'm'm	AFM	D_{4h}
mp-1070253	$Ba(CoGe)_2$	4'/m'm'm	AFM	D_{4h}
mp-1071293	CsMnAs	4'/m'm'm	AFM	D_{4h}
mp-1071768	$TbGe_2$	4'/m'm'm	AFM	D_{4h}

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Id	Material	MPG	Magtype	PG
mp-1072167	EuN_2	4'/m'm'm	AFM	D_{4h}
mp-1072248	$EuSi_2$	4'/m'm'm	AFM	D_{4h}
mp-1072982	$GdGe_2$	4'/m'm'm	AFM	D_{4h}
mp-1077053	CsMnBi	4'/m'm'm	AFM	D_{4h}
mp-1077147	$HoSi_2$	4'/m'm'm	AFM	D_{4h}
mp-1077267	$ErSi_2$	4'/m'm'm	AFM	D_{4h}
mp-1077378	CsMnP	4'/m'm'm	AFM	D_{4h}
mp-1077398	$TbSi_2$	4'/m'm'm	AFM	D_{4h}
mp-1078723	$CeTlSe_2$	4'/m'm'm	AFM	D_{4h}
mp-1078949	BaMnSbF	4'/m'm'm	AFM	D_{4h}
mp-1079008	LaCoAsO	4'/m'm'm	AFM	D_{4h}
mp-1079119	$LaFeSb_2$	4'/m'm'm	AFM	D_{4h}
mp-1079195	SrMnPF	4'/m'm'm	AFM	D_{4h}
mp-1079721	$SrMnSb_2$	4'/m'm'm	AFM	D_{4h}
mp-1079792	$CeTlTe_2$	4'/m'm'm	AFM	D_{4h}
mp-1079799	$BaMnBi_2$	4'/m'm'm	AFM	D_{4h}
mp-1080113	$ScFeC_2$	4'/m'm'm	AFM	D_{4h}
mp-1080128	SrMnSbF	4'/m'm'm	AFM	D_{4h}
mp-1080252	$CeSe_2$	4'/m'm'm	AFM	D_{4h}
mp-1080591	CaFeAsF	4'/m'm'm	AFM	D_{4h}
mp-1080749	$CsFeO_2$	4'/m'm'm	AFM	D_{4h}
mp-1084797	$Ho(BC)_2$	4'/m'm'm	AFM	D_{4h}
mp-1095117	$Pr(BC)_2$	4'/m'm'm	AFM	D_{4h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-1100762	Pm_2TlAg	4'/m'm'm	AFM	D_{4h}
mp-1101668	$NaCeO_2$	4'/m'm'm	AFM	D_{4h}
mp-11181	$Cs(MnP)_2$	4'/m'm'm	AFM	D_{4h}
mp-1127	$SmPt_2$	4'/m'm'm	AFM	D_{4h}
mp-1147521	$CsCoO_2$	4'/m'm'm	AFM	D_{4h}
mp-1147736	$RbCoO_2$	4'/m'm'm	AFM	D_{4h}
mp-1176614	LiMnP	4'/m'm'm	AFM	D_{4h}
mp-1183041	$ZrZnCo_2$	4'/m'm'm	AFM	D_{4h}
mp-1183187	$AlFe_2Ge$	4'/m'm'm	AFM	D_{4h}
mp-1183877	Eu_2CdGa	4'/m'm'm	AFM	D_{4h}
mp-1183884	Eu_2MgTl	4'/m'm'm	AFM	D_{4h}
mp-1183890	Eu_2AgSn	4'/m'm'm	AFM	D_{4h}
mp-1183896	Eu_2AgGe	4'/m'm'm	AFM	D_{4h}
mp-1183962	Eu_2CdPb	4'/m'm'm	AFM	D_{4h}
mp-1184025	Eu_2MgIn	4'/m'm'm	AFM	D_{4h}
mp-1184070	Dy_2ZnPt	4'/m'm'm	AFM	D_{4h}
mp-1184077	Er_2ZnGa	4'/m'm'm	AFM	D_{4h}
mp-1184082	Er_2ZnHg	4'/m'm'm	AFM	D_{4h}
mp-1184085	Er_2AgPt	4'/m'm'm	AFM	D_{4h}
mp-1184086	Er_2MgCd	4'/m'm'm	AFM	D_{4h}
mp-1184088	Er_2TlIn	4'/m'm'm	AFM	D_{4h}
mp-1184089	Dy_2AgAu	4'/m'm'm	AFM	D_{4h}
mp-1184090	Er_2MgGa	4'/m'm'm	AFM	D_{4h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-1184099	Er_2PdPt	4'/m'm'm	AFM	D_{4h}
mp-1184101	Er_2TlHg	4'/m'm'm	AFM	D_{4h}
mp-1184102	Er_2InHg	4'/m'm'm	AFM	D_{4h}
mp-1184106	Er_2AlCd	4'/m'm'm	AFM	D_{4h}
mp-1184108	Er_2TlZn	4'/m'm'm	AFM	D_{4h}
mp-1184110	Er_2AgAu	4'/m'm'm	AFM	D_{4h}
mp-1184111	Dy_2MgCd	4'/m'm'm	AFM	D_{4h}
mp-1184152	Dy_2GaAg	4'/m'm'm	AFM	D_{4h}
mp-1184170	Dy_2InAg	4'/m'm'm	AFM	D_{4h}
mp-1184199	Eu_2AgPb	4'/m'm'm	AFM	D_{4h}
mp-1184269	$ErMg_2$	4'/m'm'm	AFM	D_{4h}
mp-1184286	Eu_2TlSn	4'/m'm'm	AFM	D_{4h}
mp-1184310	Eu_2ZnGa	4'/m'm'm	AFM	D_{4h}
mp-1184464	Eu_2ZnIn	4'/m'm'm	AFM	D_{4h}
mp-1184473	Eu_2TlIn	4'/m'm'm	AFM	D_{4h}
mp-1184617	Ho_2ZnAu	4'/m'm'm	AFM	D_{4h}
mp-1184618	Ho_2TlHg	4'/m'm'm	AFM	D_{4h}
mp-1184622	Ho_2AgAu	4'/m'm'm	AFM	D_{4h}
mp-1184624	Ho_2MgCd	4'/m'm'm	AFM	D_{4h}
mp-1184627	Ho_2CdHg	4'/m'm'm	AFM	D_{4h}
mp-1184628	Ho_2TlZn	4'/m'm'm	AFM	D_{4h}
mp-1184634	Ho_2ZnAg	4'/m'm'm	AFM	D_{4h}
mp-1184643	Ho_2InHg	4'/m'm'm	AFM	D_{4h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-1184644	Ho_2TlIn	4'/m'm'm	AFM	D_{4h}
mp-1184662	Ho_2GaAg	4'/m'm'm	AFM	D_{4h}
mp-1184691	Ho_2AgHg	4'/m'm'm	AFM	D_{4h}
mp-1185324	$LiDy_2In$	4'/m'm'm	AFM	D_{4h}
mp-1185326	$LiDy_2Pt$	4'/m'm'm	AFM	D_{4h}
mp-1185327	$LiDy_2Tl$	4'/m'm'm	AFM	D_{4h}
mp-1185328	$LiHo_2In$	4'/m'm'm	AFM	D_{4h}
mp-1185330	$LiEr_2Au$	4'/m'm'm	AFM	D_{4h}
mp-1185347	$LiDy_2Ga$	4'/m'm'm	AFM	D_{4h}
mp-1185391	$LiPr_2Al$	4'/m'm'm	AFM	D_{4h}
mp-1185403	$LiPr_2Ga$	4'/m'm'm	AFM	D_{4h}
mp-1185849	$MgCo_2Si$	4'/m'm'm	AFM	D_{4h}
mp-1185926	Mn_2PdPt	4'/m'm'm	AFM	D_{4h}
mp-1186139	$NaEu_2Tl$	4'/m'm'm	AFM	D_{4h}
mp-1186236	Nd_2CdAg	4'/m'm'm	AFM	D_{4h}
mp-1186238	Nd_2GaAg	4'/m'm'm	AFM	D_{4h}
mp-1186249	Nd_2InHg	4'/m'm'm	AFM	D_{4h}
mp-1186257	Nd_2ZnHg	4'/m'm'm	AFM	D_{4h}
mp-1186261	Nd_2TlIn	4'/m'm'm	AFM	D_{4h}
mp-1186279	Nd_2InAg	4'/m'm'm	AFM	D_{4h}
mp-1186436	Pm_2CdHg	4'/m'm'm	AFM	D_{4h}
mp-1186473	Pm_2PdAu	4'/m'm'm	AFM	D_{4h}
mp-1186479	Pm_2SiPt	4'/m'm'm	AFM	D_{4h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-1186693	Pr_2MgCd	4'/m'm'm	AFM	D_{4h}
mp-1186695	Pr_2TlHg	4'/m'm'm	AFM	D_{4h}
mp-1186712	Pr_2ZnIn	4'/m'm'm	AFM	D_{4h}
mp-1186729	Pr_2MgIn	4'/m'm'm	AFM	D_{4h}
mp-1187000	Sm_2GaAg	4'/m'm'm	AFM	D_{4h}
mp-1187001	Sm_2TlIn	4'/m'm'm	AFM	D_{4h}
mp-1187002	Sm_2MgCd	4'/m'm'm	AFM	D_{4h}
mp-1187015	Sm_2HgPb	4'/m'm'm	AFM	D_{4h}
mp-1187051	Sm_2CdIn	4'/m'm'm	AFM	D_{4h}
mp-1187175	$SrCaEu_2$	4'/m'm'm	AFM	D_{4h}
mp-1187179	Sm_2MgIn	4'/m'm'm	AFM	D_{4h}
mp-1187225	$TaFe_2Ge$	4'/m'm'm	AFM	D_{4h}
mp-1187605	Tm_2PdAu	4'/m'm'm	AFM	D_{4h}
mp-1187676	$TmMg_2$	4'/m'm'm	AFM	D_{4h}
mp-1187823	Tm_2InHg	4'/m'm'm	AFM	D_{4h}
mp-1187911	$ZnGaCo_2$	4'/m'm'm	AFM	D_{4h}
mp-1188052	$ZrGaCo_2$	4'/m'm'm	AFM	D_{4h}
mp-1188066	$ZrInCo_2$	4'/m'm'm	AFM	D_{4h}
mp-1189	$PrAl_2$	4'/m'm'm	AFM	D_{4h}
mp-1205343	$CaMnSb_2$	4'/m'm'm	AFM	D_{4h}
mp-1206409	$K(FeP)_2$	4'/m'm'm	AFM	D_{4h}
mp-1206821	Cr_2O	4'/m'm'm	AFM	D_{4h}
mp-1206830	$Cs(CoAs)_2$	4'/m'm'm	AFM	D_{4h}

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Id	Material	MPG	Magtype	PG
mp-1207125	$Cs(FeP)_2$	4'/m'm'm	AFM	D_{4h}
mp-1207142	$Rb(CoAs)_2$	4'/m'm'm	AFM	D_{4h}
mp-1207438	Zr_4V	4'/m'm'm	AFM	D_{4h}
mp-1207477	Zr_4Mn	4'/m'm'm	AFM	D_{4h}
mp-12077	$Y(FeB)_2$	4'/m'm'm	AFM	D_{4h}
mp-1208	$ErAl_2$	4'/m'm'm	AFM	D_{4h}
mp-12084	$Lu(CrSi)_2$	4'/m'm'm	AFM	D_{4h}
mp-12091	$Tl(FeS)_2$	4'/m'm'm	AFM	D_{4h}
mp-1209175	Sc_4Fe	4'/m'm'm	AFM	D_{4h}
mp-12117	PrS_2	4'/m'm'm	AFM	D_{4h}
mp-12119	$Cs(FeSb)_2$	4'/m'm'm	AFM	D_{4h}
mp-1212224	Hf_4V	4'/m'm'm	AFM	D_{4h}
mp-1221492	Mo_2O	4'/m'm'm	AFM	D_{4h}
mp-1227741	$BaSr(MoO_3)_2$	4'/m'm'm	AFM	D_{4h}
mp-1227910	$BaLa(FeO_3)_2$	4'/m'm'm	AFM	D_{4h}
mp-1232269	SmS_2	4'/m'm'm	AFM	D_{4h}
mp-1232303	$RbNiO_2$	4'/m'm'm	AFM	D_{4h}
mp-1232310	$CsNiO_2$	4'/m'm'm	AFM	D_{4h}
mp-1232313	$BaCoO_2$	4'/m'm'm	AFM	D_{4h}
mp-12750	$SmGe_2$	4'/m'm'm	AFM	D_{4h}
mp-12770	$DySi_2$	4'/m'm'm	AFM	D_{4h}
mp-1283531	$LiVO_2$	4'/m'm'm	AFM	D_{4h}
mp-13914	$LiCo_2Ge$	4'/m'm'm	AFM	D_{4h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-13955	$SmSi_2$	4'/m'm'm	AFM	D_{4h}
mp-15608	$Ba(MnAs)_2$	4'/m'm'm	AFM	D_{4h}
mp-16331	ErS_2	4'/m'm'm	AFM	D_{4h}
mp-1697	$TbPt_2$	4'/m'm'm	AFM	D_{4h}
mp-18745	LaMnSbO	4'/m'm'm	AFM	D_{4h}
mp-18782	$LiFeO_2$	4'/m'm'm	AFM	D_{4h}
mp-18828	$TlFeO_2$	4'/m'm'm	AFM	D_{4h}
mp-19737	LaMnSi	4'/m'm'm	AFM	D_{4h}
mp-19824	$Ca(MnGe)_2$	4'/m'm'm	AFM	D_{4h}
mp-19857	$Ba(MnP)_2$	4'/m'm'm	AFM	D_{4h}
mp-19939	$La(CoGe)_2$	4'/m'm'm	AFM	D_{4h}
mp-20049	LiFeP	4'/m'm'm	AFM	D_{4h}
mp-20111	$EuAl_2$	4'/m'm'm	AFM	D_{4h}
mp-20189	SrMnGe	4'/m'm'm	AFM	D_{4h}
mp-20195	LaMnGe	4'/m'm'm	AFM	D_{4h}
mp-20227	NaMnP	4'/m'm'm	AFM	D_{4h}
mp-20233	CaMnSn	4'/m'm'm	AFM	D_{4h}
mp-20235	CaMnGe	4'/m'm'm	AFM	D_{4h}
mp-20242	RbMnAs	4'/m'm'm	AFM	D_{4h}
mp-20354	MgMnGe	4'/m'm'm	AFM	D_{4h}
mp-20422	KMnP	4'/m'm'm	AFM	D_{4h}
mp-20527	$La(FeGe)_2$	4'/m'm'm	AFM	D_{4h}
mp-20563	$Ba(CoAs)_2$	4'/m'm'm	AFM	D_{4h}

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Id	Material	MPG	Magtype	PG
mp-20612	NaMnAs	4'/m'm'm	AFM	D_{4h}
mp-20639	BaMnGe	4'/m'm'm	AFM	D_{4h}
mp-20698	LiCoAs	4'/m'm'm	AFM	D_{4h}
mp-20759	SrMnSn	4'/m'm'm	AFM	D_{4h}
mp-20761	LaCoGe	4'/m'm'm	AFM	D_{4h}
mp-20814	$Dy(BC)_2$	4'/m'm'm	AFM	D_{4h}
mp-20970	NaMnSb	4'/m'm'm	AFM	D_{4h}
mp-21055	$CeGe_2$	4'/m'm'm	AFM	D_{4h}
mp-21096	CaMnSi	4'/m'm'm	AFM	D_{4h}
mp-21113	$Y(FeGe)_2$	4'/m'm'm	AFM	D_{4h}
mp-21118	$Sr(MnGe)_2$	4'/m'm'm	AFM	D_{4h}
mp-21192	$GdSi_2$	4'/m'm'm	AFM	D_{4h}
mp-21249	YMnSi	4'/m'm'm	AFM	D_{4h}
mp-21284	LiMnAs	4'/m'm'm	AFM	D_{4h}
mp-2129	$NdGe_2$	4'/m'm'm	AFM	D_{4h}
mp-21413	RbMnP	4'/m'm'm	AFM	D_{4h}
mp-21471	LiFeAs	4'/m'm'm	AFM	D_{4h}
mp-21847	KMnAs	4'/m'm'm	AFM	D_{4h}
mp-22679	$Ba(MnSn)_2$	4'/m'm'm	AFM	D_{4h}
mp-22760	$La(MnGe)_2$	4'/m'm'm	AFM	D_{4h}
mp-22973	NaMnBi	4'/m'm'm	AFM	D_{4h}
mp-2358	$SmAl_2$	4'/m'm'm	AFM	D_{4h}
mp-25332	FeO_2	4'/m'm'm	AFM	D_{4h}

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Id	Material	MPG	Magtype	PG
mp-2579	$HoPt_2$	4'/m'm'm	AFM	D_{4h}
mp-2720	$NdPt_2$	4'/m'm'm	AFM	D_{4h}
mp-28884	$Cs(FeAs)_2$	4'/m'm'm	AFM	D_{4h}
mp-29206	$BaMnSb_2$	4'/m'm'm	AFM	D_{4h}
mp-29207	$SrMnBi_2$	4'/m'm'm	AFM	D_{4h}
mp-3021	$Tl(FeSe)_2$	4'/m'm'm	AFM	D_{4h}
mp-30775	$PrMg_2$	4'/m'm'm	AFM	D_{4h}
mp-3165	RbMnSb	4'/m'm'm	AFM	D_{4h}
mp-3299	$Sr(FeP)_2$	4'/m'm'm	AFM	D_{4h}
mp-33667	$LiDyS_2$	4'/m'm'm	AFM	D_{4h}
mp-33882	$ErAgSe_2$	4'/m'm'm	AFM	D_{4h}
mp-35205	$LiErSe_2$	4'/m'm'm	AFM	D_{4h}
mp-35276	$K(FeAs)_2$	4'/m'm'm	AFM	D_{4h}
mp-35591	$LiErS_2$	4'/m'm'm	AFM	D_{4h}
mp-36029	$ErAgS_2$	4'/m'm'm	AFM	D_{4h}
mp-36536	$NaCeS_2$	4'/m'm'm	AFM	D_{4h}
mp-36791	$LiNdS_2$	4'/m'm'm	AFM	D_{4h}
mp-37605	$LiNdSe_2$	4'/m'm'm	AFM	D_{4h}
mp-3791	$ScCo_2Sn$	4'/m'm'm	AFM	D_{4h}
mp-38695	$LiTbSe_2$	4'/m'm'm	AFM	D_{4h}
mp-400	$NdAl_2$	4'/m'm'm	AFM	D_{4h}
mp-4088	$La(FeSi)_2$	4'/m'm'm	AFM	D_{4h}
mp-4233	KMnSb	4'/m'm'm	AFM	D_{4h}

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Id	Material	MPG	Magtype	PG
mp-4259	$Ca(CoGe)_2$	4'/m'm'm	AFM	D_{4h}
mp-4488	$Sr(FeAs)_2$	4'/m'm'm	AFM	D_{4h}
mp-4668	$K(CoSe)_2$	4'/m'm'm	AFM	D_{4h}
mp-4740	$Y(CrSi)_2$	4'/m'm'm	AFM	D_{4h}
mp-4883	$Ba(FeP)_2$	4'/m'm'm	AFM	D_{4h}
mp-4908	$Y(CoGe)_2$	4'/m'm'm	AFM	D_{4h}
mp-504691	LiMnP	4'/m'm'm	AFM	D_{4h}
mp-505016	CsMnAs	4'/m'm'm	AFM	D_{4h}
mp-505332	LaFeSi	4'/m'm'm	AFM	D_{4h}
mp-505531	FeS	4'/m'm'm	AFM	D_{4h}
mp-5069	$La(MnSi)_2$	4'/m'm'm	AFM	D_{4h}
mp-5088	$NaGdO_2$	4'/m'm'm	AFM	D_{4h}
mp-510378	CsMnSb	4'/m'm'm	AFM	D_{4h}
mp-510668	LaFePO	4'/m'm'm	AFM	D_{4h}
mp-5129	$Y(CoSi)_2$	4'/m'm'm	AFM	D_{4h}
mp-5288	$Y(FeSi)_2$	4'/m'm'm	AFM	D_{4h}
mp-529	$SmMg_2$	4'/m'm'm	AFM	D_{4h}
mp-5526	$La(CoSi)_2$	4'/m'm'm	AFM	D_{4h}
mp-5541	ZrVSi	4'/m'm'm	AFM	D_{4h}
mp-5597	$Ca(FeP)_2$	4'/m'm'm	AFM	D_{4h}
mp-567240	$Ba(MnSb)_2$	4'/m'm'm	AFM	D_{4h}
mp-568961	$Ba(FeAs)_2$	4'/m'm'm	AFM	D_{4h}
mp-569247	$Zr(FeSi)_2$	4'/m'm'm	AFM	D_{4h}

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Id	Material	MPG	Magtype	PG
mp-569298	$Ca(CoAs)_2$	4'/m'm'm	AFM	D_{4h}
mp-569408	$K(CoAs)_2$	4'/m'm'm	AFM	D_{4h}
mp-571098	$Lu(FeSi)_2$	4'/m'm'm	AFM	D_{4h}
mp-571203	$Sr(CoAs)_2$	4'/m'm'm	AFM	D_{4h}
mp-571271	$TmPt_2$	4'/m'm'm	AFM	D_{4h}
mp-571552	$Lu(CoGe)_2$	4'/m'm'm	AFM	D_{4h}
mp-604910	MnSe	4'/m'm'm	AFM	D_{4h}
mp-604914	VSe	4'/m'm'm	AFM	D_{4h}
mp-604915	CrSe	4'/m'm'm	AFM	D_{4h}
mp-631534	$NaSrRe_2$	4'/m'm'm	AFM	D_{4h}
mp-6956	$La(FeP)_2$	4'/m'm'm	AFM	D_{4h}
mp-6964	$NaTbO_2$	4'/m'm'm	AFM	D_{4h}
mp-7105	$NdSi_2$	4'/m'm'm	AFM	D_{4h}
mp-7361	$Sr(CoGe)_2$	4'/m'm'm	AFM	D_{4h}
mp-754027	$NaSmO_2$	4'/m'm'm	AFM	D_{4h}
mp-754204	$LiGdO_2$	4'/m'm'm	AFM	D_{4h}
mp-754237	$LiTmO_2$	4'/m'm'm	AFM	D_{4h}
mp-754334	$NaTmO_2$	4'/m'm'm	AFM	D_{4h}
mp-754958	$RbFeO_2$	4'/m'm'm	AFM	D_{4h}
mp-755883	$NaDyO_2$	4'/m'm'm	AFM	D_{4h}
mp-756	$TbAl_2$	4'/m'm'm	AFM	D_{4h}
mp-758741	$Li(FeP)_2$	4'/m'm'm	AFM	D_{4h}
mp-803	$DyAl_2$	4'/m'm'm	AFM	D_{4h}

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Id	Material	MPG	Magtype	PG
mp-8128	$NaNdO_2$	4'/m'm'm	AFM	D_{4h}
mp-8470	$NaPrO_2$	4'/m'm'm	AFM	D_{4h}
mp-858	$TmAl_2$	4'/m'm'm	AFM	D_{4h}
mp-861594	Pr_2TlCd	4'/m'm'm	AFM	D_{4h}
mp-861628	Er_2TlCd	4'/m'm'm	AFM	D_{4h}
mp-861913	$LiDy_2Al$	4'/m'm'm	AFM	D_{4h}
mp-861946	Er_2MgAl	4'/m'm'm	AFM	D_{4h}
mp-862602	$ScAlCo_2$	4'/m'm'm	AFM	D_{4h}
mp-862669	$BeFe_2Si$	4'/m'm'm	AFM	D_{4h}
mp-862788	Er_2ZnIn	4'/m'm'm	AFM	D_{4h}
mp-863651	Ho_2CdIn	4'/m'm'm	AFM	D_{4h}
mp-863667	Er_2TlAg	4'/m'm'm	AFM	D_{4h}
mp-864610	Nd_2MgAl	4'/m'm'm	AFM	D_{4h}
mp-864629	Pm_2TlCd	4'/m'm'm	AFM	D_{4h}
mp-864674	Ho_2AlZn	4'/m'm'm	AFM	D_{4h}
mp-864715	$HfInCo_2$	4'/m'm'm	AFM	D_{4h}
mp-865006	Dy_2MgAl	4'/m'm'm	AFM	D_{4h}
mp-865007	Dy_2MgIn	4'/m'm'm	AFM	D_{4h}
mp-865159	Dy_2AlZn	4'/m'm'm	AFM	D_{4h}
mp-865281	Tm_2AgPt	4'/m'm'm	AFM	D_{4h}
mp-865297	Ho_2InAg	4'/m'm'm	AFM	D_{4h}
mp-865356	Tm_2MgAl	4'/m'm'm	AFM	D_{4h}
mp-865380	Tm_2PdPt	4'/m'm'm	AFM	D_{4h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-865578	$LiNd_2Ga$	4'/m'm'm	AFM	D_{4h}
mp-865797	$LuCo_2Sn$	4'/m'm'm	AFM	D_{4h}
mp-866004	Er_2InAg	4'/m'm'm	AFM	D_{4h}
mp-866008	Dy_2TlAg	4'/m'm'm	AFM	D_{4h}
mp-866051	$HfFe_2Sn$	4'/m'm'm	AFM	D_{4h}
mp-866096	$HfZnCo_2$	4'/m'm'm	AFM	D_{4h}
mp-866120	Tm_2TlAg	4'/m'm'm	AFM	D_{4h}
mp-867145	$LiHo_2Ga$	4'/m'm'm	AFM	D_{4h}
mp-867249	$TaAlFe_2$	4'/m'm'm	AFM	D_{4h}
mp-867277	Ho_2MgAl	4'/m'm'm	AFM	D_{4h}
mp-867293	$LiCo_2Si$	4'/m'm'm	AFM	D_{4h}
mp-867507	$TaGaFe_2$	4'/m'm'm	AFM	D_{4h}
mp-867873	$LiTm_2Al$	4'/m'm'm	AFM	D_{4h}
mp-867878	$AlFe_2Si$	4'/m'm'm	AFM	D_{4h}
mp-867888	$LiTm_2Pt$	4'/m'm'm	AFM	D_{4h}
mp-867894	Sm_2MgAl	4'/m'm'm	AFM	D_{4h}
mp-867915	$ScGaCo_2$	4'/m'm'm	AFM	D_{4h}
mp-916	$DyPt_2$	4'/m'm'm	AFM	D_{4h}
mp-972504	Sm_2AlZn	4'/m'm'm	AFM	D_{4h}
mp-972536	Sm_2TlAg	4'/m'm'm	AFM	D_{4h}
mp-973089	$ScTaFe_2$	4'/m'm'm	AFM	D_{4h}
mp-973779	Nd_2CdHg	4'/m'm'm	AFM	D_{4h}
mp-974387	Nd_2AgHg	4'/m'm'm	AFM	D_{4h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-975359	$Rb(FeAs)_2$	4'/m'm'm	AFM	D_{4h}
mp-975788	Pr_2AgHg	4'/m'm'm	AFM	D_{4h}
mp-976260	$LiTm_2Au$	4'/m'm'm	AFM	D_{4h}
mp-976341	Nd_2ZnAg	4'/m'm'm	AFM	D_{4h}
mp-976743	$LiEr_2In$	4'/m'm'm	AFM	D_{4h}
mp-978083	Pr_2ZnAg	4'/m'm'm	AFM	D_{4h}
mp-978095	Pr_2CdPb	4'/m'm'm	AFM	D_{4h}
mp-978100	Pr_2InAg	4'/m'm'm	AFM	D_{4h}
mp-978519	Sm_2AlCd	4'/m'm'm	AFM	D_{4h}
mp-978625	Sm_2MgTl	4'/m'm'm	AFM	D_{4h}
mp-978808	Sm_2ZnGa	4'/m'm'm	AFM	D_{4h}
mp-978815	Sm_2TlZn	4'/m'm'm	AFM	D_{4h}
mp-978891	Sm_2InAg	4'/m'm'm	AFM	D_{4h}
mp-978950	Sm_2ZnIn	4'/m'm'm	AFM	D_{4h}
mp-978973	Sm_2ZnHg	4'/m'm'm	AFM	D_{4h}
mp-979012	Tm_2AlZn	4'/m'm'm	AFM	D_{4h}
mp-979057	Sm_2ZnAg	4'/m'm'm	AFM	D_{4h}
mp-982010	Pr_2CdAg	4'/m'm'm	AFM	D_{4h}
mp-982387	Pm_2ZnHg	4'/m'm'm	AFM	D_{4h}
mp-982615	Pm_2InAg	4'/m'm'm	AFM	D_{4h}
mp-982772	Pm_2PtAu	4'/m'm'm	AFM	D_{4h}
mp-983154	Pm_2ZnPt	4'/m'm'm	AFM	D_{4h}
mp-983358	$HfAlFe_2$	4'/m'm'm	AFM	D_{4h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-983908	Er_2ZnAu	4'/m'm'm	AFM	D_{4h}
mp-984721	$BeGaCo_2$	4'/m'm'm	AFM	D_{4h}
mp-987178	RbMnAs	4'/m'm'm	AFM	D_{4h}
mp-10087	CeScSi	4/m'm'm'	AFM	D_{4h}
mp-1018677	DyScSb	4/m'm'm'	AFM	D_{4h}
mp-1018692	$ErTe_2$	4/m'm'm'	AFM	D_{4h}
mp-1018727	HoS_2	4/m'm'm'	AFM	D_{4h}
mp-1018728	$HoSe_2$	4/m'm'm'	AFM	D_{4h}
mp-1018732	$HoTe_2$	4/m'm'm'	AFM	D_{4h}
mp-1018814	NdSbTe	4/m'm'm'	AFM	D_{4h}
mp-1018936	PrSbTe	4/m'm'm'	AFM	D_{4h}
mp-1018941	PrTeCl	4/m'm'm'	AFM	D_{4h}
mp-1019324	$TbTe_2$	4/m'm'm'	AFM	D_{4h}
mp-1025077	$TbSe_2$	4/m'm'm'	AFM	D_{4h}
mp-10298	$Sm(SiPt)_2$	4/m'm'm'	AFM	D_{4h}
mp-10316	CeCdAsO	4/m'm'm'	AFM	D_{4h}
mp-1067935	Ho_2SbO_2	4/m'm'm'	AFM	D_{4h}
mp-1067937	Ho_2BiO_2	4/m'm'm'	AFM	D_{4h}
mp-1068843	Sm_2BiO_2	4/m'm'm'	AFM	D_{4h}
mp-1068954	Tb_2BiO_2	4/m'm'm'	AFM	D_{4h}
mp-1069561	Dy_2BiO_2	4/m'm'm'	AFM	D_{4h}
mp-1070662	Gd_2BiO_2	4/m'm'm'	AFM	D_{4h}
mp-1071036	TbScSb	4/m'm'm'	AFM	D_{4h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-1071468	TbMgSn	4/m'm'm'	AFM	D_{4h}
mp-1071863	PrMgSn	4/m'm'm'	AFM	D_{4h}
mp-1072185	PrAsSe	4/m'm'm'	AFM	D_{4h}
mp-1072474	$TmSe_2$	4/m'm'm'	AFM	D_{4h}
mp-1077029	SmAsSe	4/m'm'm'	AFM	D_{4h}
mp-1077558	NdScSi	4/m'm'm'	AFM	D_{4h}
mp-1077831	EuScGe	4/m'm'm'	AFM	D_{4h}
mp-1078315	$PrBi_2Au$	4/m'm'm'	AFM	D_{4h}
mp-1078370	$CeBi_2Au$	4/m'm'm'	AFM	D_{4h}
mp-1078542	GdZnAsO	4/m'm'm'	AFM	D_{4h}
mp-1078616	$CeSb_3Pd$	4/m'm'm'	AFM	D_{4h}
mp-1078722	$Eu(AsPt)_2$	4/m'm'm'	AFM	D_{4h}
mp-1078778	$Ce(SbPd)_2$	4/m'm'm'	AFM	D_{4h}
mp-1078787	$Sm(AlAu)_2$	4/m'm'm'	AFM	D_{4h}
mp-1078805	$SmSb_2Pd$	4/m'm'm'	AFM	D_{4h}
mp-1079316	$Dy(GePt)_2$	4/m'm'm'	AFM	D_{4h}
mp-1079397	$HoZnSn_2$	4/m'm'm'	AFM	D_{4h}
mp-1079478	$PrAgSb_2$	4/m'm'm'	AFM	D_{4h}
mp-1079518	$Er(SiPt)_2$	4/m'm'm'	AFM	D_{4h}
mp-1079550	$PrSb_2Au$	4/m'm'm'	AFM	D_{4h}
mp-1079698	$CeSb_2Au$	4/m'm'm'	AFM	D_{4h}
mp-1079703	$SmSb_2Au$	4/m'm'm'	AFM	D_{4h}
mp-1079881	$CeSb_2Pd$	4/m'm'm'	AFM	D_{4h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-1080061	$Dy(SiPt)_2$	4/m'm'm'	AFM	D_{4h}
mp-1080767	$Eu(BiPd)_2$	4/m'm'm'	AFM	D_{4h}
mp-10816	$NdAgAs_2$	4/m'm'm'	AFM	D_{4h}
mp-1087475	$NbCrN_2$	4/m'm'm'	AFM	D_{4h}
mp-1091396	$Pr(AlAu)_2$	4/m'm'm'	AFM	D_{4h}
mp-1092291	$Sm(GePt)_2$	4/m'm'm'	AFM	D_{4h}
mp-1095192	$TbSb_2Pd$	4/m'm'm'	AFM	D_{4h}
mp-10965	$DyAgSb_2$	4/m'm'm'	AFM	D_{4h}
mp-1178160	HoBrO	4/m'm'm'	AFM	D_{4h}
mp-1178355	Er_2TeO_2	4/m'm'm'	AFM	D_{4h}
mp-1178366	Dy_2SbO_2	4/m'm'm'	AFM	D_{4h}
mp-1178454	CeOF	4/m'm'm'	AFM	D_{4h}
mp-1179844	$PrSb_2Pd$	4/m'm'm'	AFM	D_{4h}
mp-1180068	$NdSb_2Pd$	4/m'm'm'	AFM	D_{4h}
mp-1183325	$Ba_2V_2O_5$	4/m'm'm'	AFM	D_{4h}
mp-1184114	$Er_2Pt_2O_5$	4/m'm'm'	AFM	D_{4h}
mp-1185978	$Mn_2Pt_2O_5$	4/m'm'm'	AFM	D_{4h}
mp-1186691	Pr_2Mg	4/m'm'm'	AFM	D_{4h}
mp-1187759	$Y_2Co_2O_5$	4/m'm'm'	AFM	D_{4h}
mp-1205673	$Nd(PPt)_2$	4/m'm'm'	AFM	D_{4h}
mp-1206043	$TbAgAs_2$	4/m'm'm'	AFM	D_{4h}
mp-1206091	Nd_2ZnSb_3	4/m'm'm'	AFM	D_{4h}
mp-1206140	$Sm_2(SiPt)_3$	4/m'm'm'	AFM	D_{4h}

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Id	Material	MPG	Magtype	PG
mp-1206213	Eu_2Br_2F	4/m'm'm'	AFM	D_{4h}
mp-1206224	$Ho_2(SiPt)_3$	4/m'm'm'	AFM	D_{4h}
mp-1206271	Nd_2CdAs_2O	4/m'm'm'	AFM	D_{4h}
mp-1206324	$Tb_2(SiPt)_3$	4/m'm'm'	AFM	D_{4h}
mp-1206328	Pr_2As_3Au	4/m'm'm'	AFM	D_{4h}
mp-1206359	$Er_2(SiPt)_3$	4/m'm'm'	AFM	D_{4h}
mp-1206426	Pr_2AgSb_3	4/m'm'm'	AFM	D_{4h}
mp-1206467	Sm_2Br_2F	4/m'm'm'	AFM	D_{4h}
mp-1206470	Nd_2S_2F	4/m'm'm'	AFM	D_{4h}
mp-1206538	$BaSr(CuO_2)_2$	4/m'm'm'	AFM	D_{4h}
mp-1206571	Sm_2ZnSb_3	4/m'm'm'	AFM	D_{4h}
mp-1206584	PrScSi	4/m'm'm'	AFM	D_{4h}
mp-1206586	Eu_2HCl_2	4/m'm'm'	AFM	D_{4h}
mp-1206616	Ho_2Br_2O	4/m'm'm'	AFM	D_{4h}
mp-1206628	Er_2S_2F	4/m'm'm'	AFM	D_{4h}
mp-1206696	Er_2AgSb_3	4/m'm'm'	AFM	D_{4h}
mp-1206705	Sm_2I_2O	4/m'm'm'	AFM	D_{4h}
mp-1206787	$Tm_2(SiPt)_3$	4/m'm'm'	AFM	D_{4h}
mp-1206859	ErBrO	4/m'm'm'	AFM	D_{4h}
mp-1207043	Tm_2I_2F	4/m'm'm'	AFM	D_{4h}
mp-1207058	Er_2I_2O	4/m'm'm'	AFM	D_{4h}
mp-1207147	NdScSi	4/m'm'm'	AFM	D_{4h}
mp-1207240	Sm_2I_2F	4/m'm'm'	AFM	D_{4h}

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Id	Material	MPG	Magtype	PG
mp-1207247	Er_2Cl_2O	4/m'm'm'	AFM	D_{4h}
mp-1207258	Dy_2Te_3	4/m'm'm'	AFM	D_{4h}
mp-1207260	Pr_2S_2F	4/m'm'm'	AFM	D_{4h}
mp-1207261	Tm_2Br_2F	4/m'm'm'	AFM	D_{4h}
mp-1207262	Nd_2Cl_2O	4/m'm'm'	AFM	D_{4h}
mp-1207264	Ho_2S_2F	4/m'm'm'	AFM	D_{4h}
mp-1207276	Sm_2Se_2F	4/m'm'm'	AFM	D_{4h}
mp-1207280	Ho_2Te_3	4/m'm'm'	AFM	D_{4h}
mp-1207288	Pr_2Br_2O	4/m'm'm'	AFM	D_{4h}
mp-1207289	Eu_2Cl_2F	4/m'm'm'	AFM	D_{4h}
mp-1207299	Sm_2S_2F	4/m'm'm'	AFM	D_{4h}
mp-1207301	Nd_2Se_2F	4/m'm'm'	AFM	D_{4h}
mp-1207311	Nd_2AgSb_3	4/m'm'm'	AFM	D_{4h}
mp-1207314	Ho_2AgSb_3	4/m'm'm'	AFM	D_{4h}
mp-1207366	Tb_2Sb_3Pd	4/m'm'm'	AFM	D_{4h}
mp-1207368	Sm_2Sb_3Pd	4/m'm'm'	AFM	D_{4h}
mp-1208704	Tb_2ZnSn_3	4/m'm'm'	AFM	D_{4h}
mp-1209178	$Sm_2(GePt)_3$	4/m'm'm'	AFM	D_{4h}
mp-1209649	Sm_2Sb_3Au	4/m'm'm'	AFM	D_{4h}
mp-1209838	Nd_2Br_2O	4/m'm'm'	AFM	D_{4h}
mp-1211519	Nd_2Sb_3Pd	4/m'm'm'	AFM	D_{4h}
mp-1211777	$Li_3Nd_2Sb_3$	4/m'm'm'	AFM	D_{4h}
mp-1212355	Ho_2Cl_2O	4/m'm'm'	AFM	D_{4h}

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Id	Material	MPG	Magtype	PG
mp-1212779	Er_2Br_2O	4/m'm'm'	AFM	D_{4h}
mp-1212838	Er_2ZnAs_2O	4/m'm'm'	AFM	D_{4h}
mp-1216746	Tm_2InAg	4/m'm'm'	AFM	D_{4h}
mp-1217670	Tb_2ZnAg	4/m'm'm'	AFM	D_{4h}
mp-1217680	Tb_2AgPd	4/m'm'm'	AFM	D_{4h}
mp-1217699	Tb_2InAg	4/m'm'm'	AFM	D_{4h}
mp-1218402	$SrCaCr_2O_6$	4/m'm'm'	AFM	D_{4h}
mp-1219180	Sm_2SbO_2	4/m'm'm'	AFM	D_{4h}
mp-1220313	Nd_2SbO_2	4/m'm'm'	AFM	D_{4h}
mp-1223918	Ho_2InAg	4/m'm'm'	AFM	D_{4h}
mp-1224733	Gd_2ZnAg	4/m'm'm'	AFM	D_{4h}
mp-1225050	Er_2BPt_6	4/m'm'm'	AFM	D_{4h}
mp-1225365	Eu_2BPd_6	4/m'm'm'	AFM	D_{4h}
mp-1225505	Er_2InAg	4/m'm'm'	AFM	D_{4h}
mp-1226779	Ce_2BPd_6	4/m'm'm'	AFM	D_{4h}
mp-1226954	Ce_2MgZn	4/m'm'm'	AFM	D_{4h}
mp-1227294	$BeCo_2Si$	4/m'm'm'	AFM	D_{4h}
mp-1227299	$BeCo_2Ge$	4/m'm'm'	AFM	D_{4h}
mp-1228893	$AlGaCo_2$	4/m'm'm'	AFM	D_{4h}
mp-1232216	$PmSe_2$	4/m'm'm'	AFM	D_{4h}
mp-1247042	TeMoN	4/m'm'm'	AFM	D_{4h}
mp-1247334	$MnPbN_2$	4/m'm'm'	AFM	D_{4h}
mp-12621	NdTeF	4/m'm'm'	AFM	D_{4h}

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Id	Material	MPG	Magtype	PG
mp-13135	$Eu(ZnSn)_2$	4/m'm'm'	AFM	D_{4h}
mp-13162	$TbZnSn_2$	4/m'm'm'	AFM	D_{4h}
mp-13498	Tb_2Mg	4/m'm'm'	AFM	D_{4h}
mp-1380	Zn_3Ru	4/m'm'm'	AFM	D_{4h}
mp-16032	Pr_2TeO_2	4/m'm'm'	AFM	D_{4h}
mp-16033	Sm_2TeO_2	4/m'm'm'	AFM	D_{4h}
mp-16035	Gd_2TeO_2	4/m'm'm'	AFM	D_{4h}
mp-16037	Dy_2TeO_2	4/m'm'm'	AFM	D_{4h}
mp-16275	CeScGe	4/m'm'm'	AFM	D_{4h}
mp-16377	$Ho(SiPt)_2$	4/m'm'm'	AFM	D_{4h}
mp-1699	$AlCr_2$	4/m'm'm'	AFM	D_{4h}
mp-18850	$BaYMn_2O_5$	4/m'm'm'	AFM	D_{4h}
mp-19808	$Eu(ZnGe)_2$	4/m'm'm'	AFM	D_{4h}
mp-19897	Eu_2TeO_2	4/m'm'm'	AFM	D_{4h}
mp-20106	Li_2NdSb_2	4/m'm'm'	AFM	D_{4h}
mp-20133	NbCrN	4/m'm'm'	AFM	D_{4h}
mp-2017836	$Tb(GePt)_2$	4/m'm'm'	AFM	D_{4h}
mp-2038468	$Pr(GePt)_2$	4/m'm'm'	AFM	D_{4h}
mp-20400	$Ce(GePt)_2$	4/m'm'm'	AFM	D_{4h}
mp-2045437	Er_2SbO_2	4/m'm'm'	AFM	D_{4h}
mp-2047136	$Nd(GePt)_2$	4/m'm'm'	AFM	D_{4h}
mp-2047556	Gd_2SbO_2	4/m'm'm'	AFM	D_{4h}
mp-20528	$KCoO_2$	4/m'm'm'	AFM	D_{4h}

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Id	Material	MPG	Magtype	PG
mp-20532	$PrSb_2Pd$	4/m'm'm'	AFM	D_{4h}
mp-2078	TiCu	4/m'm'm'	AFM	D_{4h}
mp-22438	$Ce(SiPt)_2$	4/m'm'm'	AFM	D_{4h}
mp-22620	CeZnSbO	4/m'm'm'	AFM	D_{4h}
mp-2272172	HoAsSe	4/m'm'm'	AFM	D_{4h}
mp-2272716	ErAsS	4/m'm'm'	AFM	D_{4h}
mp-2273942	TmAsSe	4/m'm'm'	AFM	D_{4h}
mp-2275282	HoAsS	4/m'm'm'	AFM	D_{4h}
mp-2275508	ErAsSe	4/m'm'm'	AFM	D_{4h}
mp-22952	CeClO	4/m'm'm'	AFM	D_{4h}
mp-23050	GdClO	4/m'm'm'	AFM	D_{4h}
mp-23058	NdClO	4/m'm'm'	AFM	D_{4h}
mp-23068	NdBrO	4/m'm'm'	AFM	D_{4h}
mp-2394167	VN	4/m'm'm'	AFM	D_{4h}
mp-2550	$NdTe_2$	4/m'm'm'	AFM	D_{4h}
mp-27439	TmIO	4/m'm'm'	AFM	D_{4h}
mp-27984	PrClO	4/m'm'm'	AFM	D_{4h}
mp-29254	PrIO	4/m'm'm'	AFM	D_{4h}
mp-29327	SmBrO	4/m'm'm'	AFM	D_{4h}
mp-29731	HoClO	4/m'm'm'	AFM	D_{4h}
mp-29797	GdBrO	4/m'm'm'	AFM	D_{4h}
mp-30409	Mn_2Au	4/m'm'm'	AFM	D_{4h}
mp-31138	$MnPd_3$	4/m'm'm'	AFM	D_{4h}

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Id	Material	MPG	Magtype	PG
mp-3216921	YbOF	4/m'm'm'	AFM	D_{4h}
mp-3931	SmSF	4/m'm'm'	AFM	D_{4h}
mp-3992	PrSF	4/m'm'm'	AFM	D_{4h}
mp-4075	TbZrSb	4/m'm'm'	AFM	D_{4h}
mp-4395	TbScGe	4/m'm'm'	AFM	D_{4h}
mp-4738	PrScGe	4/m'm'm'	AFM	D_{4h}
mp-4854	NdScGe	4/m'm'm'	AFM	D_{4h}
mp-4973	CeSF	4/m'm'm'	AFM	D_{4h}
mp-504727	EuBrO	4/m'm'm'	AFM	D_{4h}
mp-504900	$Eu(SbPd)_2$	4/m'm'm'	AFM	D_{4h}
mp-542757	EuClO	4/m'm'm'	AFM	D_{4h}
mp-545539	Pr_2BiO_2	4/m'm'm'	AFM	D_{4h}
mp-5459	Nd_2TeO_2	4/m'm'm'	AFM	D_{4h}
mp-554055	HoS	4/m'm'm'	AFM	D_{4h}
mp-556382	EuClF	4/m'm'm'	AFM	D_{4h}
mp-567807	TmZrSb	4/m'm'm'	AFM	D_{4h}
mp-600622	EuIO	4/m'm'm'	AFM	D_{4h}
mp-610469	$CeBiS_2O$	4/m'm'm'	AFM	D_{4h}
mp-672267	$Ce(SnPt)_2$	4/m'm'm'	AFM	D_{4h}
mp-7061	NdZnAsO	4/m'm'm'	AFM	D_{4h}
mp-7135	TbS_2	4/m'm'm'	AFM	D_{4h}
mp-753173	HoIO	4/m'm'm'	AFM	D_{4h}
mp-753314	Eu_2SeO_2	4/m'm'm'	AFM	D_{4h}

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Id	Material	MPG	Magtype	PG
mp-754112	CeBrO	4/m'm'm'	AFM	D_{4h}
mp-754149	GdOF	4/m'm'm'	AFM	D_{4h}
mp-754217	SmIO	4/m'm'm'	AFM	D_{4h}
mp-754349	GdOF	4/m'm'm'	AFM	D_{4h}
mp-754475	Tm_2SeO_2	4/m'm'm'	AFM	D_{4h}
mp-754969	TmBrO	4/m'm'm'	AFM	D_{4h}
mp-755323	DyClO	4/m'm'm'	AFM	D_{4h}
mp-755336	NdIO	4/m'm'm'	AFM	D_{4h}
mp-755713	Tb_2SbO_2	4/m'm'm'	AFM	D_{4h}
mp-7698	NdS_2	4/m'm'm'	AFM	D_{4h}
mp-772222	TmClO	4/m'm'm'	AFM	D_{4h}
mp-8320	SmScSi	4/m'm'm'	AFM	D_{4h}
mp-862993	ErMgSn	4/m'm'm'	AFM	D_{4h}
mp-867348	DyMgSn	4/m'm'm'	AFM	D_{4h}
mp-975652	$PrTe_2$	4/m'm'm'	AFM	D_{4h}
mp-975666	PrBrO	4/m'm'm'	AFM	D_{4h}
mp-979028	Sm_2Mg	4/m'm'm'	AFM	D_{4h}
mp-981808	$Sm_2As_2O_5$	4/m'm'm'	AFM	D_{4h}
mp-983603	ErZnAsO	4/m'm'm'	AFM	D_{4h}
mp-9978	$ErSe_2$	4/m'm'm'	AFM	D_{4h}
mp-1094140	$MnGe_2$	4/m'mm	AFM	D_{4h}
mp-1159	Zr_2Fe	4/m'mm	AFM	D_{4h}
mp-20086	$MnSn_2$	4/m'mm	AFM	D_{4h}

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Id	Material	MPG	Magtype	PG
mp-2666	$CrSb_2$	4/m'mm	AFM	D_{4h}
mp-2851	VSb_2	4/m'mm	AFM	D_{4h}
mp-30562	Sc_2Co	4/m'mm	AFM	D_{4h}
mp-628	Zr_2Co	4/m'mm	AFM	D_{4h}
mp-1054	ErTl	4/mmm.1'	AFM	D_{4h}
mp-1080251	$CeSe_2$	4/mmm.1'	AFM	D_{4h}
mp-1218324	$SrCrHO_2$	4/mmm.1'	AFM	D_{4h}
mp-1218326	$SrCrO_2$	4/mmm.1'	AFM	D_{4h}
mp-14254	$NdAlO_3$	4/mmm.1'	AFM	D_{4h}
mp-1670	MnPt	4/mmm.1'	AFM	D_{4h}
mp-238	MnPd	4/mmm.1'	AFM	D_{4h}
mp-2541	SmTl	4/mmm.1'	AFM	D_{4h}
mp-2678	VPt	4/mmm.1'	AFM	D_{4h}
mp-547069	$FeBiO_3$	4/mmm.1'	AFM	D_{4h}
mp-5566	$KCuF_3$	4/mmm.1'	AFM	D_{4h}
mp-752688	$MnCdO_2$	4/mmm.1'	AFM	D_{4h}
mp-771	MnAl	4/mmm.1'	AFM	D_{4h}
mp-8218	$PrAlO_3$	4/mmm.1'	AFM	D_{4h}
mp-1025387	TbO_3	6'/m	AFM	C_{6h}
mp-1025483	ErO_3	6'/m	AFM	C_{6h}
mp-1025565	HoO_3	6'/m	AFM	C_{6h}
mp-1180065	NdO_3	6'/m	AFM	C_{6h}
mp-1206505	GdO_3	6'/m	AFM	C_{6h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-23211	$PrCl_3$	6'/m	AFM	C_{6h}
mp-23221	$PrBr_3$	6'/m	AFM	C_{6h}
mp-568170	$TbCl_3$	6'/m	AFM	C_{6h}
mp-1005760	Tl_3Os	6'/mmm'	AFM	D_{6h}
mp-1013525	VS_2	6'/mmm'	AFM	D_{6h}
mp-1018785	LiFeAs	6'/mmm'	AFM	D_{6h}
mp-1025029	PrHSe	6'/mmm'	AFM	D_{6h}
mp-1025473	Li_2NdGe	6'/mmm'	AFM	D_{6h}
mp-1078610	$EuGe_3$	6'/mmm'	AFM	D_{6h}
mp-1078626	$TbSnPt_2$	6'/mmm'	AFM	D_{6h}
mp-1079065	Zr_3Co	6'/mmm'	AFM	D_{6h}
mp-1079071	$EuTl_3$	6'/mmm'	AFM	D_{6h}
mp-1079867	Li_2PrGe	6'/mmm'	AFM	D_{6h}
mp-1080132	$EuHg_3$	6'/mmm'	AFM	D_{6h}
mp-1080263	$CeSe_2$	6'/mmm'	AFM	D_{6h}
mp-1092248	$TbInPt_2$	6'/mmm'	AFM	D_{6h}
mp-1183349	Ba_3Tm	6'/mmm'	AFM	D_{6h}
mp-1183351	Ba_3Nd	6'/mmm'	AFM	D_{6h}
mp-1183357	Ba_3Sm	6'/mmm'	AFM	D_{6h}
mp-1183368	Ba_3Pr	6'/mmm'	AFM	D_{6h}
mp-1183522	Ca_3Tb	6'/mmm'	AFM	D_{6h}
mp-1183523	Ca_3Dy	6'/mmm'	AFM	D_{6h}
mp-1183563	Ba_3Ce	6'/mmm'	AFM	D_{6h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-1183770	CeP_3	6'/mmm'	AFM	D_{6h}
mp-1183817	$DyMg_3$	6'/mmm'	AFM	D_{6h}
mp-1183836	$DySb_3$	6'/mmm'	AFM	D_{6h}
mp-1183846	$DyLu_3$	6'/mmm'	AFM	D_{6h}
mp-1183960	Ca_3Eu	6'/mmm'	AFM	D_{6h}
mp-1184171	$ErAl_3$	6'/mmm'	AFM	D_{6h}
mp-1184175	$ErAs_3$	6'/mmm'	AFM	D_{6h}
mp-1184182	$ErBi_3$	6'/mmm'	AFM	D_{6h}
mp-1184195	$ErGa_3$	6'/mmm'	AFM	D_{6h}
mp-1184211	ErO	6'/mmm'	AFM	D_{6h}
mp-1184346	$FeHg_3$	6'/mmm'	AFM	D_{6h}
mp-1184392	$EuAg_3$	6'/mmm'	AFM	D_{6h}
mp-1184419	$EuAu_3$	6'/mmm'	AFM	D_{6h}
mp-1184436	EuO_3	6'/mmm'	AFM	D_{6h}
mp-1184466	$EuIn_3$	6'/mmm'	AFM	D_{6h}
mp-1184472	$FeGe_3$	6'/mmm'	AFM	D_{6h}
mp-1184501	$GdBi_3$	6'/mmm'	AFM	D_{6h}
mp-1184714	$HoAs_3$	6'/mmm'	AFM	D_{6h}
mp-1184746	$HoBi_3$	6'/mmm'	AFM	D_{6h}
mp-1184775	$FeSn_3$	6'/mmm'	AFM	D_{6h}
mp-1184902	K_3Dy	6'/mmm'	AFM	D_{6h}
mp-1184930	$HoLu_3$	6'/mmm'	AFM	D_{6h}
mp-1185140	K_3Tm	6'/mmm'	AFM	D_{6h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-1185146	K_3Pm	6'/mmm'	AFM	D_{6h}
mp-1185197	Li_3Ho	6'/mmm'	AFM	D_{6h}
mp-1185206	Li_3Pm	6'/mmm'	AFM	D_{6h}
mp-1185259	K_3Eu	6'/mmm'	AFM	D_{6h}
mp-1185269	Li_3Gd	6'/mmm'	AFM	D_{6h}
mp-1185353	K_3Ce	6'/mmm'	AFM	D_{6h}
mp-1185528	La_3Eu	6'/mmm'	AFM	D_{6h}
mp-1185808	Mg_3V	6'/mmm'	AFM	D_{6h}
mp-1186048	Na_3Fe	6'/mmm'	AFM	D_{6h}
mp-1186078	Na_3Pm	6'/mmm'	AFM	D_{6h}
mp-1186294	$NdAg_3$	6'/mmm'	AFM	D_{6h}
mp-1186318	$NdLu_3$	6'/mmm'	AFM	D_{6h}
mp-1186340	NdY_3	6'/mmm'	AFM	D_{6h}
mp-1186539	$PmAg_3$	6'/mmm'	AFM	D_{6h}
mp-1186548	$PmBi_3$	6'/mmm'	AFM	D_{6h}
mp-1186581	$PmGe_3$	6'/mmm'	AFM	D_{6h}
mp-1186612	$PmMg_3$	6'/mmm'	AFM	D_{6h}
mp-1186676	PmY_3	6'/mmm'	AFM	D_{6h}
mp-1186784	PrY_3	6'/mmm'	AFM	D_{6h}
mp-1186979	Sc_3V	6'/mmm'	AFM	D_{6h}
mp-1186981	Sc_3Os	6'/mmm'	AFM	D_{6h}
mp-1187112	Sr_3Dy	6'/mmm'	AFM	D_{6h}
mp-1187113	Sr_3Er	6'/mmm'	AFM	D_{6h}

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Id	Material	MPG	Magtype	PG
mp-1187131	Sr_3Ho	6'/mmm'	AFM	D_{6h}
mp-1187133	Sr_3Fe	6'/mmm'	AFM	D_{6h}
mp-1187161	Sr_3Pm	6'/mmm'	AFM	D_{6h}
mp-1187237	Sr_3Ce	6'/mmm'	AFM	D_{6h}
mp-1187332	$TbBi_3$	6'/mmm'	AFM	D_{6h}
mp-1187712	$TmZr_3$	6'/mmm'	AFM	D_{6h}
mp-1187741	VAu_3	6'/mmm'	AFM	D_{6h}
mp-1187993	Zn_3Co	6'/mmm'	AFM	D_{6h}
mp-1207192	NdHSe	6'/mmm'	AFM	D_{6h}
mp-1238834	VC	6'/mmm'	AFM	D_{6h}
mp-12553	$PrAl_3$	6'/mmm'	AFM	D_{6h}
mp-1386773	$AlCoO_3$	6'/mmm'	AFM	D_{6h}
mp-1387356	$YCoO_3$	6'/mmm'	AFM	D_{6h}
mp-1398131	$AlFeO_3$	6'/mmm'	AFM	D_{6h}
mp-1399857	$YNiO_3$	6'/mmm'	AFM	D_{6h}
mp-1445377	$YMoO_3$	6'/mmm'	AFM	D_{6h}
mp-16513	$NdAl_3$	6'/mmm'	AFM	D_{6h}
mp-16762	PrB_3	6'/mmm'	AFM	D_{6h}
mp-20231	$CeInPd_2$	6'/mmm'	AFM	D_{6h}
mp-21094	$InFeO_3$	6'/mmm'	AFM	D_{6h}
mp-24011	CeHSe	6'/mmm'	AFM	D_{6h}
mp-31900	$TaMn_2O_3$	6'/mmm'	AFM	D_{6h}
mp-4992	$ScCrC_2$	6'/mmm'	AFM	D_{6h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-568503	Fe_2C	6'/mmm'	AFM	D_{6h}
mp-754197	NdO	6'/mmm'	AFM	D_{6h}
mp-754342	$ScFeO_3$	6'/mmm'	AFM	D_{6h}
mp-861487	$PrHg_3$	6'/mmm'	AFM	D_{6h}
mp-862668	$CeHg_3$	6'/mmm'	AFM	D_{6h}
mp-862696	$CeGa_3$	6'/mmm'	AFM	D_{6h}
mp-862709	$CeAg_3$	6'/mmm'	AFM	D_{6h}
mp-862756	$PrGa_3$	6'/mmm'	AFM	D_{6h}
mp-862984	PmB_3	6'/mmm'	AFM	D_{6h}
mp-862985	$PmAu_3$	6'/mmm'	AFM	D_{6h}
mp-862986	$PmBr_3$	6'/mmm'	AFM	D_{6h}
mp-863026	$SmCl_3$	6'/mmm'	AFM	D_{6h}
mp-863029	$ErCl_3$	6'/mmm'	AFM	D_{6h}
mp-863264	TbI_3	6'/mmm'	AFM	D_{6h}
mp-864621	$NdGa_3$	6'/mmm'	AFM	D_{6h}
mp-864657	HoI_3	6'/mmm'	AFM	D_{6h}
mp-864733	MoI_3	6'/mmm'	AFM	D_{6h}
mp-864994	$DyHg_3$	6'/mmm'	AFM	D_{6h}
mp-864995	$DyAl_3$	6'/mmm'	AFM	D_{6h}
mp-865005	DyI_3	6'/mmm'	AFM	D_{6h}
mp-865103	$DyGa_3$	6'/mmm'	AFM	D_{6h}
mp-865259	$HoHg_3$	6'/mmm'	AFM	D_{6h}
mp-865301	$TmBr_3$	6'/mmm'	AFM	D_{6h}

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Id	Material	MPG	Magtype	PG
mp-865327	$TmHg_3$	6'/mmm'	AFM	D_{6h}
mp-865353	TmI_3	6'/mmm'	AFM	D_{6h}
mp-865386	$GdGa_3$	6'/mmm'	AFM	D_{6h}
mp-865411	$GdAl_3$	6'/mmm'	AFM	D_{6h}
mp-865464	$PmSi_3$	6'/mmm'	AFM	D_{6h}
mp-866003	ErI_3	6'/mmm'	AFM	D_{6h}
mp-866102	$ErHg_3$	6'/mmm'	AFM	D_{6h}
mp-867143	$SmGa_3$	6'/mmm'	AFM	D_{6h}
mp-867232	$TbAl_3$	6'/mmm'	AFM	D_{6h}
mp-867246	$TbGa_3$	6'/mmm'	AFM	D_{6h}
mp-867870	$SmAl_3$	6'/mmm'	AFM	D_{6h}
mp-867879	$SmHg_3$	6'/mmm'	AFM	D_{6h}
mp-972494	$SmMg_3$	6'/mmm'	AFM	D_{6h}
mp-972549	$SmLu_3$	6'/mmm'	AFM	D_{6h}
mp-972557	$SmAg_3$	6'/mmm'	AFM	D_{6h}
mp-974336	HoO	6'/mmm'	AFM	D_{6h}
mp-974672	Rb_3Er	6'/mmm'	AFM	D_{6h}
mp-974906	$MnSn_3$	6'/mmm'	AFM	D_{6h}
mp-975653	PrS_3	6'/mmm'	AFM	D_{6h}
mp-975872	K_3Pr	6'/mmm'	AFM	D_{6h}
mp-976221	K_3Sm	6'/mmm'	AFM	D_{6h}
mp-976356	$NdSc_3$	6'/mmm'	AFM	D_{6h}
mp-976583	K_3Co	6'/mmm'	AFM	D_{6h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-976806	$NiAu_3$	6'/mmm'	AFM	D_{6h}
mp-977165	Li_3Co	6'/mmm'	AFM	D_{6h}
mp-977188	Li_3Dy	6'/mmm'	AFM	D_{6h}
mp-977195	Li_3Er	6'/mmm'	AFM	D_{6h}
mp-977229	Li_3Cr	6'/mmm'	AFM	D_{6h}
mp-977375	$HoBr_3$	6'/mmm'	AFM	D_{6h}
mp-978744	$SmBi_3$	6'/mmm'	AFM	D_{6h}
mp-978919	Ba_3Tb	6'/mmm'	AFM	D_{6h}
mp-979013	$SmGe_3$	6'/mmm'	AFM	D_{6h}
mp-979040	$TmAl_3$	6'/mmm'	AFM	D_{6h}
mp-979465	$SmCd_3$	6'/mmm'	AFM	D_{6h}
mp-979900	$TmAs_3$	6'/mmm'	AFM	D_{6h}
mp-979980	VPd_3	6'/mmm'	AFM	D_{6h}
mp-980038	Tl_3Ru	6'/mmm'	AFM	D_{6h}
mp-980061	$TbAs_3$	6'/mmm'	AFM	D_{6h}
mp-981748	$TbAg_3$	6'/mmm'	AFM	D_{6h}
mp-982557	$HoGa_3$	6'/mmm'	AFM	D_{6h}
mp-984106	Na_3Re	6'/mmm'	AFM	D_{6h}
mp-984359	DyO_3	6'/mmm'	AFM	D_{6h}
mp-984873	Al_3Fe	6'/mmm'	AFM	D_{6h}
mp-985437	$ErLu_3$	6'/mmm'	AFM	D_{6h}
mp-1018703	EuZnGe	6/m'm'm'	AFM	D_{6h}
mp-1017531	VPt	m'm'm'	AFM	D_{2h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-1017545	ZrRh	m'm'm'	AFM	D_{2h}
mp-1025096	$ErZn_2$	m'm'm'	AFM	D_{2h}
mp-1025183	Ho_2B_4C	m'm'm'	AFM	D_{2h}
mp-1025379	Tb_2B_4C	m'm'm'	AFM	D_{2h}
mp-1025478	$TbAu_3$	m'm'm'	AFM	D_{2h}
mp-10528	Ho_2AlSi_2	m'm'm'	AFM	D_{2h}
mp-10529	Er_2AlSi_2	m'm'm'	AFM	D_{2h}
mp-10530	Tm_2AlSi_2	m'm'm'	AFM	D_{2h}
mp-1071422	$CeAg_2$	m'm'm'	AFM	D_{2h}
mp-1077151	EuZnGe	m'm'm'	AFM	D_{2h}
mp-1077183	$PrGe_2$	m'm'm'	AFM	D_{2h}
mp-1077510	PrSiGe	m'm'm'	AFM	D_{2h}
mp-1077746	TiFeH	m'm'm'	AFM	D_{2h}
mp-1077779	$ErSe_2$	m'm'm'	AFM	D_{2h}
mp-1079618	$TbAl_4$	m'm'm'	AFM	D_{2h}
mp-1079859	CaFeAsF	m'm'm'	AFM	D_{2h}
mp-1079897	$SmAl_4$	m'm'm'	AFM	D_{2h}
mp-1080590	$DyAu_3$	m'm'm'	AFM	D_{2h}
mp-1080756	$ErAu_3$	m'm'm'	AFM	D_{2h}
mp-1184410	EuMg	m'm'm'	AFM	D_{2h}
mp-1185911	MgOs	m'm'm'	AFM	D_{2h}
mp-1206385	TmSeI	m'm'm'	AFM	D_{2h}
mp-1207331	TbSeI	m'm'm'	AFM	D_{2h}

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Id	Material	MPG	Magtype	PG
mp-1207375	ErSBr	m'm'm'	AFM	D_{2h}
mp-1216554	Tm_2TeS_2	m'm'm'	AFM	D_{2h}
mp-1216596	V_2O_5	m'm'm'	AFM	D_{2h}
mp-1217728	$Tb_2(InSn)_3$	m'm'm'	AFM	D_{2h}
mp-1219315	$Sm_2(InSn)_3$	m'm'm'	AFM	D_{2h}
mp-1219688	PrAsPd	m'm'm'	AFM	D_{2h}
mp-1219736	PrSO	m'm'm'	AFM	D_{2h}
mp-1219932	$Pr_2(TlIn)_3$	m'm'm'	AFM	D_{2h}
mp-1220560	$Nd_2(InSn)_3$	m'm'm'	AFM	D_{2h}
mp-1220865	$NaSm_2Se_3$	m'm'm'	AFM	D_{2h}
mp-1220945	$NaPr_2Se_3$	m'm'm'	AFM	D_{2h}
mp-1222543	$LiCo_2O_3$	m'm'm'	AFM	D_{2h}
mp-1223956	Ho_2TeS_2	m'm'm'	AFM	D_{2h}
mp-1224241	HfV_2N_3	m'm'm'	AFM	D_{2h}
mp-1224715	$Fe_2(PdAu)_3$	m'm'm'	AFM	D_{2h}
mp-1224880	$GaFe_2$	m'm'm'	AFM	D_{2h}
mp-1225415	$Dy_2(InSn)_3$	m'm'm'	AFM	D_{2h}
mp-1225541	Er_2TeS_2	m'm'm'	AFM	D_{2h}
mp-1226572	CeGaSi	m'm'm'	AFM	D_{2h}
mp-1226599	CeGaGe	m'm'm'	AFM	D_{2h}
mp-1226905	$Ce_2(TlSn)_3$	m'm'm'	AFM	D_{2h}
mp-1227310	$Ce_2(InSn)_3$	m'm'm'	AFM	D_{2h}
mp-1228006	AlV_2	m'm'm'	AFM	D_{2h}

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Id	Material	MPG	Magtype	PG
mp-1228923	$AlCr_2$	m'm'm'	AFM	D_{2h}
mp-1385	$CeZn_2$	m'm'm'	AFM	D_{2h}
mp-15293	TmTiGe	m'm'm'	AFM	D_{2h}
mp-18767	$LiMnO_2$	m'm'm'	AFM	D_{2h}
mp-19218	$Sr_3Fe_2O_5$	m'm'm'	AFM	D_{2h}
mp-19860	CeTiGe	m'm'm'	AFM	D_{2h}
mp-2017054	EuMg	m'm'm'	AFM	D_{2h}
mp-2041	$HoZn_2$	m'm'm'	AFM	D_{2h}
mp-20626	DyTiGe	m'm'm'	AFM	D_{2h}
mp-20918	ErTiSi	m'm'm'	AFM	D_{2h}
mp-21036	$NaMnO_2$	m'm'm'	AFM	D_{2h}
mp-21463	PrTiGe	m'm'm'	AFM	D_{2h}
mp-22108	HoTiGe	m'm'm'	AFM	D_{2h}
mp-22274	HoTiSi	m'm'm'	AFM	D_{2h}
mp-22532	TbTiSi	m'm'm'	AFM	D_{2h}
mp-27323	$BaMn_2O_3$	m'm'm'	AFM	D_{2h}
mp-27616	ErSCl	m'm'm'	AFM	D_{2h}
mp-28458	ErSeI	m'm'm'	AFM	D_{2h}
mp-30417	$SmAu_3$	m'm'm'	AFM	D_{2h}
mp-30487	$EuCd_2$	m'm'm'	AFM	D_{2h}
mp-504474	$TbHO_2$	m'm'm'	AFM	D_{2h}
mp-540828	FeClO	m'm'm'	AFM	D_{2h}
mp-556135	GdSI	m'm'm'	AFM	D_{2h}

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Id	Material	MPG	Magtype	PG
mp-568541	Dy_2B_4C	m'm'm'	AFM	D_{2h}
mp-569406	$TmZn_2$	m'm'm'	AFM	D_{2h}
mp-570093	$DyZn_2$	m'm'm'	AFM	D_{2h}
mp-603347	TiNi	m'm'm'	AFM	D_{2h}
mp-681	$EuZn_2$	m'm'm'	AFM	D_{2h}
mp-752637	HoBrO	m'm'm'	AFM	D_{2h}
mp-754113	TmClO	m'm'm'	AFM	D_{2h}
mp-755689	ErClO	m'm'm'	AFM	D_{2h}
mp-757614	$LiFeO_2$	m'm'm'	AFM	D_{2h}
mp-998968	TiMo	m'm'm'	AFM	D_{2h}
mp-1007881	FeB	m'mm	AFM	D_{2h}
mp-1011377	$CeSe_2$	m'mm	AFM	D_{2h}
mp-1017507	TmAu	m'mm	AFM	D_{2h}
mp-1018073	HoGa	m'mm	AFM	D_{2h}
mp-1018276	CeGa	m'mm	AFM	D_{2h}
mp-1024985	ErAlGe	m'mm	AFM	D_{2h}
mp-1025069	$PrSn_2$	m'mm	AFM	D_{2h}
mp-1025395	$HoTe_3$	m'mm	AFM	D_{2h}
mp-1025426	CeI_3	m'mm	AFM	D_{2h}
mp-1025482	$DyTe_3$	m'mm	AFM	D_{2h}
mp-1025485	$LaZn_2Co$	m'mm	AFM	D_{2h}
mp-1025554	$PrSi_2Ag$	m'mm	AFM	D_{2h}
mp-1039524	$CeMg_2$	m'mm	AFM	D_{2h}

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Id	Material	MPG	Magtype	PG
mp-1064981	HfCo	m'mm	AFM	D_{2h}
mp-1065301	TmGa	m'mm	AFM	D_{2h}
mp-1067248	TiNi	m'mm	AFM	D_{2h}
mp-1071337	TbAlGe	m'mm	AFM	D_{2h}
mp-1071458	TiNiH	m'mm	AFM	D_{2h}
mp-1071492	ErSnGe	m'mm	AFM	D_{2h}
mp-1071567	$GdSn_2$	m'mm	AFM	D_{2h}
mp-1071879	GdBC	m'mm	AFM	D_{2h}
mp-1072024	TmAlGe	m'mm	AFM	D_{2h}
mp-1072865	$HoSn_2$	m'mm	AFM	D_{2h}
mp-1072922	$TbSn_2$	m'mm	AFM	D_{2h}
mp-1077056	GdAlGe	m'mm	AFM	D_{2h}
mp-1077102	$TmSn_2$	m'mm	AFM	D_{2h}
mp-1077240	NaFeAs	m'mm	AFM	D_{2h}
mp-1077386	LiFeP	m'mm	AFM	D_{2h}
mp-1077479	$EuBi_2$	m'mm	AFM	D_{2h}
mp-1077556	TbSnGe	m'mm	AFM	D_{2h}
mp-1078348	$CeGa_3Pd$	m'mm	AFM	D_{2h}
mp-1078429	$EuGa_3Pd$	m'mm	AFM	D_{2h}
mp-1078508	$HoTe_3$	m'mm	AFM	D_{2h}
mp-1078515	$LiTbSn_2$	m'mm	AFM	D_{2h}
mp-1078517	$RbFeS_2$	m'mm	AFM	D_{2h}
mp-1078879	$LiPrSn_2$	m'mm	AFM	D_{2h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-1079160	$CeAl_2Pt$	m'mm	AFM	D_{2h}
mp-1079203	$NdGe_2Pd$	m'mm	AFM	D_{2h}
mp-1079241	Ce_2Si_7	m'mm	AFM	D_{2h}
mp-1079745	$ErGa_2Pd$	m'mm	AFM	D_{2h}
mp-1079951	Na_2CoSe_2	m'mm	AFM	D_{2h}
mp-1080066	$LiTmSn_2$	m'mm	AFM	D_{2h}
mp-1080248	$CeSe_2$	m'mm	AFM	D_{2h}
mp-1080405	DySnGe	m'mm	AFM	D_{2h}
mp-1080480	$CeSi_2Ag$	m'mm	AFM	D_{2h}
mp-1080579	$NdCd_2Pd$	m'mm	AFM	D_{2h}
mp-1080643	$LaFeSi_2$	m'mm	AFM	D_{2h}
mp-1080658	$LiErSn_2$	m'mm	AFM	D_{2h}
mp-1080712	$LiSmSn_2$	m'mm	AFM	D_{2h}
mp-1080784	$LiHoSn_2$	m'mm	AFM	D_{2h}
mp-1080801	$NdLuS_3$	m'mm	AFM	D_{2h}
mp-1086673	$DyTe_3$	m'mm	AFM	D_{2h}
mp-1087512	$TmTe_3$	m'mm	AFM	D_{2h}
mp-1092225	$CeLuS_3$	m'mm	AFM	D_{2h}
mp-1092296	$DyGa_2Pd$	m'mm	AFM	D_{2h}
mp-1093536	$CaRh_2Pb$	m'mm	AFM	D_{2h}
mp-1093647	$MgZnNi_2$	m'mm	AFM	D_{2h}
mp-1093730	$CdRh_2Pb$	m'mm	AFM	D_{2h}
mp-1093751	$CaHfRh_2$	m'mm	AFM	D_{2h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-1093754	$YScRu_2$	m'mm	AFM	D_{2h}
mp-1093794	$ZnSnRh_2$	m'mm	AFM	D_{2h}
mp-1093884	$ScAlRu_2$	m'mm	AFM	D_{2h}
mp-1093946	$BeGeIr_2$	m'mm	AFM	D_{2h}
mp-1095134	$LaCoGe_2$	m'mm	AFM	D_{2h}
mp-1095723	$BeGeRh_2$	m'mm	AFM	D_{2h}
mp-1095734	$ZrGaCo_2$	m'mm	AFM	D_{2h}
mp-1095749	$ZnSiRu_2$	m'mm	AFM	D_{2h}
mp-1095793	$ZnCdRh_2$	m'mm	AFM	D_{2h}
mp-1095820	$InNi_2Au$	m'mm	AFM	D_{2h}
mp-1095847	$BeCo_2P$	m'mm	AFM	D_{2h}
mp-1095989	$ZnInIr_2$	m'mm	AFM	D_{2h}
mp-1096011	$MgGeRu_2$	m'mm	AFM	D_{2h}
mp-1096081	$ZrSiRu_2$	m'mm	AFM	D_{2h}
mp-1096171	$AlZnCo_2$	m'mm	AFM	D_{2h}
mp-1096323	$MgSiRu_2$	m'mm	AFM	D_{2h}
mp-1096345	$AlGaRu_2$	m'mm	AFM	D_{2h}
mp-1096462	$AlCdRh_2$	m'mm	AFM	D_{2h}
mp-1096531	$ZnGaNi_2$	m'mm	AFM	D_{2h}
mp-1096558	$BeCo_2B$	m'mm	AFM	D_{2h}
mp-1096567	$LiPRh_2$	m'mm	AFM	D_{2h}
mp-1096586	$ZrZnIr_2$	m'mm	AFM	D_{2h}
mp-1096639	$ZnGeRu_2$	m'mm	AFM	D_{2h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-1096700	$TaBeCo_2$	m'mm	AFM	D_{2h}
mp-1096739	$NaSnRh_2$	m'mm	AFM	D_{2h}
mp-1096747	$ZnGeRh_2$	m'mm	AFM	D_{2h}
mp-1096750	$ZrInRu_2$	m'mm	AFM	D_{2h}
mp-1097117	$MgCdRh_2$	m'mm	AFM	D_{2h}
mp-1097119	$AlGaCo_2$	m'mm	AFM	D_{2h}
mp-1097171	$ZnSiIr_2$	m'mm	AFM	D_{2h}
mp-1097281	$ScInCo_2$	m'mm	AFM	D_{2h}
mp-1097323	$ZrZnCo_2$	m'mm	AFM	D_{2h}
mp-1097363	$HfInRu_2$	m'mm	AFM	D_{2h}
mp-1097490	$HfCo_2Sb$	m'mm	AFM	D_{2h}
mp-1097504	$MgSnRu_2$	m'mm	AFM	D_{2h}
mp-1097663	$MgCo_2Sn$	m'mm	AFM	D_{2h}
mp-1097665	$MgCo_2Si$	m'mm	AFM	D_{2h}
mp-1097669	$ZnGaCo_2$	m'mm	AFM	D_{2h}
mp-1097675	$BePRu_2$	m'mm	AFM	D_{2h}
mp-11295	$DyCd_3$	m'mm	AFM	D_{2h}
mp-11302	$HoCd_3$	m'mm	AFM	D_{2h}
mp-11392	$TmGa_2Pd$	m'mm	AFM	D_{2h}
mp-1176635	$LiMnF_3$	m'mm	AFM	D_{2h}
mp-1181499	CuO_2	m'mm	AFM	D_{2h}
mp-1184465	$CoPb_3$	m'mm	AFM	D_{2h}
mp-1187671	Ti_3Ni	m'mm	AFM	D_{2h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-1205810	$EuBr_3$	m'mm	AFM	D_{2h}
mp-1206025	HoAlSi	m'mm	AFM	D_{2h}
mp-1206055	$NdSi_2Ag$	m'mm	AFM	D_{2h}
mp-1206104	$CeSiPt_2$	m'mm	AFM	D_{2h}
mp-1206233	TbAlGe	m'mm	AFM	D_{2h}
mp-1206326	ErAlSi	m'mm	AFM	D_{2h}
mp-1206580	GdSnGe	m'mm	AFM	D_{2h}
mp-1211097	LiFe	m'mm	AFM	D_{2h}
mp-1212688	$EuSi_2Pt$	m'mm	AFM	D_{2h}
mp-12351	$PrTe_3$	m'mm	AFM	D_{2h}
mp-1245544	NaMnN	m'mm	AFM	D_{2h}
mp-1246338	NaFeN	m'mm	AFM	D_{2h}
mp-12607	PrPt	m'mm	AFM	D_{2h}
mp-12701	$NdSn_2$	m'mm	AFM	D_{2h}
mp-13037	$TmGe_2$	m'mm	AFM	D_{2h}
mp-13327	$NdLuSe_3$	m'mm	AFM	D_{2h}
mp-1405	TbGe	m'mm	AFM	D_{2h}
mp-1448	NdGa	m'mm	AFM	D_{2h}
mp-1546120	$EuSb_2$	m'mm	AFM	D_{2h}
mp-1546306	VBr_3	m'mm	AFM	D_{2h}
mp-16342	HoGe	m'mm	AFM	D_{2h}
mp-20021	$DySn_2$	m'mm	AFM	D_{2h}
mp-20122	DyGe	m'mm	AFM	D_{2h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-21460	$CeIn_2Pd$	m'mm	AFM	D_{2h}
mp-2210763	$NaMgCu_2O_3$	m'mm	AFM	D_{2h}
mp-2264	ErGe	m'mm	AFM	D_{2h}
mp-24992	$FeHO_2$	m'mm	AFM	D_{2h}
mp-260	CrB	m'mm	AFM	D_{2h}
mp-27975	$NdBr_3$	m'mm	AFM	D_{2h}
mp-28448	$DyCl_3$	m'mm	AFM	D_{2h}
mp-30423	VAu_2	m'mm	AFM	D_{2h}
mp-30502	$TmCd_3$	m'mm	AFM	D_{2h}
mp-30613	$ErSn_2$	m'mm	AFM	D_{2h}
mp-31380	SmPd	m'mm	AFM	D_{2h}
mp-3213	$LaMnSi_2$	m'mm	AFM	D_{2h}
mp-3216543	KYb_2F_7	m'mm	AFM	D_{2h}
mp-378	ErSi	m'mm	AFM	D_{2h}
mp-4437	$NdTe_2Se$	m'mm	AFM	D_{2h}
mp-505034	Cs_2MnS_2	m'mm	AFM	D_{2h}
mp-505632	$CsFeS_2$	m'mm	AFM	D_{2h}
mp-511	PrGe	m'mm	AFM	D_{2h}
mp-513	$ErGe_3$	m'mm	AFM	D_{2h}
mp-5131	K_2CoS_2	m'mm	AFM	D_{2h}
mp-555351	$FeBiO_3$	m'mm	AFM	D_{2h}
mp-561830	Cs_2CoS_2	m'mm	AFM	D_{2h}
mp-568624	$Tb_2B_2C_3$	m'mm	AFM	D_{2h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-569701	$ErTe_3$	m'mm	AFM	D_{2h}
mp-570403	$TbCd_3$	m'mm	AFM	D_{2h}
mp-570934	NdPt	m'mm	AFM	D_{2h}
mp-571506	TmAlSi	m'mm	AFM	D_{2h}
mp-571571	$CeTe_3$	m'mm	AFM	D_{2h}
mp-573947	Cs_2MnSe_2	m'mm	AFM	D_{2h}
mp-610744	Cs_2MnTe_2	m'mm	AFM	D_{2h}
mp-663	NdGe	m'mm	AFM	D_{2h}
mp-7303	$ErCd_3$	m'mm	AFM	D_{2h}
mp-740	$NdTe_3$	m'mm	AFM	D_{2h}
mp-755136	$LiFeF_3$	m'mm	AFM	D_{2h}
mp-755708	$RbFeO_2$	m'mm	AFM	D_{2h}
mp-8713	K_2MnS_2	m'mm	AFM	D_{2h}
mp-8714	Rb_2MnS_2	m'mm	AFM	D_{2h}
mp-8716	K_2MnSe_2	m'mm	AFM	D_{2h}
mp-8717	Rb_2MnSe_2	m'mm	AFM	D_{2h}
mp-8719	K_2MnTe_2	m'mm	AFM	D_{2h}
mp-8720	Rb_2MnTe_2	m'mm	AFM	D_{2h}
mp-8765	Na_2CoS_2	m'mm	AFM	D_{2h}
mp-8766	Rb_2CoS_2	m'mm	AFM	D_{2h}
mp-8768	K_2CoSe_2	m'mm	AFM	D_{2h}
mp-8769	Rb_2CoSe_2	m'mm	AFM	D_{2h}
mp-8770	Cs_2CoSe_2	m'mm	AFM	D_{2h}

Continued on next page

Id	Material	MPG	Magtype	PG
mp-8806	$Sr_2Cu_2O_3$	m'mm	AFM	D_{2h}
mp-9399	$SmTe_3$	m'mm	AFM	D_{2h}
mp-972423	$TbGa_2Pd$	m'mm	AFM	D_{2h}
mp-972521	SmGe	m'mm	AFM	D_{2h}
mp-973954	$LuFeGe_2$	m'mm	AFM	D_{2h}
mp-982511	$HoGa_2Pd$	m'mm	AFM	D_{2h}
mp-989554	$LaMnN_3$	m'mm	AFM	D_{2h}
mp-9936	DyBC	m'mm	AFM	D_{2h}
mp-9973	VB	m'mm	AFM	D_{2h}
mp-998911	TmGe	m'mm	AFM	D_{2h}
mp-999124	TbPd	m'mm	AFM	D_{2h}
mp-999141	TbAu	m'mm	AFM	D_{2h}
mp-999177	SmGa	m'mm	AFM	D_{2h}
mp-999193	SmAu	m'mm	AFM	D_{2h}
mp-999291	PrPd	m'mm	AFM	D_{2h}
mp-999306	PrAu	m'mm	AFM	D_{2h}
mp-999338	NdAu	m'mm	AFM	D_{2h}
mp-1227032	$CaMnO_2$	mmm.1'	AFM	D_{2h}

TABLE S9: List of materials with CS even-wave axial phonon. Wave and Wave (no Tbp) indicates the wave type determined with and without considering time-reversal-breaking perturbation. Magtype indicates the magnetic ordering type. FM, AM, and CFM stand for ferromagnetic, antiferromagnetic, and compensated ferrimagnetic orderings, respectively. PG indicates the point group of the magnetic space group.

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1018693	Eu_2H_3Cl	$\bar{3}$m'	s	-	FM	D_{3d}
mp-1096697	$YAlCu_2$	m'm'm	s	-	FM	D_{2h}
mp-1019082	RuN_2	4/mm'm'	s	-	FM	D_{4h}
mp-1078726	$CsHoS_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-21139	Mn_2SnS_4	mmm.1	d	-	AM	D_{2h}
mp-10761	FeTe	6'/m'mm'	g	-	AM	D_{6h}
mp-1182416	CoF_3	2'/m'	s	-	AM	C_{2h}
mp-1227082	$CaLa(CoO_3)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-2295-	$CsNiCl_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-560119	$TbCl_2F$	2/m.1	d	-	FM	C_{2h}
mp-1097535	$HfTiNi_2$	m'm'm	s	-	FM	D_{2h}
mp-18966	$FeAgO_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-5938	$SrCu_2O_3$	m'm'm	s	-	FM	D_{2h}
mp-976126	K_3Rh	6/mm'm'	s	-	FM	D_{6h}
mp-1185788	Mg_3Cr	6/mm'm'	s	-	FM	D_{6h}
mp-3909	$ZrAlCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1078802	$LaVGe_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-1177971	Li_2FeS_2	m'm'm	s	-	FM	D_{2h}
mp-1184649	Ho_2ZnPd	4/mm'm'	s	-	FM	D_{4h}
mp-1025525	$DyInPt_2$	6/mm'm'	s	-	FM	D_{6h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-23038	$CsVBr_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-1417269	FeN	4'/mm'm	d	-	AM	D_{4h}
mp-861947	$LiPm_2Ga$	4/mm'm'	s	-	FM	D_{4h}
mp-1185341	$LiEu_2Cd$	4/mm'm'	s	-	FM	D_{4h}
mp-1385977	MnF_4	4/mm'm'	s	-	FM	D_{4h}
mp-4771	$TiAlCu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1018691	Eu_2H_3Br	$\overline{3}$m'	s	-	FM	D_{3d}
mp-75496-	SmIO	$\overline{3}$m'	s	-	FM	D_{3d}
mp-2353285	$TlCoCl_3$	2/m.1	d	-	FM	C_{2h}
mp-1068212	Fe_2O_3	4/mm'm'	s	-	FM	D_{4h}
mp-122697-	Ce_2Mg_5Au	$\overline{3}$m'	s	-	FM	D_{3d}
mp-864602	Nd_2MgTl	4/mm'm'	s	-	FM	D_{4h}
mp-86160-	Ho_2ZnIn	4/mm'm'	s	-	FM	D_{4h}
mp-1072798	ErAlZn	6'/m'mm'	g	-	AM	D_{6h}
mp-1186682	Pr_2CdHg	4/mm'm'	s	-	FM	D_{4h}
mp-998624	$NaOsO_3$	$\overline{3}$m.1	g	-	AM	D_{3d}
mp-567933	$FeCN_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-139304-	VO_2	6/mm'm'	s	-	FM	D_{6h}
mp-1097439	$HfTiRe_2$	m'm'm	s	-	FM	D_{2h}
mp-999516	MnP	6'/m'mm'	g	-	AM	D_{6h}
mp-1097629	$ZrTaOs_2$	m'm'm	s	-	FM	D_{2h}
mp-28928	DySBr	m'm'm	s	-	FM	D_{2h}
mp-20145	$TiGaCo_2$	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-4583	$NbCo_2Sn$	4/mm'm'	s	-	FM	D_{4h}
mp-2109	$CePt_2$	4/mm'm'	s	-	FM	D_{4h}
mp-974434	RuF_4	2'/m'	s	-	AM	C_{2h}
mp-1096358	$TiCdCu_2$	m'm'm	s	-	FM	D_{2h}
mp-1183888	Eu_2CdSn	4/mm'm'	s	-	FM	D_{4h}
mp-1077452	KMnCl	m'm'm	s	-	AM	D_{2h}
mp-86792-	$K_2Rh_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-1039083	CeMg	$\overline{3}$m'	s	-	FM	D_{3d}
mp-109707-	$ZrGaRh_2$	m'm'm	s	-	FM	D_{2h}
mp-1014373	CrN_2	4/mm'm'	s	-	FM	D_{4h}
mp-75669-	$EuAgO_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-2217171	MgV_2ZnO_6	2/m.1	d	-	FM	C_{2h}
mp-1071595	PrSnAu	6'/m'mm'	g	-	AM	D_{6h}
mp-1185335	$LiEu_2Tl$	4/mm'm'	s	-	FM	D_{4h}
mp-865805	$TaZnCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-334-	$TaAlCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1186508	Pm_2InSn	4/mm'm'	s	-	FM	D_{4h}
mp-1206506	EuO_2	4/mm'm'	s	-	FM	D_{4h}
mp-1208254	Ti_4Co	4/mm'm'	s	-	FM	D_{4h}
mp-1186694	Pr_2ZnGa	4/mm'm'	s	-	FM	D_{4h}
mp-863655	Pm_2CdSn	4/mm'm'	s	-	FM	D_{4h}
mp-1183218	$AlGaRu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1227951	$BaLa(CoO_3)_2$	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1516435	$LaEu_2SbO_6$	4/mm'm'	s	-	FM	D_{4h}
mp-1245931	$CoPtN_2$	6/mm'm'	s	-	FM	D_{6h}
mp-19147	$NiCO_3$	$\overline{3}$m.1	g	-	AM	D_{3d}
mp-118648-	Pm_2CdPb	4/mm'm'	s	-	FM	D_{4h}
mp-1206241	$HoInPt_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-1288145	$LaCoO_3$	$\overline{3}$.1	s	-	CFM	C_{3i}
mp-1186476	Pm_2TlSn	4/mm'm'	s	-	FM	D_{4h}
mp-75448-	$GdYO_2$	6/mm'm'	s	-	FM	D_{6h}
mp-850131	NiS_2	2'/m'	s	-	AM	C_{2h}
mp-1080683	$CsEuS_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-1227171	CeAgPb	$\overline{3}$m'	s	-	FM	D_{3d}
mp-755007	CeOF	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1879	SmS	4/mm'm'	s	-	FM	D_{4h}
mp-1978358	KCo	m'm'm	s	-	FM	D_{2h}
mp-1217541	TbSbPd	2/m.1	d	-	FM	C_{2h}
mp-224046-	$MgIn(FeO_2)_2$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1019266	$SmTe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-555908	CoF_2	4/mm'm'	s	-	FM	D_{4h}
mp-1097003	FeO_2	m'm'm	s	-	FM	D_{2h}
mp-796278	CoO_2	m'm'm	s	-	FM	D_{2h}
mp-1076971	HoSnAu	6/mm'm'	s	-	FM	D_{6h}
mp-107937-	ErH_3	6/mm'm'	s	-	FM	D_{6h}
mp-19929	$MgInNi_2$	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-983562	Na_3Nd	6/mm'm'	s	-	FM	D_{6h}
mp-1205604	$KVCl_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-1018663	CeS_2	4/mm'm'	s	-	FM	D_{4h}
mp-20384	$CeAgAs_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1181447	EuH_2	6/mm'm'	s	-	FM	D_{6h}
mp-1078341	$EuNbO_3$	m'm'm	s	-	FM	D_{2h}
mp-861877	$CdSnRh_2$	4/mm'm'	s	-	FM	D_{4h}
mp-122554-	ErCdIn	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1208431	Ta_4Co	4/mm'm'	s	-	FM	D_{4h}
mp-1093846	$HfGaCu_2$	m'm'm	s	-	FM	D_{2h}
mp-5068	DyZrSb	4/mm'm'	s	-	FM	D_{4h}
mp-1400395	$AlNiO_3$	6/mm'm'	s	-	FM	D_{6h}
mp-866152	$TiBeCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1206276	Pr_2Sb_3Au	4/mm'm'	s	-	FM	D_{4h}
mp-1095729	$HfNbRe_2$	m'm'm	s	-	FM	D_{2h}
mp-752928	$LiCoS_2$	2/m.1	d	-	FM	C_{2h}
mp-1224398	$HfInCu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-101869-	ErZnGa	6'/m'mm'	g	-	AM	D_{6h}
mp-762506	$SrNiO_3$	4/mm'm'	s	-	FM	D_{4h}
mp-704645	CuO	2'/m'	s	-	AM	C_{2h}
mp-1178416	CrO	2'/m'	s	-	AM	C_{2h}
mp-997098	$CuPtO_2$	m'm'm	s	-	AM	D_{2h}
mp-2225594	$MgMn_2O_4$	$\overline{3}$m'	s	-	FM	D_{3d}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1186082	Na_3Ru	6/mm'm'	s	-	FM	D_{6h}
mp-997095	$NiAuO_2$	6/mm'm'	s	-	FM	D_{6h}
mp-867475	$TaSnRu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1079578	$Tb(BC)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1039492	$CeMg_2$	6/mm'm'	s	-	FM	D_{6h}
mp-30604	DyGa	m'm'm	s	-	FM	D_{2h}
mp-118765-	Tm_2ZnIn	4/mm'm'	s	-	FM	D_{4h}
mp-1094065	$Sr_2Co_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-1184129	$Dy_2Y_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-28929	DySI	m'm'm	s	-	FM	D_{2h}
mp-1209243	Pr_2ZnP_2O	4/mm'm'	s	-	FM	D_{4h}
mp-10856	$Er(BC)_2$	4/mmm.1	g	-	AM	D_{4h}
mp-1226047	CoAsS	2/m.1	d	-	CFM	C_{2h}
mp-75472-	CoO_2	$\bar{3}$m'	s	-	FM	D_{3d}
mp-1184582	$HfNbRu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-109729-	Cu_2PdPt	m'm'm	s	-	FM	D_{2h}
mp-998429	$NiAgF_3$	m'm'm	s	-	AM	D_{2h}
mp-1227395	$Ca(TmTe_2)_2$	2/m.1	d	-	FM	C_{2h}
mp-120622-	$KDyI_3$	m'm'm	s	-	AM	D_{2h}
mp-1206474	Pr_2I_2O	4/mm'm'	s	-	FM	D_{4h}
mp-1232197	$CeMgS_3$	2/m.1	d	-	FM	C_{2h}
mp-560663	$Rb(CoS)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1224185	In_3Co	m'm'm	s	-	FM	D_{2h}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1080268	$CeSe_2$	4'/mm'm	d	-	AM	D_{4h}
mp-1185283	Li_3Tm	6/mm'm'	s	-	FM	D_{6h}
mp-979983	Cs_3Yb	6/mm'm'	s	-	FM	D_{6h}
mp-1188015	$ZrSbRu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-769284	Dy_2SeO_2	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1077032	$CeZn_2$	m'm'm	s	-	FM	D_{2h}
mp-19424	$TiCoO_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-98466-	Dy_2InHg	4/mm'm'	s	-	FM	D_{4h}
mp-571339	$Ba(CrAs)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1184056	Eu_2InHg	4/mm'm'	s	-	FM	D_{4h}
mp-16053	$CuSiO_3$	m'm'm	s	-	AM	D_{2h}
mp-972244	Tm_2ZnGa	4/mm'm'	s	-	FM	D_{4h}
mp-1184333	Gd_2MgAl	4/mm'm'	s	-	FM	D_{4h}
mp-983556	Er_2MgTl	4/mm'm'	s	-	FM	D_{4h}
mp-1095918	$YGaCu_2$	m'm'm	s	-	FM	D_{2h}
mp-552694	Yb_2SO_2	6/mm'm'	s	-	FM	D_{6h}
mp-884	$NdSi_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1217047	$TiAlCu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1219175	Sm_2O	4/mm'm'	s	-	CFM	D_{4h}
mp-13975	Er_2SeO_2	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1184095	Dy_2ZnAg	4/mm'm'	s	-	FM	D_{4h}
mp-108033-	$CeSe_2$	6/mm'm'	s	-	FM	D_{6h}
mp-114756-	$KY(CuO_2)_2$	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1079919	Mg_3Mn	2/m.1	d	-	FM	C_{2h}
mp-1226439	Co_2Pd	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1236294	$LiCe_2O_3$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1185944	$MgSbRh_2$	4/mm'm'	s	-	FM	D_{4h}
mp-768864	$KNdO_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-10853	$Pr(BC)_2$	4/mmm.1	g	-	AM	D_{4h}
mp-1077593	$SmSn_2$	m'm'm	s	-	FM	D_{2h}
mp-1184273	$EuBr_2$	4/mm'm'	s	-	FM	D_{4h}
mp-754409	$HoBO_3$	$\overline{3}$m.1	g	-	AM	D_{3d}
mp-23232	$FeBr_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-1281832	CoO_2	2'/m'	s	-	AM	C_{2h}
mp-1096225	$YSnRu_2$	m'm'm	s	-	FM	D_{2h}
mp-5735	$BaTbO_3$	m'm'm	s	-	AM	D_{2h}
mp-2537	NdS_2	4/mm'm'	s	-	FM	D_{4h}
mp-1187251	$TaSiRu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-10867	PrPPd	6'/m'mm'	g	-	AM	D_{6h}
mp-21279	EuSi	m'm'm	s	-	FM	D_{2h}
mp-33009	MnO_2	m'm'm	s	-	FM	D_{2h}
mp-1096677	$MgSbRh_2$	m'm'm	s	-	FM	D_{2h}
mp-118439-	Gd_2TlZn	4/mm'm'	s	-	FM	D_{4h}
mp-21419	$CeMg_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1076988	$GdZn_2$	m'm'm	s	-	FM	D_{2h}
mp-977546	Pm_2ZnGa	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1025545	$EuBrO_2$	2/m.1	d	-	FM	C_{2h}
mp-1227385	$Ca(HoTe_2)_2$	2/m.1	d	-	CFM	C_{2h}
mp-19339	$LaNiO_3$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1185399	$LiPm_2Sn$	4/mm'm'	s	-	FM	D_{4h}
mp-5899	$NdAlO_3$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-97213-	Tl_3Cr	6/mm'm'	s	-	FM	D_{6h}
mp-863743	Pm_2SiAg	4/mm'm'	s	-	FM	D_{4h}
mp-1184448	Gd_2TlHg	4/mm'm'	s	-	FM	D_{4h}
mp-1096645	$HfZrOs_2$	m'm'm	s	-	FM	D_{2h}
mp-1184313	$ErMg_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1079111	$EuTiO_3$	4/mm'm'	s	-	FM	D_{4h}
mp-1225323	Dy_2InAg	4/mm'm'	s	-	FM	D_{4h}
mp-1206356	Y_2GaCo_2	m'm'm	s	-	FM	D_{2h}
mp-863697	$LiPm_2Si$	4/mm'm'	s	-	FM	D_{4h}
mp-1018729	HoZnIn	6'/m'mm'	g	-	AM	D_{6h}
mp-1186438	Pm_2AgAu	4/mm'm'	s	-	FM	D_{4h}
mp-1097572	$TiCu_2Au$	m'm'm	s	-	FM	D_{2h}
mp-1097652	$MgScCu_2$	m'm'm	s	-	FM	D_{2h}
mp-4402	$La(CoP)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-608777	$Eu(InAs)_2$	6/mm'm'	s	-	FM	D_{6h}
mp-12671	Er_2SO_2	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1041961	CrO_2	m'm'm	s	-	FM	D_{2h}
mp-1183915	Eu_2CdHg	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1147752	$KLa(CuO_2)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-122667-	CeAsPd	2/m.1	d	-	FM	C_{2h}
mp-20954	DyTiSi	4/mm'm'	s	-	FM	D_{4h}
mp-865316	Gd_2MgTl	4/mm'm'	s	-	FM	D_{4h}
mp-1078217	$NaFeF_3$	m'm'm	s	-	AM	D_{2h}
mp-117981-	$PrClO_2$	2/m.1	d	-	FM	C_{2h}
mp-1225044	Er_2C	$\overline{3}$m'	s	-	FM	D_{3d}
mp-559931	VF_3	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1018711	GdZnIn	6/mm'm'	s	-	FM	D_{6h}
mp-16378	HoS_2	4/mm'm'	s	-	FM	D_{4h}
mp-973841	$LiHo_2Al$	4/mm'm'	s	-	FM	D_{4h}
mp-973773	$Nd_2Cd_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-1206499	Dy_2Cl_2O	4/mm'm'	s	-	FM	D_{4h}
mp-1210828	Lu_4Ni	4/mm'm'	s	-	FM	D_{4h}
mp-4227	$BaVS_3$	6/mm'm'	s	-	FM	D_{6h}
mp-863698	Pm_2MgAl	4/mm'm'	s	-	FM	D_{4h}
mp-139132-	Ca_2CrN_2	2/m.1	d	-	FM	C_{2h}
mp-1183762	Ce_2CdPb	4/mm'm'	s	-	FM	D_{4h}
mp-1097197	$LiZrCu_2$	m'm'm	s	-	FM	D_{2h}
mp-11193	$VAuS_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1096495	$LiNi_2As$	m'm'm	s	-	FM	D_{2h}
mp-1095172	$CsNdS_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-2456411	$CsCuCl_3$	2/m.1	d	-	FM	C_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1072208	DyOF	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1018086	CePd	m'm'm	s	-	FM	D_{2h}
mp-982013	Sr_3Tm	6/mm'm'	s	-	FM	D_{6h}
mp-3217104	Yb_2Te_3	4/mm'm'	s	-	FM	D_{4h}
mp-1245404	Cr_2SeN_2	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1071985	CeSnAu	6/mm'm'	s	-	FM	D_{6h}
mp-86499-	Mn_2AlW	4/mm'm'	s	-	FM	D_{4h}
mp-1186844	Rb_3Cr	6/mm'm'	s	-	FM	D_{6h}
mp-1018942	PrTlCd	6/mm'm'	s	-	FM	D_{6h}
mp-1206513	$CeGeBi_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1225452	Eu_2Al_3Ga	$\overline{3}$m'	s	-	FM	D_{3d}
mp-27259	$CsCrI_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1018707	$GdSe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1078842	$GdHg_3$	6/mm'm'	s	-	FM	D_{6h}
mp-29535	CeSiI	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1184648	$HfZrFe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1176774	$LiCr_2O_4$	2/m.1	d	-	FM	C_{2h}
mp-570268	$MnSbSe_2I$	2/m.1	d	-	CFM	C_{2h}
mp-1205855	$LaCrSe_2O$	2/m.1	d	-	FM	C_{2h}
mp-1186253	Nd_2MgCd	4/mm'm'	s	-	FM	D_{4h}
mp-1071459	GdZrSb	4/mm'm'	s	-	FM	D_{4h}
mp-10854	$Tb(BC)_2$	4/mmm.1	g	-	AM	D_{4h}
mp-1097253	$ScCo_2Ge$	m'm'm	s	-	FM	D_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-120633-	DyAlSi	m'm'm	s	-	FM	D_{2h}
mp-1101069	$CrPSe_3$	2/m.1	d	-	FM	C_{2h}
mp-19789	$Mn(BW)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-2210685	$NaMgCu_2O_3$	2/m.1	d	-	FM	C_{2h}
mp-862733	Pm_2ZnSi	4/mm'm'	s	-	FM	D_{4h}
mp-1097212	$YCdRh_2$	m'm'm	s	-	FM	D_{2h}
mp-11722	$PrGe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1205523	Sc_2CoGe_2	2/m.1	d	-	FM	C_{2h}
mp-1018661	CePbAu	6/mm'm'	s	-	FM	D_{6h}
mp-1018147	EuPd	m'm'm	s	-	FM	D_{2h}
mp-1097261	$YHfRh_2$	m'm'm	s	-	FM	D_{2h}
mp-2619	FeSb	6'/m'mm'	g	-	AM	D_{6h}
mp-1225196	EuZnGa	2/m.1	d	-	FM	C_{2h}
mp-120731-	Sm_2CdSb_3	4/mm'm'	s	-	FM	D_{4h}
mp-86299-	Pm_2AgSn	4/mm'm'	s	-	FM	D_{4h}
mp-1077768	CeAlAu	6/mm'm'	s	-	FM	D_{6h}
mp-1225625	DyGaAg	2/m.1	d	-	FM	C_{2h}
mp-1080275	$CeSe_2$	mmm.1	d	-	AM	D_{2h}
mp-1186506	Pm_2ZnIn	4/mm'm'	s	-	FM	D_{4h}
mp-761189	$LiFeO_3$	2/m.1	d	-	FM	C_{2h}
mp-1184317	$Gd_2Mg_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-1246377	$CaMnN_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1187662	$TmSb_3$	6/mm'm'	s	-	FM	D_{6h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1079775	$KCrO_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-1216663	TmGaAu	2/m.1	d	-	FM	C_{2h}
mp-118477-	$InNi_2Au$	4/mm'm'	s	-	FM	D_{4h}
mp-1283081	$LaMnO_3$	4/mm'm'	s	-	FM	D_{4h}
mp-865467	Pm_2SnAu	4/mm'm'	s	-	FM	D_{4h}
mp-1095884	$LiTaOs_2$	m'm'm	s	-	FM	D_{2h}
mp-976344	Nd_2ZnGa	4/mm'm'	s	-	FM	D_{4h}
mp-1079356	$NbCrN_3$	4/mm'm'	s	-	FM	D_{4h}
mp-37949	NdSiAg	6'/m'mm'	g	-	AM	D_{6h}
mp-1262-	NdSeF	4/mm'm'	s	-	FM	D_{4h}
mp-1077182	NdSiGe	m'm'm	s	-	FM	D_{2h}
mp-863686	Pm_2HgGe	4/mm'm'	s	-	FM	D_{4h}
mp-1007992	CrH	6'/m'mm'	g	-	AM	D_{6h}
mp-3657	$TiCo_2Si$	4/mm'm'	s	-	FM	D_{4h}
mp-1232316	$TiCu_2N_3$	m'm'm	s	-	AM	D_{2h}
mp-1096306	$TaNbMo_2$	m'm'm	s	-	FM	D_{2h}
mp-21049	$GdMg_2$	4/mm'm'	s	-	FM	D_{4h}
mp-13405	$Lu(MnGe)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1224641	GdSiPd	2/m.1	d	-	FM	C_{2h}
mp-1217016	$TiAlCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-984627	Dy_2ZnHg	4/mm'm'	s	-	FM	D_{4h}
mp-867288	$TbHg_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1095889	$TaNbOs_2$	m'm'm	s	-	FM	D_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1093892	$TaInOs_2$	m'm'm	s	-	FM	D_{2h}
mp-569689	Eu_2PI	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1213181	$Eu_2(AsPt)_3$	4/mm'm'	s	-	FM	D_{4h}
mp-505536	$CeTe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-118486-	$HoMg_2$	4/mm'm'	s	-	FM	D_{4h}
mp-23486	$RbNiCl_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-570091	$Rb(CoSe)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1280464	$CoHO_2$	$\overline{3}$m'	s	-	CFM	D_{3d}
mp-1018899	PrSbPd	6/mm'm'	s	-	FM	D_{6h}
mp-1045561	$LiMn_2O_4$	2/m.1	d	-	CFM	C_{2h}
mp-757234	VF_4	m'm'm	s	-	AM	D_{2h}
mp-865998	$HfGaIr_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1097422	$ZnInRh_2$	m'm'm	s	-	FM	D_{2h}
mp-1186477	Pm_2TlZn	4/mm'm'	s	-	FM	D_{4h}
mp-1095715	$CaLaRh_2$	m'm'm	s	-	FM	D_{2h}
mp-1178361	DyClO	m'm'm	s	-	FM	D_{2h}
mp-1183867	Ce_2CdIn	4/mm'm'	s	-	FM	D_{4h}
mp-55434-	CrF_2	2'/m'	s	-	AM	C_{2h}
mp-1183928	$Eu_2As_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-1232145	$ErMgSe_3$	2/m.1	d	-	FM	C_{2h}
mp-3972	Ce_2SO_2	$\overline{3}$m'	s	-	FM	D_{3d}
mp-554061	$MnSbS_2Br$	2/m.1	d	-	CFM	C_{2h}
mp-1176631	$LiMnF_3$	m'm'm	s	-	AM	D_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-998422	$CuAgF_3$	$\bar{3}$m’	s	-	FM	D_{3d}
mp-1206833	Dy_2S_2F	4/mm’m’	s	-	FM	D_{4h}
mp-21245	CePt	m’m’m	s	-	FM	D_{2h}
mp-1185785	Mg_3Os	6/mm’m’	s	-	FM	D_{6h}
mp-754138	$CsDyO_2$	6/mm’m’	s	-	FM	D_{6h}
mp-1205355	$MoBr_3$	6’/m’mm’	g	-	AM	D_{6h}
mp-1517993	Eu_2HfSnO_6	4/mm’m’	s	-	FM	D_{4h}
mp-675701	$Ca(HoSe_2)_2$	2/m.1	d	-	FM	C_{2h}
mp-672337	VGe_3	4/mm’m’	s	-	FM	D_{4h}
mp-1220222	NdAgSn	$\bar{3}$m’	s	-	FM	D_{3d}
mp-120684-	$SrRhO_3$	4/mm’m’	s	-	FM	D_{4h}
mp-985579	$AlFe_2$	6/mm’m’	s	-	FM	D_{6h}
mp-1211878	$Li_3Pr_2Sb_3$	4/mm’m’	s	-	FM	D_{4h}
mp-999336	NdPd	m’m’m	s	-	FM	D_{2h}
mp-19097	$FeBO_3$	$\bar{3}$m.1	g	-	AM	D_{3d}
mp-754151	VOF	$\bar{3}$m’	s	-	FM	D_{3d}
mp-865359	Tm_2MgIn	4/mm’m’	s	-	FM	D_{4h}
mp-1246166	$Zr(FeN)_2$	$\bar{3}$m’	s	-	FM	D_{3d}
mp-1187277	$Tb_2Y_2O_5$	4/mm’m’	s	-	FM	D_{4h}
mp-556324	NiF_2	mmm.1	d	-	AM	D_{2h}
mp-981381	Tm_2TlHg	4/mm’m’	s	-	FM	D_{4h}
mp-1184291	Eu_2ZnSn	4/mm’m’	s	-	FM	D_{4h}
mp-865838	$LiSiRu_2$	4/mm’m’	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-971979	Tm_2ZnAg	4/mm'm'	s	-	FM	D_{4h}
mp-2275605	TmAsS	4/mm'm'	s	-	FM	D_{4h}
mp-1211535	La_4Rh	4/mm'm'	s	-	FM	D_{4h}
mp-1245466	$CrBiN_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1079516	$Cu(ClO)_2$	m'm'm	s	-	FM	D_{2h}
mp-1245847	$CrPbN_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1018821	NdTlZn	6/mm'm'	s	-	FM	D_{6h}
mp-1180142	$MnCO_3$	2/m.1	d	-	FM	C_{2h}
mp-867134	$SmCl_2$	4/mm'm'	s	-	FM	D_{4h}
mp-867123	$TaTiOs_2$	4/mm'm'	s	-	FM	D_{4h}
mp-21234	EuZnSi	6/mm'm'	s	-	FM	D_{6h}
mp-13326	$PrLuSe_3$	m'm'm	s	-	FM	D_{2h}
mp-1096015	$ZrScCu_2$	m'm'm	s	-	FM	D_{2h}
mp-1227401	$Ca(DyTe_2)_2$	2/m.1	d	-	FM	C_{2h}
mp-2099	FeS	6'/m'mm'	g	-	AM	D_{6h}
mp-1212226	Hf_4Cr	4/mm'm'	s	-	FM	D_{4h}
mp-864612	Nd_2MgIn	4/mm'm'	s	-	FM	D_{4h}
mp-1183847	$CoPd_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1206726	Tb_2AgSb_3	4/mm'm'	s	-	FM	D_{4h}
mp-561922	$LaCoO_3$	$\overline{1}$.1	s	-	CFM	C_i
mp-1207792	VO_3	m'm'm	s	-	FM	D_{2h}
mp-9499	$Sm_2C(NO)_2$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-22138	$GdCd_3$	6/mm'm'	s	-	FM	D_{6h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1236499	$Ba_2Li(NiO_2)_2$	2/m.1	d	-	FM	C_{2h}
mp-1093709	$ScCu_2Ag$	m'm'm	s	-	FM	D_{2h}
mp-21434	$CoCO_3$	$\overline{3}$m.1	g	-	AM	D_{3d}
mp-547074	VO_2	mmm.1	d	-	AM	D_{2h}
mp-1018688	ErTlZn	6'/m'mm'	g	-	AM	D_{6h}
mp-2763-	$CrCl_3$	2/m.1	d	-	FM	C_{2h}
mp-1018681	DyZnIn	6/mm'm'	s	-	FM	D_{6h}
mp-675287	$CsCuCl_3$	6/mm'm'	s	-	FM	D_{6h}
mp-107943-	$Sm(BC)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1079054	$CaIrO_3$	m'm'm	s	-	AM	D_{2h}
mp-102540-	$YbCl_3$	m'm'm	s	-	FM	D_{2h}
mp-21433	TbTiGe	4/mm'm'	s	-	FM	D_{4h}
mp-849059	NiS_2	mmm.1	d	-	AM	D_{2h}
mp-1093646	$SnRh_2Au$	m'm'm	s	-	FM	D_{2h}
mp-1097146	$HfTaMn_2$	m'm'm	s	-	FM	D_{2h}
mp-1206153	Eu_2ZrO_4	4/mm'm'	s	-	FM	D_{4h}
mp-1077443	NdScSb	4/mm'm'	s	-	FM	D_{4h}
mp-107956-	Nb_2CrB_2	4/mm'm'	s	-	FM	D_{4h}
mp-794	CrTe	6/mm'm'	s	-	FM	D_{6h}
mp-1095983	$TaAlRe_2$	m'm'm	s	-	FM	D_{2h}
mp-5848	ErZrSb	4/mm'm'	s	-	FM	D_{4h}
mp-863703	Pm_2MgSn	4/mm'm'	s	-	FM	D_{4h}
mp-976339	$LiTm_2In$	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-20754	$LiCeSn_2$	m'm'm	s	-	FM	D_{2h}
mp-1389151	$AlMoO_3$	6/mm'm'	s	-	FM	D_{6h}
mp-978518	$Sm_2Ag_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-22946	CrClO	m'm'm	s	-	FM	D_{2h}
mp-864769	$LiYb_2Tl$	4/mm'm'	s	-	FM	D_{4h}
mp-1215351	Zr_6Fe_2O	2/m.1	d	-	FM	C_{2h}
mp-510408	MnO_2	4'/mm'm	d	-	AM	D_{4h}
mp-720472	PrO_3	6/m.1	s	-	FM	C_{6h}
mp-1186561	$PmCd_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1183496	$Ca_2Pr_2O_5$	4/mm'm'	s	-	CFM	D_{4h}
mp-122523-	EuCdAg	2/m.1	d	-	FM	C_{2h}
mp-3799	GdSF	4/mm'm'	s	-	FM	D_{4h}
mp-11515	NbRh	m'm'm	s	-	FM	D_{2h}
mp-1186788	$Ta_2Mo_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-754154	$CsHoO_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-1212367	Hf_4Fe	4/mm'm'	s	-	FM	D_{4h}
mp-1078886	$Ce(AlAu)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-631412	$NbRu_2Cl$	4/mm'm'	s	-	FM	D_{4h}
mp-1207259	Tb_2Br_2O	4/mm'm'	s	-	FM	D_{4h}
mp-1094027	TmTe	6'/m'mm'	g	-	AM	D_{6h}
mp-2028711	$NaMn_2O_4$	2/m.1	d	-	CFM	C_{2h}
mp-754317	NdO_2	mmm.1	d	-	AM	D_{2h}
mp-117651-	$LiVS_3$	$\bar{1}$.1	s	-	FM	C_i

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-86280-	PrI_3	6/mm'm'	s	-	FM	D_{6h}
mp-1180746	$KMnF_3$	4/mmm.1	g	-	AM	D_{4h}
mp-109701-	$CuPbO_2$	m'm'm	s	-	AM	D_{2h}
mp-4364	$NbGaCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-118388-	Eu_2AsAu	4/mm'm'	s	-	FM	D_{4h}
mp-1018676	CeSbAu	6/mm'm'	s	-	FM	D_{6h}
mp-1094145	Mg_2Fe	m'm'm	s	-	FM	D_{2h}
mp-1183895	Eu_2GaHg	4/mm'm'	s	-	FM	D_{4h}
mp-567767	$CoCN_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-3216986	Yb_2I_2O	4/mm'm'	s	-	FM	D_{4h}
mp-22152	NaFeAs	4/mm'm'	s	-	FM	D_{4h}
mp-974887	$LiNdSn_2$	m'm'm	s	-	FM	D_{2h}
mp-1077072	GdS_2	4/mm'm'	s	-	FM	D_{4h}
mp-865652	$TiMn_2Si$	4/mm'm'	s	-	FM	D_{4h}
mp-1095994	$ScSnIr_2$	m'm'm	s	-	FM	D_{2h}
mp-108057-	$CsNiBr_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-22446	Li_2PrSb_2	4/mm'm'	s	-	FM	D_{4h}
mp-1217528	TbGaAg	2/m.1	d	-	FM	C_{2h}
mp-7291	CrP_2	2/m.1	d	-	FM	C_{2h}
mp-127733-	Li_2CoO_2	2/m.1	d	-	FM	C_{2h}
mp-1183892	$EuCl_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1180767	$KCrF_3$	4/mm'm'	s	-	FM	D_{4h}
mp-1187598	Tm_2MgCd	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1184105	Dy_2TlHg	4/mm'm'	s	-	FM	D_{4h}
mp-1183849	CeI_3	6/mm'm'	s	-	FM	D_{6h}
mp-1205876	$CsSmI_3$	m'm'm	s	-	AM	D_{2h}
mp-2050029	$EuCl_3$	2/m.1	d	-	FM	C_{2h}
mp-1095063	$YFeGe_2$	m'm'm	s	-	FM	D_{2h}
mp-775022	LiFeOF	4/mm'm'	s	-	FM	D_{4h}
mp-863696	Pm_2MgSi	4/mm'm'	s	-	FM	D_{4h}
mp-2225363	$Mg(VS_2)_2$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1225046	Er_2BPd_6	4/mm'm'	s	-	FM	D_{4h}
mp-1207283	$Ni(IN)_2$	mmm.1	d	-	AM	D_{2h}
mp-867502	Eu_2PtAu	4/mm'm'	s	-	FM	D_{4h}
mp-18905	FeO	4/mm'm'	s	-	FM	D_{4h}
mp-1010953	MgNi	4/mm'm'	s	-	FM	D_{4h}
mp-27823	SmClO	4/mm'm'	s	-	FM	D_{4h}
mp-1093901	$ZrSbRu_2$	m'm'm	s	-	FM	D_{2h}
mp-863685	Pm_2GePd	4/mm'm'	s	-	FM	D_{4h}
mp-1096499	$LiNbRu_2$	m'm'm	s	-	FM	D_{2h}
mp-863654	Pm_2CdSi	4/mm'm'	s	-	FM	D_{4h}
mp-1225177	Fe_2Si	4/mm'm'	s	-	FM	D_{4h}
mp-1227262	Ce_2InAg	4/mm'm'	s	-	FM	D_{4h}
mp-1147779	$CaCuO_2$	m'm'm	s	-	CFM	D_{2h}
mp-21204	ZrNiP	6/mm'm'	s	-	FM	D_{6h}
mp-21395	CrO_2	m'm'm	s	-	FM	D_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1226657	$CeAs_2Au$	4/mm'm'	s	-	FM	D_{4h}
mp-862989	Pm_2AgPt	4/mm'm'	s	-	FM	D_{4h}
mp-1186866	Rb_3Ir	6/mm'm'	s	-	FM	D_{6h}
mp-12465	$Co(TePd)_2$	m'm'm	s	-	FM	D_{2h}
mp-19759	$BaYCo_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-357-	NdPPd	6'/m'mm'	g	-	AM	D_{6h}
mp-29616	$CsCrCl_3$	2/m.1	d	-	CFM	C_{2h}
mp-10845	Te_2Ir	4/mm'm'	s	-	FM	D_{4h}
mp-1184274	$ErSb_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1412685	FeO_2	6/mm'm'	s	-	FM	D_{6h}
mp-1181235	GdO_2	2/m.1	d	-	FM	C_{2h}
mp-972511	Sm_2AgSn	4/mm'm'	s	-	FM	D_{4h}
mp-555934	VF_2	4'/mm'm	d	-	AM	D_{4h}
mp-691-	$BaPrO_3$	$\bar{3}$m'	s	-	FM	D_{3d}
mp-1187634	$Tm_2Pd_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-997159	$CrAuO_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-29763	$RbMnBr_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-1227074	CeCdIn	$\bar{3}$m'	s	-	FM	D_{3d}
mp-1072729	$TmTe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1078947	$Nd(AlAu)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-756187	Li_2FeS_2	4/mm'm'	s	-	FM	D_{4h}
mp-1186255	Nd_2TlHg	4/mm'm'	s	-	FM	D_{4h}
mp-1407616	$LiFeF_3$	mmm.1	d	-	AM	D_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1232117	EuS_2	4/mm'm'	s	-	FM	D_{4h}
mp-1214823	$AlTlFe_2F_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1066975	TmSi	m'm'm	s	-	FM	D_{2h}
mp-1219931	Pr_2AlZn	4/mm'm'	s	-	FM	D_{4h}
mp-5671	$Sr(CoP)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1076964	$GdTe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-982009	Pr_2CdSn	4/mm'm'	s	-	FM	D_{4h}
mp-3891	$EuTl_2Pd$	m'm'm	s	-	FM	D_{2h}
mp-863705	Pm_2MgGa	4/mm'm'	s	-	FM	D_{4h}
mp-576-	NdSF	4/mm'm'	s	-	FM	D_{4h}
mp-1067475	TiNi	4/mm'm'	s	-	FM	D_{4h}
mp-3063-	$EuTl_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1185491	$LuScIr_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1247213	CoAgN	m'm'm	s	-	FM	D_{2h}
mp-557772	$CsNiF_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1207315	$CeSb_2Pd$	4/mm'm'	s	-	FM	D_{4h}
mp-222533-	$SrMgCu_2O_3$	m'm'm	s	-	FM	D_{2h}
mp-86712-	$TaMn_2Al$	4/mm'm'	s	-	FM	D_{4h}
mp-1007906	ErH	6/mm'm'	s	-	FM	D_{6h}
mp-1232321	$MgCu_2O_3$	4/mm'm'	s	-	FM	D_{4h}
mp-972274	Tm_2ZnHg	4/mm'm'	s	-	FM	D_{4h}
mp-1185908	MgNi	m'm'm	s	-	FM	D_{2h}
mp-1206632	Sm_2Cl_2F	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1039581	CeMg	6/mm'm'	s	-	FM	D_{6h}
mp-1187298	Sr_3Eu	6/mm'm'	s	-	FM	D_{6h}
mp-30152	CeSbTe	4/mm'm'	s	-	FM	D_{4h}
mp-971633	$NaFeO_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-97892-	$Tb_2Be_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-1096264	$ZrCu_2Ag$	m'm'm	s	-	FM	D_{2h}
mp-1185789	Mg_3Fe	6/mm'm'	s	-	FM	D_{6h}
mp-7954	Nd_2O_3	6/mm'm'	s	-	FM	D_{6h}
mp-1184305	Gd_2GaAg	4/mm'm'	s	-	FM	D_{4h}
mp-2224183	$MgCu_2(PdO_2)_2$	2/m.1	d	-	FM	C_{2h}
mp-118662-	$PmMg_2$	4/mm'm'	s	-	FM	D_{4h}
mp-866076	$NdAu_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1019138	SmSbTe	4/mm'm'	s	-	FM	D_{4h}
mp-20482	EuAgP	6/mm'm'	s	-	FM	D_{6h}
mp-1018946	PrZnGa	6'/m'mm'	g	-	AM	D_{6h}
mp-18814	$MnCO_3$	$\overline{3}$m.1	g	-	AM	D_{3d}
mp-8948	CeAsPd	6/mm'm'	s	-	FM	D_{6h}
mp-850222	FeO_2	4/mm'm'	s	-	FM	D_{4h}
mp-1184352	Gd_2AgHg	4/mm'm'	s	-	FM	D_{4h}
mp-865493	VI_3	6/mm'm'	s	-	FM	D_{6h}
mp-1206473	Pr_2ZnSb_3	4/mm'm'	s	-	FM	D_{4h}
mp-1018683	$DySe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1095076	Ta_2FeB_2	4/mmm.1	g	-	AM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-2225402	$MgMn_2O_4$	2/m.1	d	-	FM	C_{2h}
mp-28638	Gd_2CCl	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1224694	Fe_2Pd	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1039381	$CeMg_2$	m'm'm	s	-	FM	D_{2h}
mp-866159	$YZrRu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1238795	$Na(CrS_2)_2$	2/m.1	d	-	FM	C_{2h}
mp-1078847	$CoAgO_2$	6/mm'm'	s	-	FM	D_{6h}
mp-685068	$YbBr_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-20779	Li_2CeSb_2	4/mm'm'	s	-	FM	D_{4h}
mp-1184149	DyY_3	6/mm'm'	s	-	FM	D_{6h}
mp-28044	$TmCl_3$	$\overline{3}$m.1	g	-	AM	D_{3d}
mp-1206304	$PrTiGe_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1184075	Er_2AgHg	4/mm'm'	s	-	FM	D_{4h}
mp-21159	$DyGe_3$	m'm'm	s	-	FM	D_{2h}
mp-4612	$TiCo_2Ge$	4/mm'm'	s	-	FM	D_{4h}
mp-1212-	FeN	6'/m'mm'	g	-	AM	D_{6h}
mp-107879-	$DyInPt_2$	6/mm'm'	s	-	FM	D_{6h}
mp-120587-	$NdLuS_3$	m'm'm	s	-	AM	D_{2h}
mp-1096472	$MgGaCu_2$	m'm'm	s	-	FM	D_{2h}
mp-2644	CoSb	6/mm'm'	s	-	FM	D_{6h}
mp-1216675	$TiMo_2$	m'm'm	s	-	FM	D_{2h}
mp-1003314	KMn_2O_4	$\overline{1}$.1	s	-	FM	C_i
mp-1641	CrSb	6'/m'mm'	g	-	AM	D_{6h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1018687	ErS_2	4/mm'm'	s	-	FM	D_{4h}
mp-862706	$BeCo_2Ge$	4/mm'm'	s	-	FM	D_{4h}
mp-1225425	EuZnIn	2/m.1	d	-	FM	C_{2h}
mp-2273178	EuAs	6/mm'm'	s	-	FM	D_{6h}
mp-1436	$EuAg_2$	m'm'm	s	-	FM	D_{2h}
mp-2940-	$CsFeCl_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-570326	$CsCrCl_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1219177	Sm_2C	$\overline{3}$m'	s	-	FM	D_{3d}
mp-979292	SmY_3	6/mm'm'	s	-	FM	D_{6h}
mp-1095875	$ScZnIr_2$	m'm'm	s	-	FM	D_{2h}
mp-1207254	Tb_2S_2F	4/mm'm'	s	-	FM	D_{4h}
mp-56985-	$CeBr_3$	6/m.1	s	-	FM	C_{6h}
mp-864669	$NbGeRu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-2056-	CeS	4/mm'm'	s	-	FM	D_{4h}
mp-1206934	Dy_2AgSb_3	4/mm'm'	s	-	FM	D_{4h}
mp-976249	NdS_3	6/mm'm'	s	-	FM	D_{6h}
mp-862994	Pm_2CdGe	4/mm'm'	s	-	FM	D_{4h}
mp-1246491	$SiNiN_2$	6/mm'm'	s	-	FM	D_{6h}
mp-27924	TbBr	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1187885	Yb_2CdGa	4/mm'm'	s	-	FM	D_{4h}
mp-505766	$SrCoO_3$	4/mm'm'	s	-	FM	D_{4h}
mp-1183725	Ce_2AgSn	4/mm'm'	s	-	FM	D_{4h}
mp-866536	$NaEu_2Sn$	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1226353	Cr_2Pt_2C	4/mm'm'	s	-	FM	D_{4h}
mp-1002571	$NaMn_2O_4$	$\overline{1}$.1	s	-	FM	C_i
mp-849065	VS	6'/m'mm'	g	-	AM	D_{6h}
mp-1095863	$MgInCu_2$	m'm'm	s	-	FM	D_{2h}
mp-19227	$YMnO_3$	6/mm'm'	s	-	FM	D_{6h}
mp-985438	Ce_2CdHg	4/mm'm'	s	-	FM	D_{4h}
mp-1080026	$Ce(SnPd)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1216996	$TiCo_2Sn$	4/mm'm'	s	-	FM	D_{4h}
mp-755651	$CsGdO_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1097411	$GaSnRu_2$	m'm'm	s	-	FM	D_{2h}
mp-1520462	Eu_2ZrTiO_6	4/mm'm'	s	-	FM	D_{4h}
mp-1207287	Nd_2As_3Au	4/mm'm'	s	-	FM	D_{4h}
mp-1184096	Er_2CdHg	4/mm'm'	s	-	FM	D_{4h}
mp-1097277	$YScCu_2$	m'm'm	s	-	FM	D_{2h}
mp-754936	$DyAlO_3$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1205799	$Mo(SI)_2$	2/m.1	d	-	FM	C_{2h}
mp-1206253	$Eu_2(BiPd)_3$	4/mm'm'	s	-	FM	D_{4h}
mp-1186071	Na_3Os	6/mm'm'	s	-	FM	D_{6h}
mp-1184427	Gd_2AlZn	4/mm'm'	s	-	FM	D_{4h}
mp-977392	Ho_2MgIn	4/mm'm'	s	-	FM	D_{4h}
mp-754184	$ErAlO_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1093679	$TiGaCu_2$	m'm'm	s	-	FM	D_{2h}
mp-1224791	$GaNi_2Pt$	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1184388	Gd_2ZnGa	4/mm'm'	s	-	FM	D_{4h}
mp-1079886	$Eu(BC)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-550807	$MnInO_3$	6/mm'm'	s	-	FM	D_{6h}
mp-997104	$CuClO_2$	2/m.1	d	-	FM	C_{2h}
mp-1181516	CuTe	m'm'm	s	-	FM	D_{2h}
mp-1095755	YRh_2Pb	m'm'm	s	-	FM	D_{2h}
mp-1225289	Dy_2TeS_2	m'm'm	s	-	FM	D_{2h}
mp-107086-	EuHCl	4/mm'm'	s	-	FM	D_{4h}
mp-770618	$MgMnO_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-1184084	Er_2AlZn	4/mm'm'	s	-	FM	D_{4h}
mp-107980-	$La_2Co_2Se_2O_3$	4'/mm'm	d	-	AM	D_{4h}
mp-1018667	CeTeCl	4/mm'm'	s	-	FM	D_{4h}
mp-1206205	$Nd_2(SiPt)_3$	4/mm'm'	s	-	FM	D_{4h}
mp-863704	Pm_2MgTl	4/mm'm'	s	-	FM	D_{4h}
mp-23183	$NdCl_3$	6/m.1	s	-	FM	C_{6h}
mp-22857	$CrCl_2$	m'm'm	s	-	FM	D_{2h}
mp-1183763	Ce_2ZnIn	4/mm'm'	s	-	FM	D_{4h}
mp-118376-	Ce_2AgHg	4/mm'm'	s	-	FM	D_{4h}
mp-1187497	$TiGeRh_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1238878	$Rb(CrS_2)_2$	2/m.1	d	-	FM	C_{2h}
mp-1097559	$TaMn_2Nb$	m'm'm	s	-	FM	D_{2h}
mp-1095923	$ScSiRu_2$	m'm'm	s	-	FM	D_{2h}
mp-867835	$BeSiRu_2$	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-24051	ErHCl	$\overline{3}$m’	s	-	FM	D_{3d}
mp-568747	$K(NiSe)_2$	4/mm’m’	s	-	FM	D_{4h}
mp-1206732	$BaLaCo_2O_5$	m’m’m	s	-	FM	D_{2h}
mp-1205375	$LaMnO_3$	4/mm’m’	s	-	FM	D_{4h}
mp-1184321	$EuMg_2$	4/mm’m’	s	-	FM	D_{4h}
mp-1179696	RuF_3	2/m.1	d	-	FM	C_{2h}
mp-1018671	CeZnGa	6/mm’m’	s	-	FM	D_{6h}
mp-1187247	$SrMoO_3$	4/mm’m’	s	-	FM	D_{4h}
mp-1209073	Sc_4Co	4/mm’m’	s	-	FM	D_{4h}
mp-1180725	$LaCoO_3$	2’/m’	s	-	AM	C_{2h}
mp-10868	SmPPd	6’/m’mm’	g	-	AM	D_{6h}
mp-123570-	$LiSm_2SO_2$	$\overline{3}$m’	s	-	FM	D_{3d}
mp-1017532	VN	6/mm’m’	s	-	FM	D_{6h}
mp-4525	$SrRuO_3$	4/mm’m’	s	-	FM	D_{4h}
mp-1096144	$ZrTaMn_2$	m’m’m	s	-	FM	D_{2h}
mp-1181931	CrF_3	2’/m’	s	-	AM	C_{2h}
mp-1097497	$CaSbRh_2$	m’m’m	s	-	FM	D_{2h}
mp-27923	TbCl	$\overline{3}$m’	s	-	FM	D_{3d}
mp-1080328	$CeSe_2$	mmm.1	d	-	AM	D_{2h}
mp-2214874	$CoHO_2$	m’m’m	s	-	FM	D_{2h}
mp-2210768	$NaMgCu_2O_3$	m’m’m	s	-	FM	D_{2h}
mp-27841	VBrO	m’m’m	s	-	FM	D_{2h}
mp-695863	$MnCO_3$	2’/m’	s	-	AM	C_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1096386	$ZrNbRe_2$	m'm'm	s	-	FM	D_{2h}
mp-1221088	$NaCe_2Se_3$	m'm'm	s	-	FM	D_{2h}
mp-1147566	$SrCuOF_2$	4/mmm.1	g	-	AM	D_{4h}
mp-1185349	$LiEu_2Hg$	4/mm'm'	s	-	FM	D_{4h}
mp-1207199	PrAsPd	6'/m'mm'	g	-	AM	D_{6h}
mp-1205856	Eu_2LuTaO_6	4/mm'm'	s	-	FM	D_{4h}
mp-118625-	Nd_2Mg	4/mm'm'	s	-	FM	D_{4h}
mp-1097296	$AlSnRu_2$	m'm'm	s	-	FM	D_{2h}
mp-3216899	Yb_2Br_2O	4/mm'm'	s	-	FM	D_{4h}
mp-1238776	VBC	6/mm'm'	s	-	FM	D_{6h}
mp-1096166	$BeAlCo_2$	m'm'm	s	-	FM	D_{2h}
mp-10932	ErSF	4/mm'm'	s	-	FM	D_{4h}
mp-124648-	$CoGeN_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1093653	$HfTiRh_2$	m'm'm	s	-	FM	D_{2h}
mp-36862	VCl_2O	2/m.1	d	-	FM	C_{2h}
mp-1097327	$YSbRh_2$	m'm'm	s	-	FM	D_{2h}
mp-558518	$K(NiS)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1185229	$LiCe_2Ga$	4/mm'm'	s	-	FM	D_{4h}
mp-120695-	Tb_2As_3Au	4/mm'm'	s	-	FM	D_{4h}
mp-86593-	$TiZnCu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-3805	$Al(FeB)_2$	m'm'm	s	-	FM	D_{2h}
mp-426	CoSe	6/mm'm'	s	-	FM	D_{6h}
mp-1178103	$Li(FeO_2)_2$	$\bar{1}$.1	s	-	CFM	C_i

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-675199	$NaPrS_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1093812	$TaInRh_2$	m'm'm	s	-	FM	D_{2h}
mp-569151	MnGaPt	6/mm'm'	s	-	FM	D_{6h}
mp-978596	$Sm_2Au_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-1206651	$LaCoSi_2$	m'm'm	s	-	FM	D_{2h}
mp-1185282	Li_3Tb	6/mm'm'	s	-	FM	D_{6h}
mp-1232268	Cr_2AgS_4	2/m.1	d	-	FM	C_{2h}
mp-2891-	CrS_2	2/m.1	d	-	FM	C_{2h}
mp-33029	Nd_2O_3	4/mm'm'	s	-	FM	D_{4h}
mp-1071948	TmS_2	4/mm'm'	s	-	FM	D_{4h}
mp-1238784	Cr_2HgS_4	2/m.1	d	-	FM	C_{2h}
mp-67229-	EuPPt	6/mm'm'	s	-	FM	D_{6h}
mp-2008	$FeAs_2$	mmm.1	d	-	AM	D_{2h}
mp-1273363	CrO	mmm.1	d	-	AM	D_{2h}
mp-1224698	Fe_2N	$\overline{3}$m'	s	-	FM	D_{3d}
mp-8053	YCo	m'm'm	s	-	FM	D_{2h}
mp-1184637	Ho_2ZnHg	4/mm'm'	s	-	FM	D_{4h}
mp-86151-	Pr_2SnHg	4/mm'm'	s	-	FM	D_{4h}
mp-1225205	EuGaAu	2/m.1	d	-	FM	C_{2h}
mp-2355	MoN	6/mm'm'	s	-	FM	D_{6h}
mp-30415	$PrAu_2$	m'm'm	s	-	FM	D_{2h}
mp-7003	CePPd	6/mm'm'	s	-	FM	D_{6h}
mp-973592	$Ho_2Ge_2O_5$	4/mm'm'	s	-	CFM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-568247	$TmAu_3$	m'm'm	s	-	FM	D_{2h}
mp-13063	Tb_2O_3	$\bar{3}$m'	s	-	FM	D_{3d}
mp-1206929	$Y(NiB)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1078796	$EuAs_3$	2/m.1	d	-	FM	C_{2h}
mp-20198	$CaIrO_3$	m'm'm	s	-	FM	D_{2h}
mp-1071694	TmZnGa	6'/m'mm'	g	-	AM	D_{6h}
mp-10078	TbTiGe	4/mm'm'	s	-	FM	D_{4h}
mp-1205522	Y_2FeSi_2	2/m.1	d	-	FM	C_{2h}
mp-862601	RhI_2	4/mm'm'	s	-	FM	D_{4h}
mp-118551-	$LuScCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-639496	$EuIn_2Au$	m'm'm	s	-	FM	D_{2h}
mp-861993	Ho_2TlAg	4/mm'm'	s	-	FM	D_{4h}
mp-1245806	$MnGaN_2$	m'm'm	s	-	AM	D_{2h}
mp-1232273	SmS_2	4/mm'm'	s	-	FM	D_{4h}
mp-109-	FeSe	6'/m'mm'	g	-	AM	D_{6h}
mp-12899	HoSi	m'm'm	s	-	FM	D_{2h}
mp-3216222	$YbCl_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1221411	$Na(FeO_2)_2$	$\bar{1}$.1	s	-	CFM	C_i
mp-9873	EuZnGe	6/mm'm'	s	-	FM	D_{6h}
mp-5501	$Tl(CoS)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1077442	$CeAu_2$	m'm'm	s	-	FM	D_{2h}
mp-1221921	MgZnCo	m'm'm	s	-	FM	D_{2h}
mp-2958	$Dy(BC)_2$	4/mmm.1	g	-	AM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1206706	$EuGaO_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-1080476	FeH_3	4'/mm'm	d	-	AM	D_{4h}
mp-1018699	EuZnGe	m'm'm	s	-	FM	D_{2h}
mp-3779	$CrSiTe_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-863725	Pm_2PdPt	4/mm'm'	s	-	FM	D_{4h}
mp-1245868	VCN_2	6'/m'mm'	g	-	AM	D_{6h}
mp-1188058	Zr_3V	6/mm'm'	s	-	FM	D_{6h}
mp-19357	$LaCrO_3$	$\overline{3}$m.1	g	-	AM	D_{3d}
mp-1185893	MgMn	m'm'm	s	-	FM	D_{2h}
mp-1017564	Eu_2O_3	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1226008	CoAsSe	2/m.1	d	-	CFM	C_{2h}
mp-3513	$Dy_2Al_3Si_2$	2/m.1	d	-	FM	C_{2h}
mp-3216821	YbO_3	2/m.1	d	-	FM	C_{2h}
mp-22725	$TiInCu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1025279	$Ti(CrSe_2)_2$	2/m.1	d	-	FM	C_{2h}
mp-1096667	$TaBeOs_2$	m'm'm	s	-	FM	D_{2h}
mp-1224858	$GaNi_2$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1207265	$LaCu_2SeO_2$	4/mm'm'	s	-	FM	D_{4h}
mp-123223-	$EuSe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-557539	MoF_3	$\overline{3}$m.1	g	-	AM	D_{3d}
mp-1215257	ZrRh	4/mm'm'	s	-	FM	D_{4h}
mp-1520691	Eu_2HfZrO_6	4/mm'm'	s	-	FM	D_{4h}
mp-549728	DyZnPO	$\overline{3}$m'	s	-	FM	D_{3d}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1079214	$GdSnPt_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1206758	Ce_2Cl_2O	4/mm'm'	s	-	FM	D_{4h}
mp-1018686	ErH_2	6/mm'm'	s	-	FM	D_{6h}
mp-1078398	$CeAsO_3$	2/m.1	d	-	FM	C_{2h}
mp-982393	Pm_2ZnAg	4/mm'm'	s	-	FM	D_{4h}
mp-75392-	Tm_2SeO_2	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1097137	$NbInNi_2$	m'm'm	s	-	FM	D_{2h}
mp-1093881	$CaInRh_2$	m'm'm	s	-	FM	D_{2h}
mp-864919	$MgTiRh_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1097043	$LiFeF_3$	4/mmm.1	g	-	AM	D_{4h}
mp-862727	Pm_2ZnPb	4/mm'm'	s	-	FM	D_{4h}
mp-1184366	Gd_2TlAg	4/mm'm'	s	-	FM	D_{4h}
mp-752944	CrOF	m'm'm	s	-	FM	D_{2h}
mp-2088	$CeAl_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1217684	Tb_2TeS_2	m'm'm	s	-	FM	D_{2h}
mp-1205931	$NiNCl_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1072501	DySnAu	6'/m'mm'	g	-	AM	D_{6h}
mp-10629	TbS_2	4/mm'm'	s	-	FM	D_{4h}
mp-973983	$NiPd_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1093589	$ZnSbRu_2$	m'm'm	s	-	FM	D_{2h}
mp-1018819	NdTlCd	6/mm'm'	s	-	FM	D_{6h}
mp-755464	CeBrO	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1096446	$YTaOs_2$	m'm'm	s	-	FM	D_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-6916	$Sm(BC)_2$	4/mmm.1	g	-	AM	D_{4h}
mp-4022	Zr_2CoSi_2	2/m.1	d	-	FM	C_{2h}
mp-1041997	MoO_2	m'm'm	s	-	FM	D_{2h}
mp-101870-	EuO_2	4/mm'm'	s	-	FM	D_{4h}
mp-865468	Pm_2SiPd	4/mm'm'	s	-	FM	D_{4h}
mp-866017	$LiNd_2Al$	4/mm'm'	s	-	FM	D_{4h}
mp-124682-	ReTeN	4/mm'm'	s	-	FM	D_{4h}
mp-1226053	CoAsPd	4/mm'm'	s	-	FM	D_{4h}
mp-1186228	$NbSiRu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-669347	$KCuF_3$	4'/mm'm	d	-	AM	D_{4h}
mp-973953	$NdCl_2$	4/mm'm'	s	-	FM	D_{4h}
mp-675929	$Ti(FeSe_2)_2$	$\overline{1}$.1	s	-	FM	C_i
mp-863028	SmI_3	6/mm'm'	s	-	FM	D_{6h}
mp-754998	Ce_2SeO_2	4/mm'm'	s	-	FM	D_{4h}
mp-559473	CoF_3	$\overline{3}$m'	s	-	FM	D_{3d}
mp-2073-	$HfCo_2Sn$	4/mm'm'	s	-	FM	D_{4h}
mp-63142-	$CaRe_2Si$	4/mm'm'	s	-	FM	D_{4h}
mp-101911-	SmPbAu	6/mm'm'	s	-	FM	D_{6h}
mp-1079406	$Eu(SnPd)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1399869	CrN_2	2/m.1	d	-	FM	C_{2h}
mp-3216215	Yb_2Br_2F	4/mm'm'	s	-	FM	D_{4h}
mp-1018825	NdPbAu	6/mm'm'	s	-	FM	D_{6h}
mp-11427	GdPd	m'm'm	s	-	FM	D_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-30619	Zr_3Co	m'm'm	s	-	FM	D_{2h}
mp-51028-	$CeAgSb_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1205866	$Ce(PPt)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-121753-	TbGaAu	2/m.1	d	-	FM	C_{2h}
mp-1025129	TmSnGe	m'm'm	s	-	FM	D_{2h}
mp-559798	NiF_2	4'/mm'm	d	-	AM	D_{4h}
mp-10256	VTe	6'/m'mm'	g	-	AM	D_{6h}
mp-1210831	Lu_4Fe	4/mm'm'	s	-	FM	D_{4h}
mp-863657	$PmCl_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1093686	$ZrGaRu_2$	m'm'm	s	-	FM	D_{2h}
mp-1183747	Ce_2SnHg	4/mm'm'	s	-	FM	D_{4h}
mp-1096675	$ScBiRu_2$	m'm'm	s	-	FM	D_{2h}
mp-1076831	$KNa(MoO_3)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-755671	MnO_2	$\bar{3}$m'	s	-	FM	D_{3d}
mp-561949	$GdBO_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1184645	$Ho_2Mg_2O_5$	4/mm'm'	s	-	CFM	D_{4h}
mp-972935	$ScZnNi_2$	4/mm'm'	s	-	FM	D_{4h}
mp-20027	FeP_2	mmm.1	d	-	AM	D_{2h}
mp-1018665	$CeSe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1185243	$LiYb_2Al$	4/mm'm'	s	-	FM	D_{4h}
mp-1185392	$LiGd_2Al$	4/mm'm'	s	-	FM	D_{4h}
mp-1184629	Ho_2MgGa	4/mm'm'	s	-	FM	D_{4h}
mp-863702	Er_2MgIn	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1079249	TbH_3	6/mm'm'	s	-	FM	D_{6h}
mp-1022732	FeBiAsO	4/mm'm'	s	-	FM	D_{4h}
mp-1019256	SmTlZn	6'/m'mm'	g	-	AM	D_{6h}
mp-1097641	$LiGaIr_2$	m'm'm	s	-	FM	D_{2h}
mp-1097207	$YHfRu_2$	m'm'm	s	-	FM	D_{2h}
mp-19729	EuAsAu	6/mm'm'	s	-	FM	D_{6h}
mp-1186702	$Pr_2Y_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-21122	$NdSb_2Pd$	4/mm'm'	s	-	FM	D_{4h}
mp-859783	VOF	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1018679	$DyTe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1173028	NdO_3	2/m.1	d	-	FM	C_{2h}
mp-2261-	Mn_2SnW	4/mm'm'	s	-	FM	D_{4h}
mp-10454	SmTiGe	4/mm'm'	s	-	FM	D_{4h}
mp-752887	VF_4	m'm'm	s	-	FM	D_{2h}
mp-753163	HoIO	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1180782	$KCrF_3$	m'm'm	s	-	FM	D_{2h}
mp-999195	RuN	6'/m'mm'	g	-	AM	D_{6h}
mp-569402	VP	6/mm'm'	s	-	FM	D_{6h}
mp-4873	Ce_2TeO_2	4/mm'm'	s	-	FM	D_{4h}
mp-613052	Eu_2PBr	$\overline{3}$m'	s	-	FM	D_{3d}
mp-10311	ZrVGe	4'/mm'm	d	-	AM	D_{4h}
mp-978545	Sm_2AgHg	4/mm'm'	s	-	FM	D_{4h}
mp-1274	CoS	6/mm'm'	s	-	FM	D_{6h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-2224799	$MgFe_2(OF)_2$	2/m.1	d	-	CFM	C_{2h}
mp-1215848	Yb_2C	$\overline{3}$m'	s	-	FM	D_{3d}
mp-862713	$BeGeRu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-864748	Gd_2MgIn	4/mm'm'	s	-	FM	D_{4h}
mp-2415-	$LiNd_2HO_3$	m'm'm	s	-	FM	D_{2h}
mp-1184138	$Er_2Sc_2O_5$	4/mm'm'	s	-	CFM	D_{4h}
mp-548824	$BaTbO_3$	$\overline{3}$m.1	g	-	AM	D_{3d}
mp-1077233	SmSnAu	6'/m'mm'	g	-	AM	D_{6h}
mp-19832	$BaCoS_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1095764	$HfTaMo_2$	m'm'm	s	-	FM	D_{2h}
mp-1078516	$BaCrS_2$	4/mm'm'	s	-	FM	D_{4h}
mp-27976	$SmBr_3$	m'm'm	s	-	FM	D_{2h}
mp-962	$SmZn_2$	m'm'm	s	-	FM	D_{2h}
mp-1518128	Eu_2TiInO_6	4/mm'm'	s	-	FM	D_{4h}
mp-865473	VBr_3	6/mm'm'	s	-	FM	D_{6h}
mp-2901879	$PrMgS_3$	2/m.1	d	-	FM	C_{2h}
mp-1091374	$NbCrN_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1080474	$FeNCl_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1184362	Gd_2CdHg	4/mm'm'	s	-	FM	D_{4h}
mp-867299	Eu_2HgGe	4/mm'm'	s	-	FM	D_{4h}
mp-1224826	$GaFe_2$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-27186	$MgVO_3$	m'm'm	s	-	FM	D_{2h}
mp-1247539	MoSeN	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-13972	Sm_2SeO_2	$\bar{3}$m'	s	-	FM	D_{3d}
mp-1184288	Eu_2ZnCd	4/mm'm'	s	-	FM	D_{4h}
mp-1262938	AlV_2W	m'm'm	s	-	FM	D_{2h}
mp-1078379	$FeBiS_2Br$	2/m.1	d	-	FM	C_{2h}
mp-1078991	$ErTe_3$	m'm'm	s	-	FM	D_{2h}
mp-1224988	Gd_2InAg	4/mm'm'	s	-	FM	D_{4h}
mp-1006399	CeZnIn	6/mm'm'	s	-	FM	D_{6h}
mp-1176435	$MnGaO_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1096681	$CdSbRh_2$	m'm'm	s	-	FM	D_{2h}
mp-1206232	Nd_2CdSb_3	4/mm'm'	s	-	FM	D_{4h}
mp-979751	$TaTiFe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-754727	$LiNiS_2$	2/m.1	d	-	FM	C_{2h}
mp-1217042	TiAlVC	$\bar{3}$m'	s	-	FM	D_{3d}
mp-1385938	$Ca(FeO_2)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-2225911	$KMgMn_2O_4$	$\bar{1}$.1	s	-	CFM	C_i
mp-1096223	$TiBeCu_2$	m'm'm	s	-	FM	D_{2h}
mp-1097138	$HfTiOs_2$	m'm'm	s	-	FM	D_{2h}
mp-976793	$LiEr_2Ga$	4/mm'm'	s	-	FM	D_{4h}
mp-1080202	FeN_2	mmm.1	d	-	AM	D_{2h}
mp-864617	NdI_3	6/mm'm'	s	-	FM	D_{6h}
mp-1097419	$TaGaRh_2$	m'm'm	s	-	FM	D_{2h}
mp-1038816	CeMg	2/m.1	d	-	FM	C_{2h}
mp-1101329	Tb_2SeO_2	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1095188	CaNiGeH	4/mm'm'	s	-	FM	D_{4h}
mp-1185246	$LiYb_2Cd$	4/mm'm'	s	-	FM	D_{4h}
mp-1018669	CeTlZn	6/mm'm'	s	-	FM	D_{6h}
mp-1080313	$CeSe_2$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1245547	CrTeN	4/mm'm'	s	-	FM	D_{4h}
mp-1120748	TeMo	6/mm'm'	s	-	FM	D_{6h}
mp-391	$HoAl_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1205732	$VNCl_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1077197	CeScSb	4/mm'm'	s	-	FM	D_{4h}
mp-28645	CaNiN	4/mm'm'	s	-	FM	D_{4h}
mp-321-	$Ca(CoP)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1080176	$Gd(BC)_2$	4/mmm.1	g	-	AM	D_{4h}
mp-604908	CoSe	4/mm'm'	s	-	FM	D_{4h}
mp-1180159	$MnNF_3$	4'/mm'm	d	-	AM	D_{4h}
mp-30657	$TiGaNi_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1079783	EuAl	m'm'm	s	-	FM	D_{2h}
mp-1080249	$CeSe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-108020-	CrN_2	m'm'm	s	-	FM	D_{2h}
mp-7892	Mn_2AlB_2	m'm'm	s	-	FM	D_{2h}
mp-1097048	$LaCuO_2F$	4/mmm.1	g	-	AM	D_{4h}
mp-1232267	PmS_2	4/mm'm'	s	-	FM	D_{4h}
mp-1187459	$TiGaCu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-13038	$Dy_2C(NO)_2$	$\overline{3}$m'	s	-	FM	D_{3d}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1919-	$SrNiO_2$	m'm'm	s	-	FM	D_{2h}
mp-1186256	Nd_2TlAg	4/mm'm'	s	-	FM	D_{4h}
mp-19168	$LaMnO_3$	$\bar{3}$m'	s	-	FM	D_{3d}
mp-981249	Y_3Tm	6/mm'm'	s	-	FM	D_{6h}
mp-1097499	$NbCr_2W$	m'm'm	s	-	FM	D_{2h}
mp-5407	$TiAlCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1211676	La_4Co	4/mm'm'	s	-	FM	D_{4h}
mp-1692	CuO	4'/mm'm	d	-	AM	D_{4h}
mp-1184647	$HfZrCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1518357	Eu_2HfNbO_6	4/mm'm'	s	-	FM	D_{4h}
mp-1069613	Er_2BiO_2	4/mm'm'	s	-	FM	D_{4h}
mp-2041-	$Ho(BC)_2$	4/mmm.1	g	-	AM	D_{4h}
mp-758456	$LiMnF_3$	m'm'm	s	-	AM	D_{2h}
mp-1015811	$AlCo_2Si$	m'm'm	s	-	FM	D_{2h}
mp-866376	$TiMn_2Ge$	4/mm'm'	s	-	FM	D_{4h}
mp-1207286	Tb_2Cl_2O	4/mm'm'	s	-	FM	D_{4h}
mp-1184263	Eu_2TlHg	4/mm'm'	s	-	FM	D_{4h}
mp-1064427	GdBr	$\bar{3}$m'	s	-	FM	D_{3d}
mp-33322	$LiHoSe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1095938	$BeNbOs_2$	m'm'm	s	-	FM	D_{2h}
mp-1206846	$SrRhO_3$	m'm'm	s	-	FM	D_{2h}
mp-755325	CoOF	m'm'm	s	-	FM	D_{2h}
mp-1184381	Gd_2AgAu	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-2224714	$MgCr_2O_4$	2/m.1	d	-	FM	C_{2h}
mp-1245507	$NiGeN_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-1246644	In_2NiN_2	m'm'm	s	-	FM	D_{2h}
mp-1217625	TbAgSn	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1187238	$TaMn_2Ga$	4/mm'm'	s	-	FM	D_{4h}
mp-1018952	PrZnIn	6/mm'm'	s	-	FM	D_{6h}
mp-997029	$TlCuO_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1225194	EuAlGa	2/m.1	d	-	FM	C_{2h}
mp-55656-	MnF_3	2/m.1	d	-	FM	C_{2h}
mp-22412	$Ba(MnGe)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1183801	Ce_2MgCd	4/mm'm'	s	-	FM	D_{4h}
mp-1183942	Eu_2AgSb	4/mm'm'	s	-	FM	D_{4h}
mp-1096527	$LaYCu_2$	m'm'm	s	-	FM	D_{2h}
mp-86617-	$TiInRh_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1079312	$NdSb_2Au$	4/mm'm'	s	-	FM	D_{4h}
mp-1080419	$SmBi_2Au$	4/mm'm'	s	-	FM	D_{4h}
mp-75430-	$HoBiO_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-1207191	$TiCu_2Sb$	4/mm'm'	s	-	FM	D_{4h}
mp-1007918	DyAu	m'm'm	s	-	FM	D_{2h}
mp-1384482	Zn_2CrN_2	2/m.1	d	-	FM	C_{2h}
mp-1232271	PmS_2	4/mm'm'	s	-	FM	D_{4h}
mp-1227387	$Ca(ErTe_2)_2$	2/m.1	d	-	CFM	C_{2h}
mp-1232163	$DyMgS_3$	2/m.1	d	-	FM	C_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1211596	Sc_4Ni	4/mm'm'	s	-	FM	D_{4h}
mp-1018704	GdAlZn	6/mm'm'	s	-	FM	D_{6h}
mp-568565	CrAs	6/mm'm'	s	-	FM	D_{6h}
mp-1207047	Tm_2AgSb_3	4/mm'm'	s	-	FM	D_{4h}
mp-1096698	$ZnGeIr_2$	m'm'm	s	-	FM	D_{2h}
mp-1025491	$TbGe_3$	m'm'm	s	-	FM	D_{2h}
mp-1018815	NdSbPd	6'/m'mm'	g	-	AM	D_{6h}
mp-862742	Pm_2ZnGe	4/mm'm'	s	-	FM	D_{4h}
mp-1523086	Eu_2ZnWO_6	4/mm'm'	s	-	FM	D_{4h}
mp-1186684	Pr_2GaAg	4/mm'm'	s	-	FM	D_{4h}
mp-1232151	$TmMgSe_3$	2/m.1	d	-	FM	C_{2h}
mp-1079563	$Ni(ClO)_2$	2'/m'	s	-	AM	C_{2h}
mp-982613	Pm_2InHg	4/mm'm'	s	-	FM	D_{4h}
mp-976679	$HoSb_3$	6/mm'm'	s	-	FM	D_{6h}
mp-13485	$Eu(AlAu)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1178953	TmO_3	6/m.1	s	-	FM	C_{6h}
mp-979986	$BaCaYb_2$	4/mm'm'	s	-	FM	D_{4h}
mp-755252	$DyHO_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-2721	Ce_2O_3	$\bar{3}$m'	s	-	FM	D_{3d}
mp-863695	PmI_3	6/mm'm'	s	-	FM	D_{6h}
mp-971647	$NaMnO_2$	6/mm'm'	s	-	FM	D_{6h}
mp-22331	NdTiGe	4/mm'm'	s	-	FM	D_{4h}
mp-862845	$IrCl_2$	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1096137	$ZrGaCu_2$	m'm'm	s	-	FM	D_{2h}
mp-28254	$LiRuO_2$	m'm'm	s	-	FM	D_{2h}
mp-1396061	MoO_3	6/mm'm'	s	-	FM	D_{6h}
mp-1186433	Pm_2AgHg	4/mm'm'	s	-	FM	D_{4h}
mp-1206225	Tb_2Te_3	4/mm'm'	s	-	FM	D_{4h}
mp-1184514	Gd_2CdIn	4/mm'm'	s	-	FM	D_{4h}
mp-753024	$LiVF_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-1101265	$TmAlO_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-1184403	Gd_2AlCd	4/mm'm'	s	-	FM	D_{4h}
mp-1078968	$LaCoSb_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1384466	FeO_2	6/mm'm'	s	-	FM	D_{6h}
mp-1039548	$CeMg_2$	2/m.1	d	-	FM	C_{2h}
mp-1396942	VO_2	6/mm'm'	s	-	FM	D_{6h}
mp-224025-	$BaMgMn_2O_5$	m'm'm	s	-	FM	D_{2h}
mp-634979	TbOF	2/m.1	d	-	FM	C_{2h}
mp-1206817	$TlVCl_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-547622	Pm_2O_3	$\bar{3}$m'	s	-	FM	D_{3d}
mp-1184409	Gd_2MgCd	4/mm'm'	s	-	FM	D_{4h}
mp-6574	$Er_2C(NO)_2$	$\bar{3}$m'	s	-	FM	D_{3d}
mp-1186254	Nd_2TlCd	4/mm'm'	s	-	FM	D_{4h}
mp-1210664	Lu_4Co	4/mm'm'	s	-	FM	D_{4h}
mp-755716	$HoHO_2$	6/mm'm'	s	-	FM	D_{6h}
mp-999507	MnSn	6/mm'm'	s	-	FM	D_{6h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-975059	$MnTl_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1095058	$Er(BC)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1078237	$NaNiF_3$	m'm'm	s	-	AM	D_{2h}
mp-1206316	Nd_2Sb_3Au	4/mm'm'	s	-	FM	D_{4h}
mp-601693	YbBrO	4/mm'm'	s	-	FM	D_{4h}
mp-10656	TmTe	6/mm'm'	s	-	FM	D_{6h}
mp-555359	$KMnF_3$	4/mmm.1	g	-	AM	D_{4h}
mp-1018075	FeSe	4/mm'm'	s	-	FM	D_{4h}
mp-1184474	$GdAg_3$	6/mm'm'	s	-	FM	D_{6h}
mp-30611	$ErSnPt_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1219176	Sm_2AsSe	4/mm'm'	s	-	FM	D_{4h}
mp-63722-	$Gd(SiPt)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1095804	$NbZnNi_2$	m'm'm	s	-	FM	D_{2h}
mp-984555	$CsDyS_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1521653	Eu_2HfTiO_6	4/mm'm'	s	-	FM	D_{4h}
mp-862732	$PmZn_3$	6/mm'm'	s	-	FM	D_{6h}
mp-107899-	$CsTmS_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1097507	$HfMgCu_2$	m'm'm	s	-	FM	D_{2h}
mp-685137	Ce_2SbO_2	2/m.1	d	-	FM	C_{2h}
mp-1207112	$Lu(MnSi)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-28755	GdCBr	2/m.1	d	-	FM	C_{2h}
mp-759867	VF_4	2'/m'	s	-	AM	C_{2h}
mp-1039345	$CeMg_2$	m'm'm	s	-	FM	D_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-4096	$CeAlO_3$	4/mm'm'	s	-	FM	D_{4h}
mp-90-	RhSe	6/mm'm'	s	-	FM	D_{6h}
mp-1025207	$Ti(CrTe_2)_2$	2/m.1	d	-	FM	C_{2h}
mp-1184912	K_3Ho	6/mm'm'	s	-	FM	D_{6h}
mp-977372	Pm_2SnHg	4/mm'm'	s	-	FM	D_{4h}
mp-118450-	Gd_2ZnHg	4/mm'm'	s	-	FM	D_{4h}
mp-1184741	$HoBr_2$	4/mm'm'	s	-	FM	D_{4h}
mp-34477	$LiSmS_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1238772	$TmMgS_3$	2/m.1	d	-	FM	C_{2h}
mp-30498	$TbCd_3$	6/mm'm'	s	-	FM	D_{6h}
mp-20706	EuPPd	6/mm'm'	s	-	FM	D_{6h}
mp-567305	$CeAl_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1229	CuF_2	2'/m'	s	-	AM	C_{2h}
mp-1079437	FeB_4	m'm'm	s	-	FM	D_{2h}
mp-13915	$LiNi_2Sn$	4/mm'm'	s	-	FM	D_{4h}
mp-1216922	$TiInCu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-862734	Pm_2ZnSn	4/mm'm'	s	-	FM	D_{4h}
mp-1206169	SrCuSi	6/mm'm'	s	-	FM	D_{6h}
mp-974525	$ReAg_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1097671	$TaBeRh_2$	m'm'm	s	-	FM	D_{2h}
mp-1097145	$MgTiCu_2$	m'm'm	s	-	FM	D_{2h}
mp-1524494	$CeAu_2$	m'm'm	s	-	FM	D_{2h}
mp-764949	MnF_3	m'm'm	s	-	FM	D_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-121095-	$LiHoW_2$	m'm'm	s	-	FM	D_{2h}
mp-3350-	Cr_2HO_4	2/m.1	d	-	FM	C_{2h}
mp-1079568	$NaIrO_3$	m'm'm	s	-	FM	D_{2h}
mp-1446026	CrO_2	6/mm'm'	s	-	FM	D_{6h}
mp-13066	Er_2O_3	$\overline{3}$m'	s	-	FM	D_{3d}
mp-997162	$MnAgO_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1078716	$SrMoO_3$	m'm'm	s	-	AM	D_{2h}
mp-2248-	GdScSi	4/mm'm'	s	-	FM	D_{4h}
mp-1206194	$RbDyI_3$	m'm'm	s	-	AM	D_{2h}
mp-1180654	NiF_3	$\overline{1}$.1	s	-	FM	C_i
mp-1019255	SmTlCd	6'/m'mm'	g	-	AM	D_{6h}
mp-1206322	$CeAg_2$	m'm'm	s	-	FM	D_{2h}
mp-1205652	$TlNiCl_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-1238845	$Cs(CrS_2)_2$	2/m.1	d	-	FM	C_{2h}
mp-22752	$FeSn_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1186441	Pm_2AlZn	4/mm'm'	s	-	FM	D_{4h}
mp-22892	$RuBr_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-940-	$CeAlSi_2$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1220312	Nd_2O_3	m'm'm	s	-	CFM	D_{2h}
mp-1024998	ScCoSi	m'm'm	s	-	FM	D_{2h}
mp-979989	Yb_2AgPd	4/mm'm'	s	-	FM	D_{4h}
mp-759286	$NaNi_2O_3$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-865338	Tm_2ZnPt	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1072737	$NdAg_2$	m'm'm	s	-	FM	D_{2h}
mp-1019257	SmZnGa	6/mm'm'	s	-	FM	D_{6h}
mp-121394-	Ce_2CdAs_2O	4/mm'm'	s	-	FM	D_{4h}
mp-1206228	$Ce_2(AgSb)_3$	4/mm'm'	s	-	FM	D_{4h}
mp-3682	$KCuF_3$	4'/mm'm	d	-	AM	D_{4h}
mp-22991	$CsVI_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-2831	FePd	4/mm'm'	s	-	FM	D_{4h}
mp-544	Ti_3Ir	4/mm'm'	s	-	FM	D_{4h}
mp-1018077	ErGa	m'm'm	s	-	FM	D_{2h}
mp-1209782	Pr_2Sb_3Pd	4/mm'm'	s	-	FM	D_{4h}
mp-1079447	$Ni(ClO)_2$	2/m.1	d	-	FM	C_{2h}
mp-13005	$LaCrGe_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-769277	Yb_2TeO_2	4/mm'm'	s	-	FM	D_{4h}
mp-30566	Ti_2Co	4/mm'm'	s	-	FM	D_{4h}
mp-1186314	$NdHg_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1238831	Cr_2AgS_4	2/m.1	d	-	FM	C_{2h}
mp-1187233	$TaGeRu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1206203	YbSeI	m'm'm	s	-	FM	D_{2h}
mp-1185441	$LiSm_2Ga$	4/mm'm'	s	-	FM	D_{4h}
mp-1215937	YAlFe	m'm'm	s	-	AM	D_{2h}
mp-1018702	EuZnGe	m'm'm	s	-	FM	D_{2h}
mp-1096676	$ZrCu_2Au$	m'm'm	s	-	FM	D_{2h}
mp-2416214	TbSe	6/mm'm'	s	-	FM	D_{6h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-20908	$Ce(BC)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1206319	$RbCoBr_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-1185272	Li_3Sm	6/mm'm'	s	-	FM	D_{6h}
mp-1080042	IrC_4	m'm'm	s	-	FM	D_{2h}
mp-1385937	$AlCrO_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1444809	$MnAlO_3$	6/mm'm'	s	-	FM	D_{6h}
mp-568258	Fe_2Ge	6/mm'm'	s	-	FM	D_{6h}
mp-754526	TmBrO	m'm'm	s	-	FM	D_{2h}
mp-568887	$RbCrCl_3$	2/m.1	d	-	CFM	C_{2h}
mp-755074	CeOF	4/mm'm'	s	-	FM	D_{4h}
mp-859873	$LiMnF_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-1246351	V_2SN_2	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1185458	$LiSm_2Al$	4/mm'm'	s	-	FM	D_{4h}
mp-1185254	$LiYb_2In$	4/mm'm'	s	-	FM	D_{4h}
mp-867197	$LiGaNi_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1205507	Eu_2MgWO_6	4/mm'm'	s	-	FM	D_{4h}
mp-1038788	CeMg	m'm'm	s	-	FM	D_{2h}
mp-1186435	Pm_2AlGa	4/mm'm'	s	-	FM	D_{4h}
mp-2224453	$Mg(CuO)_2$	m'm'm	s	-	FM	D_{2h}
mp-1181307	$LaCoO_3$	2'/m'	s	-	AM	C_{2h}
mp-864641	$HoCl_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1098702	$CeSe_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1025099	TbGaI	$\overline{3}$m'	s	-	FM	D_{3d}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-101753-	VH	6'/m'mm'	g	-	AM	D_{6h}
mp-1187848	Tl_3Co	2/m.1	d	-	FM	C_{2h}
mp-152000-	Eu_2TiSbO_6	4/mm'm'	s	-	FM	D_{4h}
mp-1226005	CoSbTe	2/m.1	d	-	FM	C_{2h}
mp-864986	$DyBr_2$	4'/mm'm	d	-	AM	D_{4h}
mp-1206207	$DyClO_2$	2/m.1	d	-	FM	C_{2h}
mp-102496-	PrScSi	4/mm'm'	s	-	FM	D_{4h}
mp-27842	CrBrO	m'm'm	s	-	FM	D_{2h}
mp-1235	TiIr	4/mm'm'	s	-	FM	D_{4h}
mp-109760-	$TiNbOs_2$	m'm'm	s	-	FM	D_{2h}
mp-1219747	PrSbPd	$\bar{3}$m'	s	-	FM	D_{3d}
mp-1078656	K_3Mn	4/mm'm'	s	-	FM	D_{4h}
mp-2226731	$Mg(VS_2)_2$	$\bar{3}$m'	s	-	FM	D_{3d}
mp-27617	Ce_2SeF_4	$\bar{3}$m'	s	-	FM	D_{3d}
mp-757-	RuF_3	$\bar{3}$m.1	g	-	AM	D_{3d}
mp-1271121	CoF_3	4'/mm'm	d	-	AM	D_{4h}
mp-19971	$ZnCo_2Ge$	4/mm'm'	s	-	FM	D_{4h}
mp-19157	$LaMnO_3$	2/m.1	d	-	FM	C_{2h}
mp-1086672	MnO_3	m'm'm	s	-	FM	D_{2h}
mp-1183344	$BaSrEu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1096255	$HfNi_2Au$	m'm'm	s	-	FM	D_{2h}
mp-1220968	$NaNd_2Se_3$	m'm'm	s	-	FM	D_{2h}
mp-1184476	Gd_2InHg	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-109705-	$YMgCu_2$	m'm'm	s	-	FM	D_{2h}
mp-1018087	CeAu	m'm'm	s	-	FM	D_{2h}
mp-1206692	$PrLuS_3$	m'm'm	s	-	AM	D_{2h}
mp-866153	$TiAlRh_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1237963	$TbMgSe_3$	2/m.1	d	-	FM	C_{2h}
mp-1208943	$ScCo_2Ge$	4/mm'm'	s	-	FM	D_{4h}
mp-1186841	Rb_3Dy	6/mm'm'	s	-	FM	D_{6h}
mp-675581	Cr_2HO_4	2/m.1	d	-	FM	C_{2h}
mp-1206676	$RbSmI_3$	m'm'm	s	-	AM	D_{2h}
mp-1209925	Nd_2ZnSb_2O	4/mm'm'	s	-	FM	D_{4h}
mp-22998	CrSBr	m'm'm	s	-	FM	D_{2h}
mp-755099	$ZnFeO_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-118646-	Pm_2GaSn	4/mm'm'	s	-	FM	D_{4h}
mp-642807	TbH_2Br	$\overline{3}$m'	s	-	FM	D_{3d}
mp-569674	$La(CoAs)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1076977	DyAlGe	m'm'm	s	-	FM	D_{2h}
mp-756702	PrBrO	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1080029	$Ba_2Mn_2Se_2OF_2$	4'/mm'm	d	-	AM	D_{4h}
mp-849057	FeS	$\overline{3}$m'	s	-	CFM	D_{3d}
mp-7977	$CsSmO_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1225586	ErGaAu	2/m.1	d	-	FM	C_{2h}
mp-1206129	$Rb(AsRu)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1186558	$PmBr_2$	4'/mm'm	d	-	AM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1093-	TbSF	4/mm'm'	s	-	FM	D_{4h}
mp-1097123	$MgBiRh_2$	m'm'm	s	-	FM	D_{2h}
mp-1095722	$BeBIr_2$	m'm'm	s	-	FM	D_{2h}
mp-18946	VBO_3	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1221594	MnO_4	4/mm'm'	s	-	FM	D_{4h}
mp-138790-	$YCrO_3$	6/mm'm'	s	-	FM	D_{6h}
mp-780639	$LiFeF_3$	2'/m'	s	-	AM	C_{2h}
mp-504708	$CsCoCl_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-1185972	Mn_2NbGa	4/mm'm'	s	-	FM	D_{4h}
mp-30555	$TaGaCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-19284	$NiAgO_2$	6/mm'm'	s	-	FM	D_{6h}
mp-86325-	$TaMn_2Ge$	4/mm'm'	s	-	FM	D_{4h}
mp-12516	NdZnSbO	4/mm'm'	s	-	FM	D_{4h}
mp-1096704	$TaNbRe_2$	m'm'm	s	-	FM	D_{2h}
mp-1025246	Er_2B_4C	m'm'm	s	-	FM	D_{2h}
mp-560902	MnF_2	4'/mm'm	d	-	AM	D_{4h}
mp-866155	$TiAlRu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-758879	FeO_2F	2'/m'	s	-	AM	C_{2h}
mp-1095795	$BeZnIr_2$	m'm'm	s	-	FM	D_{2h}
mp-1226638	CeSbPd	6/mm'm'	s	-	FM	D_{6h}
mp-1215169	ZrVW	2'/m'	s	-	AM	C_{2h}
mp-1025422	$HoGe_3$	m'm'm	s	-	FM	D_{2h}
mp-21149	GdO_2	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-120639-	Sm_2AgSb_3	4/mm'm'	s	-	FM	D_{4h}
mp-540609	$CsMnI_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-1045516	$Li(NiO_2)_2$	2/m.1	d	-	FM	C_{2h}
mp-1025449	$TbInPt_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-1184692	Ho_2ZnPt	4/mm'm'	s	-	FM	D_{4h}
mp-23061	VClO	m'm'm	s	-	FM	D_{2h}
mp-754508	$MgFeO_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-109600-	$ZrTaRe_2$	m'm'm	s	-	FM	D_{2h}
mp-3080-	$NdZn_2$	m'm'm	s	-	FM	D_{2h}
mp-1079534	EuP_3	2/m.1	d	-	FM	C_{2h}
mp-1025319	Nd_2PdO_4	4/mm'm'	s	-	FM	D_{4h}
mp-29131	VSe	6'/m'mm'	g	-	AM	D_{6h}
mp-1018673	CoPPd	4/mm'm'	s	-	FM	D_{4h}
mp-594	NiS	6'/m'mm'	g	-	AM	D_{6h}
mp-604153	$LaCr_2Si_2C$	4/mm'm'	s	-	FM	D_{4h}
mp-1224869	Gd_2C	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1186475	Pm_2MgGe	4/mm'm'	s	-	FM	D_{4h}
mp-865302	Tm_2CdIn	4/mm'm'	s	-	FM	D_{4h}
mp-752469	MnOF	m'm'm	s	-	FM	D_{2h}
mp-1018822	NdZnIn	6/mm'm'	s	-	FM	D_{6h}
mp-979258	Tm_2CdHg	4/mm'm'	s	-	FM	D_{4h}
mp-1184083	Er_2ZnAg	4/mm'm'	s	-	FM	D_{4h}
mp-861968	$ErCl_2$	4'/mm'm	d	-	AM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1093706	$HfScNi_2$	m'm'm	s	-	FM	D_{2h}
mp-1187132	Sr_3Nd	6/mm'm'	s	-	FM	D_{6h}
mp-20757	MnAlGe	4/mm'm'	s	-	FM	D_{4h}
mp-1101654	$NaEuO_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1232239	PmS	4/mm'm'	s	-	FM	D_{4h}
mp-1220371	NbAlVC	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1186638	PmS_3	6/mm'm'	s	-	FM	D_{6h}
mp-16036	Tb_2TeO_2	4/mm'm'	s	-	FM	D_{4h}
mp-1072345	TmMgSn	4/mm'm'	s	-	FM	D_{4h}
mp-1185234	$LiCe_2Al$	4/mm'm'	s	-	FM	D_{4h}
mp-510732	MnO_2	m'm'm	s	-	FM	D_{2h}
mp-866204	Pm_2SiHg	4/mm'm'	s	-	FM	D_{4h}
mp-109744-	$CaScRh_2$	m'm'm	s	-	FM	D_{2h}
mp-7962	$YbAgS_2$	4/mm'm'	s	-	FM	D_{4h}
mp-120696-	Tb_2TiGe_2	4/mm'm'	s	-	FM	D_{4h}
mp-1078939	$MnNF_3$	mmm.1	d	-	AM	D_{2h}
mp-1025372	$Y_2Cr_2C_3$	2/m.1	d	-	FM	C_{2h}
mp-8215	$LaYbS_3$	m'm'm	s	-	AM	D_{2h}
mp-4764	Pr_2SeO_2	$\overline{3}$m'	s	-	FM	D_{3d}
mp-120736-	Pr_2Sb_3Pd	4/mm'm'	s	-	FM	D_{4h}
mp-3474	$LaCuO_3$	$\overline{3}$m.1	g	-	AM	D_{3d}
mp-30042	Li_2CeGe	6/mm'm'	s	-	FM	D_{6h}
mp-1095877	$TaFe_2Ge$	m'm'm	s	-	FM	D_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-102520-	Eu_2TiO_4	4/mm'm'	s	-	FM	D_{4h}
mp-20477	$BaLa(CoO_3)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-866142	$TiGaIr_2$	4/mm'm'	s	-	FM	D_{4h}
mp-23319	$RbVCl_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-761288	$MnBO_3$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-2365577	$LiNiS_2$	2/m.1	d	-	FM	C_{2h}
mp-3854	$Y(MnSi)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1207443	Zr_4Cr	4/mm'm'	s	-	FM	D_{4h}
mp-1077112	EuZnGe	m'm'm	s	-	FM	D_{2h}
mp-20155	$CoSn_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1078188	$LiOsO_3$	$\overline{3}$m.1	g	-	AM	D_{3d}
mp-861498	Pr_2HgPb	4/mm'm'	s	-	FM	D_{4h}
mp-1225233	EuZnSn	2/m.1	d	-	FM	C_{2h}
mp-1018818	NdTeCl	4/mm'm'	s	-	FM	D_{4h}
mp-756878	$NaYbO_2$	4/mm'm'	s	-	FM	D_{4h}
mp-978085	Pr_2TlAg	4/mm'm'	s	-	FM	D_{4h}
mp-1187644	$TmGa_3$	6/mm'm'	s	-	FM	D_{6h}
mp-10312	HfVGe	4'/mm'm	d	-	AM	D_{4h}
mp-22783	EuPAu	6/mm'm'	s	-	FM	D_{6h}
mp-971705	Tm_2MgTl	4/mm'm'	s	-	FM	D_{4h}
mp-1023125	$MgCuO_2$	4/mm'm'	s	-	FM	D_{4h}
mp-567262	$NiCN_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-2900784	$Ni(ClO)_2$	2/m.1	d	-	FM	C_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1072181	$FeSb_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1216644	V_2NO	4/mm'm'	s	-	CFM	D_{4h}
mp-122559-	ErAgSn	$\overline{3}$m'	s	-	FM	D_{3d}
mp-22398	FeF_3	$\overline{3}$m.1	g	-	AM	D_{3d}
mp-1078702	$EuAs_3$	$\overline{1}$.1	s	-	FM	C_i
mp-5908	CeAsS	4/mm'm'	s	-	FM	D_{4h}
mp-1186461	Pm_2GaHg	4/mm'm'	s	-	FM	D_{4h}
mp-1854	$EuPd_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1226622	CeGaAg	2/m.1	d	-	FM	C_{2h}
mp-556911	FeF_2	4'/mm'm	d	-	AM	D_{4h}
mp-1206338	ErO_2	2/m.1	d	-	FM	C_{2h}
mp-1187163	Sr_3Yb	6/mm'm'	s	-	FM	D_{6h}
mp-1077785	HoAlGe	m'm'm	s	-	FM	D_{2h}
mp-567504	$CrCl_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-636316	$EuIn_2$	6/mm'm'	s	-	FM	D_{6h}
mp-545467	$Li_3(CuO_2)_2$	2/m.1	d	-	FM	C_{2h}
mp-10892	MnAlPt	6'/m'mm'	g	-	AM	D_{6h}
mp-788	CoTe	6/mm'm'	s	-	FM	D_{6h}
mp-1019253	$SmSe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-109596-	$MgCu_2Pt$	m'm'm	s	-	FM	D_{2h}
mp-67636-	$NaNdS_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1096387	$ScTiRh_2$	m'm'm	s	-	FM	D_{2h}
mp-1079523	CoO_4	2/m.1	d	-	FM	C_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-865461	$LuZrCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1184139	Dy_2TlIn	4/mm'm'	s	-	FM	D_{4h}
mp-118598-	$MgSnRu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-2217217	$NaMgMn_2O_4$	$\overline{1}$.1	s	-	CFM	C_i
mp-1093617	Cu_2PtAu	m'm'm	s	-	FM	D_{2h}
mp-1079847	$CsFeBr_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-1183904	Eu_2AgPt	4/mm'm'	s	-	FM	D_{4h}
mp-1517851	Eu_2BiSbO_6	4/mm'm'	s	-	FM	D_{4h}
mp-949	CoPt	4/mm'm'	s	-	FM	D_{4h}
mp-1096159	$NbSnRu_2$	m'm'm	s	-	FM	D_{2h}
mp-12669	Dy_2SO_2	$\overline{3}$m'	s	-	FM	D_{3d}
mp-120617-	YCr_2Si_2C	4/mm'm'	s	-	FM	D_{4h}
mp-545348	$MgVO_3$	m'm'm	s	-	FM	D_{2h}
mp-867259	$RhCl_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1186478	Pm_2TlHg	4/mm'm'	s	-	FM	D_{4h}
mp-1183148	$AlGaCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1071698	$EuAu_2$	m'm'm	s	-	FM	D_{2h}
mp-1025352	$Ce_2C(NO)_2$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1070912	CsV_2S_2O	4'/mm'm	d	-	AM	D_{4h}
mp-262-	DySi	m'm'm	s	-	FM	D_{2h}
mp-1215268	ZrCrW	2'/m'	s	-	AM	C_{2h}
mp-2189	CrSe	6/mm'm'	s	-	FM	D_{6h}
mp-2227138	$Mg(CrS_2)_2$	$\overline{3}$m'	s	-	FM	D_{3d}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1216661	$TiZnCu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-775831	$TiMn_2O_6$	2/m.1	d	-	FM	C_{2h}
mp-98287-	$HfAlIr_2$	4/mm'm'	s	-	FM	D_{4h}
mp-864973	Dy_2CdIn	4/mm'm'	s	-	FM	D_{4h}
mp-12875	ReO_2	4'/mm'm	d	-	AM	D_{4h}
mp-1147746	CoS	4/mm'm'	s	-	FM	D_{4h}
mp-4475	$Tl(CoSe)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-755788	$TlCoO_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-867515	$NaCoO_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-496-	$Li(PrGe_3)_2$	m'm'm	s	-	FM	D_{2h}
mp-861948	$LiPm_2Al$	4/mm'm'	s	-	FM	D_{4h}
mp-756436	FeO	2/m.1	d	-	CFM	C_{2h}
mp-1183902	Eu_2AgPd	4/mm'm'	s	-	FM	D_{4h}
mp-10204	MnSe	6'/m'mm'	g	-	AM	D_{6h}
mp-2007-	GdTiGe	4/mm'm'	s	-	FM	D_{4h}
mp-29154	Hf_2CoP	2/m.1	d	-	FM	C_{2h}
mp-1077234	Mg_2Ru	m'm'm	s	-	FM	D_{2h}
mp-1219678	PrAlZn	2/m.1	d	-	FM	C_{2h}
mp-1220353	NdAgPb	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1184454	$EuNb_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1278738	$LaMnO_3$	4/mm'm'	s	-	FM	D_{4h}
mp-12079	$K(CoS)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-93676-	$HoAgSe_2$	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-980056	$Rb_2Yb_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-1096207	$AlFe_2Ge$	m'm'm	s	-	FM	D_{2h}
mp-1096467	$LiRh_2W$	m'm'm	s	-	FM	D_{2h}
mp-1018689	ErZnIn	6'/m'mm'	g	-	AM	D_{6h}
mp-1179151	TbOF	2/m.1	d	-	FM	C_{2h}
mp-1080828	$KCuF_3$	4'/mm'm	d	-	AM	D_{4h}
mp-864982	$DyBr_3$	6/mm'm'	s	-	FM	D_{6h}
mp-101868-	DyTlZn	6/mm'm'	s	-	FM	D_{6h}
mp-1517152	Eu_2YWO_6	4/mm'm'	s	-	FM	D_{4h}
mp-1184281	Eu_2TlCd	4/mm'm'	s	-	FM	D_{4h}
mp-984682	Ce_2MgAl	4/mm'm'	s	-	FM	D_{4h}
mp-117835-	ErClO	4/mm'm'	s	-	FM	D_{4h}
mp-1038955	$CeMg_2$	2/m.1	d	-	FM	C_{2h}
mp-861908	$TaTiRu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1097075	$ScTlCu_2$	m'm'm	s	-	FM	D_{2h}
mp-1207282	Sm_2Br_2O	4/mm'm'	s	-	FM	D_{4h}
mp-1215934	YMnAl	m'm'm	s	-	AM	D_{2h}
mp-1183811	Ce_2MgPb	4/mm'm'	s	-	FM	D_{4h}
mp-30386	$HoAu_3$	m'm'm	s	-	FM	D_{2h}
mp-1184674	$Ho_2Hf_2O_5$	4/mm'm'	s	-	CFM	D_{4h}
mp-1206751	DySeI	m'm'm	s	-	FM	D_{2h}
mp-863684	Pm_2GeAu	4/mm'm'	s	-	FM	D_{4h}
mp-2240073	$SrMg(RuO_3)_2$	$\bar{3}$m'	s	-	FM	D_{3d}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1077772	NdSnAu	6'/m'mm'	g	-	AM	D_{6h}
mp-557018	$Cs(CoS)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1206301	Sm_2As_3Au	4/mm'm'	s	-	FM	D_{4h}
mp-1396678	FeF_4	4'/mm'm	d	-	AM	D_{4h}
mp-124605-	$TiCoN_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1186816	$Pt_2Rh_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-10857	$Tm(BC)_2$	4/mmm.1	g	-	AM	D_{4h}
mp-1184596	Ho_2AlCd	4/mm'm'	s	-	FM	D_{4h}
mp-1206277	Tb_2ZnSb_3	4/mm'm'	s	-	FM	D_{4h}
mp-2273987	SmAsS	4/mm'm'	s	-	FM	D_{4h}
mp-1078472	TiCuGeAs	4/mm'm'	s	-	FM	D_{4h}
mp-692	Tb_2C	$\overline{3}$m'	s	-	FM	D_{3d}
mp-20356	Ce_2SbO_2	4/mm'm'	s	-	FM	D_{4h}
mp-24149	$LiCe_2HO_3$	m'm'm	s	-	FM	D_{2h}
mp-1097098	$CaLaCu_2$	m'm'm	s	-	FM	D_{2h}
mp-1183802	$DyMg_2$	4/mm'm'	s	-	FM	D_{4h}
mp-122552-	Er_2Mg	m'm'm	s	-	FM	D_{2h}
mp-1097269	$HfBeIr_2$	m'm'm	s	-	FM	D_{2h}
mp-75464-	Ce_2SeO_2	$\overline{3}$m'	s	-	FM	D_{3d}
mp-865548	$TiInCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-86298-	$PmAl_3$	6/mm'm'	s	-	FM	D_{6h}
mp-714929	CrO_2	2/m.1	d	-	FM	C_{2h}
mp-20649	$Y(MnGe)_2$	4/mm'm'	s	-	FM	D_{4h}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-754064	MnP_2	mmm.1	d	-	AM	D_{2h}
mp-1183225	Ag_3Rh	6/mm'm'	s	-	FM	D_{6h}
mp-546292	YbClO	$\overline{3}$m'	s	-	FM	D_{3d}
mp-945	NiPt	4/mm'm'	s	-	FM	D_{4h}
mp-109654-	$LiAlIr_2$	m'm'm	s	-	FM	D_{2h}
mp-569109	$MnBiSe_2I$	2/m.1	d	-	CFM	C_{2h}
mp-1225319	Eu_2PCl	4/mm'm'	s	-	FM	D_{4h}
mp-31049	NdO_2	2/m.1	d	-	FM	C_{2h}
mp-755141	$NaHoO_2$	4/mm'm'	s	-	FM	D_{4h}
mp-849092	NiS_2	4/mm'm'	s	-	FM	D_{4h}
mp-1183809	Ce_2HgPb	4/mm'm'	s	-	FM	D_{4h}
mp-3421	$CuCN_2$	m'm'm	s	-	AM	D_{2h}
mp-1173029	$LiPrS_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1206942	$Ce_2(SiPt)_3$	4/mm'm'	s	-	FM	D_{4h}
mp-1219894	Pr_2InAg	4/mm'm'	s	-	FM	D_{4h}
mp-861994	Ho_2TlCd	4/mm'm'	s	-	FM	D_{4h}
mp-1186322	Nd_2ZnIn	4/mm'm'	s	-	FM	D_{4h}
mp-7692	$Al(CrB)_2$	m'm'm	s	-	FM	D_{2h}
mp-1184078	Dy_2MgGa	4/mm'm'	s	-	FM	D_{4h}
mp-20862	$CoSe_2$	m'm'm	s	-	FM	D_{2h}
mp-865373	YCo	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1232302	$RbCuCl_3$	4'/mm'm	d	-	AM	D_{4h}
mp-1185398	$LiPm_2Pb$	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-644292	Eu_2MgH_6	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1184635	Ho_2ZnGa	4/mm'm'	s	-	FM	D_{4h}
mp-19094	VO_2	4'/mm'm	d	-	AM	D_{4h}
mp-1018672	$CoAs_2$	m'm'm	s	-	FM	D_{2h}
mp-1077988	Mn_2B_4W	m'm'm	s	-	FM	D_{2h}
mp-118447-	Gd_2ZnIn	4/mm'm'	s	-	FM	D_{4h}
mp-541449	$CrGeTe_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-3284	$CeSi_2Pt$	m'm'm	s	-	FM	D_{2h}
mp-1178173	Ho_2TeO_2	4/mm'm'	s	-	FM	D_{4h}
mp-30125	$PrTe_2Se$	m'm'm	s	-	FM	D_{2h}
mp-608254	SmClF	4/mm'm'	s	-	FM	D_{4h}
mp-2045104	KMn_2O_4	2/m.1	d	-	FM	C_{2h}
mp-1406123	NiF_4	4/mm'm'	s	-	FM	D_{4h}
mp-3217157	YbF	6/mm'm'	s	-	FM	D_{6h}
mp-34212	$SrRuO_3$	m'm'm	s	-	FM	D_{2h}
mp-1096034	$TaTiMo_2$	m'm'm	s	-	FM	D_{2h}
mp-18969	$FeCO_3$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1232244	$SmMgS_3$	2/m.1	d	-	FM	C_{2h}
mp-975079	$MnZn_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1084847	$TbTe_3$	m'm'm	s	-	FM	D_{2h}
mp-1019103	SmSbPd	6/mm'm'	s	-	FM	D_{6h}
mp-1079069	$La_2Mn_2Se_2O_3$	4'/mm'm	d	-	AM	D_{4h}
mp-2468815	$LiCoS_2$	2/m.1	d	-	FM	C_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1098706	$CeSe_2$	6/mm'm'	s	-	FM	D_{6h}
mp-865707	$TiSnRh_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1052892	VI_3	m'm'm	s	-	FM	D_{2h}
mp-865093	$TiZnNi_2$	4/mm'm'	s	-	FM	D_{4h}
mp-19923	$GdAl_2$	4/mm'm'	s	-	FM	D_{4h}
mp-523	CrS	6/mm'm'	s	-	FM	D_{6h}
mp-1184529	$EuBr_3$	6/mm'm'	s	-	FM	D_{6h}
mp-983152	Li_3Re	6/mm'm'	s	-	FM	D_{6h}
mp-1185776	$Mg_2Ir_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-1097017	KFe	2/m.1	d	-	FM	C_{2h}
mp-1042162	$BaYCu_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-863746	$TbBr_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1186585	Pm_2AlIn	4/mm'm'	s	-	FM	D_{4h}
mp-1096113	$MgNbIr_2$	m'm'm	s	-	FM	D_{2h}
mp-1096211	$NbGaOs_2$	m'm'm	s	-	FM	D_{2h}
mp-1184062	Dy_2TlZn	4/mm'm'	s	-	FM	D_{4h}
mp-1218416	$SrCe_2(SF_2)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-865157	Dy_2ZnIn	4/mm'm'	s	-	FM	D_{4h}
mp-99716-	$MnAgO_2$	$\bar{3}$m'	s	-	FM	D_{3d}
mp-865011	Mn_2NbAl	4/mm'm'	s	-	FM	D_{4h}
mp-23048	$CsMnBr_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-973451	Nd_2BiO_2	4/mm'm'	s	-	FM	D_{4h}
mp-118404-	$Eu_2Ga_2O_5$	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-560338	CrF_3	$\overline{3}$m'	s	-	FM	D_{3d}
mp-614777	NiF_3	$\overline{3}$.1	s	-	FM	C_{3i}
mp-601195	CuO_2	m'm'm	s	-	FM	D_{2h}
mp-1093591	$HfNbRu_2$	m'm'm	s	-	FM	D_{2h}
mp-1247362	$CrCN_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1206917	$TiCu_2Sn$	4/mm'm'	s	-	FM	D_{4h}
mp-1226615	CeGePd	2/m.1	d	-	FM	C_{2h}
mp-1096738	$ZrTaRu_2$	m'm'm	s	-	FM	D_{2h}
mp-37331	$Sr_2Co_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-754229	$MnAgO_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-1205688	$Pr(PPt)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1205313	$SmAgAs_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1078227	BaCoSO	m'm'm	s	-	FM	D_{2h}
mp-786	MnSb	6/mm'm'	s	-	FM	D_{6h}
mp-1188065	$ZrCoH_3$	m'm'm	s	-	FM	D_{2h}
mp-2240714	$Sr_2Mg(CuO_2)_2$	m'm'm	s	-	FM	D_{2h}
mp-978807	Sm_2TlHg	4/mm'm'	s	-	FM	D_{4h}
mp-1206081	$TmSnPt_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-75516-	$NaMnO_2$	4/mm'm'	s	-	FM	D_{4h}
mp-19177	CrO_2	4/mm'm'	s	-	FM	D_{4h}
mp-118375-	$CrIn_3$	6/mm'm'	s	-	FM	D_{6h}
mp-151850-	Eu_2NbSnO_6	4/mm'm'	s	-	FM	D_{4h}
mp-867191	Sm_2TlCd	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-107834-	$Ce(AlPd)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1025537	$TmTe_3$	m'm'm	s	-	FM	D_{2h}
mp-570031	$Sr(CrAs)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-999307	OsN	4/mm'm'	s	-	FM	D_{4h}
mp-3576	$HfGaCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-867477	Eu_2SnHg	4/mm'm'	s	-	FM	D_{4h}
mp-1185511	$LuHfCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1226035	CoSbSe	2/m.1	d	-	FM	C_{2h}
mp-1014478	CrN_2	m'm'm	s	-	FM	D_{2h}
mp-979001	$SmAs_2Au$	4/mm'm'	s	-	FM	D_{4h}
mp-1078058	$Ti(CrS_2)_2$	2/m.1	d	-	FM	C_{2h}
mp-2275524	DyAsS	4/mm'm'	s	-	FM	D_{4h}
mp-985471	Ce_2ZnHg	4/mm'm'	s	-	FM	D_{4h}
mp-2939	$BaTbO_3$	4/mmm.1	g	-	AM	D_{4h}
mp-1214	VS	6/mm'm'	s	-	FM	D_{6h}
mp-1216629	TmGaAg	2/m.1	d	-	FM	C_{2h}
mp-7486	$BaNiS_2$	4/mm'm'	s	-	FM	D_{4h}
mp-48-	$ErPt_2$	4/mm'm'	s	-	FM	D_{4h}
mp-2338	$TbZn_2$	m'm'm	s	-	FM	D_{2h}
mp-1002569	$MgMnO_2$	mmm.1	d	-	AM	D_{2h}
mp-865025	$HfTaRe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1078833	$Tb(AlAu)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1184356	Eu_2ZnAg	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-862493	$LiEr_2Al$	4/mm'm'	s	-	FM	D_{4h}
mp-1183891	Eu_2AgAu	4/mm'm'	s	-	FM	D_{4h}
mp-1206355	CeCO	2/m.1	d	-	FM	C_{2h}
mp-1238894	$K(CrS_2)_2$	2/m.1	d	-	FM	C_{2h}
mp-23293	$TbCl_3$	m'm'm	s	-	FM	D_{2h}
mp-21422	YCoC	4/mm'm'	s	-	FM	D_{4h}
mp-865165	$HfScCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-7187	$TiAlNi_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1245524	$CaCrN_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1186303	$NdCd_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1179354	$TiFeO_3$	$\bar{1}$.1	s	-	FM	C_i
mp-1222131	Mn_2SnS_4	2/m.1	d	-	FM	C_{2h}
mp-1018668	CeTlCd	6/mm'm'	s	-	FM	D_{6h}
mp-20712	EuGe	m'm'm	s	-	FM	D_{2h}
mp-1185378	$LiGd_2Tl$	4/mm'm'	s	-	FM	D_{4h}
mp-1924816	CrF_4	4/mm'm'	s	-	FM	D_{4h}
mp-937703	$SrCeN_2$	2/m.1	d	-	FM	C_{2h}
mp-1188006	VIn_3	6/mm'm'	s	-	FM	D_{6h}
mp-118716-	Sr_3Tb	6/mm'm'	s	-	FM	D_{6h}
mp-1101397	$SmHO_2$	2/m.1	d	-	FM	C_{2h}
mp-1077423	TmAlZn	6/mm'm'	s	-	FM	D_{6h}
mp-1216784	$TiMoS_3$	2/m.1	d	-	FM	C_{2h}
mp-557523	VS_2	6/mm'm'	s	-	FM	D_{6h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-974662	Rb_3Pr	6/mm'm'	s	-	FM	D_{6h}
mp-2225359	$Mg(NiS_2)_2$	$\bar{3}$m'	s	-	FM	D_{3d}
mp-770635	$LiNiO_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1186096	Na_3Yb	6/mm'm'	s	-	FM	D_{6h}
mp-3216741	YbO_2	4/mm'm'	s	-	FM	D_{4h}
mp-977555	$MgNbRh_2$	4/mm'm'	s	-	FM	D_{4h}
mp-758601	MnF_3	2/m.1	d	-	FM	C_{2h}
mp-1184906	K_3Er	6/mm'm'	s	-	FM	D_{6h}
mp-862996	Pm_2CdIn	4/mm'm'	s	-	FM	D_{4h}
mp-1228875	CsNiP	m'm'm	s	-	AM	D_{2h}
mp-1096808	BaFeS	4/mm'm'	s	-	FM	D_{4h}
mp-1007666	HoAu	m'm'm	s	-	FM	D_{2h}
mp-1093872	Mn_2SiW	m'm'm	s	-	FM	D_{2h}
mp-976744	$LiEr_2Tl$	4/mm'm'	s	-	FM	D_{4h}
mp-1018662	CeSbPd	6/mm'm'	s	-	FM	D_{6h}
mp-1215431	$ZnCo_2$	$\bar{3}$m'	s	-	FM	D_{3d}
mp-1064456	CuO	mmm.1	d	-	AM	D_{2h}
mp-1096671	$LiCu_2Pd$	m'm'm	s	-	FM	D_{2h}
mp-7821	VSb	6'/m'mm'	g	-	AM	D_{6h}
mp-1018896	PrPbAu	6/mm'm'	s	-	FM	D_{6h}
mp-1184841	HoO_3	6/mm'm'	s	-	FM	D_{6h}
mp-14093	TbOF	$\bar{3}$m'	s	-	FM	D_{3d}
mp-2133-	EuAgAs	6/mm'm'	s	-	FM	D_{6h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-561428	NiF_3	$\bar{3}$m'	s	-	FM	D_{3d}
mp-1078336	$NaCoF_3$	m'm'm	s	-	AM	D_{2h}
mp-1114	VP	6/mm'm'	s	-	FM	D_{6h}
mp-1018706	GdS_2	4/mm'm'	s	-	FM	D_{4h}
mp-1095071	$Ce(GaPd)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-2222947	$Mg(CoO_2)_2$	$\bar{3}$m'	s	-	FM	D_{3d}
mp-552651	$La_2Fe_2Se_2O_3$	4'/mm'm	d	-	AM	D_{4h}
mp-1184888	$HoMg_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1206314	$TbSnPt_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-1206872	HoSeI	m'm'm	s	-	FM	D_{2h}
mp-16328	DyS_2	4/mm'm'	s	-	FM	D_{4h}
mp-971707	$Tm_2Mg_2O_5$	4/mm'm'	s	-	CFM	D_{4h}
mp-862979	Pm_2AgGe	4/mm'm'	s	-	FM	D_{4h}
mp-1226737	Ce_2SeS	4/mm'm'	s	-	CFM	D_{4h}
mp-863658	$PmCl_3$	6/mm'm'	s	-	FM	D_{6h}
mp-374-	$TiNi_2Sn$	4/mm'm'	s	-	FM	D_{4h}
mp-31205	Zr_3Fe	m'm'm	s	-	FM	D_{2h}
mp-1245843	$RuCN_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1187269	Tb_2TlHg	4/mm'm'	s	-	FM	D_{4h}
mp-571033	NiSe	4/mm'm'	s	-	FM	D_{4h}
mp-1183886	Eu_2MgCd	4/mm'm'	s	-	FM	D_{4h}
mp-1226137	Cu_2HgI_4	m'm'm	s	-	FM	D_{2h}
mp-76-	$FeSe_2$	m'm'm	s	-	FM	D_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1219082	SmAgSn	$\overline{3}$m’	s	-	FM	D_{3d}
mp-1186038	Na_3Dy	6/mm’m’	s	-	FM	D_{6h}
mp-1183883	Eu_2AgBi	4/mm’m’	s	-	FM	D_{4h}
mp-12574	Dy_2C	$\overline{3}$m’	s	-	FM	D_{3d}
mp-20178	$CeBO_3$	2/m.1	d	-	FM	C_{2h}
mp-20869	GdTiGe	4/mm’m’	s	-	FM	D_{4h}
mp-1186474	Pm_2MgCd	4/mm’m’	s	-	FM	D_{4h}
mp-1205353	$KMnF_3$	m’m’m	s	-	AM	D_{2h}
mp-120656-	$RbFeCl_3$	6’/m’mm’	g	-	AM	D_{6h}
mp-1504268	$LaCoO_3$	m’m’m	s	-	FM	D_{2h}
mp-20311	FeSe	4/mm’m’	s	-	FM	D_{4h}
mp-1226708	CeAgSn	$\overline{3}$m’	s	-	FM	D_{3d}
mp-1069841	V_2N_3	$\overline{3}$m’	s	-	FM	D_{3d}
mp-1187789	Y_3Er	6/mm’m’	s	-	FM	D_{6h}
mp-19156	$BaMnO_3$	6’/m’mm’	g	-	AM	D_{6h}
mp-1384488	$AlVO_3$	6/mm’m’	s	-	FM	D_{6h}
mp-999295	PrN	4/mm’m’	s	-	FM	D_{4h}
mp-11243	ErAu	m’m’m	s	-	FM	D_{2h}
mp-1101214	VOF_2	m’m’m	s	-	FM	D_{2h}
mp-568382	MnBi	6/mm’m’	s	-	FM	D_{6h}
mp-1988-	$FeTe_2$	m’m’m	s	-	FM	D_{2h}
mp-1187732	VHg_3	6/mm’m’	s	-	FM	D_{6h}
mp-32686	CoO_2	$\overline{3}$m’	s	-	CFM	D_{3d}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-611601	$CsNiF_3$	6/mm'm'	s	-	FM	D_{6h}
mp-118601-	$MnAu_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1185975	$MgTiCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-22498	$CrSb_2$	m'm'm	s	-	FM	D_{2h}
mp-754834	Er_2TeO_2	$\overline{3}$m'	s	-	FM	D_{3d}
mp-2764005	$KCrCl_3$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-866608	Gd_2TlCd	4/mm'm'	s	-	FM	D_{4h}
mp-8858	$RbCuF_3$	4'/mm'm	d	-	AM	D_{4h}
mp-3944	$ZrAlNi_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1093873	$ZnCo_2Sn$	m'm'm	s	-	FM	D_{2h}
mp-23265	$GdCl_3$	6/m.1	s	-	FM	C_{6h}
mp-864628	Pm_2SnPd	4/mm'm'	s	-	FM	D_{4h}
mp-866067	Nd_2CdIn	4/mm'm'	s	-	FM	D_{4h}
mp-122522-	EuGaAg	2/m.1	d	-	FM	C_{2h}
mp-1018674	DyAlZn	6/mm'm'	s	-	FM	D_{6h}
mp-1937-	LaCoPO	4/mm'm'	s	-	FM	D_{4h}
mp-1216537	V_2CN	4/mm'm'	s	-	CFM	D_{4h}
mp-23003	Ce_2BiO_2	4/mm'm'	s	-	FM	D_{4h}
mp-22714	LuCoC	4/mm'm'	s	-	FM	D_{4h}
mp-12464	$Co(PdSe)_2$	m'm'm	s	-	FM	D_{2h}
mp-1018708	GdTlZn	6/mm'm'	s	-	FM	D_{6h}
mp-1186013	$MnPd_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1084815	$Nd(SiPt)_2$	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-557805	$MnBiS_2Br$	2/m.1	d	-	CFM	C_{2h}
mp-1187361	$TbMg_3$	6/mm'm'	s	-	FM	D_{6h}
mp-541384	MnF_3	$\overline{3}$m'	s	-	FM	D_{3d}
mp-28117	VCl_3	$\overline{3}$.1	s	-	FM	C_{3i}
mp-2928	$FePSe_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-1232139	$HoMgS_3$	2/m.1	d	-	FM	C_{2h}
mp-1206158	$Pr_2(SiPt)_3$	4/mm'm'	s	-	FM	D_{4h}
mp-13207	CeZnPO	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1183893	Eu_2AgHg	4/mm'm'	s	-	FM	D_{4h}
mp-1217021	$TiAlNi_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1206174	ErSeBr	m'm'm	s	-	FM	D_{2h}
mp-753574	MnF_4	2'/m'	s	-	AM	C_{2h}
mp-27409	$RbNiBr_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-556045	$KCuF_3$	4'/mm'm	d	-	AM	D_{4h}
mp-5765	$Nd(BC)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1097476	$ZrScCo_2$	m'm'm	s	-	FM	D_{2h}
mp-1093606	$ScCu_2Hg$	m'm'm	s	-	FM	D_{2h}
mp-1399347	Zn_2CoN_2	2/m.1	d	-	FM	C_{2h}
mp-1213879	Ce_2ZnP_2O	4/mm'm'	s	-	FM	D_{4h}
mp-22234	$Eu_2C(NO)_2$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-755796	Li_2FeS_2	2/m.1	d	-	FM	C_{2h}
mp-1018675	DyS_2	4/mm'm'	s	-	FM	D_{4h}
mp-1185125	K_3Tb	6/mm'm'	s	-	FM	D_{6h}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-972199	$CsTbS_2$	6/mm'm'	s	-	FM	D_{6h}
mp-19417	$TiFeO_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-21344	$CuGeO_3$	m'm'm	s	-	AM	D_{2h}
mp-1187587	Tm_2ZnAu	4/mm'm'	s	-	FM	D_{4h}
mp-754307	$BaNdO_3$	$\overline{3}$m.1	g	-	AM	D_{3d}
mp-1093685	$HfTaFe_2$	m'm'm	s	-	FM	D_{2h}
mp-1097461	$ZrAlFe_2$	m'm'm	s	-	FM	D_{2h}
mp-140701-	Ca_2VN_2	2/m.1	d	-	FM	C_{2h}
mp-101894-	$PrSe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-867267	$LiHo_2Pt$	4/mm'm'	s	-	FM	D_{4h}
mp-1187876	YRh_2Pb	4/mm'm'	s	-	FM	D_{4h}
mp-1184247	Eu_2ZnHg	4/mm'm'	s	-	FM	D_{4h}
mp-1072856	$PrZn_2$	m'm'm	s	-	FM	D_{2h}
mp-1079538	$V_2H_2O_5$	2/m.1	d	-	FM	C_{2h}
mp-27707	$RbCoCl_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-1184007	Ce_2MgIn	4/mm'm'	s	-	FM	D_{4h}
mp-1095957	$MgOs_2W$	m'm'm	s	-	FM	D_{2h}
mp-560547	$KCrF_3$	4/m.1	s	-	FM	C_{4h}
mp-976082	Mn_2GaW	4/mm'm'	s	-	FM	D_{4h}
mp-1185362	$LiGd_2In$	4/mm'm'	s	-	FM	D_{4h}
mp-1186242	Nd_2HgPb	4/mm'm'	s	-	FM	D_{4h}
mp-571554	$PrAlSi_2$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-997012	$CuPdO_2$	m'm'm	s	-	AM	D_{2h}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1068789	$K(FeTe)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1185394	$LiGd_2Ga$	4/mm'm'	s	-	FM	D_{4h}
mp-1245519	$HfCoN_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1018731	HoSI	m'm'm	s	-	FM	D_{2h}
mp-753295	MnF_3	4/mm'm'	s	-	FM	D_{4h}
mp-109509-	$BaMn_2O_5$	m'm'm	s	-	FM	D_{2h}
mp-977589	Tm_2TlCd	4/mm'm'	s	-	FM	D_{4h}
mp-1205947	Eu_2TaAlO_6	4/mm'm'	s	-	FM	D_{4h}
mp-752619	$LiVF_3$	2/m.1	d	-	FM	C_{2h}
mp-752939	FeOF	m'm'm	s	-	CFM	D_{2h}
mp-151798-	Eu_2NbBiO_6	4/mm'm'	s	-	FM	D_{4h}
mp-839-	$LiYbO_2$	4/mm'm'	s	-	FM	D_{4h}
mp-276025-	$YbBO_3$	m'm'm	s	-	FM	D_{2h}
mp-122182-	$Mn_2InSnPd_4$	$\bar{3}$m'	s	-	FM	D_{3d}
mp-1078634	$LaFeO_3$	$\bar{3}$m.1	g	-	AM	D_{3d}
mp-108034-	$CeSe_2$	m'm'm	s	-	FM	D_{2h}
mp-1187826	VSn_3	6/mm'm'	s	-	FM	D_{6h}
mp-1210552	Mo_2S_4N	4/m.1	s	-	FM	C_{4h}
mp-1066497	FeSe	m'm'm	s	-	AM	D_{2h}
mp-1187588	Tm_2AgAu	4/mm'm'	s	-	FM	D_{4h}
mp-1216529	Tm_2SbTe	$\bar{3}$m'	s	-	FM	D_{3d}
mp-9945	$CoTe_2$	m'm'm	s	-	FM	D_{2h}
mp-13497	Er_2Mg	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1397055	CoF_4	4/mm'm'	s	-	FM	D_{4h}
mp-631619	$KCaNi_2$	4/mm'm'	s	-	FM	D_{4h}
mp-770662	$CdCoO_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-1187886	$Yb_2Al_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-1183359	Ba_3Er	6/mm'm'	s	-	FM	D_{6h}
mp-553308	$CsNdO_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-1185242	$LiTm_2Ga$	4/mm'm'	s	-	FM	D_{4h}
mp-1080619	$TmZnSn_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1245611	$Sr(FeN)_2$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1097072	$HfMgCo_2$	m'm'm	s	-	FM	D_{2h}
mp-1208441	Ta_4Cr	4/mm'm'	s	-	FM	D_{4h}
mp-5221	$HfAlCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-22475	EuSbAu	6'/m'mm'	g	-	AM	D_{6h}
mp-1096254	$MgCo_2Ge$	m'm'm	s	-	FM	D_{2h}
mp-981699	SmZnIn	6'/m'mm'	g	-	AM	D_{6h}
mp-2933735	CuO_2	m'm'm	s	-	FM	D_{2h}
mp-21467	$TiCo_2Sn$	4/mm'm'	s	-	FM	D_{4h}
mp-1079139	K_3Co	2'/m'	s	-	AM	C_{2h}
mp-1187798	Y_3Ho	6/mm'm'	s	-	FM	D_{6h}
mp-19245	$BaLaMn_2O_6$	4/mm'm'	s	-	FM	D_{4h}
mp-75411-	$SmAgO_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1225299	Eu_2SeS	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1206013	$HoGe_2Pd$	m'm'm	s	-	FM	D_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-755128	$SmTlO_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-21117	$FeGe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-755666	Yb_2TeO_2	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1095786	Mn_2GeW	m'm'm	s	-	FM	D_{2h}
mp-754318	$MnZnO_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-19918	GdGe	m'm'm	s	-	FM	D_{2h}
mp-2217121	MgV_2CdO_6	2/m.1	d	-	FM	C_{2h}
mp-754655	Eu_2SeO_2	$\overline{3}$m'	s	-	FM	D_{3d}
mp-582618	$Eu_2C(NCl)_2$	2/m.1	d	-	FM	C_{2h}
mp-2227518	$BaMg(FeS_2)_2$	4/m.1	s	-	FM	C_{4h}
mp-1206103	$CsTmBr_3$	4/mmm.1	g	-	AM	D_{4h}
mp-107793-	$Ta(MnB_2)_2$	m'm'm	s	-	FM	D_{2h}
mp-864633	Nd_2SnHg	4/mm'm'	s	-	FM	D_{4h}
mp-1078659	$CaRhO_3$	m'm'm	s	-	FM	D_{2h}
mp-1084804	$Nd(BC)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-569668	VSe	6/mm'm'	s	-	FM	D_{6h}
mp-1207779	Y_4Ir	4/mm'm'	s	-	FM	D_{4h}
mp-10971	$LiErO_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1096404	$ZrScIr_2$	m'm'm	s	-	FM	D_{2h}
mp-122485-	FeSbTe	2/m.1	d	-	CFM	C_{2h}
mp-1178579	$AlCuO_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-3346	HoZrSb	4/mm'm'	s	-	FM	D_{4h}
mp-1207778	Y_4Rh	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-567833	EuSn	m'm'm	s	-	FM	D_{2h}
mp-1094684	$CeMg_2$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1025494	$EuClO_2$	2/m.1	d	-	FM	C_{2h}
mp-1184294	$FeAg_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1187276	Tb_2InHg	4/mm'm'	s	-	FM	D_{4h}
mp-1096357	$TaMn_2Ga$	m'm'm	s	-	FM	D_{2h}
mp-1187861	$YLuIr_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1517132	Eu_2ZrSnO_6	4/mm'm'	s	-	FM	D_{4h}
mp-569753	$TlCoCl_3$	6/mm'm'	s	-	FM	D_{6h}
mp-24416	MnH	6/mm'm'	s	-	FM	D_{6h}
mp-1542758	$SrMoO_3$	2/m.1	d	-	FM	C_{2h}
mp-122037-	$NbCo_2Sn$	4/mm'm'	s	-	FM	D_{4h}
mp-1182811	$BaTbO_3$	$\overline{1}$.1	s	-	CFM	C_i
mp-1205634	$CaEu_2WO_6$	4/mm'm'	s	-	FM	D_{4h}
mp-1185227	Li_3Eu	6/mm'm'	s	-	FM	D_{6h}
mp-1210078	Nb_4Cr	4/mm'm'	s	-	FM	D_{4h}
mp-1183385	Ba_3Dy	6/mm'm'	s	-	FM	D_{6h}
mp-109762-	$TaMn_2Si$	m'm'm	s	-	FM	D_{2h}
mp-753799	$CsTmO_2$	6/mm'm'	s	-	FM	D_{6h}
mp-122537-	DyCdIn	$\overline{3}$m'	s	-	FM	D_{3d}
mp-107136-	FeSeN	4/mm'm'	s	-	FM	D_{4h}
mp-571343	$Cs(CoSe)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-754001	VOF	m'm'm	s	-	FM	D_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1206897	Pr_2Se_2F	4/mm'm'	s	-	FM	D_{4h}
mp-35388	$LiSmSe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1094963	CeMg	m'm'm	s	-	FM	D_{2h}
mp-1095832	$TiBeNi_2$	m'm'm	s	-	FM	D_{2h}
mp-1246454	Cr_2SN_2	$\bar{3}$m'	s	-	FM	D_{3d}
mp-2225295	$Mg(CuO)_2$	2/m.1	d	-	FM	C_{2h}
mp-22656	$GdInPt_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1185794	Mg_3Re	6/mm'm'	s	-	FM	D_{6h}
mp-118443-	$Eu_2Ti_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-11417	TbGa	m'm'm	s	-	FM	D_{2h}
mp-1183261	Ag_3Ru	6/mm'm'	s	-	FM	D_{6h}
mp-1184039	Eu_2PdAu	4/mm'm'	s	-	FM	D_{4h}
mp-1226078	CoBiTe	2/m.1	d	-	FM	C_{2h}
mp-18728	$NaFe_2O_3$	$\bar{3}$m'	s	-	FM	D_{3d}
mp-1218386	$SrCaCr_2O_6$	4'/mm'm	d	-	AM	D_{4h}
mp-2776-	$PrSi_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1025421	SmO_3	6/m.1	s	-	FM	C_{6h}
mp-5919	SmTiGe	4/mm'm'	s	-	FM	D_{4h}
mp-1227844	$BaLaMn_2O_6$	4/mm'm'	s	-	FM	D_{4h}
mp-1283849	$SrCoO_3$	4/mm'm'	s	-	FM	D_{4h}
mp-864662	$HoCl_3$	6/mm'm'	s	-	FM	D_{6h}
mp-975646	PrZnSbO	4/mm'm'	s	-	FM	D_{4h}
mp-1183765	$CrBr_2$	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-10931	HoSF	4/mm'm'	s	-	FM	D_{4h}
mp-1006323	$CeLu_3$	6/mm'm'	s	-	FM	D_{6h}
mp-974365	$RuAu_3$	6/mm'm'	s	-	FM	D_{6h}
mp-3768-	$LiGdSe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-768432	$MnTlO_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-1237949	$PrMgS_3$	2/m.1	d	-	FM	C_{2h}
mp-1186434	Pm_2CdGa	4/mm'm'	s	-	FM	D_{4h}
mp-1078278	CrB_4	mmm.1	d	-	AM	D_{2h}
mp-1232259	$CeMgSe_3$	2/m.1	d	-	FM	C_{2h}
mp-1184638	$HoAl_3$	6/mm'm'	s	-	FM	D_{6h}
mp-862842	$LiPm_2Pt$	4/mm'm'	s	-	FM	D_{4h}
mp-1025173	$Ti(MoS_2)_2$	2/m.1	d	-	FM	C_{2h}
mp-1079758	$TbHO_2$	2/m.1	d	-	FM	C_{2h}
mp-1183882	Eu_2HgSb	4/mm'm'	s	-	FM	D_{4h}
mp-1519983	Eu_2YNbO_6	4/mm'm'	s	-	FM	D_{4h}
mp-1226732	Ce_2TeSe	4/mm'm'	s	-	FM	D_{4h}
mp-1225471	DyAgPb	$\overline{3}$m'	s	-	FM	D_{3d}
mp-550944	$Sr_2Fe_2Se_2OF_2$	4'/mm'm	d	-	AM	D_{4h}
mp-20714	$FeSb_2$	mmm.1	d	-	AM	D_{2h}
mp-977264	Pm_2Mg	4/mm'm'	s	-	FM	D_{4h}
mp-1186233	$NbSnRu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1079633	$Fe(BrN)_2$	m'm'm	s	-	FM	D_{2h}
mp-1516804	Eu_2NbInO_6	4/mm'm'	s	-	FM	D_{4h}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-22503	$ZrCo_2Sn$	4/mm'm'	s	-	FM	D_{4h}
mp-2224448	$Mg(NiO_2)_2$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1522	FeS_2	m'm'm	s	-	FM	D_{2h}
mp-1247335	Mn_2SeN_2	$\overline{3}$m'	s	-	FM	D_{3d}
mp-825	RuO_2	4'/mm'm	d	-	AM	D_{4h}
mp-1183879	Eu_2HgBi	4/mm'm'	s	-	FM	D_{4h}
mp-662	NiSe	6'/m'mm'	g	-	AM	D_{6h}
mp-978088	$PrLu_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1079749	$Tm(BC)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-977388	HoMgSn	4/mm'm'	s	-	FM	D_{4h}
mp-1097366	$MgScIr_2$	m'm'm	s	-	FM	D_{2h}
mp-1077329	GdPPd	6/mm'm'	s	-	FM	D_{6h}
mp-1183716	Ce_2TlAg	4/mm'm'	s	-	FM	D_{4h}
mp-1206249	Pr_2CdAs_2O	4/mm'm'	s	-	FM	D_{4h}
mp-1097204	$AlGaIr_2$	m'm'm	s	-	FM	D_{2h}
mp-12061	$Lu(FeB)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1087507	$Ce(BC)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-13064	Dy_2O_3	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1019315	TbSbPd	6'/m'mm'	g	-	AM	D_{6h}
mp-1095758	$BeAsRu_2$	m'm'm	s	-	FM	D_{2h}
mp-24131	GdH_3	6/mm'm'	s	-	FM	D_{6h}
mp-3408	$CeAlO_3$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-22977	$CsVCl_3$	6'/m'mm'	g	-	AM	D_{6h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1184172	$ErAg_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1216672	$TiZnNi_2$	4/mm'm'	s	-	FM	D_{4h}
mp-12466	$Fe(PdSe)_2$	m'm'm	s	-	FM	D_{2h}
mp-5149	$NbAlCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-3652-	$CsCrI_2$	m'm'm	s	-	AM	D_{2h}
mp-752938	$LiMnF_3$	$\overline{3}$m.1	g	-	AM	D_{3d}
mp-541073	SmSI	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1211279	$La_2Fe_2S_2O_3$	4'/mm'm	d	-	AM	D_{4h}
mp-1237966	$SmMgSe_3$	2/m.1	d	-	FM	C_{2h}
mp-1207943	Tm_2I_2O	4/mm'm'	s	-	FM	D_{4h}
mp-1096756	$AlSiNi_2$	m'm'm	s	-	FM	D_{2h}
mp-5364	$YbBO_3$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-9902	Sc_2CoSi_2	2/m.1	d	-	FM	C_{2h}
mp-759499	$LiMn_2F_6$	2/m.1	d	-	FM	C_{2h}
mp-1078253	MnB_4	mmm.1	d	-	AM	D_{2h}
mp-1225355	EuZnPb	2/m.1	d	-	FM	C_{2h}
mp-120616-	YbO_3	6/mm'm'	s	-	FM	D_{6h}
mp-1185218	$LiCe_2Pb$	4/mm'm'	s	-	FM	D_{4h}
mp-865545	Pm_2SiAu	4/mm'm'	s	-	FM	D_{4h}
mp-570099	$RbVBr_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-1184573	$HfTaRu_2$	4/mm'm'	s	-	FM	D_{4h}
mp-23378	EuAgBi	6/mm'm'	s	-	FM	D_{6h}
mp-759163	VOF_2	2'/m'	s	-	AM	C_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1018804	MnS_2	mmm.1	d	-	AM	D_{2h}
mp-759116	$YbAlO_3$	6/mm'm'	s	-	FM	D_{6h}
mp-4796	GdScGe	4/mm'm'	s	-	FM	D_{4h}
mp-1006351	CeY_3	6/mm'm'	s	-	FM	D_{6h}
mp-861959	$Eu_2Al_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-983555	Er_2PdAu	4/mm'm'	s	-	FM	D_{4h}
mp-676553	$RbCrI_3$	2/m.1	d	-	CFM	C_{2h}
mp-109624-	$HfMgNi_2$	m'm'm	s	-	FM	D_{2h}
mp-1178903	VF_3	2/m.1	d	-	FM	C_{2h}
mp-754055	$CsErO_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-567572	GdCBr	2/m.1	d	-	FM	C_{2h}
mp-1018682	DyZnGa	6/mm'm'	s	-	FM	D_{6h}
mp-1187464	$TiAlIr_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1245779	$HfFeN_2$	6/mm'm'	s	-	FM	D_{6h}
mp-1205797	$CeLuS_3$	m'm'm	s	-	FM	D_{2h}
mp-1219172	Sm_2SbS	4/mm'm'	s	-	FM	D_{4h}
mp-1213134	$Cu(HCl)_2$	m'm'm	s	-	FM	D_{2h}
mp-1516191	Eu_2NbZnO_6	4/mm'm'	s	-	FM	D_{4h}
mp-20946	$BaYFe_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-1097078	$TaZnNi_2$	m'm'm	s	-	FM	D_{2h}
mp-1206966	Tm_2Te_3	4/mm'm'	s	-	FM	D_{4h}
mp-1179013	TiNi	2/m.1	d	-	FM	C_{2h}
mp-1186689	Pr_2MgAl	4/mm'm'	s	-	FM	D_{4h}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-35717	$LiDySe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1517095	$LaEu_2NbO_6$	4/mm'm'	s	-	FM	D_{4h}
mp-32493	$V(HO)_2$	m'm'm	s	-	FM	D_{2h}
mp-1272732	$NaNiO_2$	2/m.1	d	-	FM	C_{2h}
mp-1184322	Eu_2TlZn	4/mm'm'	s	-	FM	D_{4h}
mp-1187599	Tm_2ZnPd	4/mm'm'	s	-	FM	D_{4h}
mp-554799	VF_4	2'/m'	s	-	AM	C_{2h}
mp-1207883	Y_4Ni	4/mm'm'	s	-	FM	D_{4h}
mp-569526	$RbCuCl_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1077034	NdMgSn	4/mm'm'	s	-	FM	D_{4h}
mp-1226689	CeSbPt	6/mm'm'	s	-	FM	D_{6h}
mp-1077485	HoSnGe	m'm'm	s	-	FM	D_{2h}
mp-1218297	$SrFeO_2F$	2'/m'	s	-	AM	C_{2h}
mp-1147719	$BaCuS_2$	m'm'm	s	-	FM	D_{2h}
mp-865156	Dy_2ZnGa	4/mm'm'	s	-	FM	D_{4h}
mp-1078898	$Gd(BC)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1956	$TmGa_2$	m'm'm	s	-	FM	D_{2h}
mp-1524385	$CeAg_2$	m'm'm	s	-	FM	D_{2h}
mp-1183887	Eu_2BiAu	4/mm'm'	s	-	FM	D_{4h}
mp-21258	$EuIn_2Pd$	m'm'm	s	-	FM	D_{2h}
mp-1181783	FeF_3	2'/m'	s	-	AM	C_{2h}
mp-1221865	$Mn_2InSbPd_4$	$\bar{3}$m'	s	-	FM	D_{3d}
mp-1187166	Sr_3Sm	6/mm'm'	s	-	FM	D_{6h}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1091364	$LiDySn_2$	m'm'm	s	-	FM	D_{2h}
mp-1186697	Pr_2TlIn	4/mm'm'	s	-	FM	D_{4h}
mp-1188031	$ZrScCo_2$	4/mm'm'	s	-	FM	D_{4h}
mp-118416-	$Dy_2Ge_2O_5$	4/mm'm'	s	-	FM	D_{4h}
mp-21273	FeTe	4/mm'm'	s	-	FM	D_{4h}
mp-867239	Ce_2AgPb	4/mm'm'	s	-	FM	D_{4h}
mp-1078537	$PrLuS_3$	m'm'm	s	-	FM	D_{2h}
mp-1097514	$MgAlNi_2$	m'm'm	s	-	FM	D_{2h}
mp-1185215	Li_3Fe	6/mm'm'	s	-	FM	D_{6h}
mp-20353	GdGa	m'm'm	s	-	FM	D_{2h}
mp-97565-	Pr_2ZnHg	4/mm'm'	s	-	FM	D_{4h}
mp-1206483	EuO_3	6/m.1	s	-	FM	C_{6h}
mp-1077244	GdZnGa	6/mm'm'	s	-	FM	D_{6h}
mp-1235112	$LiDy_2(OF)_2$	$\bar{3}$m'	s	-	FM	D_{3d}
mp-121702-	$TiAlFe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1187686	$TmLu_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1079352	$SrRuO_3$	m'm'm	s	-	AM	D_{2h}
mp-1084754	LaAsRuO	4/mm'm'	s	-	FM	D_{4h}
mp-1078795	$TmGe_3$	m'm'm	s	-	FM	D_{2h}
mp-76030-	$Li_3Co_2O_2F_3$	4/mm'm'	s	-	FM	D_{4h}
mp-121342-	$Eu_2(SbPd)_3$	4/mm'm'	s	-	FM	D_{4h}
mp-118459-	Ho_2MgTl	4/mm'm'	s	-	FM	D_{4h}
mp-862629	$ScRh_2Pb$	4/mm'm'	s	-	FM	D_{4h}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-997031	$MgCuO_2$	m'm'm	s	-	AM	D_{2h}
mp-118438-	Gd_2ZnAg	4/mm'm'	s	-	FM	D_{4h}
mp-568748	Fe_2B	4/mm'm'	s	-	FM	D_{4h}
mp-1070735	$K(FeSe)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-861955	$LiPm_2Ge$	4/mm'm'	s	-	FM	D_{4h}
mp-1183885	Eu_2CdGe	4/mm'm'	s	-	FM	D_{4h}
mp-1183425	Be_3Co	6/mm'm'	s	-	FM	D_{6h}
mp-1101269	$TmGaO_3$	6'/m'mm'	g	-	AM	D_{6h}
mp-989649	$CaMoN_3$	2/m.1	d	-	FM	C_{2h}
mp-20807	SrFeAsF	4/mm'm'	s	-	FM	D_{4h}
mp-568342	TbCl	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1080757	Ta_2CrB_2	4/mm'm'	s	-	FM	D_{4h}
mp-1183941	Ce_2Mg	4/mm'm'	s	-	FM	D_{4h}
mp-1208887	Sm_2Cl_2O	4/mm'm'	s	-	FM	D_{4h}
mp-1014366	CrN_2	4/mm'm'	s	-	FM	D_{4h}
mp-1206949	Dy_2Br_2O	4/mm'm'	s	-	FM	D_{4h}
mp-727331	$CoHO_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-758652	$ZnCoO_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-975821	K_3Ir	6/mm'm'	s	-	FM	D_{6h}
mp-97192-	$TmMg_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1186605	$PmLu_3$	6/mm'm'	s	-	FM	D_{6h}
mp-120720-	$NdAlSi_2$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1206828	Eu_2YTaO_6	4/mm'm'	s	-	FM	D_{4h}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-22317	$EuGa_2$	m'm'm	s	-	FM	D_{2h}
mp-759343	MnF_4	m'm'm	s	-	FM	D_{2h}
mp-867349	Dy_2MgTl	4/mm'm'	s	-	FM	D_{4h}
mp-1096601	$LiPRu_2$	m'm'm	s	-	FM	D_{2h}
mp-1181984	$CoCO_3$	2'/m'	s	-	AM	C_{2h}
mp-3216731	YbS_2	m'm'm	s	-	FM	D_{2h}
mp-862981	Er_2CdIn	4/mm'm'	s	-	FM	D_{4h}
mp-11404	PrGa	m'm'm	s	-	FM	D_{2h}
mp-109476-	$CeMg_3$	6/mm'm'	s	-	FM	D_{6h}
mp-569895	$EuCl_3$	6/m.1	s	-	FM	C_{6h}
mp-1096048	$LiOs_2W$	m'm'm	s	-	FM	D_{2h}
mp-75741-	VF_4	2/m.1	d	-	FM	C_{2h}
mp-4243	$CaIrO_3$	m'm'm	s	-	FM	D_{2h}
mp-1226772	Ce_2SbTe	4/mm'm'	s	-	CFM	D_{4h}
mp-107904-	$CsDyBr_3$	4/mmm.1	g	-	AM	D_{4h}
mp-1025084	HoBC	m'm'm	s	-	FM	D_{2h}
mp-1025067	$ReGe_2$	2/m.1	d	-	FM	C_{2h}
mp-1978272	FeSe	m'm'm	s	-	FM	D_{2h}
mp-19794	EuSnP	4/mm'm'	s	-	FM	D_{4h}
mp-1225059	$FeCl_4$	m'm'm	s	-	FM	D_{2h}
mp-863682	$PmGa_3$	6/mm'm'	s	-	FM	D_{6h}
mp-35899	$LiMoO_2$	mmm.1	d	-	AM	D_{2h}
mp-861505	Pr_2MgTl	4/mm'm'	s	-	FM	D_{4h}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-22707	EuAgSb	6/mm'm'	s	-	FM	D_{6h}
mp-975838	K_3Nd	6/mm'm'	s	-	FM	D_{6h}
mp-120662-	Pr_2CdSb_3	4/mm'm'	s	-	FM	D_{4h}
mp-19299	$CrBO_3$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-2225307	$Mg(MnS_2)_2$	2/m.1	d	-	FM	C_{2h}
mp-1096711	$YCdCu_2$	m'm'm	s	-	FM	D_{2h}
mp-582011	$CeCl_3$	6/m.1	s	-	FM	C_{6h}
mp-1100765	Pm_2GaAg	4/mm'm'	s	-	FM	D_{4h}
mp-33031	VS	6'/m'mm'	g	-	AM	D_{6h}
mp-1224692	Fe_2Pt	$\overline{3}$m'	s	-	FM	D_{3d}
mp-123214-	$HoMgSe_3$	2/m.1	d	-	FM	C_{2h}
mp-866005	Dy_2TlCd	4/mm'm'	s	-	FM	D_{4h}
mp-1183894	Eu_2MgSn	4/mm'm'	s	-	FM	D_{4h}
mp-570303	$KTmI_3$	m'm'm	s	-	AM	D_{2h}
mp-27176	$NaMnCl_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-1206186	$Dy_2(SiPt)_3$	4/mm'm'	s	-	FM	D_{4h}
mp-977439	Ce_2ZnPb	4/mm'm'	s	-	FM	D_{4h}
mp-1181557	$CuGeO_3$	m'm'm	s	-	FM	D_{2h}
mp-4743	ErTiGe	4/mm'm'	s	-	FM	D_{4h}
mp-140250-	YVO_3	6/mm'm'	s	-	FM	D_{6h}
mp-1545417	CeI_3	2/m.1	d	-	FM	C_{2h}
mp-769253	Dy_2SeO_2	4/mm'm'	s	-	FM	D_{4h}
mp-6909	$BaPrO_3$	m'm'm	s	-	FM	D_{2h}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-2389	$NdMg_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1207484	Zr_4Fe	4/mm'm'	s	-	FM	D_{4h}
mp-120605-	$EuSiPt_2$	m'm'm	s	-	FM	D_{2h}
mp-8949	NdAsPd	6'/m'mm'	g	-	AM	D_{6h}
mp-2273693	TbAsS	4/mm'm'	s	-	FM	D_{4h}
mp-1422	$GdPt_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1097284	$AgSnRh_2$	m'm'm	s	-	FM	D_{2h}
mp-20512	FeSn	6'/m'mm'	g	-	AM	D_{6h}
mp-22463	$TiInNi_2$	4/mm'm'	s	-	FM	D_{4h}
mp-151719-	Eu_2YSbO_6	4/mm'm'	s	-	FM	D_{4h}
mp-20394	EuPb	4/mm'm'	s	-	FM	D_{4h}
mp-1246479	$CrBN_2$	6/mm'm'	s	-	FM	D_{6h}
mp-28702	$Gd_2B_3C_2$	m'm'm	s	-	FM	D_{2h}
mp-865656	$TiMn_2W$	4/mm'm'	s	-	FM	D_{4h}
mp-755216	$TmBiO_3$	$\overline{3}$.1	s	-	FM	C_{3i}
mp-979176	Tm_2AgHg	4/mm'm'	s	-	FM	D_{4h}
mp-1095912	$MgNbOs_2$	m'm'm	s	-	FM	D_{2h}
mp-1077033	$YbSe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1039357	$CeMg_2$	m'm'm	s	-	FM	D_{2h}
mp-102507-	YCo_2B_2C	4/mm'm'	s	-	FM	D_{4h}
mp-1096759	$TiMo_2W$	m'm'm	s	-	FM	D_{2h}
mp-1183371	Ba_3Pm	6/mm'm'	s	-	FM	D_{6h}
mp-1387574	Mg_2CrN_2	2/m.1	d	-	FM	C_{2h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1208384	Ta_4V	4/mm'm'	s	-	FM	D_{4h}
mp-1072619	$PrAg_2$	m'm'm	s	-	FM	D_{2h}
mp-1186174	$NaPm_2Sn$	4/mm'm'	s	-	FM	D_{4h}
mp-9037	$CsPrS_2$	6'/m'mm'	g	-	AM	D_{6h}
mp-1221819	$Mn_2SnSbPd_4$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1220759	$NaLa(RuO_3)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1235849	$LiPr_2Zn_2(PO)_2$	$\overline{3}$m'	s	-	FM	D_{3d}
mp-1077403	SrCoO	6'/m'mm'	g	-	AM	D_{6h}
mp-556365	$KCrF_3$	2/m.1	d	-	FM	C_{2h}
mp-22878	MnBi	6/mm'm'	s	-	FM	D_{6h}
mp-1387606	CrO_3	6/mm'm'	s	-	FM	D_{6h}
mp-109364-	$MgGaCo_2$	m'm'm	s	-	FM	D_{2h}
mp-1095998	$BeFe_2P$	m'm'm	s	-	FM	D_{2h}
mp-1187601	Tm_2TlZn	4/mm'm'	s	-	FM	D_{4h}
mp-755189	FeO	6'/m'mm'	g	-	AM	D_{6h}
mp-865572	$CeAu_3$	6/mm'm'	s	-	FM	D_{6h}
mp-1402363	MoN_2	2/m.1	d	-	FM	C_{2h}
mp-27363	$BaVSe_3$	6/mm'm'	s	-	FM	D_{6h}
mp-4579	LaSiRu	4/mm'm'	s	-	FM	D_{4h}
mp-1898	$CeSi_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1232178	EuS_2	4/mm'm'	s	-	FM	D_{4h}
mp-1025079	EuAsPd	6/mm'm'	s	-	FM	D_{6h}
mp-1216855	$TiCu_2Sn$	4/mm'm'	s	-	FM	D_{4h}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1218224	$SrLa(CoO_3)_2$	4/mm'm'	s	-	FM	D_{4h}
mp-754922	LiV_2O_4	2/m.1	d	-	CFM	C_{2h}
mp-1184372	Eu_2SbAu	4/mm'm'	s	-	FM	D_{4h}
mp-971634	$NaNiO_2$	6/mm'm'	s	-	FM	D_{6h}
mp-863316	FeO_3	2/m.1	d	-	FM	C_{2h}
mp-22797	$EuPt_2$	4/mm'm'	s	-	FM	D_{4h}
mp-2583	TiRh	4/mm'm'	s	-	FM	D_{4h}
mp-3762-	$LiMnO_2$	4/mm'm'	s	-	FM	D_{4h}
mp-758501	$LiNiF_3$	$\overline{3}$.1	s	-	CFM	C_{3i}
mp-1186432	Pm_2AlCd	4/mm'm'	s	-	FM	D_{4h}
mp-1065394	MoN	6/mm'm'	s	-	FM	D_{6h}
mp-1205909	Li_2VPb_2	4/mmm.1	g	-	AM	D_{4h}
mp-865443	$LuRh_2Pb$	4/mm'm'	s	-	FM	D_{4h}
mp-1187685	$TmBi_3$	6/mm'm'	s	-	FM	D_{6h}
mp-117972-	RhF_3	2/m.1	d	-	FM	C_{2h}
mp-1018817	$NdSe_2$	4/mm'm'	s	-	FM	D_{4h}
mp-1095828	$ZrGaIr_2$	m'm'm	s	-	FM	D_{2h}

TABLE S10: List of materials with NCS odd-wave axial phonon. Wave and Wave (no Tbp) indicates the wave type determined with and without considering time-reversal-breaking perturbation. Magtype indicates the magnetic ordering type. FM, AM, and CFM stand for ferromagnetic, antiferromagnetic, and compensated ferrimagnetic orderings, respectively. PG indicates the point group of the magnetic space group.

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1207203	$MnSiP_2$	$\overline{4}2$m.1	f	f	AM	D_{2d}
mp-1222709	$Li_3(CuO_2)_2$	m.1	p	p	FM	C_s
mp-2217459	$Na_2Mg(CuO_2)_2$	m.1	p	p	CFM	C_s
mp-2217165	$MgCr_2O_6$	m.1	p	p	FM	C_s
mp-753948	$PrTiO_3$	3m.1	f	f	AFM	C_{3v}
mp-1219679	$PrBrCl_2$	m.1	p	p	FM	C_s
mp-2224249	MgV_2CdO_6	m.1	p	p	FM	C_s
mp-676036	$Ba(FeS_2)_2$	4'22'	p	p	AM	D_4
mp-754513	$ZrMnO_3$	3m.1	f	f	AM	C_{3v}
mp-2227351	$MgCu_2(O_2F)_2$	m.1	p	p	FM	C_s
mp-1096879	$BaHo_2O_4$	m.1	p	p	FM	C_s
mp-1080332	$CeSe_2$	$\overline{4}2$m.1	f	f	AM	D_{2d}
mp-1235538	$LiPr_2(BrO_2)_2$	m.1	p	p	FM	C_s
mp-2228229	$Mg(CuO)_2$	2.1	p	p	FM	C_2
mp-1245486	$AlCoN_2$	$\overline{4}2$m.1	f	f	AM	D_{2d}
mp-1383615	FeS_2	$\overline{4}2$m.1	f	f	AM	D_{2d}
mp-1232380	$MnCdTe_2$	$\overline{4}2$m.1	f	f	AM	D_{2d}
mp-1216561	Tm_2Ge_3	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-2217485	$Rb_2Mg(FeO_2)_2$	m.1	p	p	CFM	C_s
mp-2226406	$MgCu_2(O_2F)_2$	m.1	p	p	FM	C_s

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-2223127	$MgMn_2(OF)_2$	m.1	p	p	CFM	C_s
mp-2225390	$MgCr_2O_4$	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-691106	$MnSnO_3$	3m.1	f	f	AM	C_{3v}
mp-2240424	$K_2Mg(CoO_2)_2$	m.1	p	p	FM	C_s
mp-2225287	$MgFe_2(OF)_2$	m.1	p	p	CFM	C_s
mp-23501	$FeBiO_3$	3m.1	f	f	AM	C_{3v}
mp-1078668	$NiPbO_3$	3m.1	f	f	AM	C_{3v}
mp-1220272	Nd_2Si_3	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-1206238	$MnSiAs_2$	$\overline{4}\overline{2}$m.1	f	f	AM	D_{2d}
mp-2240693	$MgFe_2(AgO_2)_2$	m.1	p	p	CFM	C_s
mp-2225339	$MgFe_2(OF)_2$	m.1	p	p	CFM	C_s
mp-1217207	$Ti_2Fe_2H_3$	m.1	p	p	CFM	C_s
mp-546027	$CrBiO_3$	3m.1	f	f	AM	C_{3v}
mp-753158	$Ti(CoO_3)_2$	m.1	p	p	AFM	C_s
mp-2225274	$MgCo_2(SbS)_2$	m.1	p	p	FM	C_s
mp-1245631	$AlFeN_2$	$\overline{4}\overline{2}$m.1	f	f	AM	D_{2d}
mp-1221883	$Mn_2InAgTe_4$	$\overline{4}\overline{2}$m.1	f	f	AM	D_{2d}
mp-690522	Mo_2Cl_4O	2.1	p	p	FM	C_2
mp-2217237	MgV_2ZnO_6	m.1	p	p	FM	C_s
mp-1002573	$MnHO_2$	1.1'	p	p	AFM	C_1
mp-1276097	$Co(HO)_2$	1.1'	p	p	AFM	C_1
mp-2222930	$Na_2Mg(CuO_2)_2$	m.1	p	p	FM	C_s
mp-1222756	$Li(TmGe_2)_2$	m.1	p	p	CFM	C_s

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-2226524	$MgCo_2(AsS)_2$	m.1	p	p	CFM	C_s
mp-19376	$TiMnO_3$	3m.1	f	f	AM	C_{3v}
mp-1223898	$K(CrS_2)_2$	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-625179	$Cu(HO)_2$	2.1	p	p	FM	C_2
mp-2223097	$MgV_2H_2O_5$	m.1	p	p	CFM	C_s
mp-765500	V_2OF_7	m.1	p	p	FM	C_s
mp-2239856	$Rb_2Mg(FeS_2)_2$	2.1	p	p	CFM	C_2
mp-2223083	$MgTe_4Mo_2WS_2$	m.1	p	p	FM	C_s
mp-2215994	$K_2MgMn_2O_4$	m.1	p	p	CFM	C_s
mp-1206503	$MnGeP_2$	$\overline{42}$m.1	f	f	AM	D_{2d}
mp-1225433	Eu_2Ge_3Au	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-2223644	$K_2Mg(CuO_2)_2$	m.1	p	p	FM	C_s
mp-2225608	$Mg(VS_2)_2$	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-1101165	$YbBiO_3$	3m.1	f	f	AM	C_{3v}
mp-2225360	$Mg(MnS_2)_2$	m.1	p	p	FM	C_s
mp-2240024	$MgCu_2(O_2F)_2$	m.1	p	p	FM	C_s
mp-2217142	$Mg(MoO_3)_2$	m.1	p	p	FM	C_s
mp-2217386	$MgMn_2(HO_2)_2$	m.1	p	p	CFM	C_s
mp-2223597	$MgFe_2(HO_2)_2$	m.1	p	p	CFM	C_s
mp-1096959	$FeAgSe_2$	$\overline{42}$m.1	f	f	AM	D_{2d}
mp-2227441	$MgTi(CoO_3)_2$	m.1	p	p	CFM	C_s
mp-1219196	Sm_2Ge_3	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-1221516	$MoHO_3$	2.1	p	p	FM	C_2

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1272521	$SrMn_2BiO_6$	2.1	p	p	FM	C_2
mp-1101118	$Ti(CrTe_2)_2$	m.1	p	p	FM	C_s
mp-1218900	$Sr(FeS_2)_2$	4'22'	p	p	AM	D_4
mp-675376	$HoAgSe_2$	m.1	p	p	FM	C_s
mp-2239890	$K_2Mg(CoO_2)_2$	m.1	p	p	CFM	C_s
mp-1236486	$LiCe_2O_3$	m.1	p	p	FM	C_s
mp-1220195	$NdBr_2Cl$	m.1	p	p	CFM	C_s
mp-1178162	$HoBiO_3$	3m.1	f	f	AM	C_{3v}
mp-2217176	MgV_2CdO_6	m.1	p	p	CFM	C_s
mp-1225163	Fe_2SeS	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-1094076	$SrEr_2O_4$	m.1	p	p	FM	C_s
mp-850194	$TiNiO_3$	3m.1	f	f	AM	C_{3v}
mp-2240587	$MgTl_2(FeO_2)_2$	m.1	p	p	CFM	C_s
mp-1147680	Cu_2SiO_4	$\overline{4}\overline{2}$m.1	f	f	AM	D_{2d}
mp-2225345	$MgMn_2O_4$	m.1	p	p	FM	C_s
mp-1223993	$K(VS_2)_2$	m.1	p	p	FM	C_s
mp-25317	$Li_3(CuO_2)_2$	2.1	p	p	FM	C_2
mp-1224077	Ho_2Ge_3	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-2217123	$MgV_2(OF_2)_2$	2.1	p	p	FM	C_2
mp-18895	$KCoO_2$	$\overline{4}\overline{2}$m.1	f	f	AM	D_{2d}
mp-1182005	$CaFeClO_2$	m.1	p	p	CFM	C_s
mp-2223324	$MgTe_2Mo_2W(SeS)_2$	m.1	p	p	FM	C_s
mp-2223318	$Na_3Mg(CuO_2)_2$	m.1	p	p	FM	C_s

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1225441	Eu_2Si_3Au	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-2217453	$Na_2MgMn_2O_4$	m.1	p	p	CFM	C_s
mp-1225457	Eu_2GaAg_3	m.1	p	p	FM	C_s
mp-1235199	$K_2LiMn_2O_4$	m.1	p	p	CFM	C_s
mp-2225288	$MgCr_2O_4$	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-1217266	$Ti(MoS_2)_2$	m.1	p	p	CFM	C_s
mp-2224842	$Mg(CrS_2)_2$	2.1	p	p	FM	C_2
mp-2217081	$Mg(MoO_3)_2$	m.1	p	p	FM	C_s
mp-2215829	$BaYMgCu_2O_5$	m.1	p	p	FM	C_s
mp-2225342	$Mg(MnS_2)_2$	m.1	p	p	FM	C_s
mp-626701	$Mn(HO)_2$	2.1'	p	p	AFM	C_2
mp-2222813	$MgMo_2HO_6$	m.1	p	p	FM	C_s
mp-1206018	$MnGeAs_2$	$\overline{4}2$m.1	f	f	AM	D_{2d}
mp-625381	$V_2H_3O_5$	m.1	p	p	FM	C_s
mp-2217234	$MgFe_2(HO_2)_2$	m.1	p	p	CFM	C_s
mp-675078	$Ba(FeS_2)_2$	4'	p	p	AM	C_4
mp-626071	Mo_2HO_6	m.1	p	p	FM	C_s
mp-2227469	$BaMg(FeS_2)_2$	4'22'	p	p	AM	D_4
mp-2217172	MgV_2CdO_6	m.1	p	p	FM	C_s
mp-1147704	$CoSiN_2$	$\overline{4}2$m.1	f	f	AM	D_{2d}
mp-2217091	$Na_2Mg(CoO_2)_2$	m.1	p	p	CFM	C_s
mp-2217478	MgV_2ZnO_6	m.1	p	p	FM	C_s
mp-8189	$LiReO_3$	3m.1	f	f	AM	C_{3v}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-2225297	$MgFe_2(OF)_2$	m.1	p	p	CFM	C_s
mp-1246352	$GaFeN_2$	$\overline{4}2$m.1	f	f	AM	D_{2d}
mp-759166	$LiMnOF_2$	m.1	p	p	FM	C_s
mp-1226340	Cr_2SbAs	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-2234320	CsV_2O_5	m.1	p	p	CFM	C_s
mp-2222932	$MgMo_2HO_6$	m.1	p	p	FM	C_s
mp-2225588	$MgCo_2(SbS)_2$	m.1	p	p	FM	C_s
mp-675419	$LiPrS_2$	m.1	p	p	FM	C_s
mp-2225943	$Mg(CrS_2)_2$	2.1	p	p	FM	C_2
mp-2217228	MgV_2ZnO_6	m.1	p	p	FM	C_s
mp-1236645	$LiPr_2(BrO_2)_2$	m.1	p	p	FM	C_s
mp-1219443	$Sc_2Cu_2O_5$	m.1	p	p	CFM	C_s
mp-2240560	$MgTi(CoO_3)_2$	m.1	p	p	AFM	C_s
mp-2240152	$MgFe_2(AgO_2)_2$	m.1	p	p	CFM	C_s
mp-22949	$FeBiO_3$	3m.1'	f	f	AFM	C_{3v}
mp-1235395	$LiPr_2Zn_2(PO)_2$	m.1	p	p	CFM	C_s
mp-2240690	$Na_2Mg(FeS_2)_2$	2.1	p	p	CFM	C_2
mp-1079848	$GaFe_2AgTe_4$	$\overline{4}2$m.1	f	f	AM	D_{2d}
mp-1216763	$TiVO_3$	3m.1	f	f	AM	C_{3v}
mp-1215347	Zr_6Co_2O	m.1	p	p	FM	C_s
mp-2217243	$Rb_2Mg(FeO_2)_2$	2.1	p	p	CFM	C_2
mp-1147778	$CoGeAs_2$	$\overline{4}2$m.1	f	f	AM	D_{2d}
mp-22408	CoO	3m.1'	f	f	AFM	C_{3v}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-2217423	$Na_2Mg(CoO_2)_2$	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-626084	Mo_2HO_6	m.1	p	p	CFM	C_s
mp-2225899	$MgMn_2O_4$	m.1	p	p	FM	C_s
mp-1223522	KFeSeS	2.1	p	p	CFM	C_2
mp-2217469	$Na_2Mg(NiO_2)_2$	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-2228169	$K_2Mg(CoO_2)_2$	m.1	p	p	CFM	C_s
mp-1420147	MnN	m.1	p	p	CFM	C_s
mp-19270	$TiFeO_3$	3m.1	f	f	AM	C_{3v}
mp-1217705	Tb_2Ge_3	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-2240197	$MgV_2H_2O_5$	m.1	p	p	FM	C_s
mp-1217685	Tb_2Si_3	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-1101119	$Ti(CrSe_2)_2$	m.1	p	p	FM	C_s
mp-1217270	$Ti(CrSi_3)_2$	2.1	p	p	AM	C_2
mp-1232389	MnCdTe	m.1	p	p	FM	C_s
mp-1217350	$Ti(FeSe_2)_2$	m.1	p	p	CFM	C_s
mp-1219227	Sm_2AlAg_3	m.1	p	p	FM	C_s
mp-2226136	$MgCo_2(AsS)_2$	m.1	p	p	FM	C_s
mp-2210997	$KCoO_2$	$\overline{42}$m.1	f	f	AM	D_{2d}
mp-1221454	$Na(VSe_2)_2$	m.1	p	p	FM	C_s
mp-1225431	Eu_2As_3Pt	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-1001793	$KCoCl_3$	3m.1	f	f	AM	C_{3v}
mp-2411688	$LiFe_2O_3$	m.1	p	p	CFM	C_s
mp-675700	Cr_2SbTe	$\overline{6}$'m'2	f	f	AM	D_{3h}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-5058	$FeAgS_2$	$\overline{4}2$m.1	f	f	AM	D_{2d}
mp-1182718	$FeBiO_3$	m.1	p	p	FM	C_s
mp-625181	$Cu(HO)_2$	m.1	p	p	FM	C_s
mp-676586	$Na(VS_2)_2$	m.1	p	p	FM	C_s
mp-2240739	$Na_3Mg(CuO_2)_2$	m.1	p	p	FM	C_s
mp-1224703	Fe_2AsS_3	m.1	p	p	FM	C_s
mp-2217244	$MgTl_2(CuO_2)_2$	m.1	p	p	FM	C_s
mp-1094068	$SrEr_2O_4$	m.1	p	p	CFM	C_s
mp-11073	$Ti_3In_3Rh_2$	m.1	p	p	AM	C_s
mp-1232996	$Li(CoO_2)_2$	m.1	p	p	CFM	C_s
mp-1181670	$FeBiO_3$	m.1	p	p	FM	C_s
mp-1042106	CoS_2	$\overline{4}2$m.1	f	f	AM	D_{2d}
mp-1218237	$SrLa(FeO_3)_2$	32.1	p	p	AM	D_3
mp-1224686	Fe_2N	$\overline{6}$'m'2	f	f	AM	D_{3h}
mp-2217074	$Rb_2Mg(FeS_2)_2$	m.1	p	p	CFM	C_s
mp-1039659	$CeMg_2$	m.1	p	p	FM	C_s
mp-1217360	$Ti(CrS_2)_2$	m.1	p	p	FM	C_s
mp-2240467	$K_2Mg(FeO_2)_2$	m.1	p	p	CFM	C_s
mp-1246145	$LiReN_2$	$\overline{4}2$m.1	f	f	AM	D_{2d}
mp-2223059	$MgV_2(Cl_2O)_2$	m.1	p	p	FM	C_s
mp-763784	$LiMn_2F_6$	2.1	p	p	FM	C_2
mp-1235108	$LiHo_2O_3$	m.1	p	p	FM	C_s
mp-1873967	VF_4	m.1	p	p	FM	C_s

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-2225950	$MgMn_2O_4$	m.1	p	p	FM	C_s
mp-1387939	CrF_4	m.1	p	p	FM	C_s
mp-2240335	$K_2Mg(FeS_2)_2$	2.1	p	p	CFM	C_2
mp-20032	$VPbO_3$	4mm.1'	h	h	AFM	C_{4v}
mp-676270	Cr_2AsSe	$\bar{6}$'m'2	f	f	AM	D_{3h}
mp-1235745	$Li(CoO_2)_2$	m.1	p	p	FM	C_s
mp-2210711	$Mg(CoO_2)_2$	m.1	p	p	CFM	C_s
mp-2210740	$NaMgCu_2O_3$	m.1	p	p	FM	C_s
mp-2240513	$MgTe_2Mo_2W(SeS)_2$	m.1	p	p	FM	C_s
mp-1224691	Fe_2SbTe_3	m.1	p	p	FM	C_s
mp-758804	V_2OF_5	2.1	p	p	FM	C_2
mp-625359	$NdHO_2$	2.1	p	p	FM	C_2
mp-754676	$LiMnF_3$	6'22'	p	p	AM	D_6
mp-752867	V_2OF_5	2.1	p	p	FM	C_2
mp-2225869	$MgCr_2O_4$	m.1	p	p	FM	C_s
mp-2217207	$Na_2MgMn_2O_4$	m.1	p	p	CFM	C_s
mp-1078358	$LiOsO_3$	3m.1	f	f	AM	C_{3v}
mp-1225624	Eu_2MgGa_3	m.1	p	p	CFM	C_s
mp-754943	$ErBiO_3$	3m.1	f	f	AM	C_{3v}
mp-25542	$LiMnO_2$	1.1'	p	p	AFM	C_1
mp-2223118	$MgTl_2(FeS_2)_2$	m.1	p	p	FM	C_s
mp-1069079	$FeBiO_3$	4mm.1'	h	h	AFM	C_{4v}
mp-1025282	$Ti(VTe_2)_2$	m.1	p	p	AFM	C_s

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG

4. Noncentrosymmetricc Even-Wave Axial Phonon Materials

TABLE S11: List of materials with NCS even-wave axial phonon. Wave and Wave (no Tbp) indicates the wave type determined with and without considering time-reversal-breaking perturbation. Magtype indicates the magnetic ordering type. FM, AM, and CFM stand for ferromagnetic, antiferromagnetic, and compensated ferrimagnetic orderings, respectively. PG indicates the point group of the magnetic space group.

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-759836	$Li_2V_2OF_5$	1.1	s	p	FM	C_1
mp-1389439	$Zn(CuN)_2$	$\bar{4}$'2m'	d	f	AM	D_{2d}
mp-753490	TiCuGe	m'm2'	d	f	AM	C_{2v}
mp-673673	NdO_3	1.1	s	p	FM	C_1
mp-1223698	$K_2Fe_2SeS_3$	1.1	s	p	CFM	C_1
mp-1245737	NaCrN	6'mm'	g	j	AM	C_{6v}
mp-1018695	EuBiAu	6'mm'	g	j	AM	C_{6v}
mp-1221417	$Na(CoO_2)_2$	m'm2'	d	f	AM	C_{2v}
mp-1205804	Tm_2Ge_6Pd	m'm'2	s	f	FM	C_{2v}
mp-1225524	Er_2SiGe	m'm'2	s	f	FM	C_{2v}
mp-1219183	Sm_2Si_3Pt	m'm'2	s	f	CFM	C_{2v}
mp-660213	Cs_2MnTe_2	m'	s	p	AM	C_s
mp-691187	$LiPrS_2$	1.1	s	p	FM	C_1
mp-2210628	$Mg(CoO_2)_2$	3m'	s	f	CFM	C_{3v}
mp-690525	$MnCO_3$	m'	s	p	AM	C_s
mp-10393	$SmGaSb_2$	2'2'2	s	p	AM	D_2
mp-1095762	$MgRu_2W$	m'm2'	d	f	AFM	C_{2v}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-30705	$Ti_4Ga_3Ni_2$	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-2240442	$Na_2Mg(CoO_2)_2$	m'm2'	d	f	AM	C_{2v}
mp-1025144	CeGaGe	4m'm'	s	h	FM	C_{4v}
mp-1072888	TmGeAu	6'mm'	g	j	AM	C_{6v}
mp-2217480	$Na_2Mg(CoO_2)_2$	1.1	s	p	CFM	C_1
mp-1187728	VI	6m'm'	s	j	FM	C_{6v}
mp-988996	FeSbAs	m'm2'	d	f	AM	C_{2v}
mp-760477	$SmBO_3$	mm2.1	d	f	AM	C_{2v}
mp-1079106	$TiFeH_2$	m'm'2	s	f	FM	C_{2v}
mp-2224440	$Mg(NiS_2)_2$	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-35189	Co_2SbTe	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-1093752	$TiGeRh_2$	m'm2'	d	f	AFM	C_{2v}
mp-1079462	$Sm(GePt)_2$	m'm2'	d	f	AM	C_{2v}
mp-1120818	$NaNi_2BiO_6$	3.1	s	p	FM	C_3
mp-631512	$BaCaRu_2$	$\overline{42}$'m'	s	f	FM	D_{2d}
mp-1226801	Ce_2Si_3	m'm'2	s	f	FM	C_{2v}
mp-2227100	$MgV_2(OF_2)_2$	1.1	s	p	CFM	C_1
mp-1228945	AlCrGe	2'2'2	s	p	CFM	D_2
mp-1029407	$NaCrN_2$	$\overline{42}$'m'	s	f	FM	D_{2d}
mp-1097126	$NbSiRu_2$	m'm2'	d	f	AFM	C_{2v}
mp-754977	$LiFeO_2$	6'mm'	g	j	AM	C_{6v}
mp-2223641	$CsMgV_2O_5$	1.1	s	p	FM	C_1
mp-1225889	Cu_2AsO_6	m'm'2	s	f	FM	C_{2v}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1147717	YAl_3Fe_2	m'm2'	d	f	AM	C_{2v}
mp-1225393	Eu_2ZnBi_2	$\bar{6}$m'2'	s	f	FM	D_{3h}
mp-1097076	$HfTiRu_2$	m'm2'	d	f	AFM	C_{2v}
mp-1245566	$MnAlN_2$	$\bar{4}\bar{2}$'m'	s	f	FM	D_{2d}
mp-1423472	$Ca(FeN)_2$	$\bar{4}$'2m'	d	f	AM	D_{2d}
mp-20880	NdAgPb	6'mm'	g	j	AM	C_{6v}
mp-1521061	Eu_2TiNbO_6	$\bar{4}\bar{2}$'m'	s	f	AFM	D_{2d}
mp-1245895	$AlCrN_2$	$\bar{4}\bar{2}$'m'	s	f	FM	D_{2d}
mp-27179	$CsCrBr_3$	6m'm'	s	j	FM	C_{6v}
mp-1224674	Gd_2O_3	$\bar{4}$'2m'	d	f	AM	D_{2d}
mp-1504124	$Mg(CrN)_2$	$\bar{4}$'2m'	d	f	AM	D_{2d}
mp-24669	CrH	6'mm'	g	j	AM	C_{6v}
mp-1227435	$BaVSeS_2$	m'm2'	d	f	AM	C_{2v}
mp-31449	HoAgPb	6'mm'	g	j	AM	C_{6v}
mp-1226987	$Ce_2Ga_5Au_3$	$\bar{4}$'2m'	d	f	AM	D_{2d}
mp-1275970	$BaLaMn_2O_6$	$\bar{4}\bar{2}$'m'	s	f	FM	D_{2d}
mp-1042111	CrS_2	$\bar{4}\bar{2}$'m'	s	f	FM	D_{2d}
mp-1222768	$LaY(MnSi)_2$	4'm'm	d	h	AM	C_{4v}
mp-622628	Cu_2SbO_5	1.1	s	p	CFM	C_1
mp-1207158	Sm_2Ge_6Pd	m'm'2	s	f	FM	C_{2v}
mp-758946	Fe_2O_3F	m'm'2	s	f	CFM	C_{2v}
mp-2222811	$MgTe_2Mo_2W(SeS)_2$	1.1	s	p	FM	C_1
mp-29076	$FeWN_2$	6'mm'	g	j	AM	C_{6v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1097510	Mn_2NbGa	m'm2'	d	f	AFM	C_{2v}
mp-631376	$SrMn_2Si$	$\overline{4}2$'m'	s	f	CFM	D_{2d}
mp-1217675	Tb_2ZnSb_4	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-2240080	$MgTl_2(FeS_2)_2$	m'	s	p	AM	C_s
mp-2217118	$MgCo_2(AgO_2)_2$	3m'	s	f	CFM	C_{3v}
mp-1176571	$LiTiV_2O_6$	1.1	s	p	FM	C_1
mp-12904	$HoAgTe_2$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-11081	CeSnAu	6m'm'	s	j	FM	C_{6v}
mp-1220340	Nd_2Ge_3Pd	m'm'2	s	f	CFM	C_{2v}
mp-1404786	CoN	m'm2'	d	f	AM	C_{2v}
mp-1385807	$Ca_3(FeN_2)_2$	m'm2'	d	f	AM	C_{2v}
mp-754323	$TmBiO_3$	3m'	s	f	FM	C_{3v}
mp-1102925	NbFeSi	m'm2'	d	f	AM	C_{2v}
mp-2239894	$MgMo_2W(Se_2S)_2$	3m'	s	f	FM	C_{3v}
mp-10643	SmSe	6m'm'	s	j	FM	C_{6v}
mp-1221531	Mn_2SbTe	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-1077258	Nb_2Cr	m'm2'	d	f	AFM	C_{2v}
mp-631703	$BaRe_2Sn$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-2217104	$MgV_2(O_2F)_2$	1.1	s	p	FM	C_1
mp-510687	DyAgPb	6m'm'	s	j	FM	C_{6v}
mp-1246319	KCuN	m'	s	p	AM	C_s
mp-39412	$SrLaMn_2O_6$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-1225617	Er_2Ge_3	$\overline{6}$m'2'	s	f	FM	D_{3h}

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-19074	$TiFeO_3$	m'm2'	d	f	AFM	C_{2v}
mp-1206527	TbSbPd	6'mm'	g	j	AM	C_{6v}
mp-2227040	$MgMn_2O_4$	3m'	s	f	FM	C_{3v}
mp-761166	$LiFeF_3$	m'	s	p	AM	C_s
mp-2242040	$MgFe_2(ClO)_2$	m'm'2	s	f	CFM	C_{2v}
mp-1187584	TmBr	6m'm'	s	j	FM	C_{6v}
mp-862288	$AlFe_2W$	$\overline{4}2$'m'	s	f	AFM	D_{2d}
mp-998965	$TiInFe_2$	$\overline{4}2$'m'	s	f	AFM	D_{2d}
mp-1216728	TiMnSb	6'mm'	g	j	AFM	C_{6v}
mp-1078367	$InNi_2SbO_6$	3.1	s	p	CFM	C_3
mp-22210	Co_2As	$\overline{6}$m'2'	s	f	CFM	D_{3h}
mp-1206165	Dy_2TiSi_2	4m'm'	s	h	AFM	C_{4v}
mp-2217426	$MgNi_2(AgO_2)_2$	3m'	s	f	FM	C_{3v}
mp-1176698	$LiFeF_3$	2'2'2	s	p	AM	D_2
mp-1215791	$Yb_2WN_2O_3$	m'm'2	s	f	AM	C_{2v}
mp-1224628	$GdBO_3$	mm2.1	d	f	AM	C_{2v}
mp-1208638	$SrMn_2O_6$	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-1219181	Sm_2Si_3Pd	m'm'2	s	f	FM	C_{2v}
mp-1079429	$HoAgSe_2$	4'm'm	d	h	AM	C_{4v}
mp-2227170	$MgCu_2WS_4$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-1217607	$TbBO_3$	mm2.1	d	f	AM	C_{2v}
mp-760405	$ErBO_3$	m'm'2	s	f	FM	C_{2v}
mp-759972	VF_4	m'	s	p	AM	C_s

Continued on next page

Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1217126	$Ti_4Fe_2P_3$	m’	s	p	AM	C_s
mp-1025276	Sm_2AlNO_3	4m’m’	s	h	FM	C_{4v}
mp-19963	$TiFe_2Sn$	$\overline{4}2$’m’	s	f	AFM	D_{2d}
mp-1079321	$ErAgS_2$	4’m’m	d	h	AM	C_{4v}
mp-1218282	$SrFe_2AsP$	4’m’m	d	h	AM	C_{4v}
mp-2217125	$MgFe_2(HO_2)_2$	m’m’2	s	f	CFM	C_{2v}
mp-998397	$KCrCl_3$	3m’	s	f	FM	C_{3v}
mp-1246645	$TiFeN_2$	6’mm’	g	j	AM	C_{6v}
mp-1233322	$Mg(NiN)_2$	$\overline{4}$’2m’	d	f	AM	D_{2d}
mp-1019094	PrGeAu	6’mm’	g	j	AM	C_{6v}
mp-1414188	$Mg(MnN)_2$	$\overline{4}$’2m’	d	f	AM	D_{2d}
mp-1097587	$ZrNbRu_2$	m’m2’	d	f	AFM	C_{2v}
mp-1220291	$Nd_2(OF)_3$	$\overline{6}$.1	s	f	FM	C_{3h}
mp-1232236	PmSe	6’mm’	g	j	AM	C_{6v}
mp-754050	Mn_2O_3F	m’m’2	s	f	FM	C_{2v}
mp-1206286	PrAgGe	6’mm’	g	j	AM	C_{6v}
mp-1096710	TiV_2W	m’m2’	d	f	AFM	C_{2v}
mp-567687	CrI_2	m’m’2	s	f	FM	C_{2v}
mp-675126	$FeCO_3$	m’	s	p	AM	C_s
mp-998970	$TiFe_2Sb$	$\overline{4}2$’m’	s	f	AFM	D_{2d}
mp-2240167	$MgV_2(AuS_2)_2$	3m’	s	f	FM	C_{3v}
mp-1039549	$CeMg_2$	$\overline{6}$m’2’	s	f	FM	D_{3h}
mp-9293	EuGeAu	m’m’2	s	f	FM	C_{2v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-2217160	$MgFe_2(AgO_2)_2$	3m’	s	f	FM	C_{3v}
mp-2217135	$MgFe_2(AgO_2)_2$	3m’	s	f	FM	C_{3v}
mp-1221405	$Na(CoO_2)_2$	3m’	s	f	FM	C_{3v}
mp-777422	$DyHO_2$	m’m’2	s	f	FM	C_{2v}
mp-778819	$LiMnF_3$	m’m2’	d	f	AM	C_{2v}
mp-1222786	$LaYFe_2(AsO)_2$	4’m’m	d	h	AM	C_{4v}
mp-1392959	$Zn(CrN)_2$	$\bar{4}$’2m’	d	f	AM	D_{2d}
mp-28100	$NaFeS_2$	2’2’2	s	p	CFM	D_2
mp-20169	Ce_2O_3	32’	s	p	FM	D_3
mp-1234733	$Mg(CoN)_2$	1.1	s	p	CFM	C_1
mp-1220328	Nd_2Al_3Ga	m’m’2	s	f	CFM	C_{2v}
mp-1224169	$HfTiRu_2$	4m’m’	s	h	AFM	C_{4v}
mp-1212990	$FeNCl_3$	6’mm’	g	j	AM	C_{6v}
mp-1383360	$Li_2V_2OF_5$	1.1	s	p	CFM	C_1
mp-1225079	Er_2AlGe_4	m’m’2	s	f	FM	C_{2v}
mp-1207048	Tm_2TiGe_2	4m’m’	s	h	AFM	C_{4v}
mp-676597	$BaVSe_3$	m’m’2	s	f	FM	C_{2v}
mp-675446	$NaRuO_2$	1.1	s	p	FM	C_1
mp-2223893	$Na_2Mg(NiO_2)_2$	3m’	s	f	FM	C_{3v}
mp-1086660	Nb_2FeB_2	mm2.1	d	f	AM	C_{2v}
mp-24040	$CrHO_2$	m’m’2	s	f	FM	C_{2v}
mp-1235464	$BaLiYCu_2O_5$	m’m2’	d	f	AM	C_{2v}
mp-12804	SmAlSi	4m’m’	s	h	FM	C_{4v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1226363	Cr_2S_2BrCl	m'm'2	s	f	FM	C_{2v}
mp-996999	$CuHO_2$	m'm'2	s	f	FM	C_{2v}
mp-1101116	$Ti(FeSe_2)_2$	1.1	s	p	FM	C_1
mp-1225750	Er_2Si_3	m'm'2	s	f	FM	C_{2v}
mp-2227175	$MgFe_2(ClO)_2$	m'm'2	s	f	CFM	C_{2v}
mp-1206852	NdAlGe	4'm'm	d	h	AM	C_{4v}
mp-1025275	Ce_2AlNO_3	4m'm'	s	h	CFM	C_{4v}
mp-1220495	Nd_2Ge_3Pt	m'm'2	s	f	CFM	C_{2v}
mp-1097412	$NbInCo_2$	m'm2'	d	f	AFM	C_{2v}
mp-1079841	$Pr(GePt)_2$	m'm2'	d	f	AM	C_{2v}
mp-1080069	$TbSn_3$	m'm'2	s	f	CFM	C_{2v}
mp-1072580	CeSiPt	4m'm'	s	h	FM	C_{4v}
mp-4219	CeGeAu	6m'm'	s	j	FM	C_{6v}
mp-2223605	$MgTe_4Mo_2WS_2$	3m'	s	f	FM	C_{3v}
mp-2225985	$MgFe_2(OF)_2$	1.1	s	p	FM	C_1
mp-4024	$DyAgTe_2$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-570855	SmAgPb	6m'm'	s	j	FM	C_{6v}
mp-8950	NdAsPd	6'mm'	g	j	AM	C_{6v}
mp-1186090	$Mo_2W_2O_5$	4m'm'	s	h	AFM	C_{4v}
mp-1025206	Eu_2AlNO_3	4m'm'	s	h	FM	C_{4v}
mp-582282	$GdAgSe_2$	4'm'm	d	h	AM	C_{4v}
mp-1078244	$ScNi_2SbO_6$	3.1	s	p	CFM	C_3
mp-1219264	$ScTi(NiSn)_2$	3m'	s	f	CFM	C_{3v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1077578	CeGaAg	m'm'2	s	f	FM	C_{2v}
mp-1219927	Pr_2Al_3Ag	m'm'2	s	f	CFM	C_{2v}
mp-1183702	CrCl	6'mm'	g	j	AM	C_{6v}
mp-2217072	$Sr_2MgCo_2O_5$	1.1	s	p	CFM	C_1
mp-2234765	$SrLaMn_2O_6$	$\overline{4}$.1	s	f	FM	S_4
mp-1205967	Sm_2AgGe_6	m'm'2	s	f	FM	C_{2v}
mp-611630	$CaFeClO_2$	1.1	s	p	CFM	C_1
mp-1220161	NdAlSi	4'm'm	d	h	AM	C_{4v}
mp-1226441	Co_2SbAs	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-1218980	SmGaSi	4'm'm	d	h	AM	C_{4v}
mp-1402929	MgV_2O_6	m'm'2	s	f	FM	C_{2v}
mp-1217697	Tb_2Si_3Ge	m'm'2	s	f	FM	C_{2v}
mp-1392664	$HoAgSe_2$	m'm2'	d	f	AM	C_{2v}
mp-1222348	$LiEu_2Ga_7$	$\overline{42}$'m'	s	f	FM	D_{2d}
mp-753473	$LiCoO_2$	6m'm'	s	j	FM	C_{6v}
mp-1079773	$Nd(GePt)_2$	m'm2'	d	f	AM	C_{2v}
mp-1222834	$Lu_3(MnGa_2)_2$	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-2224279	$In(FeO_2)_2$	3m'	s	f	CFM	C_{3v}
mp-2562	MnS	6'mm'	g	j	AM	C_{6v}
mp-1079474	$ErSn_3$	m'm'2	s	f	FM	C_{2v}
mp-29026	$MnWN_2$	6m'm'	s	j	FM	C_{6v}
mp-2228295	$MgMn_2O_4$	1.1	s	p	FM	C_1
mp-22149	DyGeAu	6m'm'	s	j	FM	C_{6v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1388402	VF_4	m'm'2	s	f	FM	C_{2v}
mp-1078600	$TmAgTe_2$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-2225293	MgV_2O_4	1.1	s	p	FM	C_1
mp-1226843	Ce_2CdSb_4	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-645418	$FeCl_3$	1.1	s	p	CFM	C_1
mp-2217204	$MgFe_2(HO_2)_2$	1.1	s	p	CFM	C_1
mp-2757308	VBr_3	m'm'2	s	f	FM	C_{2v}
mp-1219233	Sm_2Ge_3Pt	m'm'2	s	f	FM	C_{2v}
mp-1407746	$K_2Fe_2SeS_3$	1.1	s	p	CFM	C_1
mp-2224251	$MgMn_2O_4$	m'm'2	s	f	FM	C_{2v}
mp-31187	$TiAlFe_2$	$\overline{4}2$'m'	s	f	AFM	D_{2d}
mp-2225278	$MgMn_2O_4$	1.1	s	p	FM	C_1
mp-568814	HoSnAu	6'mm'	g	j	AM	C_{6v}
mp-2210604	$MgMn_2(OF)_2$	m'm'2	s	f	CFM	C_{2v}
mp-866141	$TiFe_2Si$	$\overline{4}2$'m'	s	f	AFM	D_{2d}
mp-758560	FeOF	m'm2'	d	f	AM	C_{2v}
mp-1220294	Nd_2Sn_4Pd	m'm'2	s	f	FM	C_{2v}
mp-1220140	$Ni_2P_2(SeS)_3$	1.1	s	p	CFM	C_1
mp-1435683	Mn_2ZnN_2	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-1186339	NiCl	6'mm'	g	j	AM	C_{6v}
mp-1207253	Ce_2Ge_6Pd	m'm'2	s	f	CFM	C_{2v}
mp-1228657	B_2RuW	m'm'2	s	f	FM	C_{2v}
mp-1096589	$HfTiFe_2$	m'm2'	d	f	AFM	C_{2v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1226895	Ce_2SbAu_3	m'm'2	s	f	FM	C_{2v}
mp-1206597	CeAlSi	4'm'm	d	h	AM	C_{4v}
mp-31413	TbSnAu	6'mm'	g	j	AM	C_{6v}
mp-863656	PmH	6'mm'	g	j	AM	C_{6v}
mp-1029395	$LiCrN_2$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-1220350	Nd_2Ga_7Pd	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-1217938	$TaMnNO_2$	m'	s	p	AM	C_s
mp-2217194	$Cs_2Mg(FeS_2)_2$	m'm2'	d	f	AM	C_{2v}
mp-2227422	$MgMo_2(SeS)_2$	m'm'2	s	f	FM	C_{2v}
mp-1205994	Dy_2Ge_6Pt	m'm'2	s	f	FM	C_{2v}
mp-2226140	$MgCu_2WS_4$	$\overline{4}$.1	s	f	FM	S_4
mp-13841	IrF_4	m'm'2	s	f	FM	C_{2v}
mp-1080068	$CuCO_3$	2'	s	p	AM	C_2
mp-1219167	Sm_2O_3	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-10450	PrAlGe	4'm'm	d	h	AM	C_{4v}
mp-1216092	YMn_2SiGe	4m'm'	s	h	FM	C_{4v}
mp-1220152	NdGaSi	4'm'm	d	h	AM	C_{4v}
mp-569724	ErAgSn	6m'm'	s	j	FM	C_{6v}
mp-1217674	Tb_2SiGe	m'm'2	s	f	CFM	C_{2v}
mp-1024986	CeSbPd	6m'm'	s	j	FM	C_{6v}
mp-1206629	Tb_2Ge_6Pt	m'm'2	s	f	FM	C_{2v}
mp-973936	NiI	6'mm'	g	j	AM	C_{6v}
mp-1220330	Nd_2Al_3Ge	m'm'2	s	f	CFM	C_{2v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-2215787	$MgCr_2O_4$	m'm'2	s	f	FM	C_{2v}
mp-1219185	Sm_2Si_3Ge	m'm'2	s	f	CFM	C_{2v}
mp-2225385	$Mg(CrS_2)_2$	$\overline{4}$.1	s	f	FM	S_4
mp-2240261	$Na_2Mg(FeS_2)_2$	2'2'2	s	p	FM	D_2
mp-2225335	MgV_2O_4	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-1430957	$Zn(CoN)_2$	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-1420270	$Ca(CrN)_2$	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-1236494	$BaLiYCu_2O_5$	m'm'2	s	f	FM	C_{2v}
mp-1018694	ErZnGa	6'mm'	g	j	AM	C_{6v}
mp-10645	TbSe	6m'm'	s	j	FM	C_{6v}
mp-1181742	CrI_2	6m'm'	s	j	FM	C_{6v}
mp-2217133	$MgMn_2(AgO_2)_2$	3m'	s	f	CFM	C_{3v}
mp-1235536	$BaLiYCu_2O_5$	4m'm'	s	h	CFM	C_{4v}
mp-1232992	$LiPr_2(BrO_2)_2$	1.1	s	p	FM	C_1
mp-974474	ReBr	6'mm'	g	j	AM	C_{6v}
mp-13303	ErSnAu	6m'm'	s	j	FM	C_{6v}
mp-754270	$V_2(OF)_3$	1.1	s	p	FM	C_1
mp-3216857	$YbBO_3$	mm2.1	d	f	AM	C_{2v}
mp-1395134	MoF_4	1.1	s	p	CFM	C_1
mp-1220245	Nd_2ZnSb_4	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-1221574	MnO_2	mm2.1	d	f	AM	C_{2v}
mp-31412	PrSnAu	6m'm'	s	j	FM	C_{6v}
mp-1096591	$MgNbCo_2$	m'm2'	d	f	AFM	C_{2v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1018902	PrSbPt	6'mm'	g	j	AM	C_{6v}
mp-997107	CuO_2F	m'm'2	s	f	FM	C_{2v}
mp-1018697	EuCdSn	6m'm'	s	j	FM	C_{6v}
mp-1395522	$Mg(FeN)_2$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-975657	PrH	6'mm'	g	j	AM	C_{6v}
mp-3551	$TbAgTe_2$	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-1225277	$Eu_2Si_4Pd_3Au$	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-31447	TbAgPb	6'mm'	g	j	AM	C_{6v}
mp-24200	$FeHO_2$	m'm2'	d	f	AM	C_{2v}
mp-1120815	$NaCr_2BiO_6$	3.1	s	p	FM	C_3
mp-2240483	$Rb_2Mg(FeS_2)_2$	m'm'2	s	f	FM	C_{2v}
mp-973933	NiN	6'mm'	g	j	AM	C_{6v}
mp-865531	$TiMn_2Al$	$\overline{4}2$'m'	s	f	AFM	D_{2d}
mp-1097455	$TiMn_2Nb$	m'm2'	d	f	AFM	C_{2v}
mp-2217537	$MgCo_2(HO_2)_2$	m'm'2	s	f	FM	C_{2v}
mp-1206175	EuAlGe	4'm'm	d	h	AM	C_{4v}
mp-1399099	$Zn(FeN)_2$	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-1095026	$DyAgSe_2$	4m'm'	s	h	FM	C_{4v}
mp-1222846	$LaMn_2CdO_6$	32'	s	p	FM	D_3
mp-999503	MoN	6'mm'	g	j	AM	C_{6v}
mp-2225007	$MgFe_2(OF)_2$	m'm'2	s	f	FM	C_{2v}
mp-2239945	$SrMg(RuO_3)_2$	32'	s	p	CFM	D_3
mp-1220399	$Nd_2Ga_5Au_3$	$\overline{4}$'2m'	d	f	AM	D_{2d}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-31420	CeAgSn	6m'm'	s	j	FM	C_{6v}
mp-626099	Mo_2HO_6	1.1	s	p	CFM	C_1
mp-1425224	$Zn(NiN)_2$	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-1226796	Ce_2ZnSb_4	$\overline{42}$'m'	s	f	FM	D_{2d}
mp-1181841	$CrBiO_3$	m'	s	p	AM	C_s
mp-1225291	Dy_2Si_3	m'm'2	s	f	FM	C_{2v}
mp-997044	CuO_2F	m'm2'	d	f	AM	C_{2v}
mp-1220339	Nd_2CdSb_4	$\overline{42}$'m'	s	f	FM	D_{2d}
mp-1093864	$AlRu_2W$	m'm2'	d	f	AFM	C_{2v}
mp-998845	$TlNiO_3$	3m'	s	f	FM	C_{3v}
mp-1206630	Ho_2Ge_6Pt	m'm'2	s	f	FM	C_{2v}
mp-623460	$GdSn_3$	m'm'2	s	f	CFM	C_{2v}
mp-1206904	Nd_2TiGe_2	4m'm'	s	h	AFM	C_{4v}
mp-1246948	FeSnN	6m'm'	s	j	FM	C_{6v}
mp-1096450	$TaMo_2W$	m'm2'	d	f	AFM	C_{2v}
mp-1224680	Gd_2SbO_2	m'm2'	d	f	AM	C_{2v}
mp-2041583	MoF_4	1.1	s	p	CFM	C_1
mp-1180771	$KCoO_2$	$\overline{4}$.1	s	f	CFM	S_4
mp-1018696	EuCdPb	6m'm'	s	j	FM	C_{6v}
mp-2222895	$MgTi(CoO_3)_2$	1.1	s	p	FM	C_1
mp-1219840	Pr_2Si_3	m'm'2	s	f	CFM	C_{2v}
mp-20434	GdSnAu	6'mm'	g	j	AM	C_{6v}
mp-1226862	Ce_2Al_3Sn	m'm'2	s	f	FM	C_{2v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-865280	$NbAlFe_2$	$\overline{4}2$'m'	s	f	AFM	D_{2d}
mp-1095954	$TiGeOs_2$	m'm2'	d	f	AFM	C_{2v}
mp-1518017	Eu_2HfWO_6	$\overline{4}2$'m'	s	f	AFM	D_{2d}
mp-1097148	$ScTiCo_2$	m'm2'	d	f	AFM	C_{2v}
mp-1071283	Nb_2Fe	m'm2'	d	f	AFM	C_{2v}
mp-754549	Na_2CuO_2	m'm'2	s	f	FM	C_{2v}
mp-1077099	EuZnGe	6m'm'	s	j	FM	C_{6v}
mp-1205807	$BaSr(CoO_3)_2$	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-1018698	EuHgPb	6m'm'	s	j	FM	C_{6v}
mp-754467	$LiV_2(OF)_3$	1.1	s	p	FM	C_1
mp-631674	$LaRe_2Ag$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-754913	Li_2CrO_2	m'm2'	d	f	AM	C_{2v}
mp-2240072	$BaMgMn_2O_5$	m'm'2	s	f	FM	C_{2v}
mp-2228225	$Mg(CuO)_2$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-2225835	$Mg(VS_2)_2$	3m'	s	f	FM	C_{3v}
mp-1516495	Eu_2ZrNbO_6	$\overline{4}2$'m'	s	f	AFM	D_{2d}
mp-1224874	Gd_2Si_3	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-1225518	Er_2SbO_2	m'm2'	d	f	AM	C_{2v}
mp-1120814	$NaMn_2BiO_6$	3.1	s	p	FM	C_3
mp-19983	TiCuSn	6'mm'	g	j	AM	C_{6v}
mp-1042186	$BaAlCu_2O_5$	4m'm'	s	h	CFM	C_{4v}
mp-1206040	Nd_2Ge_6Pd	m'm'2	s	f	CFM	C_{2v}
mp-13407	CeAgPb	6m'm'	s	j	FM	C_{6v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1224254	$HfZr(CoSb)_2$	3m’	s	f	CFM	C_{3v}
mp-1225438	Dy_2Ge_3	$\overline{6}$m’2’	s	f	FM	D_{3h}
mp-2217266	$Rb_2Mg(FeO_2)_2$	m’m’2	s	f	FM	C_{2v}
mp-4311	HoAgSn	6’mm’	g	j	AM	C_{6v}
mp-1226818	Ce_2ZnBi_4	$\overline{42}$’m’	s	f	FM	D_{2d}
mp-2242069	$MgTe_4Mo_2WS_2$	3m’	s	f	CFM	C_{3v}
mp-999002	$TiFe_2As$	$\overline{42}$’m’	s	f	AFM	D_{2d}
mp-2241580	Eu_2MgTiO_4	m’m’2	s	f	FM	C_{2v}
mp-755543	$HoHO_2$	m’m’2	s	f	FM	C_{2v}
mp-548231	$FeBiO_3$	3.1	s	p	CFM	C_3
mp-1225136	Fe_2TeSe	4m’m’	s	h	FM	C_{4v}
mp-2223055	$K_2Mg(CoO_2)_2$	$\overline{4}$’2m’	d	f	AM	D_{2d}
mp-1097888	$La_2Fe_2O_5$	2’	s	p	AM	C_2
mp-2217240	$MgCr_2O_6$	1.1	s	p	FM	C_1
mp-1205887	Er_2Ge_6Pd	m’m’2	s	f	FM	C_{2v}
mp-34735	Ho_2CdS_4	$\overline{42}$’m’	s	f	CFM	D_{2d}
mp-1206261	Sm_2Ge_6Au	m’m’2	s	f	CFM	C_{2v}
mp-1443423	VS_2	$\overline{42}$’m’	s	f	FM	D_{2d}
mp-1078819	$TmSn_3$	m’m’2	s	f	FM	C_{2v}
mp-557137	$KCoO_2$	$\overline{4}$.1	s	f	CFM	S_4
mp-2217103	$MgV_2(OF)_3$	1.1	s	p	FM	C_1
mp-610955	$CsCrCl_3$	6m’m’	s	j	FM	C_{6v}
mp-1080386	PrSiPt	4’m’m	d	h	AM	C_{4v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-752764	$LiVF_3$	3m'	s	f	FM	C_{3v}
mp-631487	$LaBeOs_2$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-2217502	$Rb_2Mg(FeO_2)_2$	1.1	s	p	CFM	C_1
mp-1245492	$Mn(CN)_2$	$\overline{4}2$'m'	s	f	CFM	D_{2d}
mp-2225344	$MgMn_2(OF)_2$	m'm'2	s	f	CFM	C_{2v}
mp-1223930	Ho_2Si_3	m'm'2	s	f	CFM	C_{2v}
mp-1225508	Er_2Se_3	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-2226689	$MgFe_2(ClO)_2$	m'm'2	s	f	CFM	C_{2v}
mp-33797	$Sr(RuO_3)_2$	m'm2'	d	f	AM	C_{2v}
mp-753318	$DyBO_3$	mm2.1	d	f	AM	C_{2v}
mp-1235526	$LiCr_2O_4$	$\overline{4}$.1	s	f	FM	S_4
mp-15839	NdSbPt	6'mm'	g	j	AM	C_{6v}
mp-19128	CoO	6'mm'	g	j	AM	C_{6v}
mp-1077736	CeTiGe	$\overline{4}$'2m'	d	f	AFM	D_{2d}
mp-2217136	$MgV_2(Cl_2O)_2$	1.1	s	p	CFM	C_1
mp-1232366	$CuAuClO_2$	1.1	s	p	CFM	C_1
mp-1227229	$CaFe_2BiO_6$	4m'm'	s	h	FM	C_{4v}
mp-866375	$TiFe_2Ge$	$\overline{4}2$'m'	s	f	AFM	D_{2d}
mp-1219834	Pr_2SbAu_3	m'm'2	s	f	FM	C_{2v}
mp-631507	$BeBiOs_2$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-2239842	$MgMo_2HO_6$	1.1	s	p	FM	C_1
mp-3077	SmAlGe	4m'm'	s	h	FM	C_{4v}
mp-1215287	$ZrTi(NiH)_2$	m'm'2	s	f	FM	C_{2v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-2217119	$Na_2Mg(CoO_2)_2$	1.1	s	p	CFM	C_1
mp-5646	NdSnAu	6'mm'	g	j	AM	C_{6v}
mp-1208307	Ti_4Cr	m'm2'	d	f	AFM	C_{2v}
mp-10862	Ho_2Ge_6Pd	m'm'2	s	f	CFM	C_{2v}
mp-1018701	EuSnHg	6m'm'	s	j	FM	C_{6v}
mp-754022	$AlCoO_3$	1.1	s	p	CFM	C_1
mp-1206008	Tb_2Ge_6Pd	m'm'2	s	f	CFM	C_{2v}
mp-1226834	$Ce_2Al_3GaPd_4$	$\overline{4}\overline{2}$'m'	s	f	FM	D_{2d}
mp-7132	DySe	6m'm'	s	j	FM	C_{6v}
mp-1071675	GdSiPt	4m'm'	s	h	FM	C_{4v}
mp-2217089	$MgNi_2(AgO_2)_2$	3m'	s	f	FM	C_{3v}
mp-1223904	Ho_2O_3	$\overline{4}\overline{2}$'m'	s	f	FM	D_{2d}
mp-1078505	$DySn_3$	m'm'2	s	f	CFM	C_{2v}
mp-1206221	Dy_2Ge_6Pd	m'm'2	s	f	FM	C_{2v}
mp-1237274	$K(CoO_2)_2$	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-1223099	$LaCeSi_2$	m'm'2	s	f	FM	C_{2v}
mp-1206886	Ce_2AgGe_6	m'm'2	s	f	FM	C_{2v}
mp-1385392	$V_2(OF)_3$	1.1	s	p	FM	C_1
mp-12902	$ErAgTe_2$	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-764744	V_2OF_5	1.1	s	p	FM	C_1
mp-999517	MnN	6'mm'	g	j	AM	C_{6v}
mp-2210606	$Mg(CoO_2)_2$	1.1	s	p	CFM	C_1
mp-1223968	Ho_2SiGe	m'm'2	s	f	FM	C_{2v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-2222881	$MgTe_2Mo_2W(SeS)_2$	3m’	s	f	FM	C_{3v}
mp-38021	Cr_2AsSe	$\overline{6}$m’2’	s	f	FM	D_{3h}
mp-510670	$FeHO_2$	m’m2’	d	f	AM	C_{2v}
mp-1097052	$La_2Fe_2O_5$	1.1	s	p	CFM	C_1
mp-631413	Re_2PCl	$\overline{42}$’m’	s	f	CFM	D_{2d}
mp-1219910	Pr_2AlSi	m’m’2	s	f	CFM	C_{2v}
mp-1208838	SmSbPd	6’mm’	g	j	AM	C_{6v}
mp-2225840	$MgMn_2O_4$	3m’	s	f	FM	C_{3v}
mp-12563	ErGeAu	6m’m’	s	j	FM	C_{6v}
mp-2227067	$MgMn_2(AgO_2)_2$	3m’	s	f	CFM	C_{3v}
mp-1221791	Mn_2Sb_2PtAu	3m’	s	f	FM	C_{3v}
mp-567366	$CsCuCl_3$	6m’m’	s	j	FM	C_{6v}
mp-2240166	$MgCu_2(O_2F)_2$	m’m2’	d	f	AM	C_{2v}
mp-1206965	Pr_2TiGe_2	4m’m’	s	h	AFM	C_{4v}
mp-1184774	IrN	6m’m’	s	j	FM	C_{6v}
mp-1019278	TbGeAu	6’mm’	g	j	AM	C_{6v}
mp-1225560	Er_2O_3	3m’	s	f	CFM	C_{3v}
mp-1217150	Ti_4GaCo_2Si	3m’	s	f	FM	C_{3v}
mp-1224886	FeP_2W	m’m’2	s	f	FM	C_{2v}
mp-31421	PrAgSn	6m’m’	s	j	FM	C_{6v}
mp-631573	Re_2AuSe	$\overline{42}$’m’	s	f	CFM	D_{2d}
mp-754742	$Li(CoO_2)_2$	3m’	s	f	FM	C_{3v}
mp-2217108	$Mg(MoO_3)_2$	m’m’2	s	f	FM	C_{2v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-999539	MnO	6'mm'	g	j	AM	C_{6v}
mp-1226980	Ce_2Ga_7Pd	4m'm'	s	h	FM	C_{4v}
mp-1235109	$Ba_2Li(NiO_2)_2$	m'm'2	s	f	FM	C_{2v}
mp-1434308	$Mg(CoN)_2$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-777672	$LiFeF_3$	m'm2'	d	f	AM	C_{2v}
mp-1225256	Eu_2ZnSb_2	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-1078415	CaFeSO	6'mm'	g	j	AM	C_{6v}
mp-2226922	$Rb_2Mg(FeS_2)_2$	1.1	s	p	CFM	C_1
mp-1221448	$Na(CoO_2)_2$	1.1	s	p	FM	C_1
mp-1147571	KCu_2GeS_4	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-1207374	Ce_2Ge_6Au	m'm'2	s	f	FM	C_{2v}
mp-1079166	$Tb(GePt)_2$	m'm'2	s	f	FM	C_{2v}
mp-5519	HoGeAu	6'mm'	g	j	AM	C_{6v}
mp-1022963	IrO_3	m'm'2	s	f	FM	C_{2v}
mp-2051155	$FeCl_3$	1.1	s	p	CFM	C_1
mp-1120819	$NaCo_2BiO_6$	3.1	s	p	CFM	C_3
mp-1225298	$Eu_2P_3Pt_4$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-864857	$NbZnCo_2$	$\overline{4}2$'m'	s	f	AFM	D_{2d}
mp-12041	DySbPd	6m'm'	s	j	FM	C_{6v}
mp-1008920	Mn_2Ge	$\overline{4}2$'m'	s	f	CFM	D_{2d}
mp-1219845	Pr_2ZnBi_4	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-999540	MnSe	6'mm'	g	j	AM	C_{6v}
mp-21198	DyAgSn	6'mm'	g	j	AM	C_{6v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1219919	Pr_2CdSb_4	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-1025277	Pr_2AlNO_3	4m'm'	s	h	CFM	C_{4v}
mp-31422	TbAgSn	6'mm'	g	j	AM	C_{6v}
mp-2227400	$BaMg(FeS_2)_2$	m'	s	p	AM	C_s
mp-1008875	Mn_2Sb	$\overline{4}2$'m'	s	f	CFM	D_{2d}
mp-2227057	$Mg(CuO)_2$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-977410	$NbGaFe_2$	$\overline{4}2$'m'	s	f	AFM	D_{2d}
mp-1097648	$HfTiCo_2$	m'm2'	d	f	AFM	C_{2v}
mp-1096575	$AlCr_2W$	m'm2'	d	f	AFM	C_{2v}
mp-2217251	$Na_2Mg(CuO_2)_2$	m'm'2	s	f	FM	C_{2v}
mp-1206946	Ho_2TiGe_2	4m'm'	s	h	AFM	C_{4v}
mp-980649	$TiNbRu_2$	$\overline{4}2$'m'	s	f	AFM	D_{2d}
mp-1225275	Dy_2O_3	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-505105	$Cu(HO)_2$	m'm'2	s	f	FM	C_{2v}
mp-1219972	PrGaSi	4'm'm	d	h	AM	C_{4v}
mp-2222853	$Mg(MoS_2)_2$	m'm'2	s	f	FM	C_{2v}
mp-1224619	GdAlSi	4'm'm	d	h	AM	C_{4v}
mp-1077109	SmSiPt	4m'm'	s	h	FM	C_{4v}
mp-1219170	$Sm_2P_3Pt_4$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-2217147	$MgV_2(OF)_3$	1.1	s	p	FM	C_1
mp-1024964	PrSbPd	6m'm'	s	j	FM	C_{6v}
mp-1245538	$MnZnN_2$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-626068	$MnHO_2$	m'm'2	s	f	FM	C_{2v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1219847	$Pr_2Ga_5Au_3$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-4304	SmSnAu	6'mm'	g	j	AM	C_{6v}
mp-2217085	$MgFe_2(HO_2)_2$	m'm'2	s	f	CFM	C_{2v}
mp-2240136	$SrMg(RuO_3)_2$	m'	s	p	AM	C_s
mp-1096852	$BaNiCl_3$	6m'm'	s	j	FM	C_{6v}
mp-867821	$TaTiMn_2$	$\overline{4}2$'m'	s	f	AFM	D_{2d}
mp-1219169	Sm_2ZnSb_4	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-1519174	Eu_2NbWO_6	$\overline{4}2$'m'	s	f	AFM	D_{2d}
mp-2222875	$MgMo_2HO_6$	1.1	s	p	FM	C_1
mp-1219184	Sm_2CdSb_4	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-1233072	$Mg(CuN)_2$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-1397283	MnS_2	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-1184680	HIr	6m'm'	s	j	FM	C_{6v}
mp-1218365	$SrCr_2BiO_6$	3.1	s	p	FM	C_3
mp-998527	$NiBiO_3$	3.1	s	p	FM	C_3
mp-760484	$TmBO_3$	mm2.1	d	f	AM	C_{2v}
mp-1225364	Eu_2Ga_7Ag	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-1206574	Sm_2TiGe_2	4m'm'	s	h	AFM	C_{4v}
mp-1245970	$MgMnN_2$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-1173720	$NaHo_2F_7$	1.1	s	p	CFM	C_1
mp-1025108	GdAlGe	4'm'm	d	h	AM	C_{4v}
mp-1402859	$Ca(CuN)_2$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-1232988	$LiPr_2Zn_2(PO)_2$	3m'	s	f	FM	C_{3v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-2225574	$MgMn_2O_4$	3m’	s	f	FM	C_{3v}
mp-1205531	$CeTiGe_3$	6’mm’	g	j	AFM	C_{6v}
mp-1096054	$NbRe_2W$	m’m2’	d	f	AFM	C_{2v}
mp-546679	Nd_2AlNO_3	4m’m’	s	h	FM	C_{4v}
mp-1245750	KRuN	4m’m’	s	h	FM	C_{4v}
mp-850916	$LiCoOF_2$	m’	s	p	AM	C_s
mp-1079330	$MgVO_3$	m’m’2	s	f	FM	C_{2v}
mp-11215	CeAgGe	6m’m’	s	j	FM	C_{6v}
mp-1245558	NaMnN	6’mm’	g	j	AM	C_{6v}
mp-1221528	Mn_2SbAs	$\overline{6}$m’2’	s	f	FM	D_{3h}
mp-865448	$TiGaRu_2$	$\overline{42}$’m’	s	f	AFM	D_{2d}
mp-35749	Cr_2SbTe	$\overline{6}$m’2’	s	f	FM	D_{3h}
mp-1176634	$LiMnF_3$	m’m2’	d	f	AM	C_{2v}
mp-1247730	$ScRu_2W$	m’m2’	d	f	AFM	C_{2v}
mp-1443952	$Ca(CoN)_2$	$\overline{42}$’m’	s	f	FM	D_{2d}
mp-1080577	$HoSn_3$	m’m’2	s	f	CFM	C_{2v}
mp-1206077	Er_2Ge_6Pt	m’m’2	s	f	CFM	C_{2v}
mp-1042086	MoS_2	$\overline{42}$’m’	s	f	FM	D_{2d}
mp-1080305	$CeSe_2$	3m’	s	f	FM	C_{3v}
mp-31414	DySnAu	6’mm’	g	j	AM	C_{6v}
mp-1428720	V_2ZnN_2	$\overline{4}$’2m’	d	f	AM	D_{2d}
mp-1245666	$Co(CN)_2$	$\overline{42}$’m’	s	f	CFM	D_{2d}
mp-1225223	$EuBO_3$	mm2.1	d	f	AM	C_{2v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-21061	GdSbPd	6'mm'	g	j	AM	C_{6v}
mp-1245896	NaFeN	6m'm'	s	j	FM	C_{6v}
mp-1206251	Ce_2Ge_6Pt	m'm'2	s	f	FM	C_{2v}
mp-1206928	CeAlGe	4m'm'	s	h	FM	C_{4v}
mp-2225272	$Mg(CrS_2)_2$	3m'	s	f	FM	C_{3v}
mp-2226699	$SrMg(RuO_3)_2$	m'm'2	s	f	FM	C_{2v}
mp-1206030	Tm_2Ge_6Pt	m'm'2	s	f	FM	C_{2v}
mp-19712	PrAgPb	6m'm'	s	j	FM	C_{6v}
mp-1080260	$CeSe_2$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-1093966	$MgTiCo_2$	m'm2'	d	f	AFM	C_{2v}
mp-1096665	$BeFe_2W$	m'm2'	d	f	AFM	C_{2v}
mp-2225908	$Mg(CuO)_2$	3m'	s	f	FM	C_{3v}
mp-2217467	$MgCo_2(AgO_2)_2$	3m'	s	f	FM	C_{3v}
mp-676779	$NaHo_2F_7$	1.1	s	p	FM	C_1
mp-4808	NdAgSn	6'mm'	g	j	AM	C_{6v}
mp-1215191	$ZrTiNi_2$	m'm'2	s	f	FM	C_{2v}
mp-2215960	$MgCr_2O_4$	$\overline{4}$.1	s	f	FM	S_4
mp-555857	$BaVS_3$	2'2'2	s	p	FM	D_2
mp-631567	$AgAsRu_2$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-2223607	$MgMn_2(OF)_2$	m'm'2	s	f	CFM	C_{2v}
mp-1182200	Ce_2O_3	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-2223086	$MgV_2(AuS_2)_2$	3m'	s	f	FM	C_{3v}
mp-1235284	$LiPr_2(BrO_2)_2$	1.1	s	p	FM	C_1

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-2225589	$MgFe_2(OF)_2$	m'm'2	s	f	CFM	C_{2v}
mp-1235791	$LiTm_2(ClO)_2$	4m'm'	s	h	CFM	C_{4v}
mp-1235016	$LiCr_2O_4$	m'm'2	s	f	FM	C_{2v}
mp-1220352	Nd_2Si_3Ag	m'm'2	s	f	FM	C_{2v}
mp-690516	$Sr_2Co_2O_5$	1.1	s	p	CFM	C_1
mp-755095	V_2O_3F	m'm'2	s	f	FM	C_{2v}
mp-1186908	RhBr	6'mm'	g	j	AM	C_{6v}
mp-1206173	CeSiGe	4m'm'	s	h	FM	C_{4v}
mp-1078919	CsV_2O_5	6m'm'	s	j	FM	C_{6v}
mp-676144	$Ti(CrS_2)_2$	1.1	s	p	CFM	C_1
mp-2240631	$MgTi(CoO_3)_2$	1.1	s	p	CFM	C_1
mp-2225927	$Mg(MoS_2)_2$	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-1245601	NaCuN	6'mm'	g	j	AM	C_{6v}
mp-865780	$TiMn_2Ga$	$\overline{42}$'m'	s	f	AFM	D_{2d}
mp-808843	$V_2(OF)_3$	1.1	s	p	FM	C_1
mp-1215384	Zr_3TiCu_2	4m'm'	s	h	FM	C_{4v}
mp-1223926	Ho_2SbO_2	m'm2'	d	f	AM	C_{2v}
mp-1220308	Nd_2Si_3	m'm'2	s	f	CFM	C_{2v}
mp-1246000	$LiMnN_2$	$\overline{42}$'m'	s	f	FM	D_{2d}
mp-1218247	$SrMn_2BiO_6$	4m'm'	s	h	FM	C_{4v}
mp-1225503	ErAlSi	4'm'm	d	h	AM	C_{4v}
mp-1217678	Tb_2Si_3	m'm'2	s	f	CFM	C_{2v}
mp-2226887	$MgCu_2WS_4$	$\overline{42}$'m'	s	f	FM	D_{2d}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1207003	La_2Cu_2I	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-8951	SmAsPd	6'mm'	g	j	AM	C_{6v}
mp-1039355	$CeMg_2$	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-1097632	$NbMo_2W$	m'm2'	d	f	AFM	C_{2v}
mp-1217673	Tb_2O_3	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-777522	$LiFeF_3$	m'm2'	d	f	AM	C_{2v}
mp-6917	TmAgSn	6'mm'	g	j	AM	C_{6v}
mp-2240456	$K_2Mg(CoO_2)_2$	4m'm'	s	h	CFM	C_{4v}
mp-1205968	Tb_2Ge_6Au	m'm'2	s	f	CFM	C_{2v}
mp-1226320	Cr_2TeSe	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-1220375	$NbAlV_2$	m'm'2	s	f	CFM	C_{2v}
mp-1226822	$Ce_2Y(AlPd)_3$	m'm'2	s	f	FM	C_{2v}
mp-1216734	$TiMoAs_2$	m'm2'	d	f	AM	C_{2v}
mp-1433304	$Mg(VN)_2$	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-2217148	$Na_2MgMn_2O_4$	m'm'2	s	f	FM	C_{2v}
mp-1206587	EuO_3	m'm'2	s	f	FM	C_{2v}
mp-1520588	Eu_2ZrWO_6	$\overline{42}$'m'	s	f	AFM	D_{2d}
mp-1078455	Nd_2SO_6	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-1236076	$LiTm_2(ClO)_2$	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-1286205	$LaMn_2CdO_6$	1.1	s	p	FM	C_1
mp-1281811	MnOF	m'm'2	s	f	FM	C_{2v}
mp-2225848	$Mg(NiO_2)_2$	3m'	s	f	FM	C_{3v}
mp-1227466	$BaVSe_2S$	m'm'2	s	f	FM	C_{2v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-2225358	$Mg(VS_2)_2$	3m'	s	f	FM	C_{3v}
mp-613327	$Fe(BW)_2$	mm2.1	d	f	AM	C_{2v}
mp-974315	RuI	6'mm'	g	j	AM	C_{6v}
mp-1217032	$TiAlV_2$	m'm'2	s	f	CFM	C_{2v}
mp-1237723	MnCdTe	m'm'2	s	f	FM	C_{2v}
mp-2227108	$MgCu_2WS_4$	$\overline{4}2$'m'	s	f	FM	D_{2d}
mp-1223941	$K(CoO_2)_2$	m'm2'	d	f	AM	C_{2v}
mp-1406978	$Ca(VN)_2$	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-1226189	CrP_2W	m'm'2	s	f	FM	C_{2v}
mp-1097548	$MgTiNi_2$	m'm2'	d	f	AFM	C_{2v}
mp-1184482	GdCl	6'mm'	g	j	AM	C_{6v}
mp-1226267	Cr_2SeS	$\overline{6}$m'2'	s	f	FM	D_{3h}
mp-1219837	Pr_2ZnAs_4	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-1385829	$Ca(MnN)_2$	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-2215898	$BaYMgCu_2O_5$	m'm'2	s	f	FM	C_{2v}
mp-1223935	Ho_2Si_3Pd	m'm'2	s	f	CFM	C_{2v}
mp-1077762	NdSiPt	4'm'm	d	h	AM	C_{4v}
mp-1216761	$TiVS_2$	m'm2'	d	f	AM	C_{2v}
mp-1018826	NdGeAu	6'mm'	g	j	AM	C_{6v}
mp-865898	$TiZnCo_2$	$\overline{4}2$'m'	s	f	AFM	D_{2d}
mp-676241	$FeCl_3$	1.1	s	p	CFM	C_1
mp-1094815	$CeMg_2$	m'm'2	s	f	CFM	C_{2v}
mp-1219929	Pr_2Al_3Ge	m'm'2	s	f	FM	C_{2v}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-1184406	$Eu_2W_2O_5$	4m'm'	s	h	CFM	C_{4v}
mp-20732	EuAsPt	4m'm'	s	h	FM	C_{4v}
mp-2223092	$MgCr_2O_6$	1.1	s	p	FM	C_1
mp-1095736	$BeNbCo_2$	m'm2'	d	f	AFM	C_{2v}
mp-755254	$LiFe_2(ClO)_2$	m'm'2	s	f	CFM	C_{2v}
mp-1096156	AlV_2W	m'm2'	d	f	AFM	C_{2v}
mp-675832	$SrCeN_2$	2'	s	p	AM	C_2
mp-1079656	$TmAgS_2$	4'm'm	d	h	AM	C_{4v}
mp-1019101	SmGeAu	6'mm'	g	j	AM	C_{6v}
mp-1025028	PrSiAg	4'm'm	d	h	AM	C_{4v}
mp-1446564	$LiFeF_3$	62'2'	s	p	FM	D_6
mp-2227380	$MgCu_2WS_4$	2'2'2	s	p	CFM	D_2
mp-2222810	$MgCo_2(HO_2)_2$	m'm'2	s	f	FM	C_{2v}
mp-2217384	$K_2Mg(FeO_2)_2$	1.1	s	p	FM	C_1
mp-636320	$TiGaFe_2$	$\overline{4}2$'m'	s	f	AFM	D_{2d}
mp-16741	TmSnAu	6m'm'	s	j	FM	C_{6v}
mp-1235642	$LiSm_2SO_2$	3m'	s	f	FM	C_{3v}
mp-2217124	$Sr_2MgCo_2O_5$	1.1	s	p	CFM	C_1
mp-1209737	Pr_2Ge_6Au	m'm'2	s	f	FM	C_{2v}
mp-1215245	$ZrTi(NiH_3)_2$	m'm'2	s	f	CFM	C_{2v}
mp-1221410	$Na(VSe_2)_2$	3m'	s	f	FM	C_{3v}
mp-1225273	DyAlSi	4'm'm	d	h	AM	C_{4v}
mp-1062072	YMn_2	$\overline{4}2$'m'	s	f	CFM	D_{2d}

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Id	Material	MPG	Wave	Wave (no Tbp)	Magtype	PG
mp-753056	$HoBO_3$	mm2.1	d	f	AM	C_{2v}
mp-979271	$TbAgSe_2$	4'm'm	d	h	AM	C_{4v}
mp-758052	$LiCuF_3$	3m'	s	f	FM	C_{3v}
mp-989401	$CaMoN_3$	m'm'2	s	f	FM	C_{2v}
mp-2222778	$K_2Mg(CoO_2)_2$	1.1	s	p	CFM	C_1
mp-1219199	$Sm_2Ga_5Au_3$	$\overline{4}$'2m'	d	f	AM	D_{2d}
mp-2222888	$K_2Mg(CoO_2)_2$	1.1	s	p	CFM	C_1
mp-631368	$SiSbOs_2$	$\overline{42}$'m'	s	f	FM	D_{2d}

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