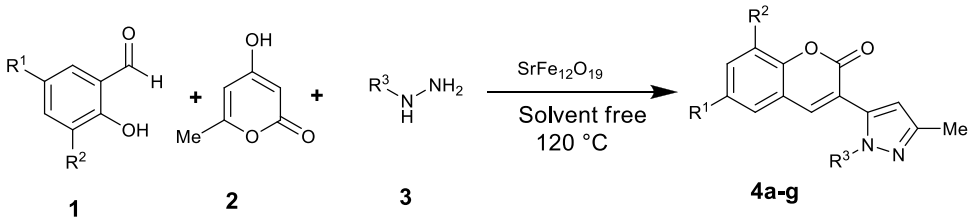
Table 1: Optimizing the reaction condition for the synthesis of chromenone-pyrazole

no.	Catalyst	Solvent	Condition	Time (h)	Yield (%)
1	SiO_2-Pr-SO_3H	-	120 °C	> 4	-
2	$SrFe_{12}O_{19}$	EtOH:H_2O (1:1)	Reflux	2.5	67
3	$SrFe_{12}O_{19}$	EtOH	Reflux	33 min	52
4	$SrFe_{12}O_{19}$	H_2O	Reflux	1.5	75
5	$SrFe_{12}O_{19}$	-	120 °C	22 min	95

Table 2: Synthesis of chromenone-pyrazoles derivatives **4a-4g** in the presence of nanomagnetic $SrFe_{12}O_{19}$ in solvent-free condition

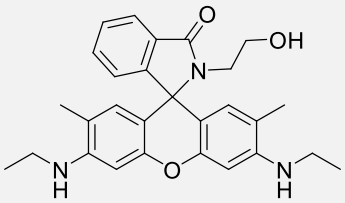
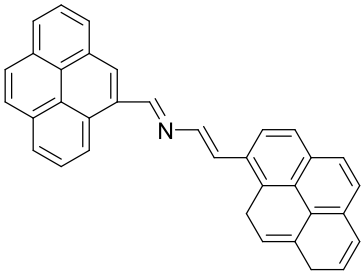
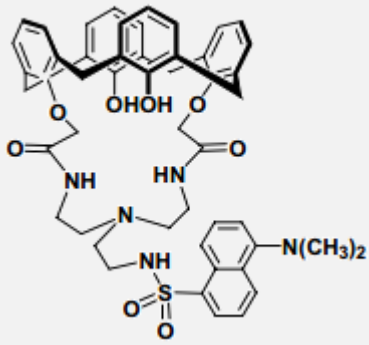
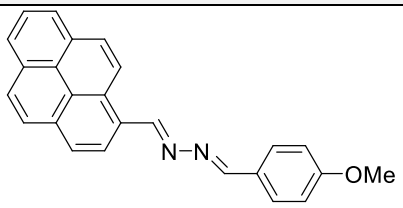


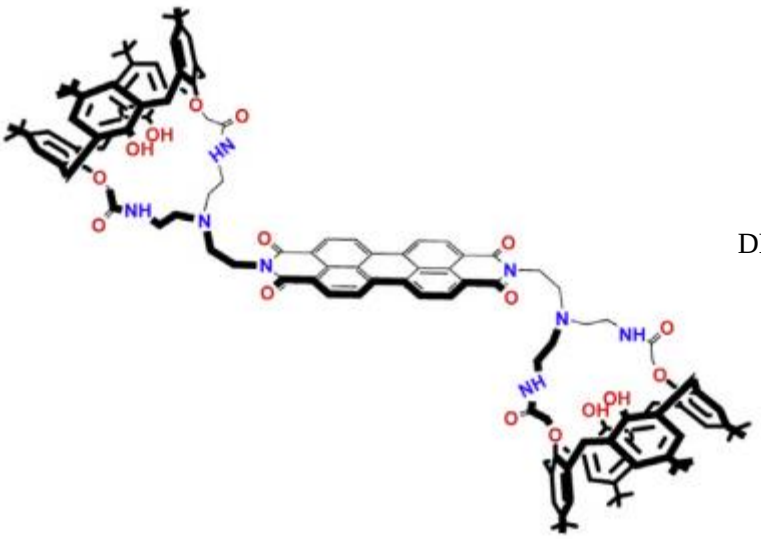
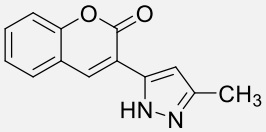
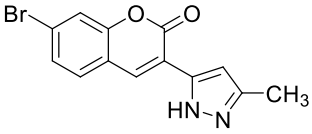
Entry	No.	R^1	R^2	R^3	Time (min)	Yield (%)	m.p. (°C)	m.p. [Lit.] (°C)
1	**4a**	NO_2	H	Ph	22	88	168-170	[28]
2	**4b**	Br	H	Ph	20	89	160-158	[29]
3	**4c**	H	H	Ph	20	89	125-127	[29]
4	**4d**	H	H	H	18	96	182-184	New
5	**4e**	H	H	4-NO_2-Ph	20	87	270-272	New
6	**4f**	H	OH	Ph	20	96	281-280	New
7	**4g**	Br	H	H	18	89	241-239	New

Table 3: Comparison of different reported conditions in the literature for the synthesis of chromenone-pyrazoles derivatives **4a-4c**

Entry	Catalyst	Solvent	Condition	Time (h)	Yield (%)	Ref.
1	Piperidine	CH_3CN	Reflux	3	60	[28]
2	Meglumine	$EtOH:H_2O$ (1:1)	Reflux	1.5	75	[29]

Table 3: Comparison of the analytical performance of compounds **6** and **7** with some previously reported chemosensors

NO.	Chemosensor	Solvent	The detection limit (M)	Ref.
1		CH_3CN	8×10^{-6}	30
2		CH_3CN	2.5×10^{-6}	31
3		MeCN:H_2O (4:1)	4×10^{-6}	32
4		CH_3CN (7:3)	4×10^{-6}	33

5		DMF/H_2O (95:5)	5.56×10^{-7}	[34]
6		EtOH	4×10^{-7}	This work
7		EtOH	3×10^{-8}	This work