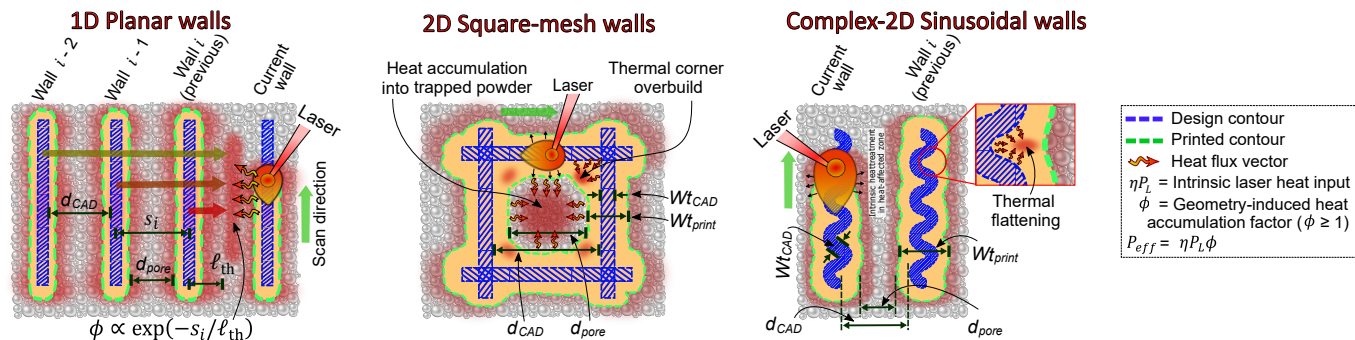
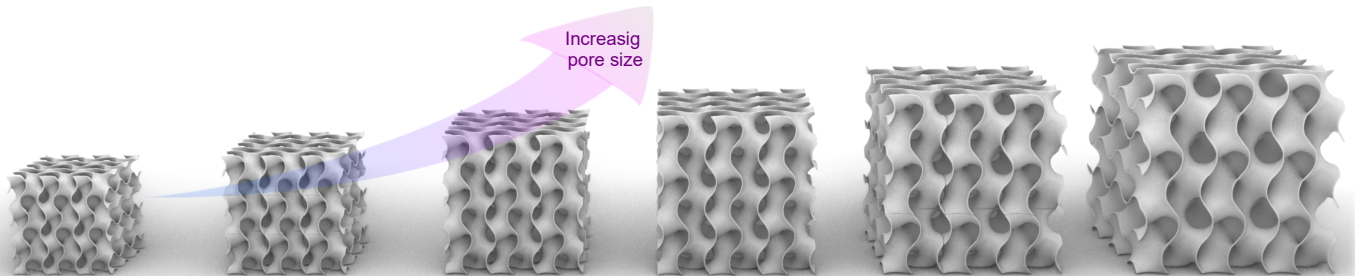


(a) Geometric-design-induced thermal behavior



(b) Pore-size-controlled inter-wall thermal interaction

Strong inter-wall thermal coupling $\phi \gg 1 \rightarrow$ excessive effective heat input	Balanced laser-geometry interaction $\phi > 1 \rightarrow$ stable effective heat input	Thermally isolated walls $\phi \rightarrow 1 \rightarrow$ laser-limited melting
$\phi \gg 1 \Rightarrow P_{eff} = \eta_{PL}\phi \uparrow \uparrow$	$\phi > 1 \Rightarrow P_{eff} = \eta_{PL}\phi \uparrow$	$\phi \rightarrow 1 \Rightarrow P_{eff} \approx \eta_{PL}$



Increasing pore size $\rightarrow$ reduced thermal interaction

(c) Geometry-controlled fusion regimes under low laser energy

