

Low-density nanocrystalline alumina from random searches

Matthew J. Lyle, Chris J. Pickard & Richard J. Needs

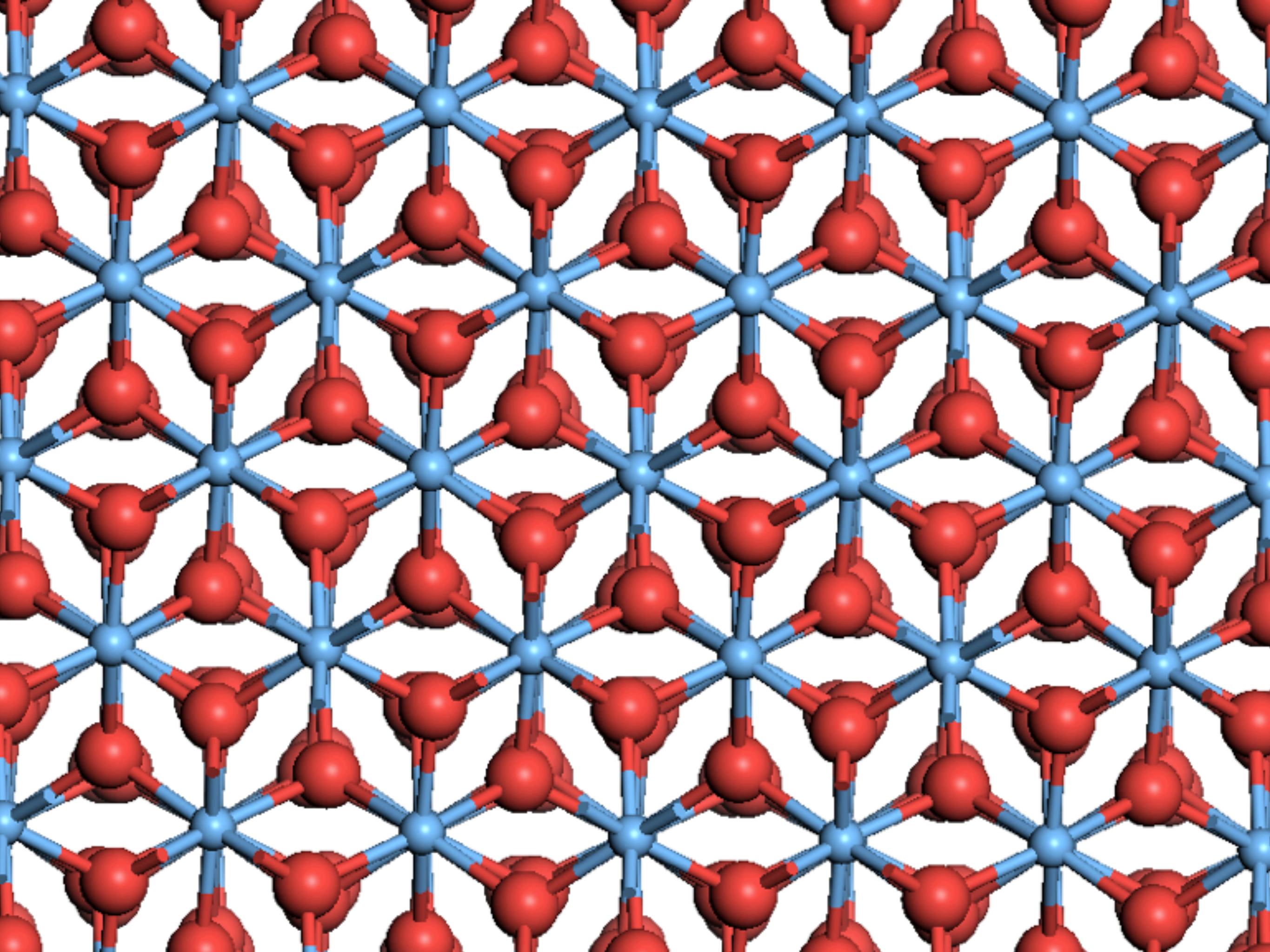


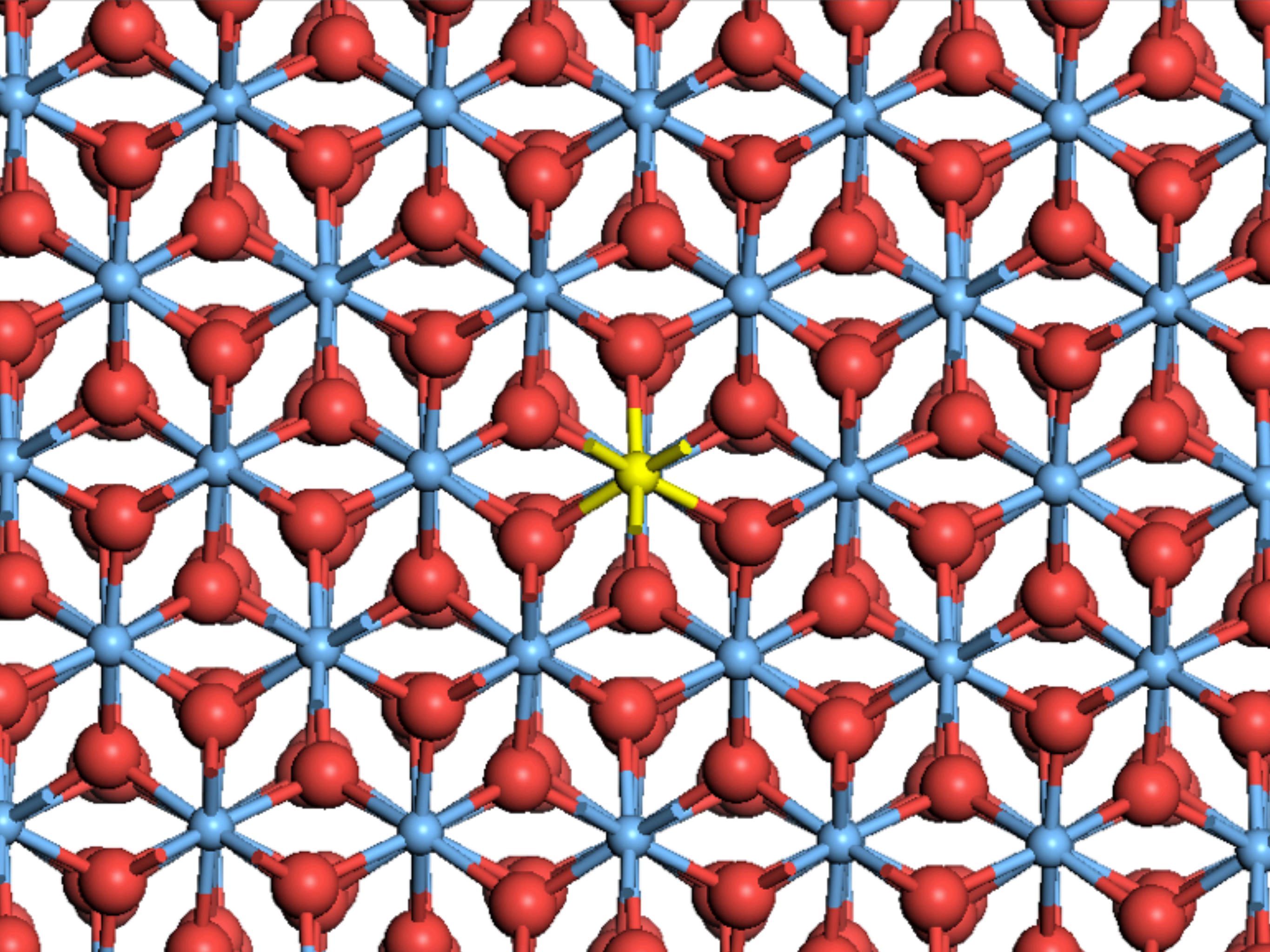


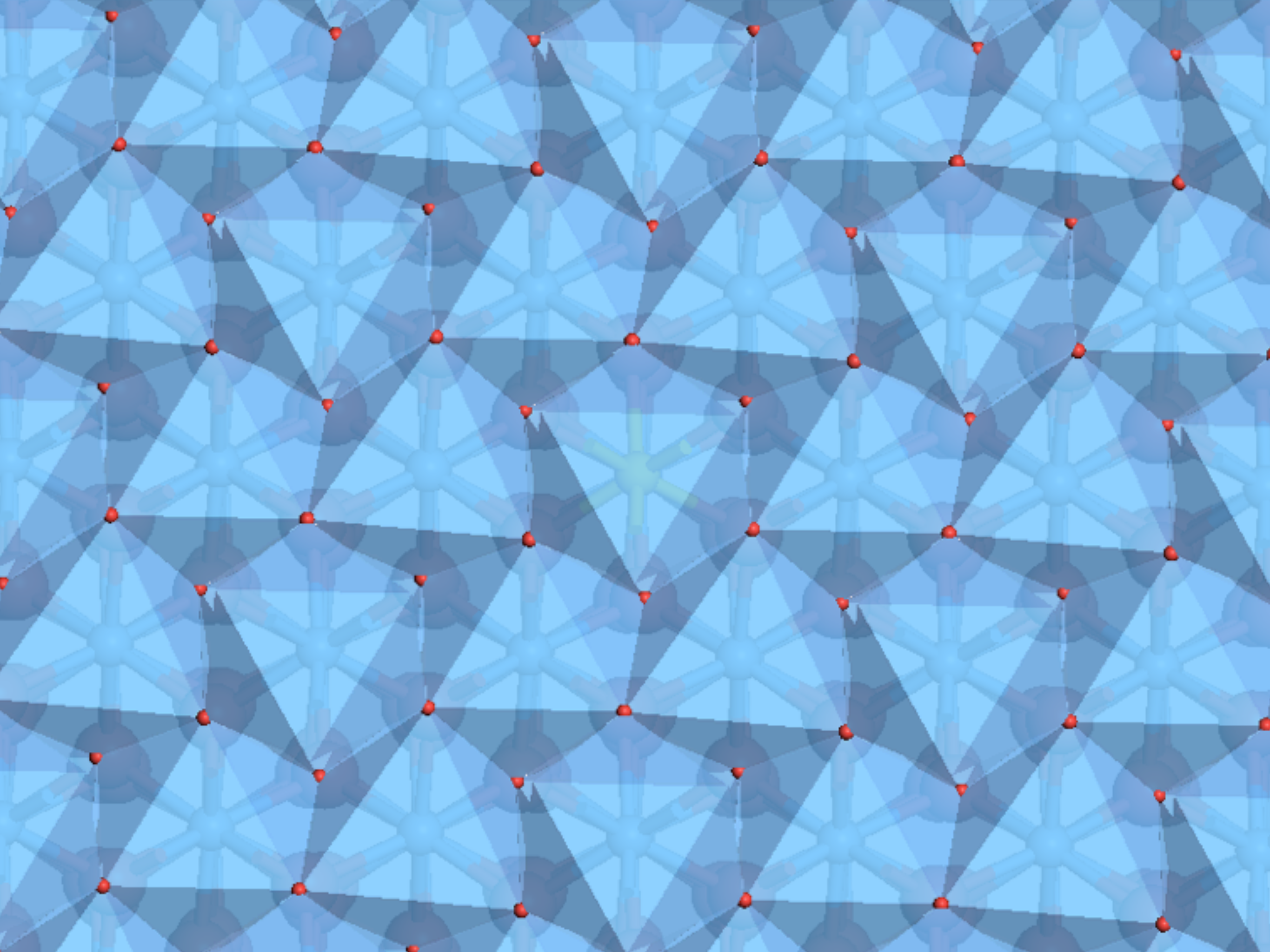
α



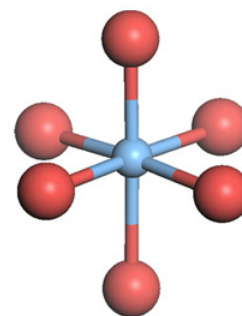
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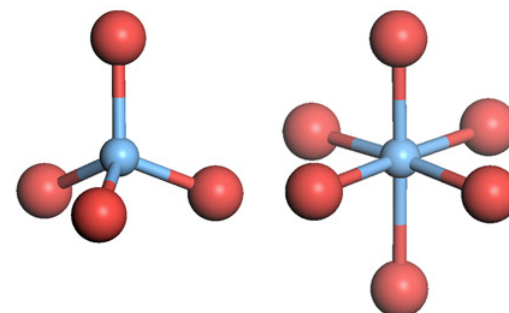




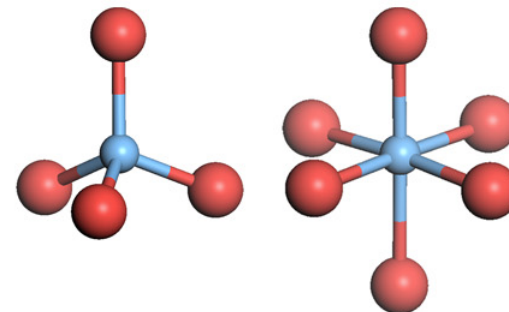
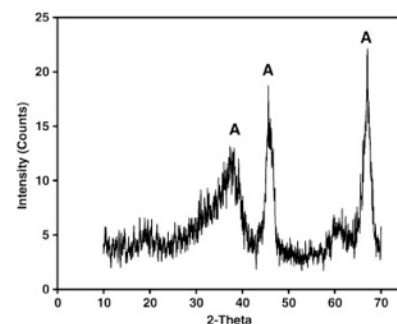
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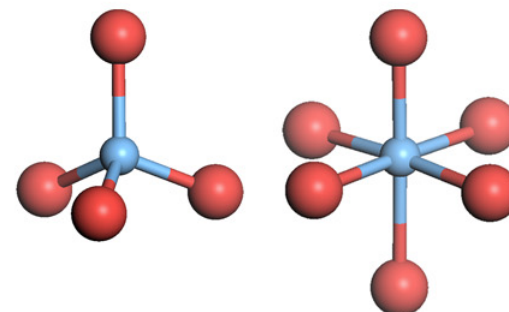
γ



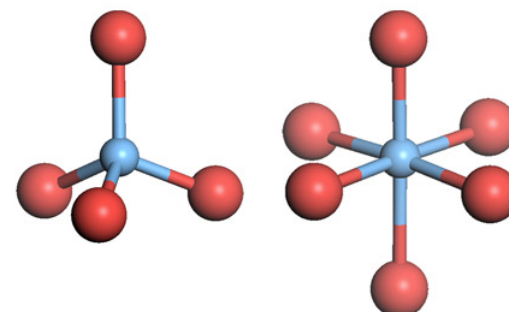
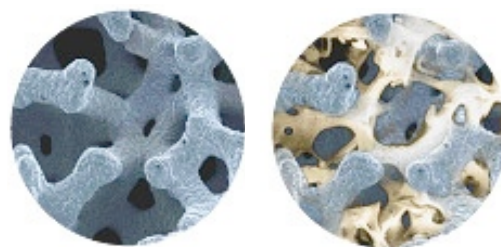
θ



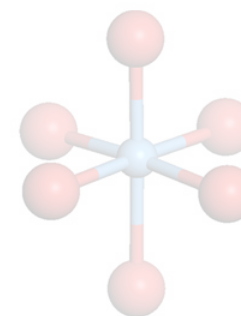
κ



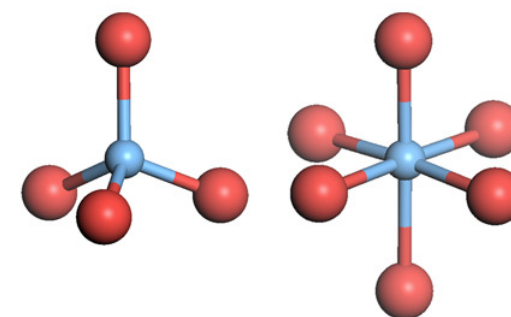
δ



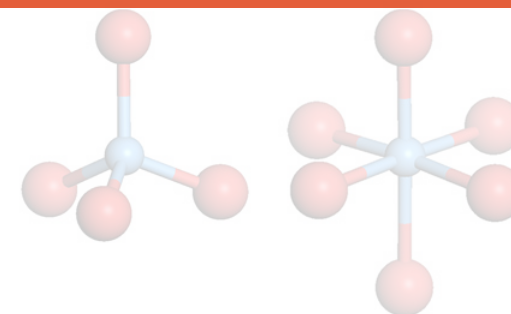
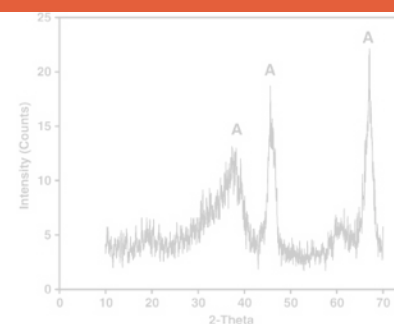
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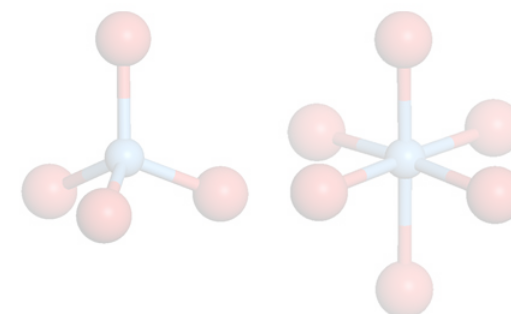
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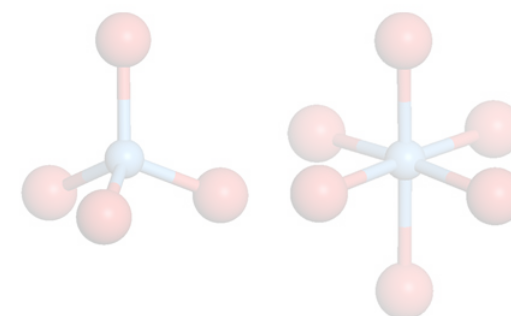
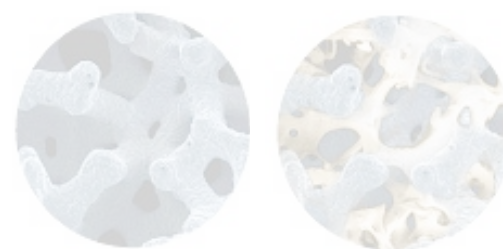
θ



κ



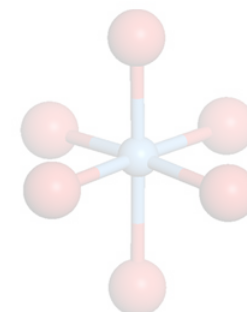
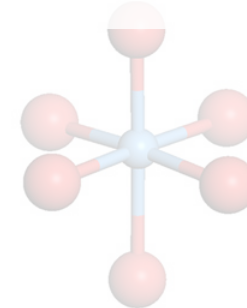
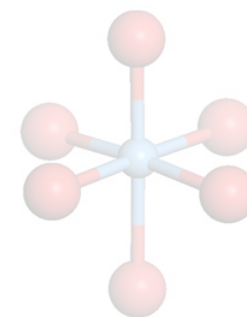
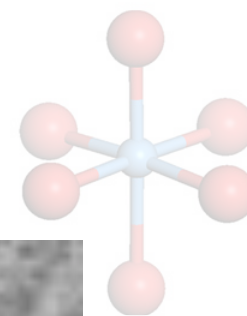
δ



α



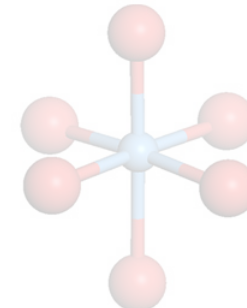
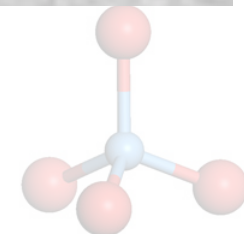
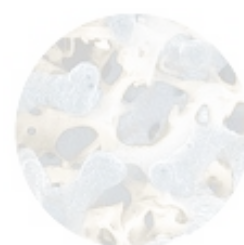
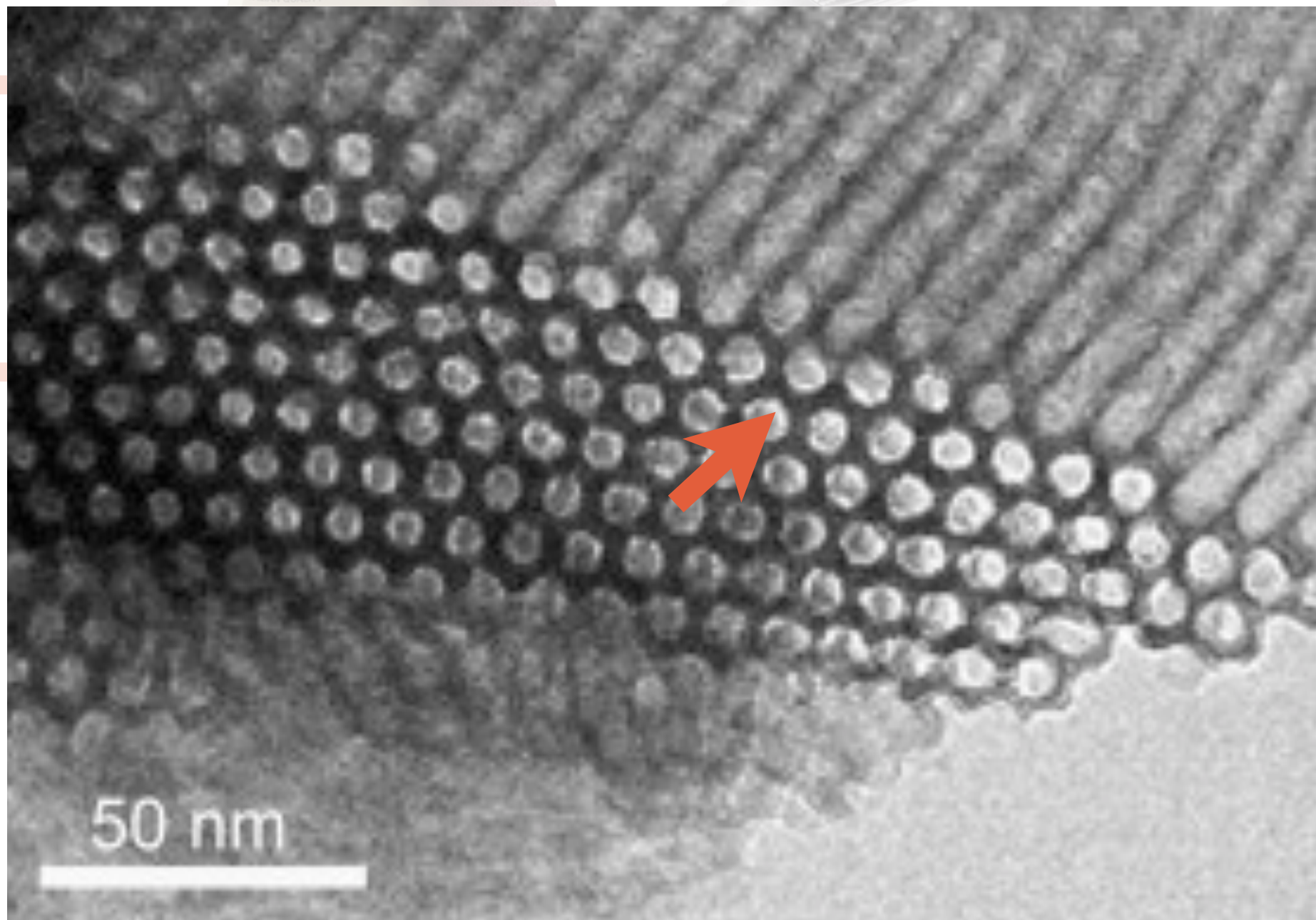
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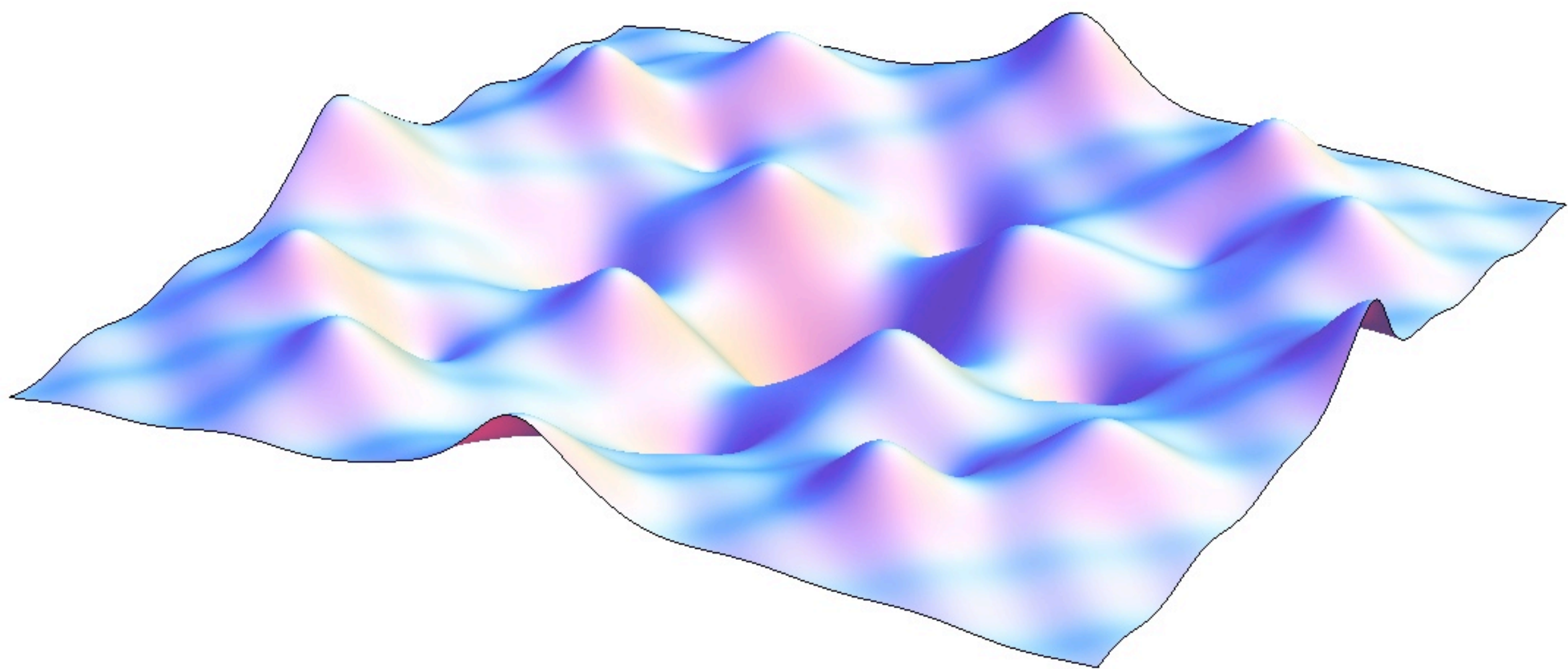


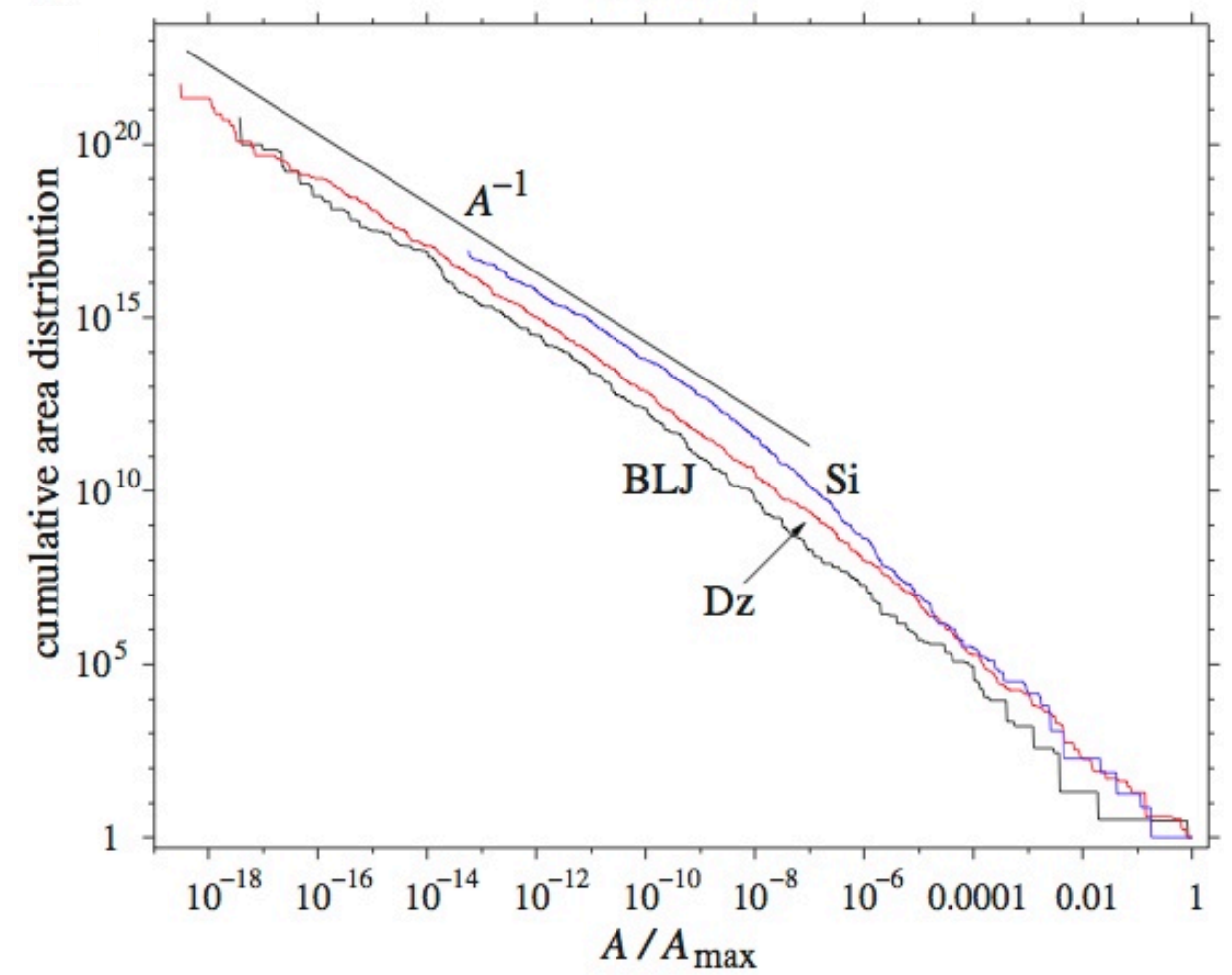
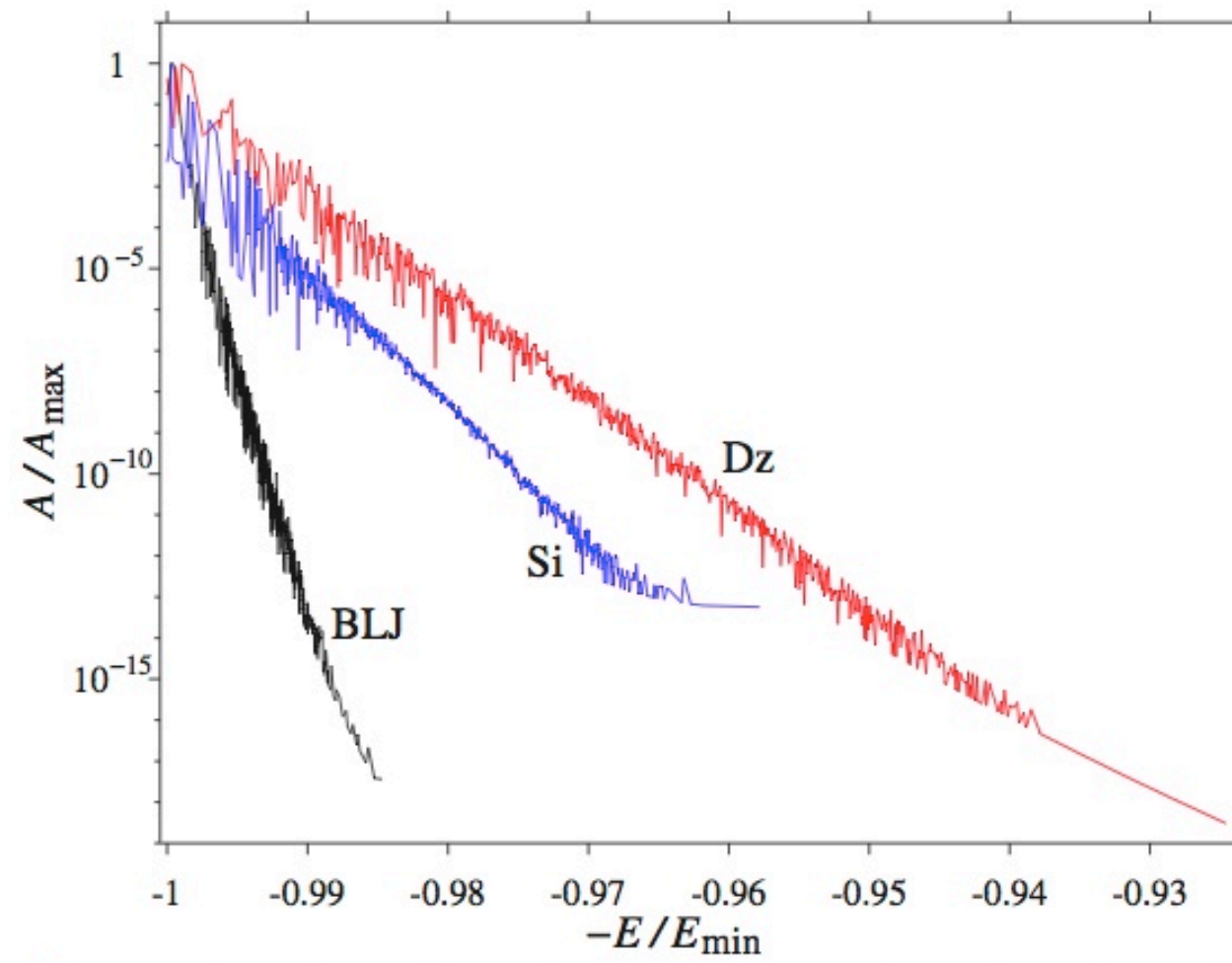
θ

κ

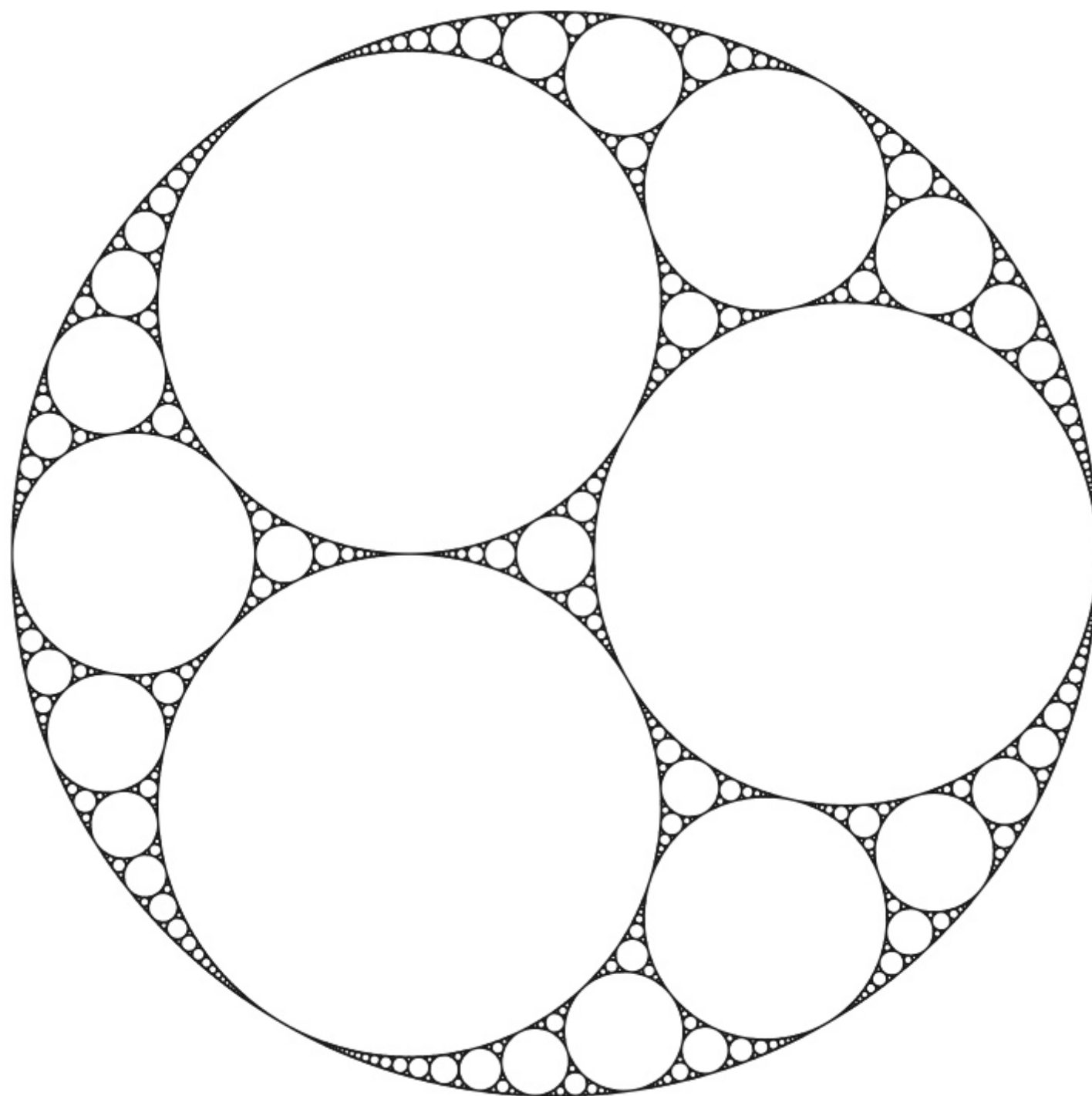
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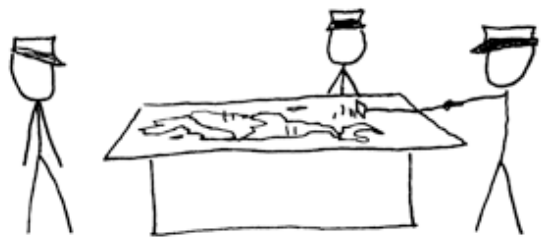
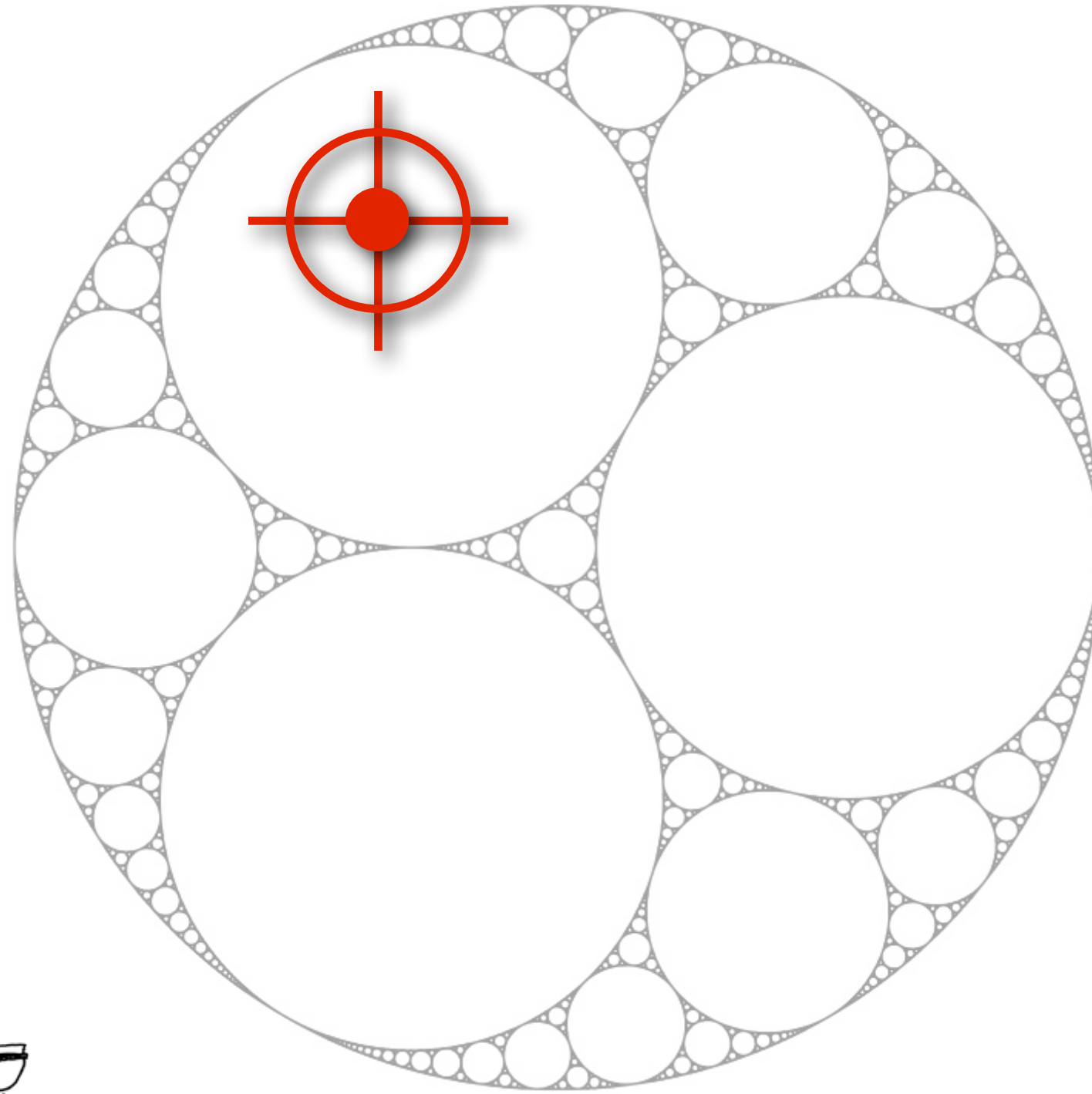


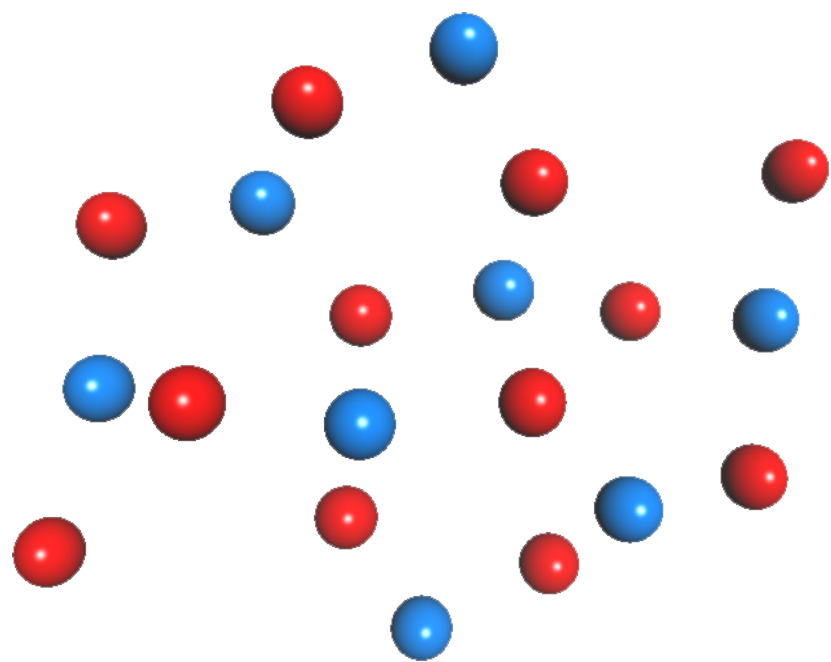




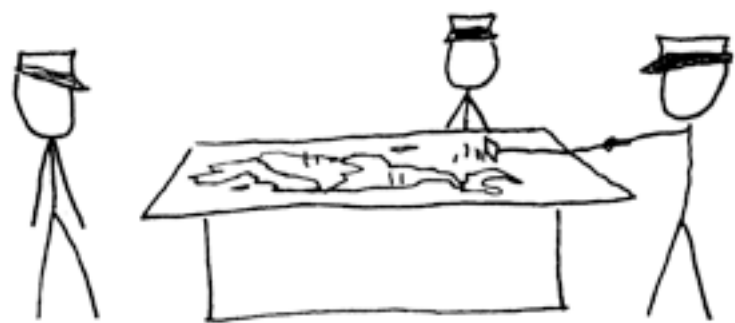
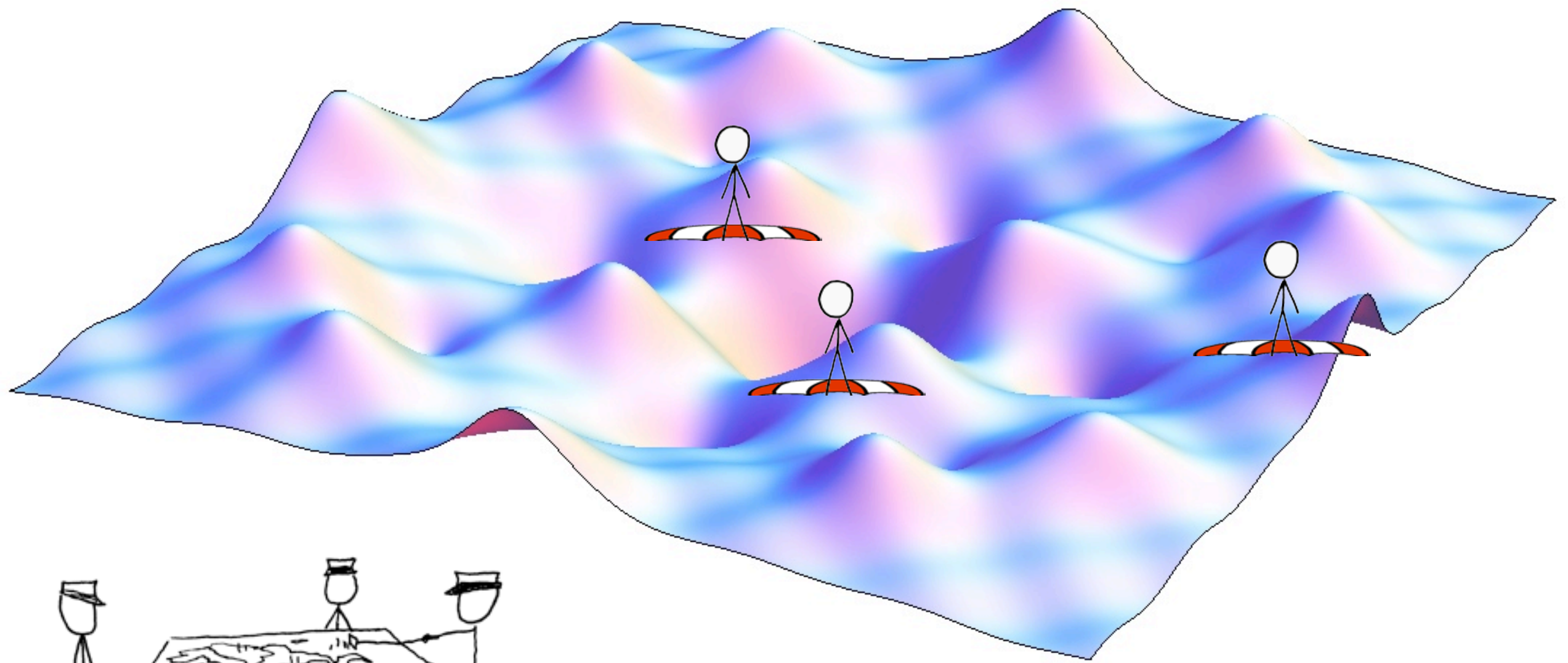
Massen, C. P. & Doye, J. P. K. *Phys. Rev. E* **75**, 037101 (2007)

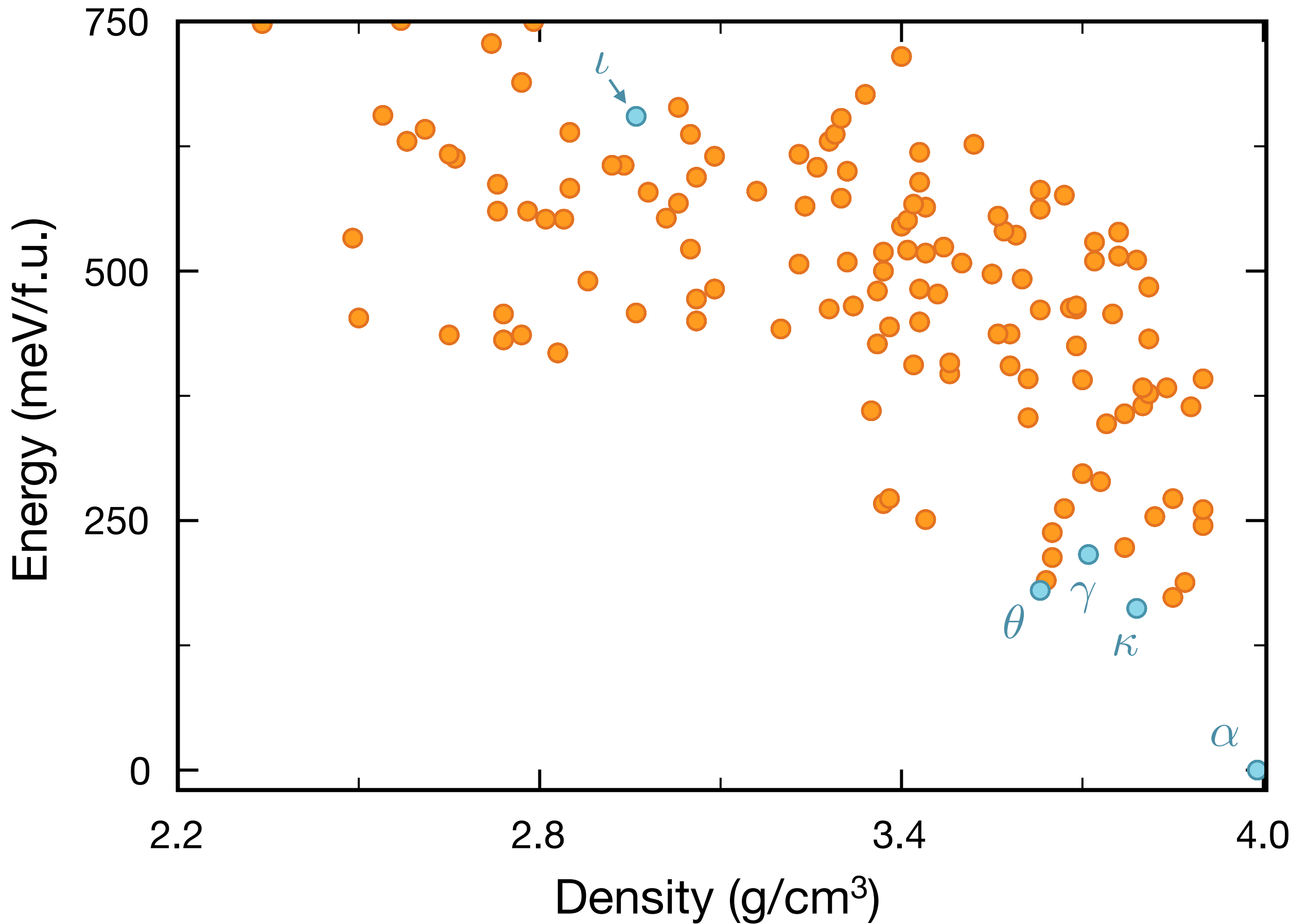


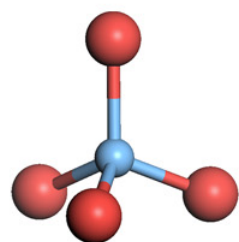
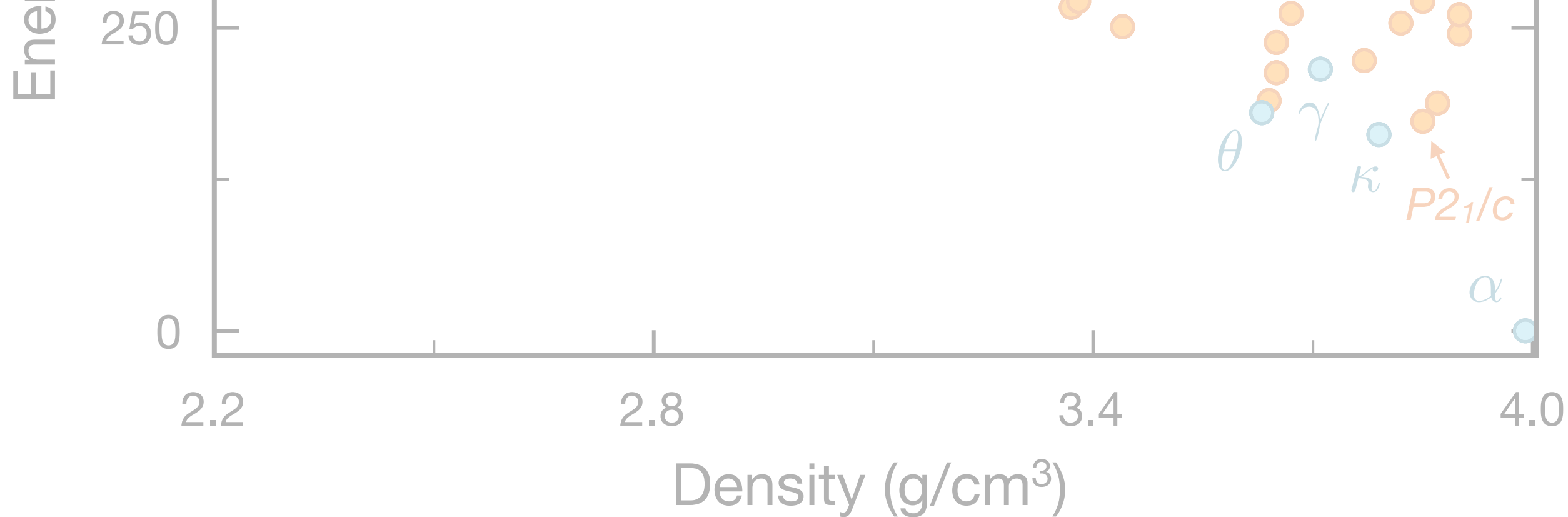






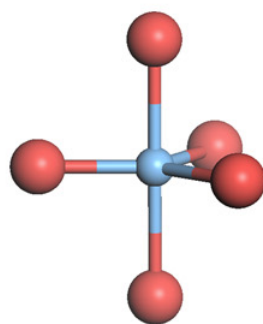






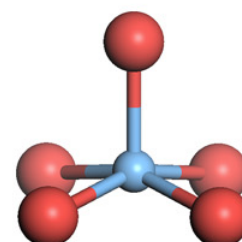
T_d

Tetrahedral



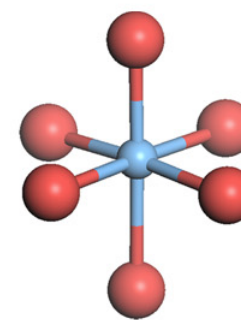
D_{3h}

Trigonal
bipyramidal



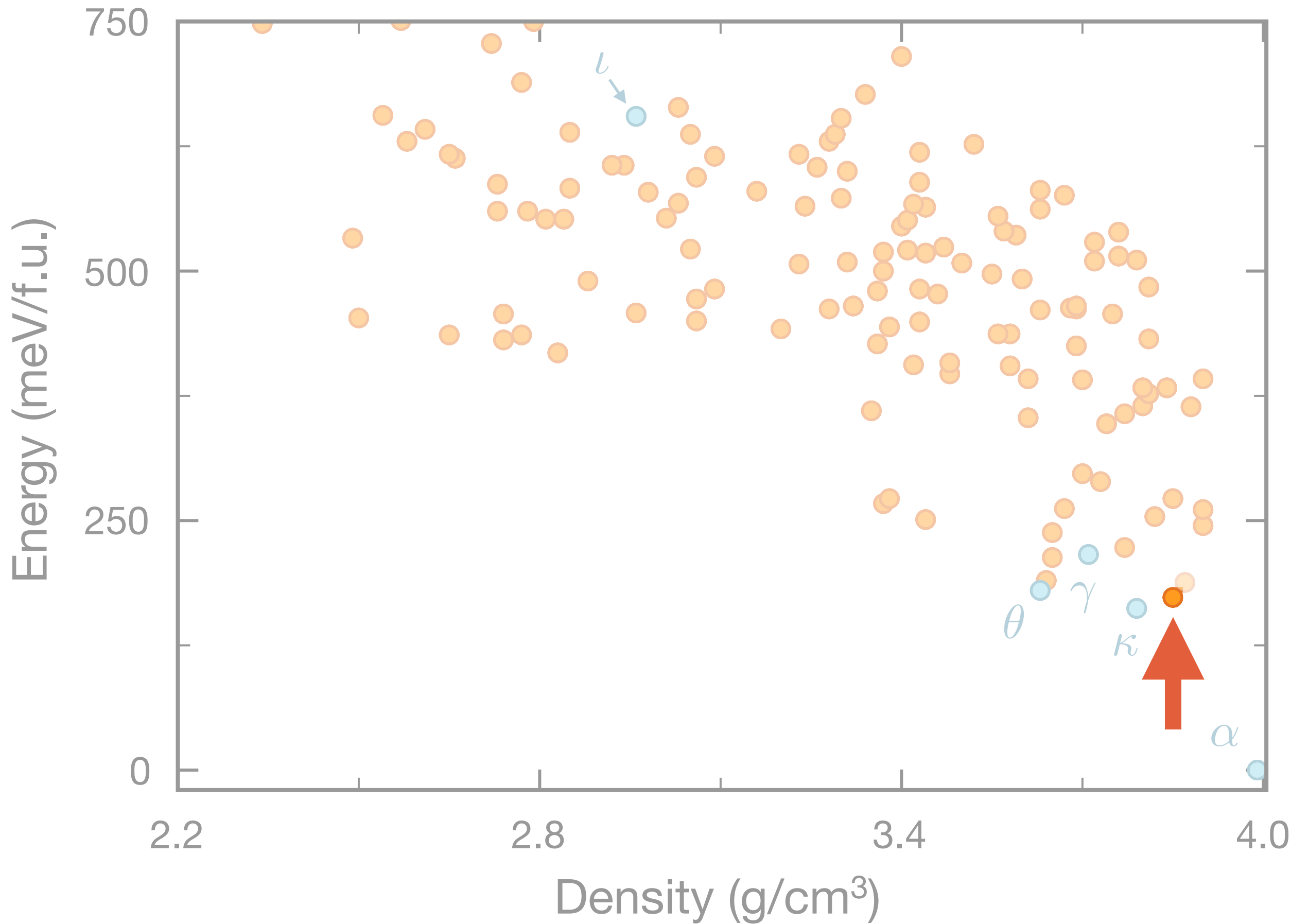
C_{4v}

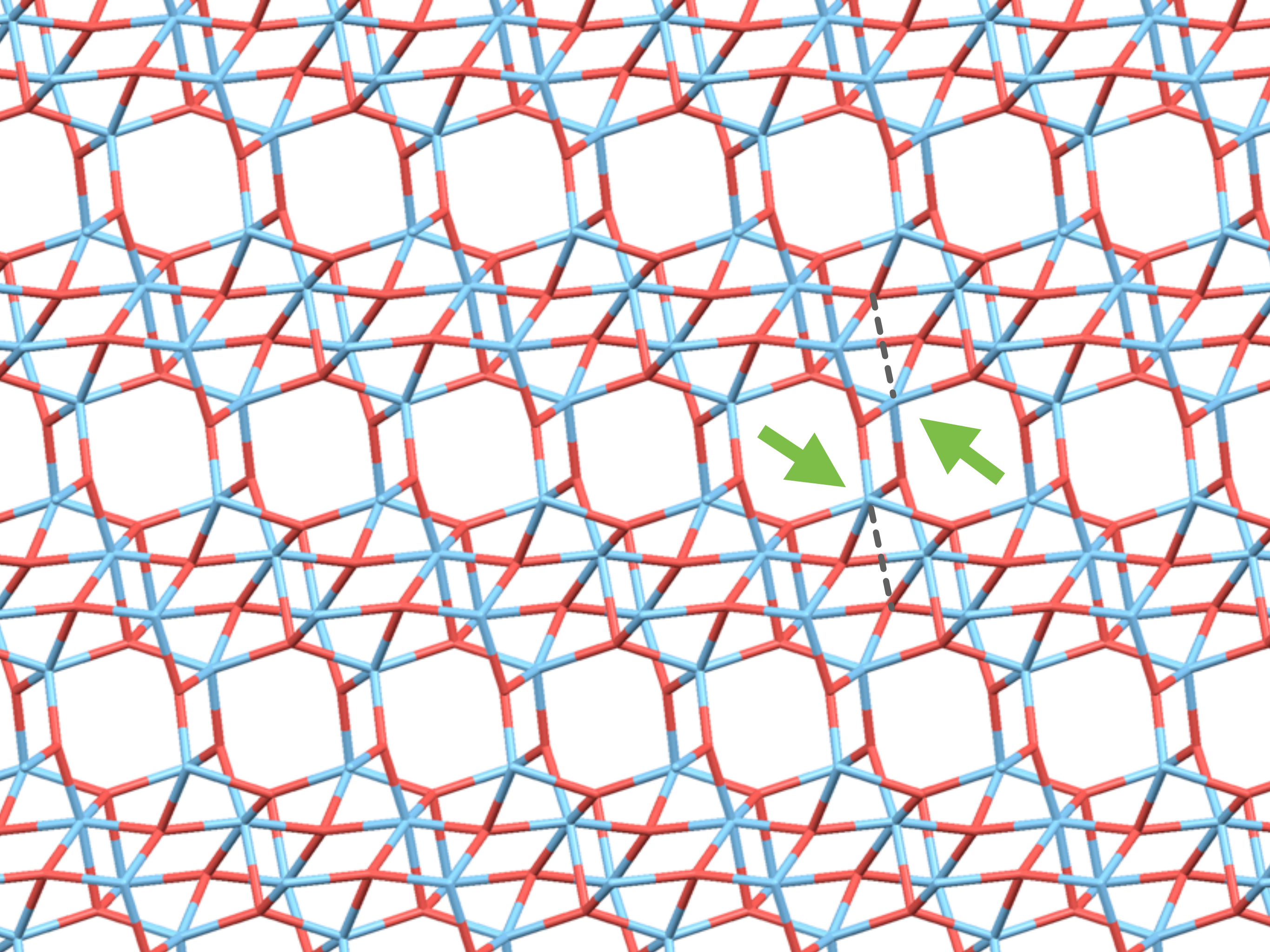
Square-based
pyramidal

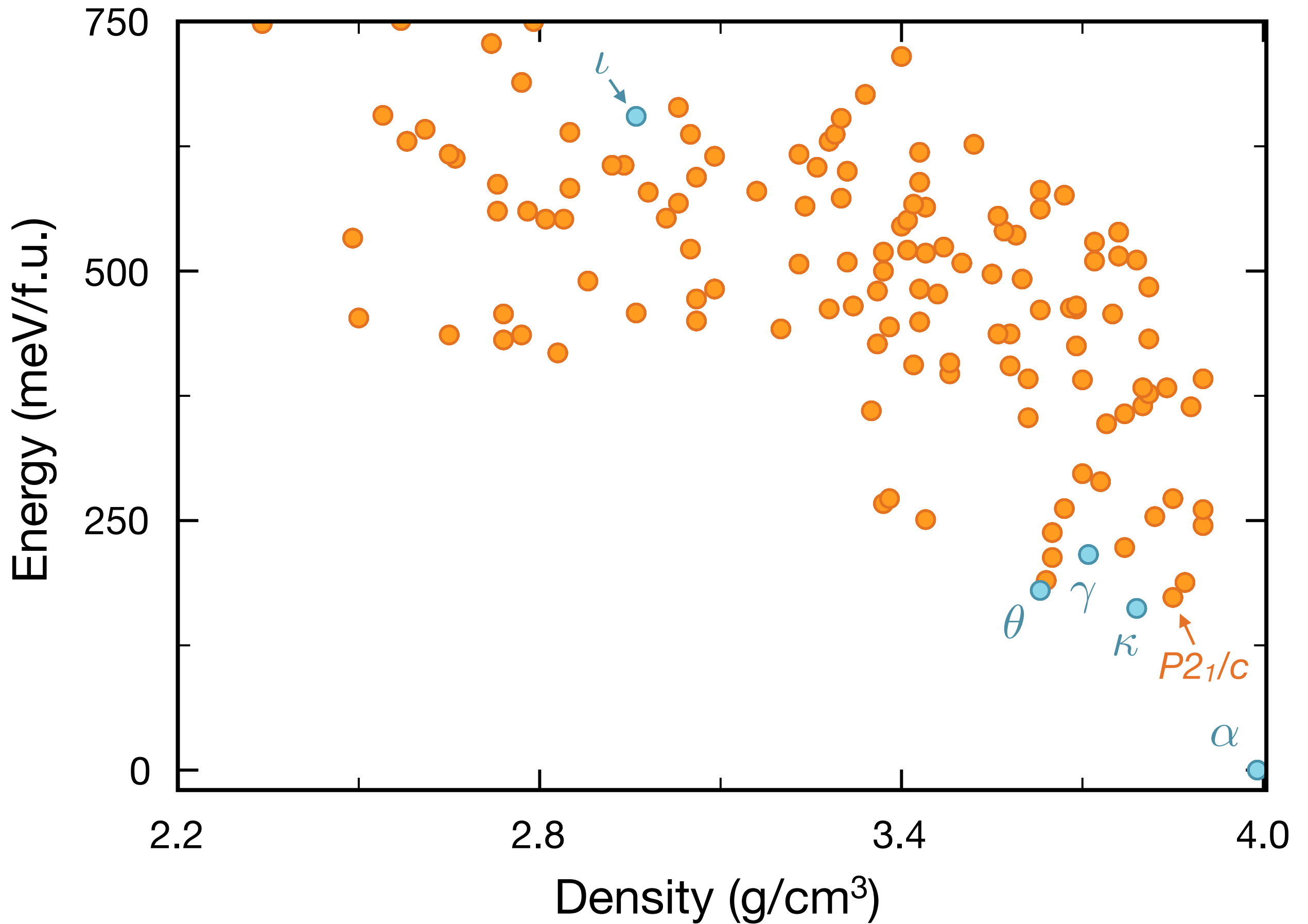


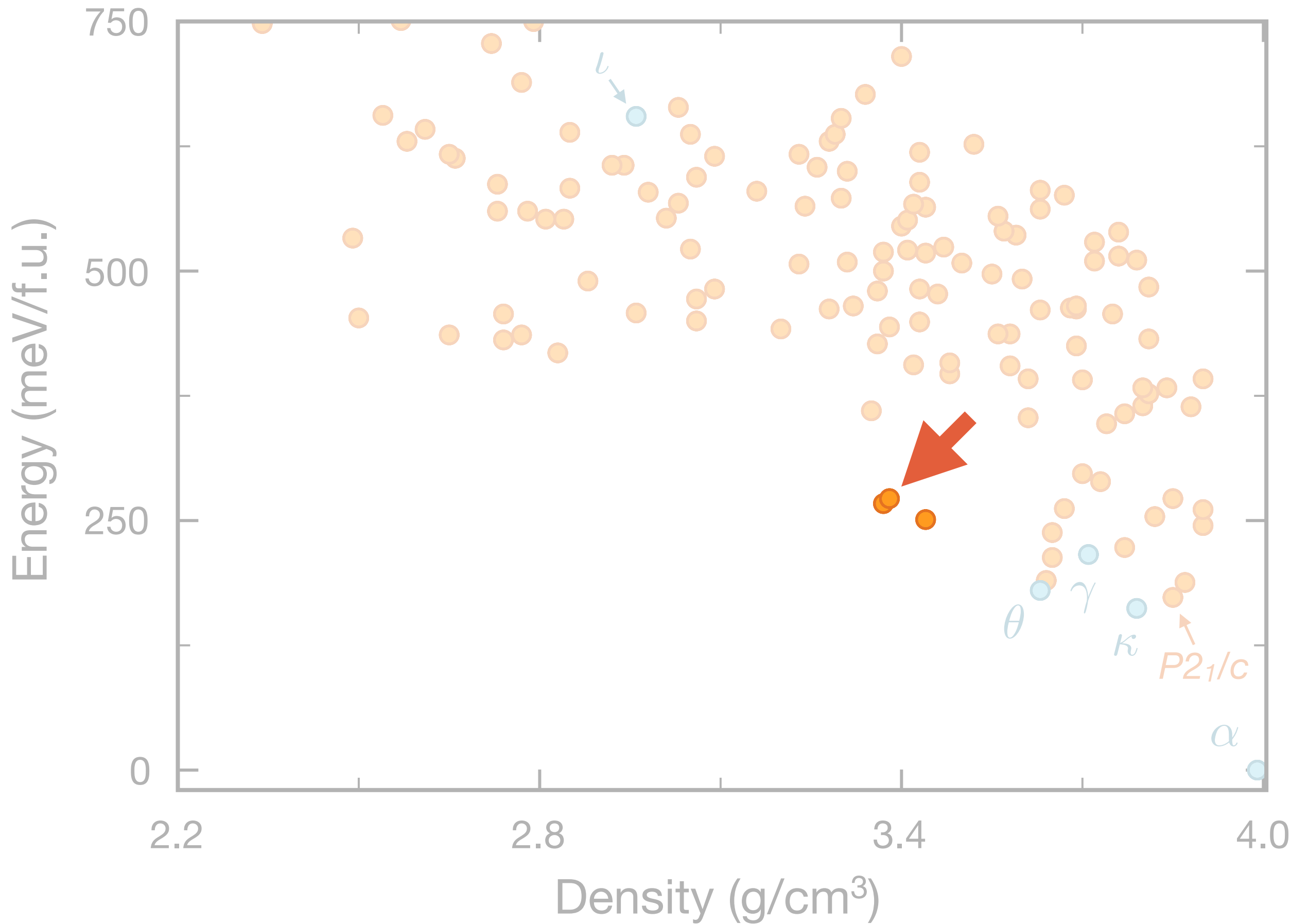
O_h

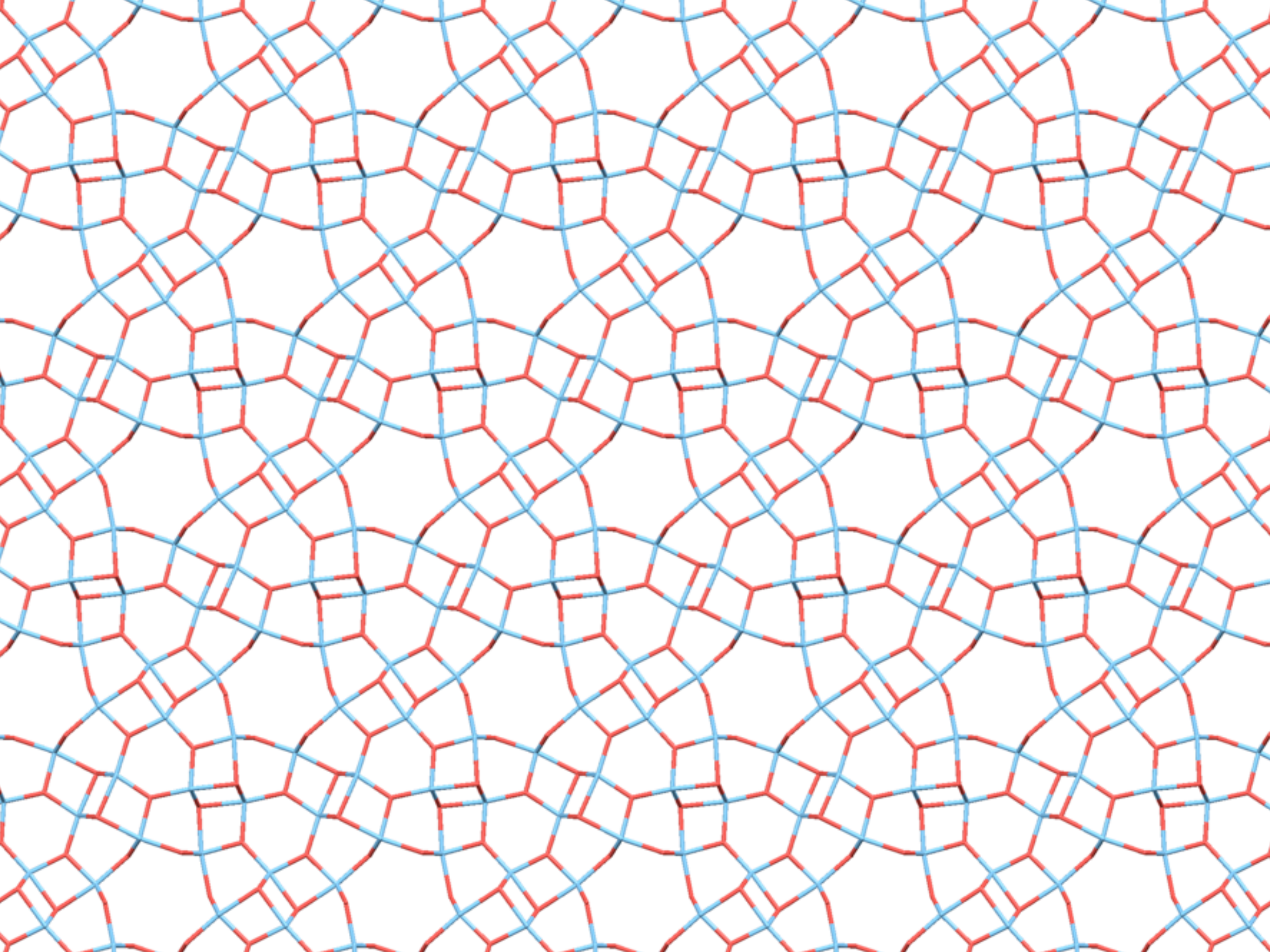
Octahedral

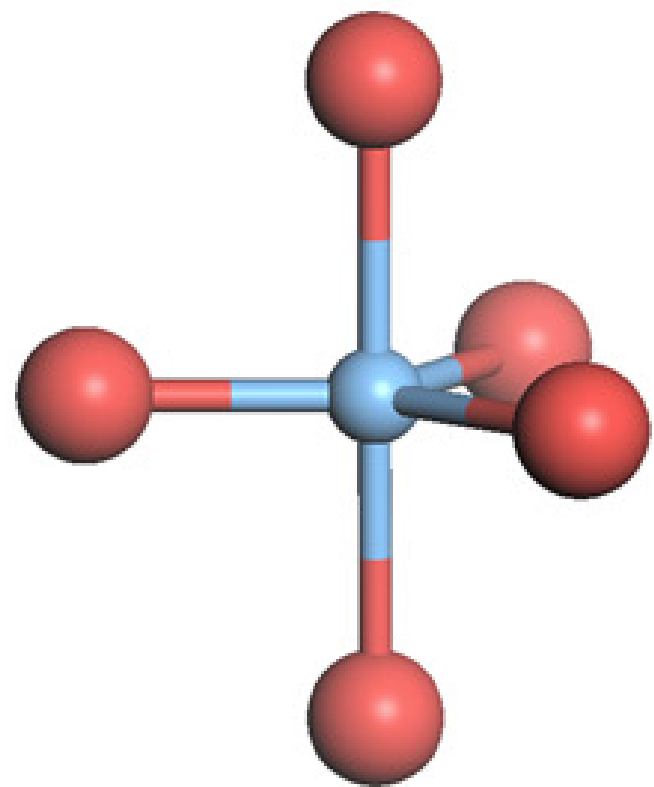


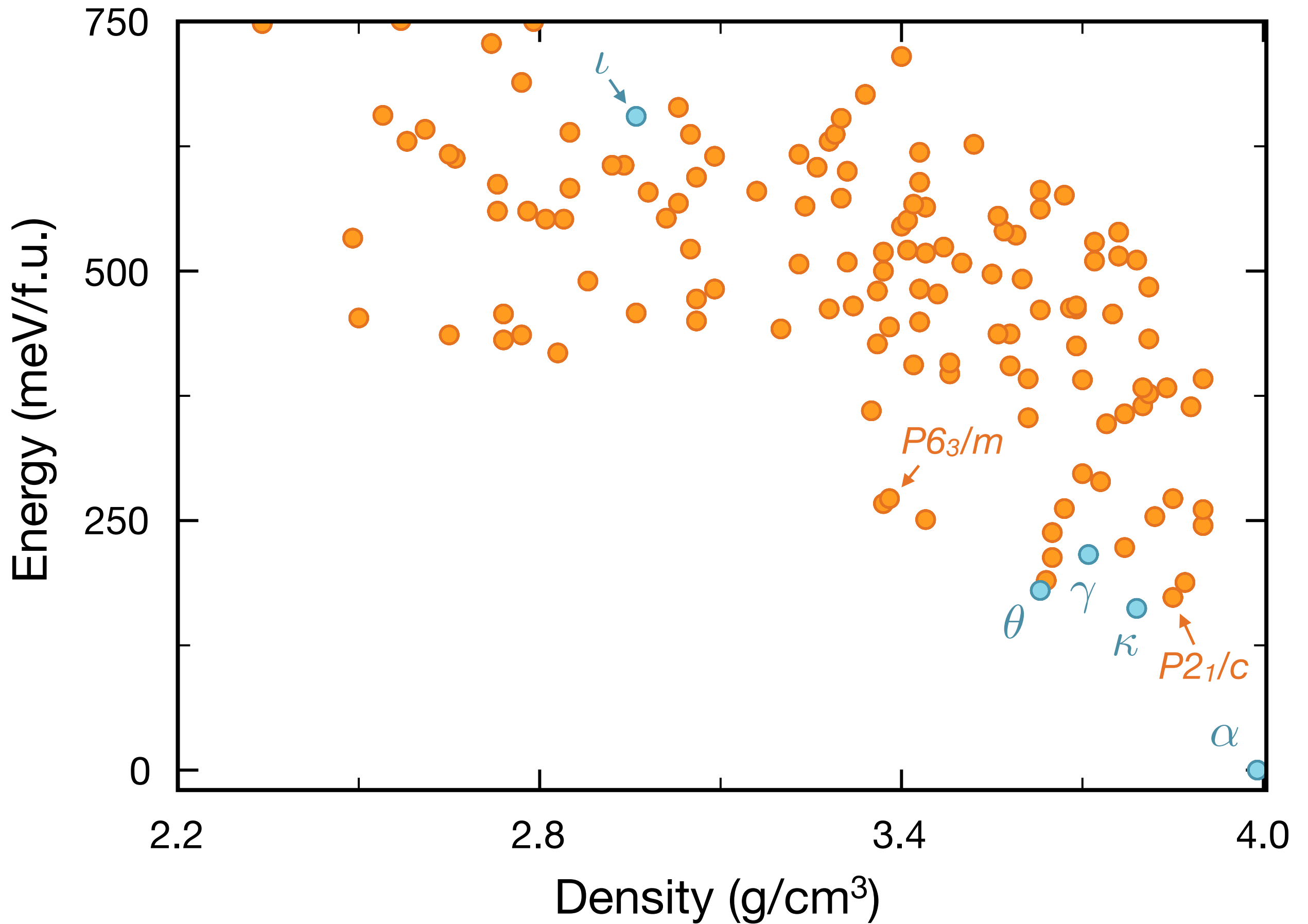


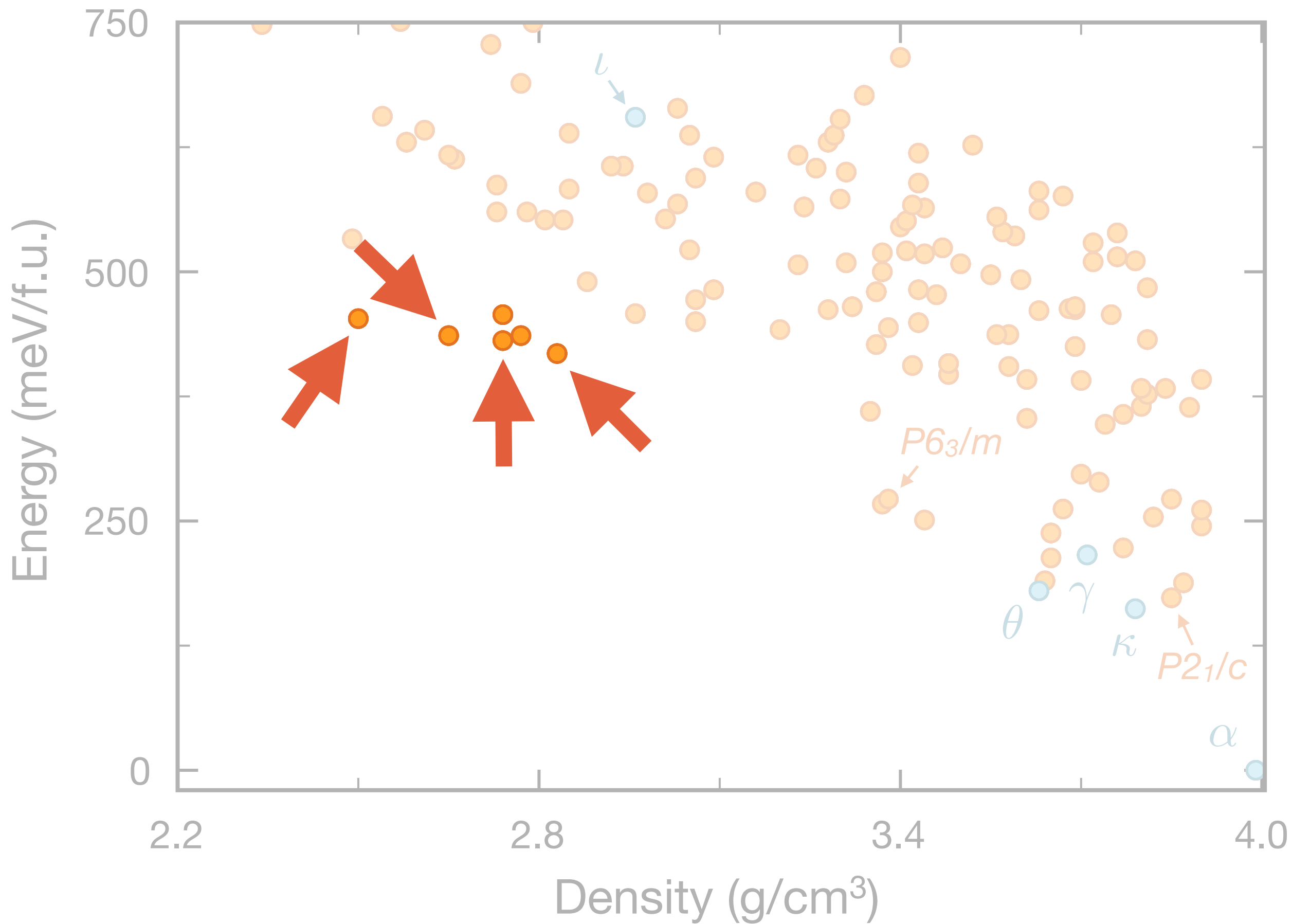




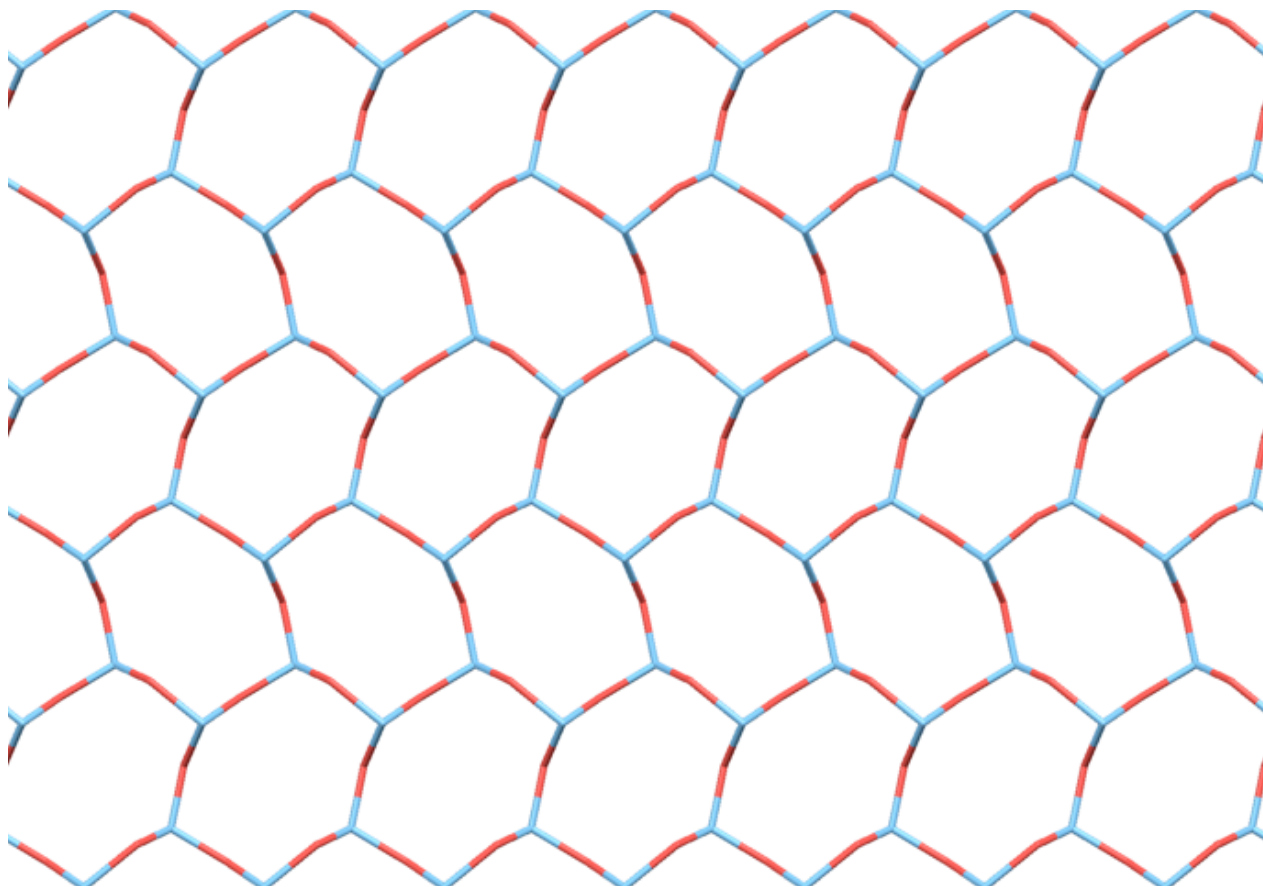




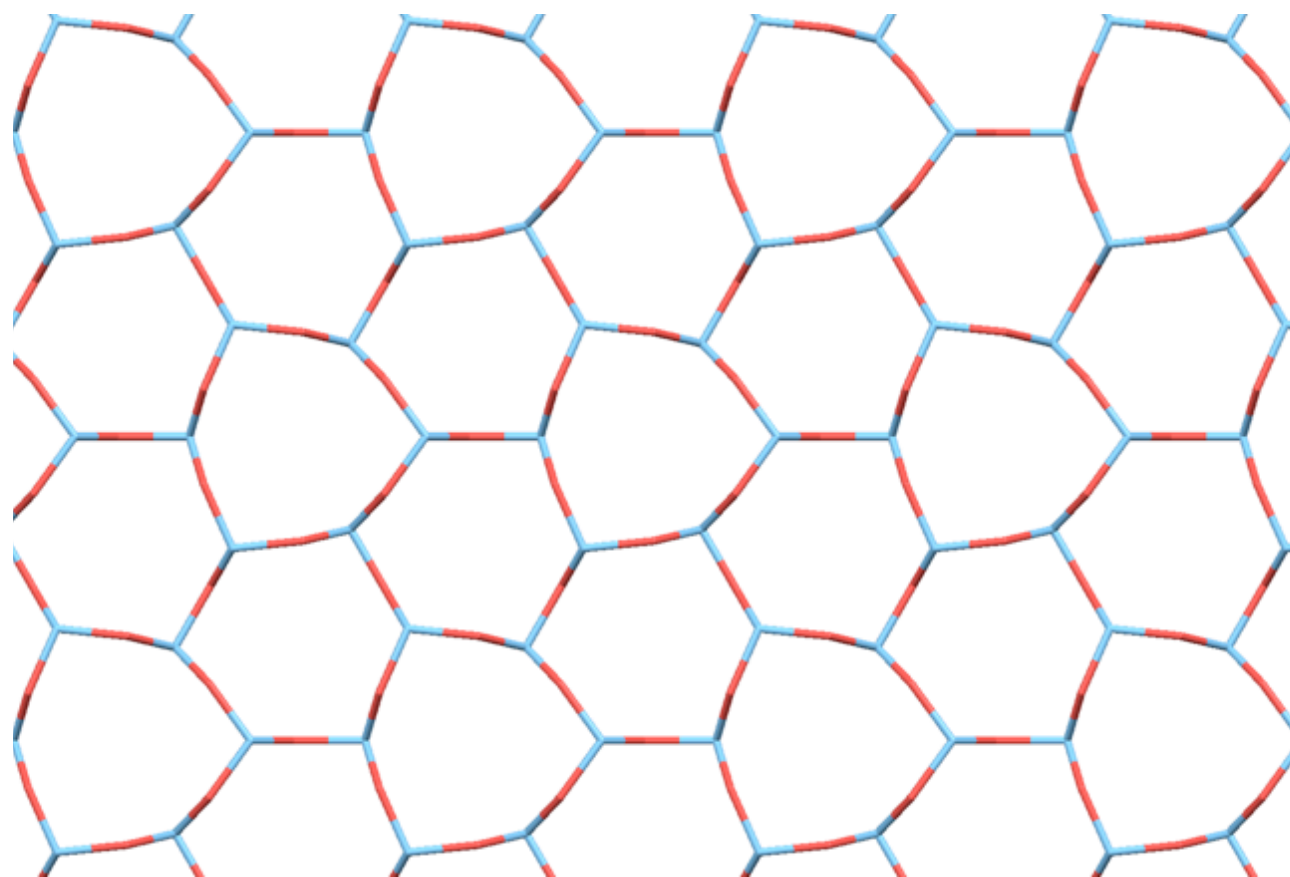




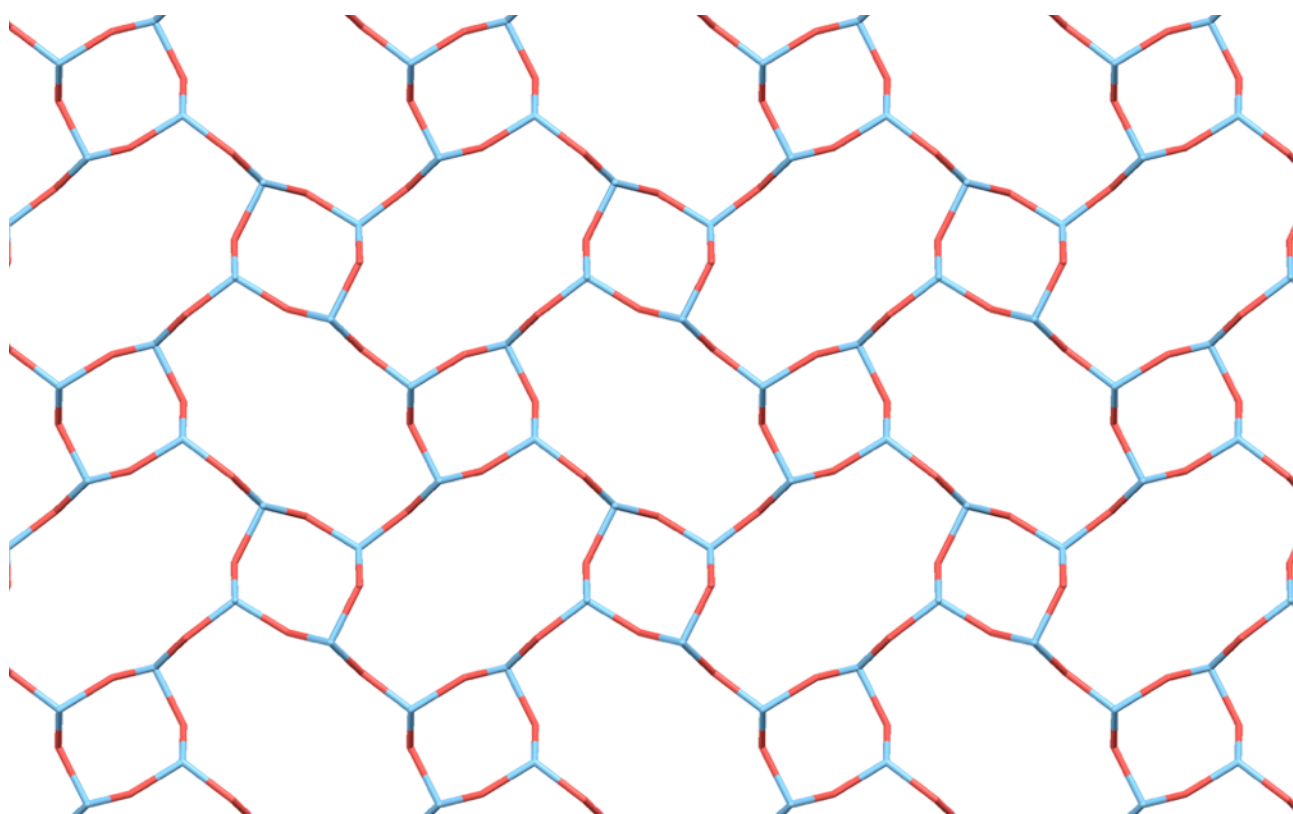
Pnma



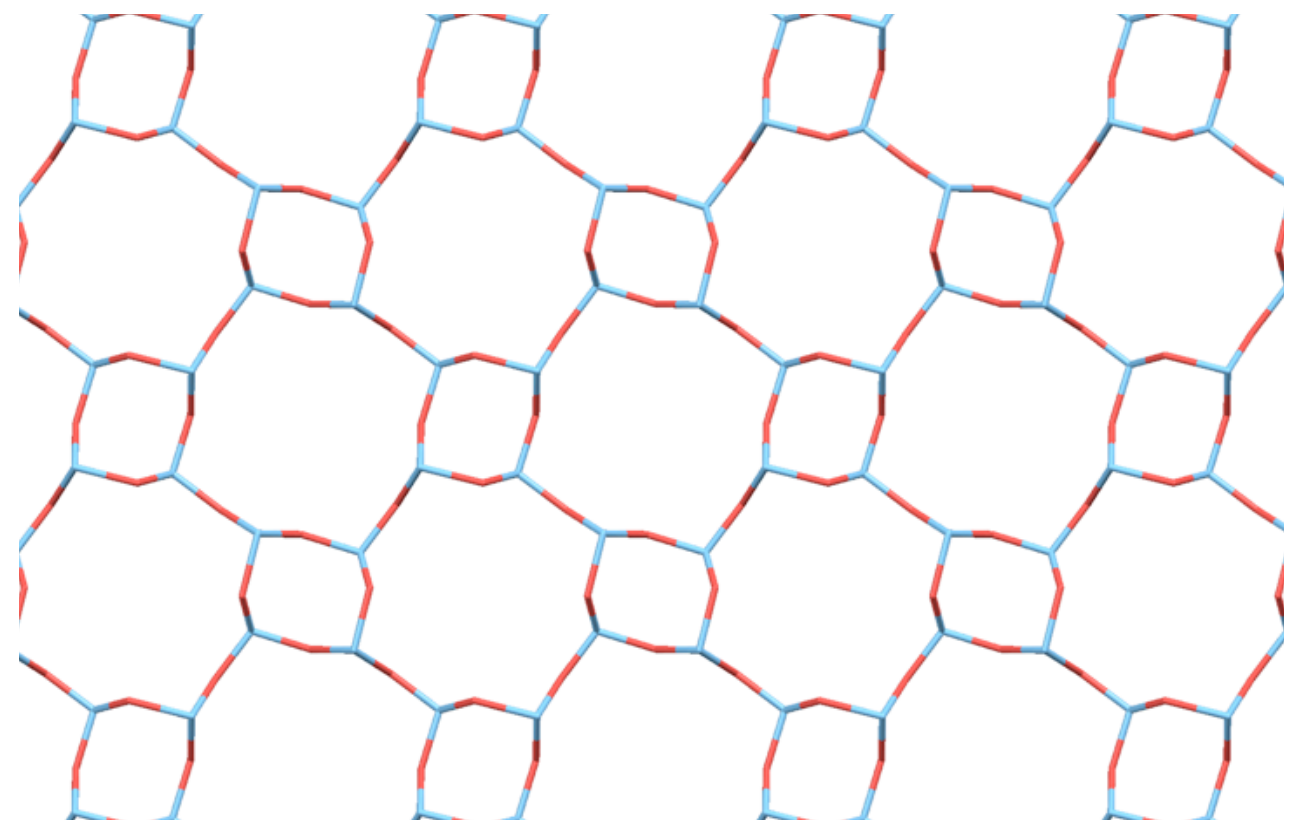
$P\bar{6}2m$

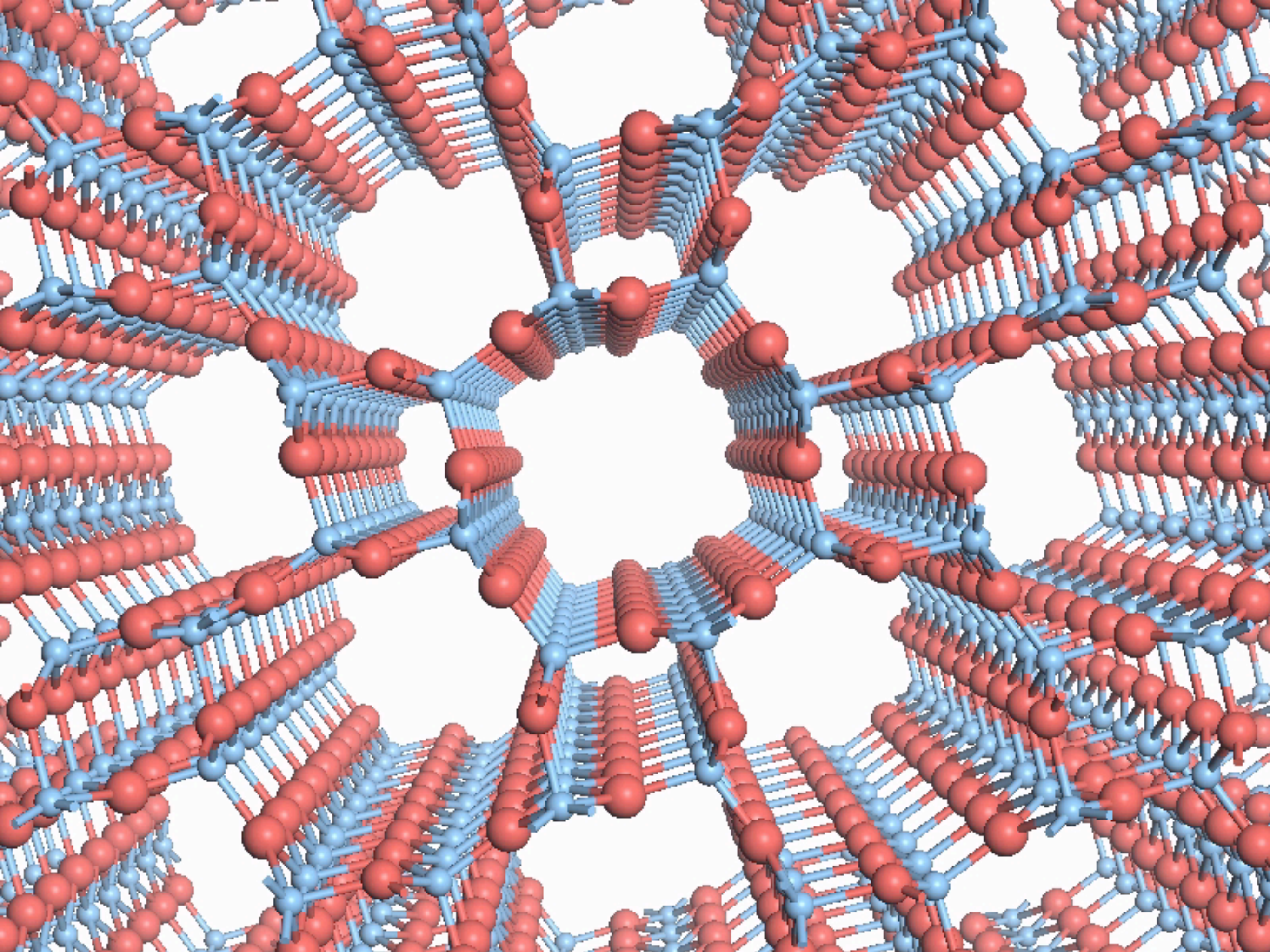


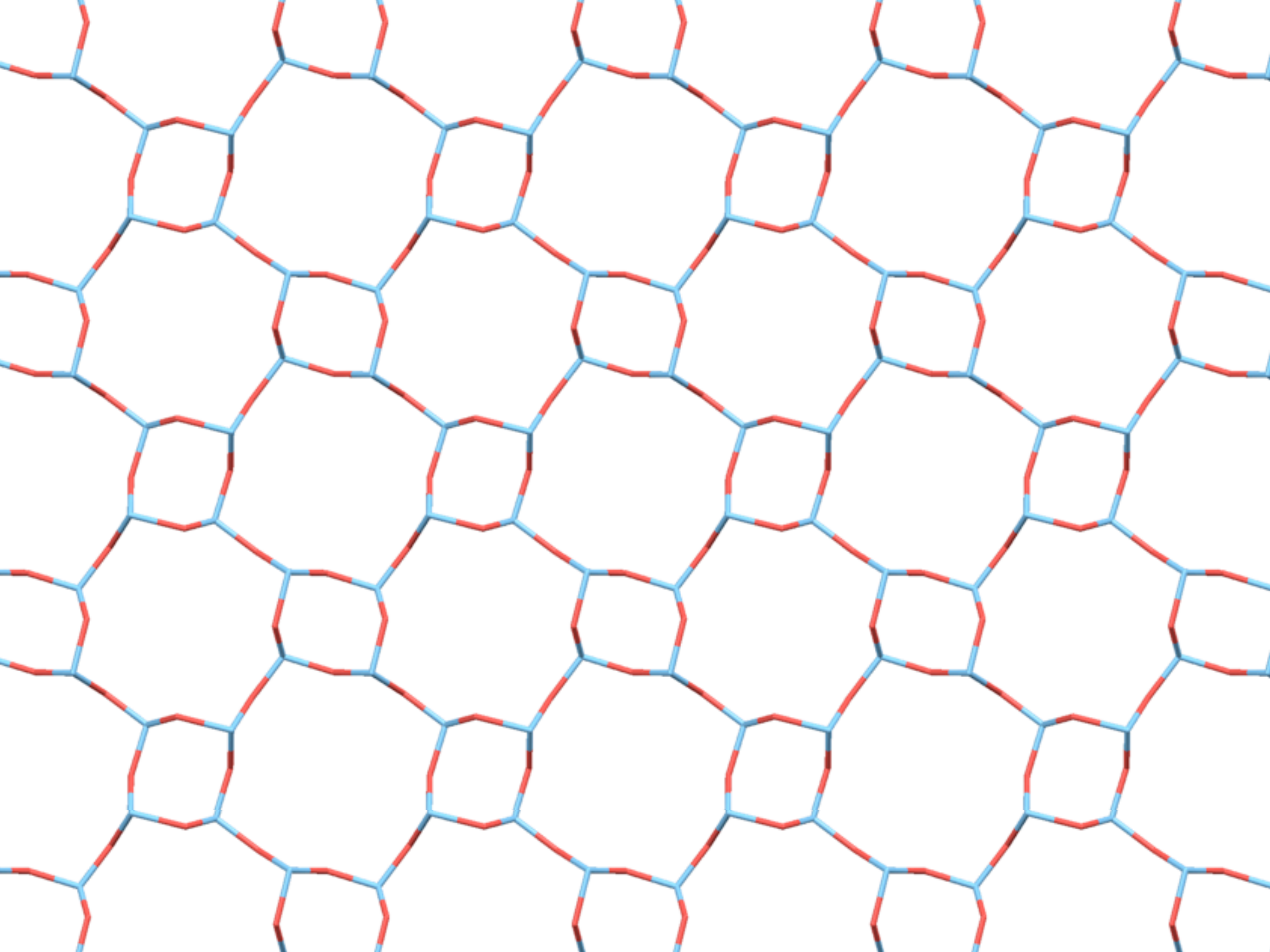
Pbam

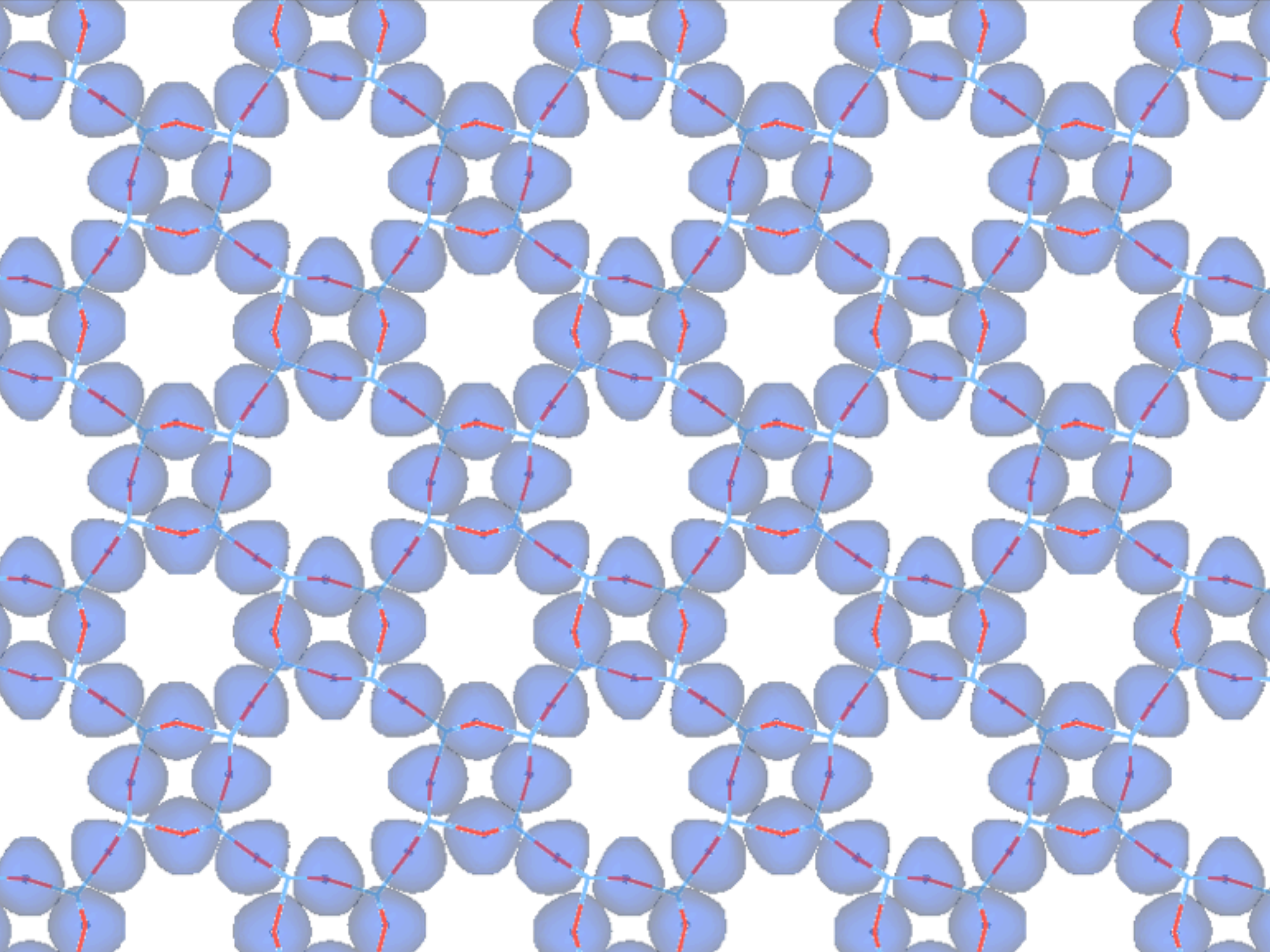


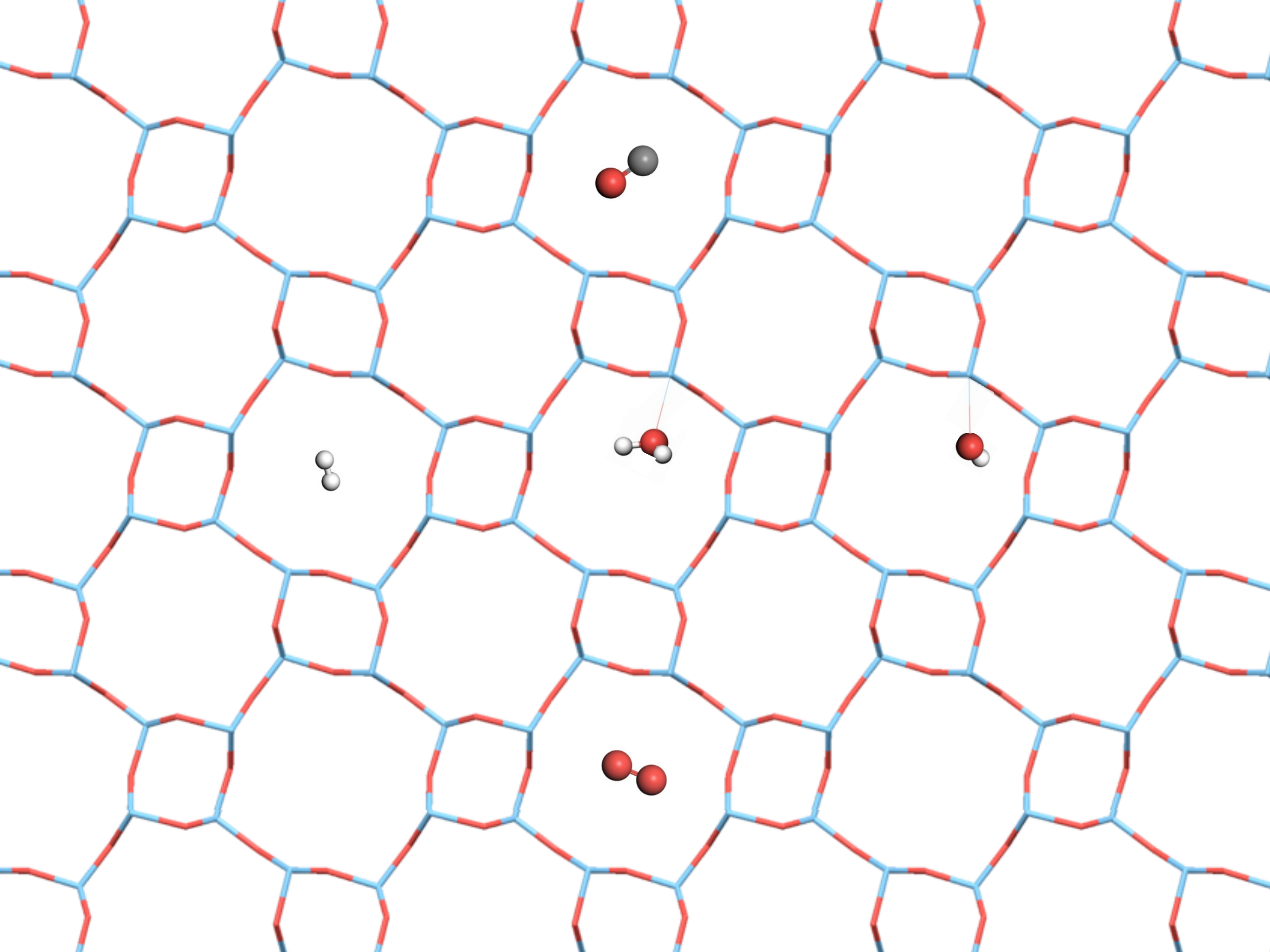
$P4/m$

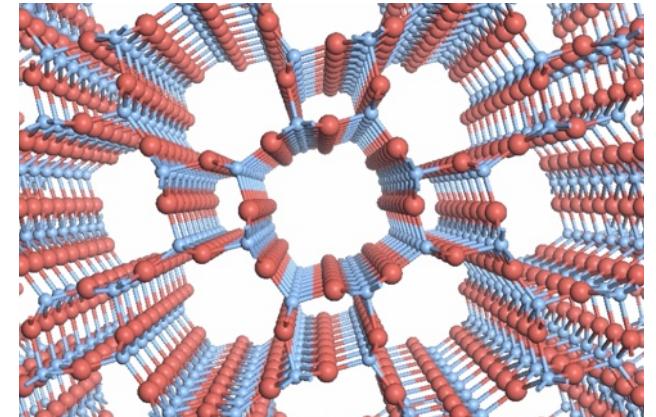
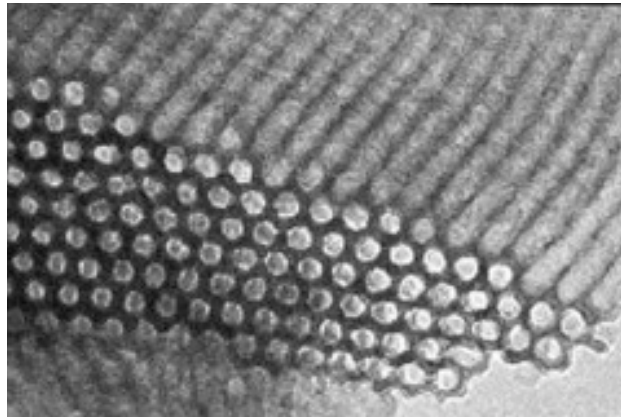












Pore diameter
(Å)

20-2000

3.1

Pore volume
(cm³/g)

0.08-0.7

0.063

Accessible
surface area
(m²/g)

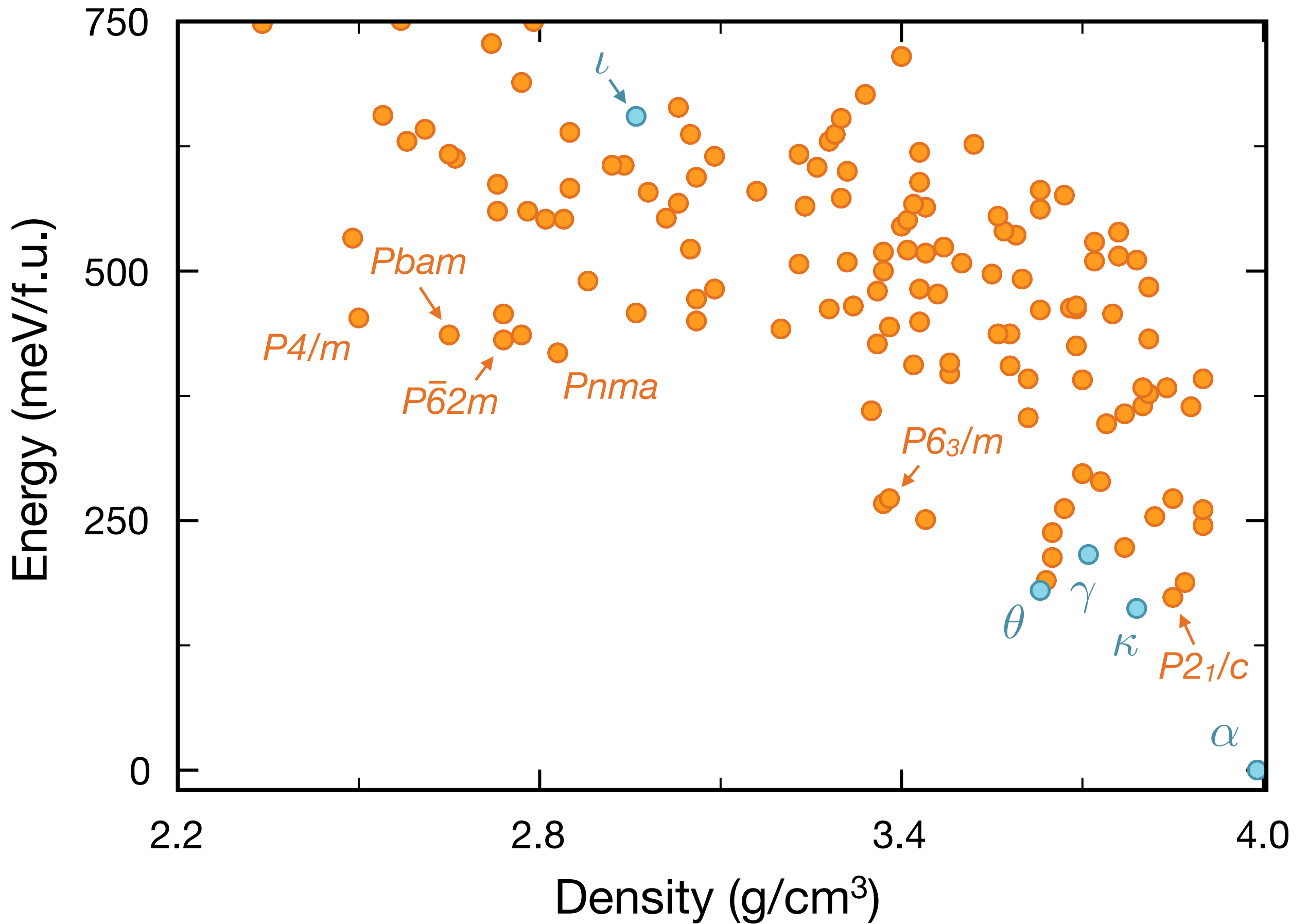
600

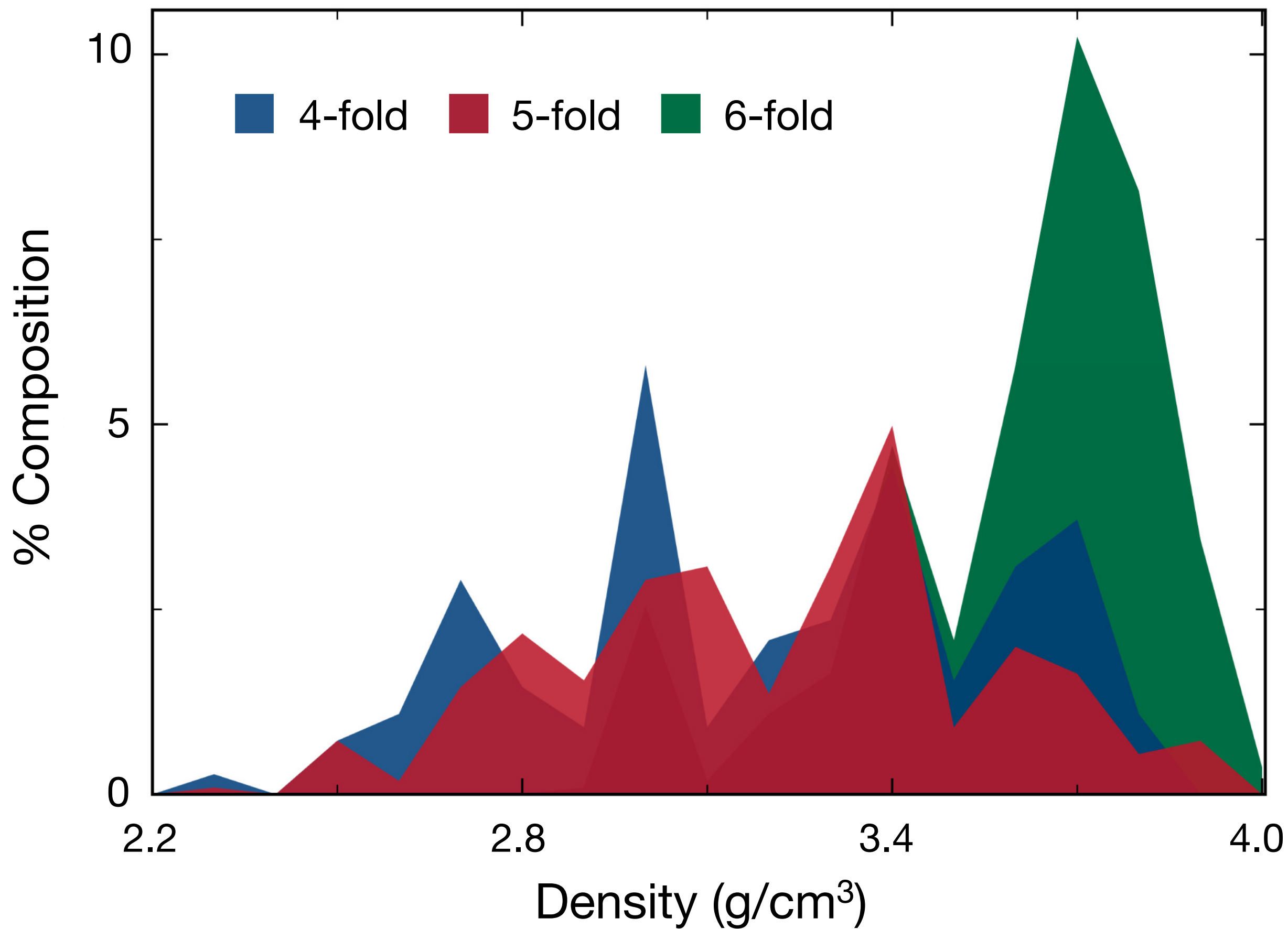
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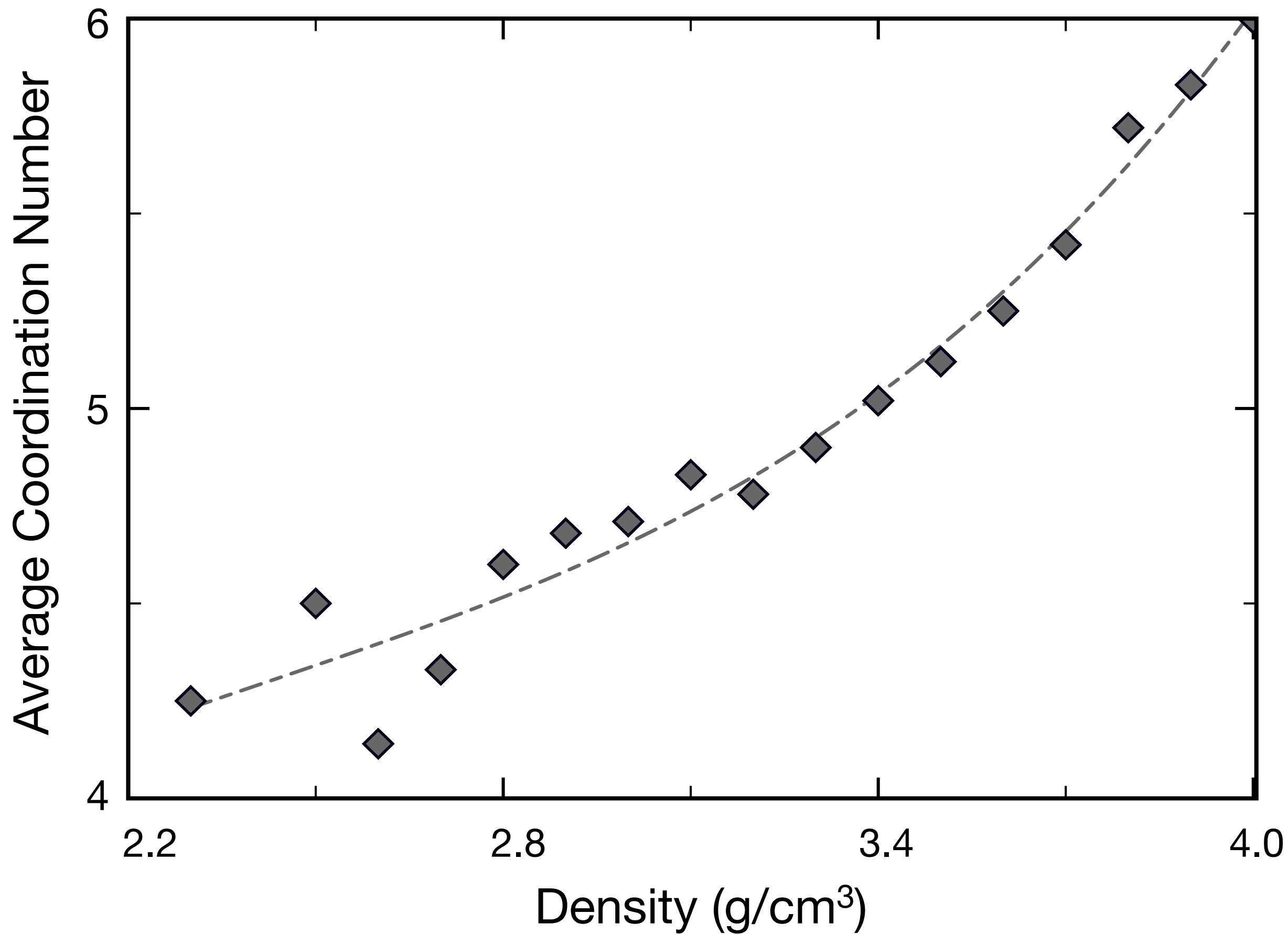
Average density
(g/cm³)

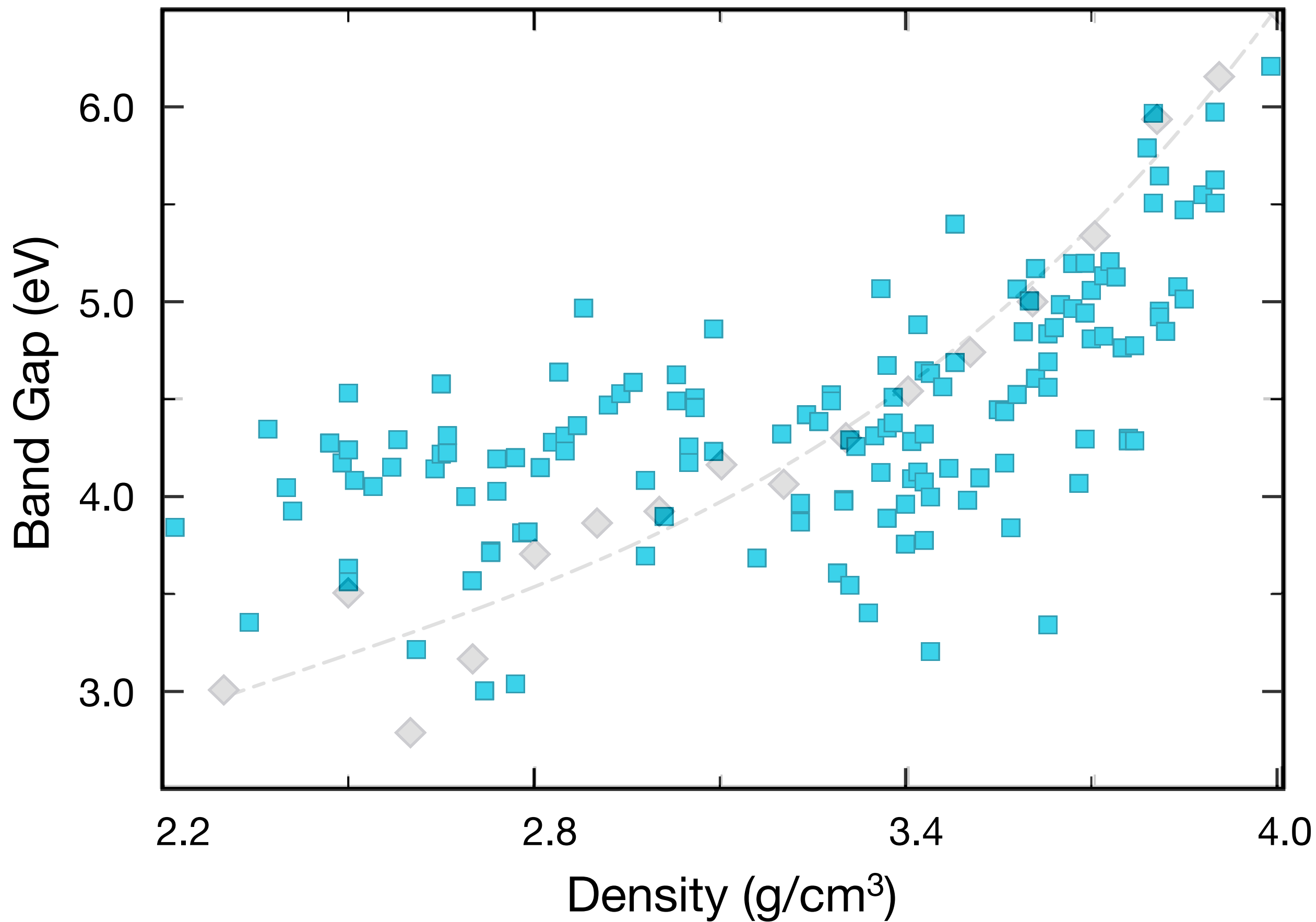
2.4

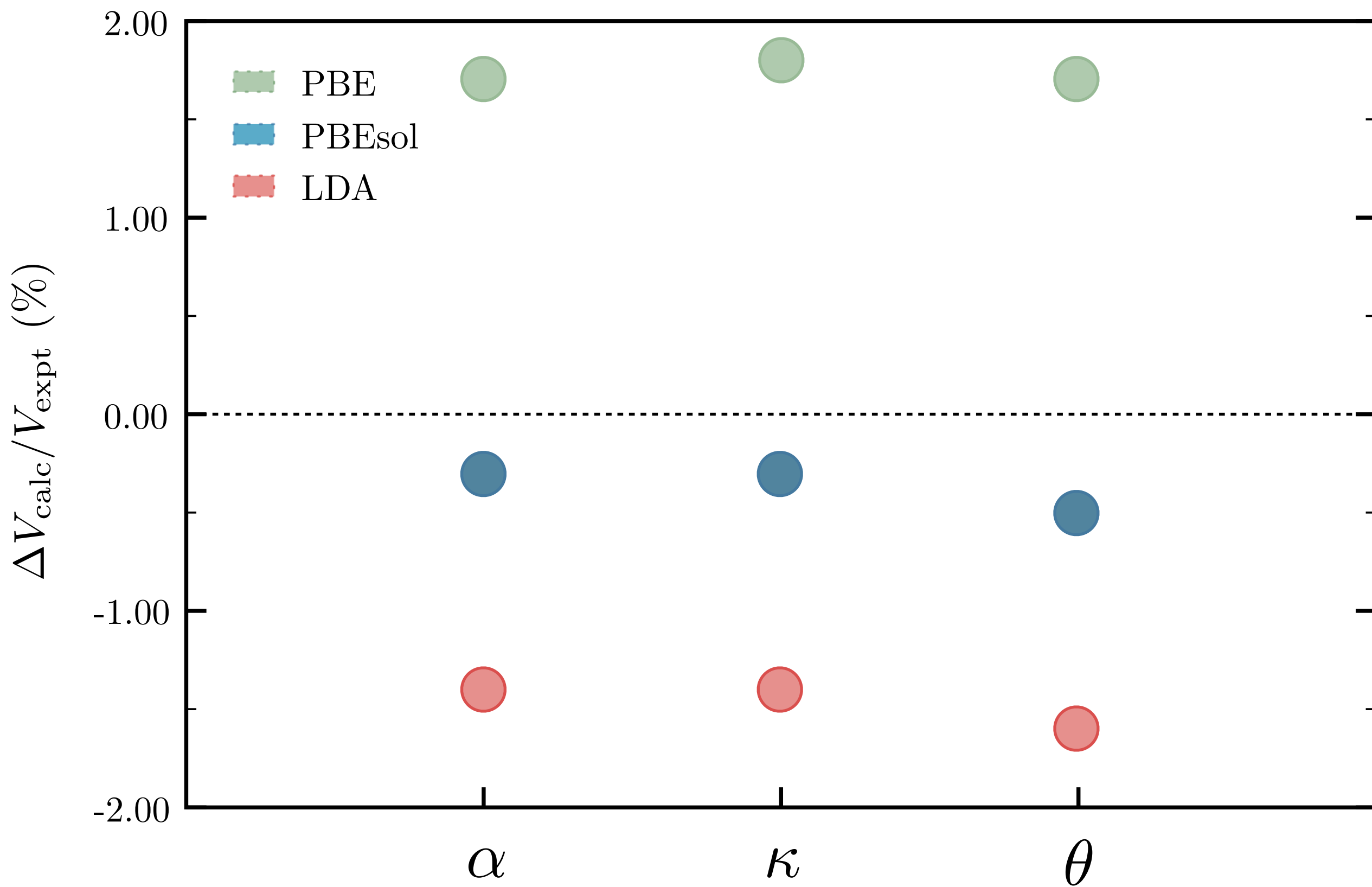
2.5

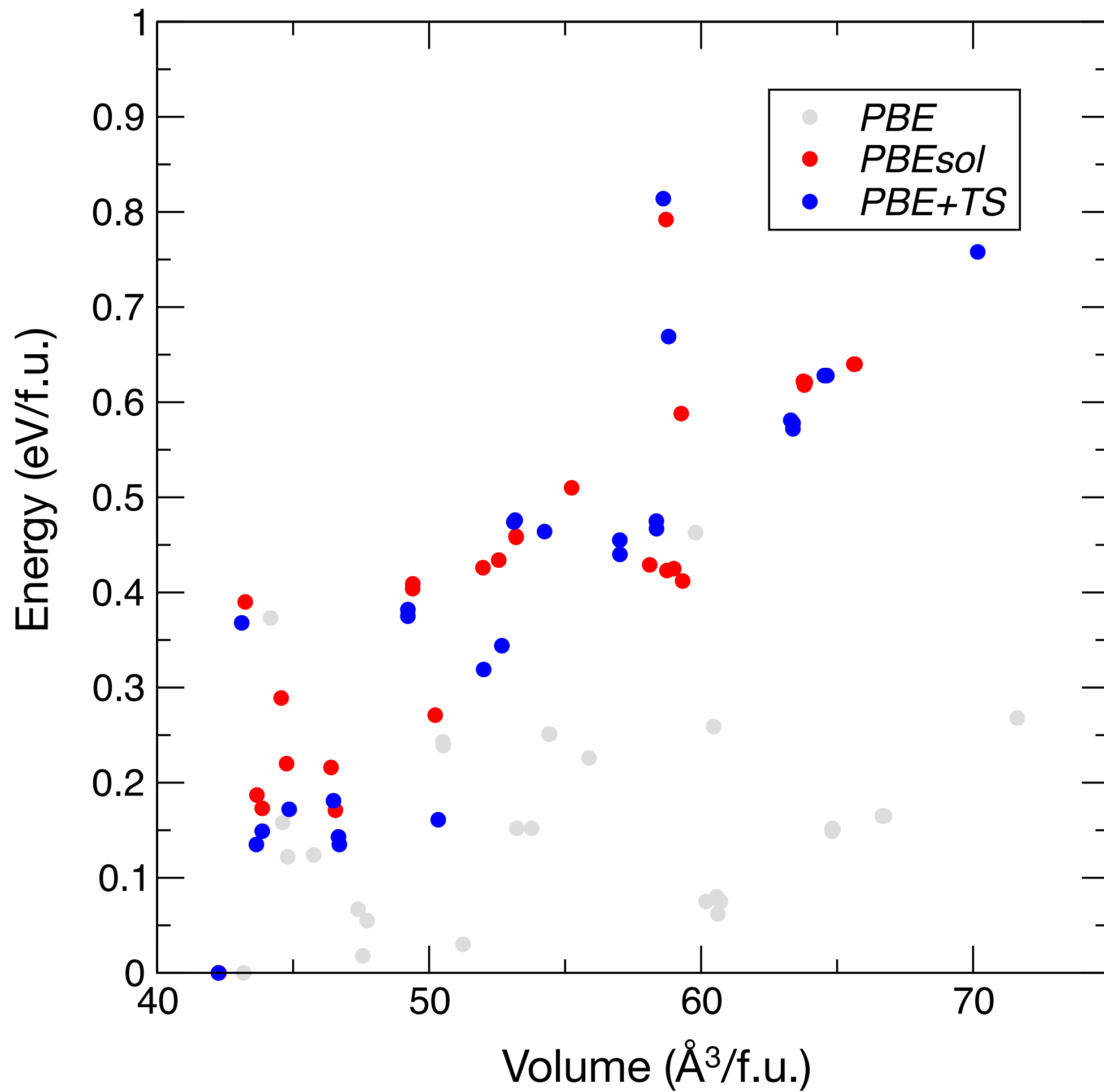












grazie