

When is a crystal graph not crystallographic?

Olaf Delgado-Friedrichs

Order!Order? — Canberra 4 Dec 2019

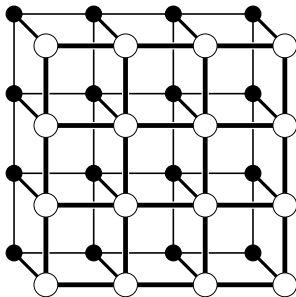
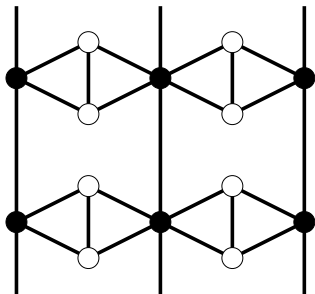
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Too much
symmetry

Crystal nets

Answer: when it has “too much symmetry”.



More precisely: when its automorphism group is not a crystallographic space group.

*(Crystallographic nets and their quotient graphs,
W. E. Klee 2004.)*

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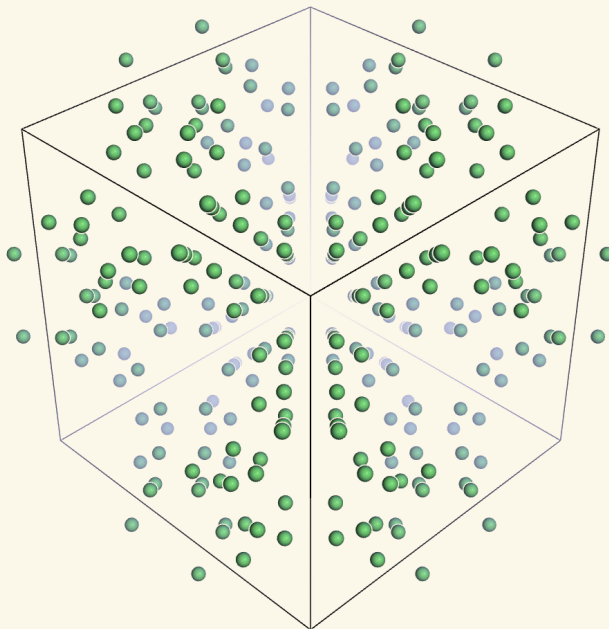


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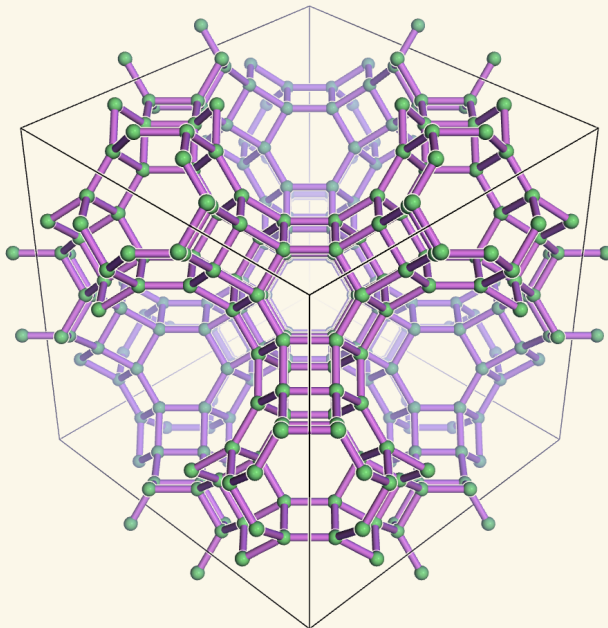


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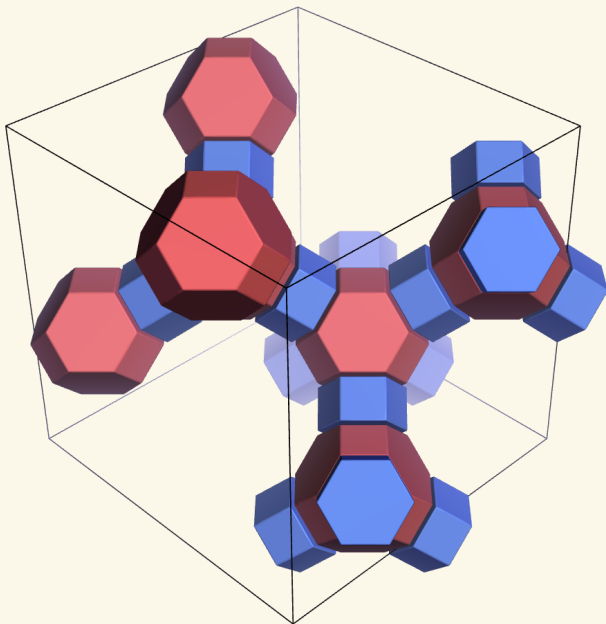


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A circular diagram with a dark blue background and a white grid of curved lines, resembling a stylized globe or a complex geometric pattern. The grid consists of several concentric rings of circles and radial lines, creating a mesh-like structure. The lines are white and stand out against the dark blue background. The overall shape is a perfect circle.

Too much symmetry

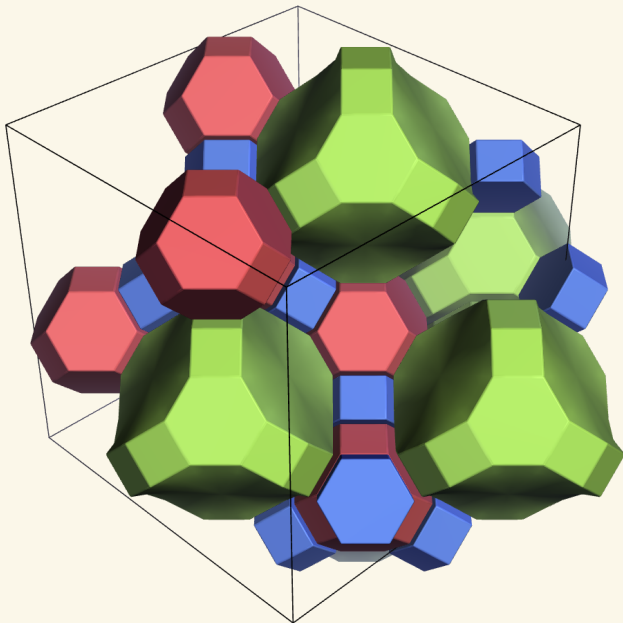
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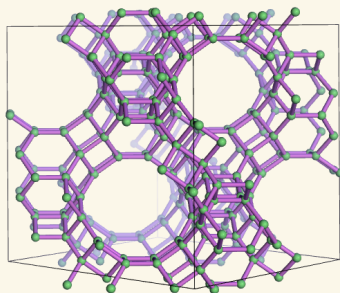


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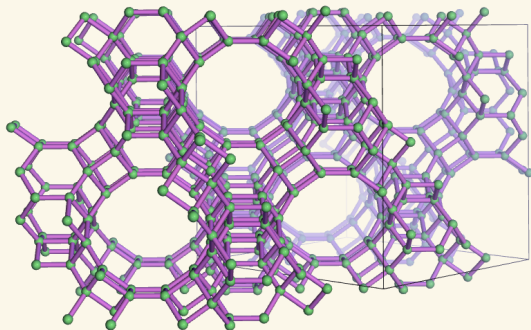


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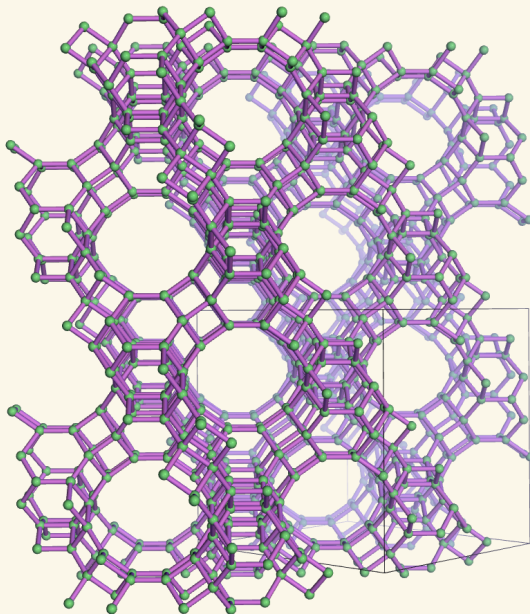


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