

When is a crystal graph not crystallographic?

Olaf Delgado-Friedrichs

Order!Order? — Canberra 4 Dec 2019

When is a
crystal graph
not
crystallographic?

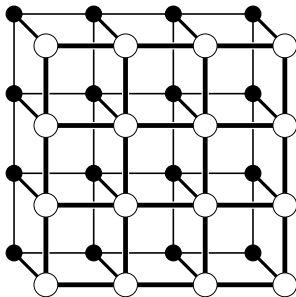
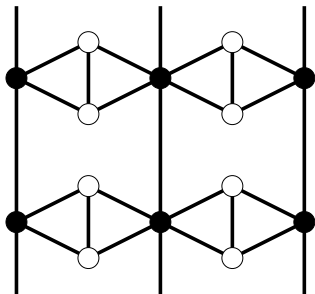
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Too much
symmetry

Crystal nets

Tutte's barycentric
embedding

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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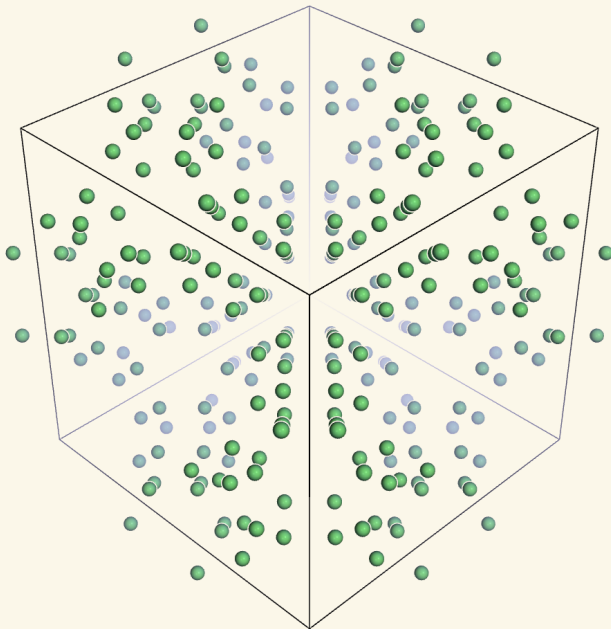
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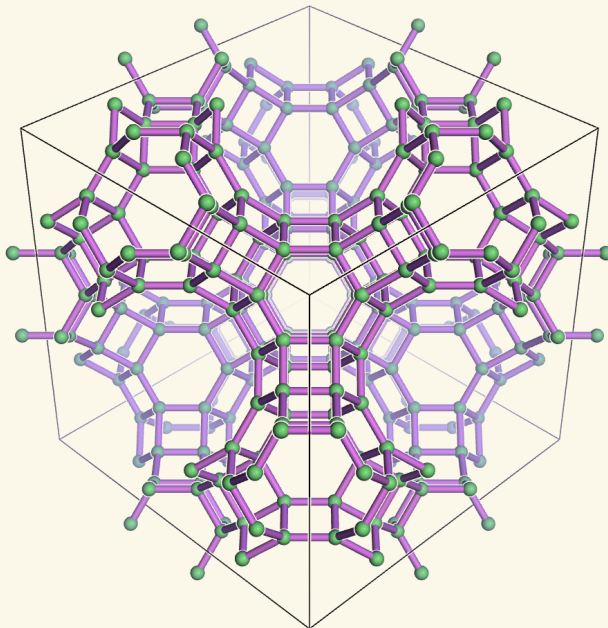
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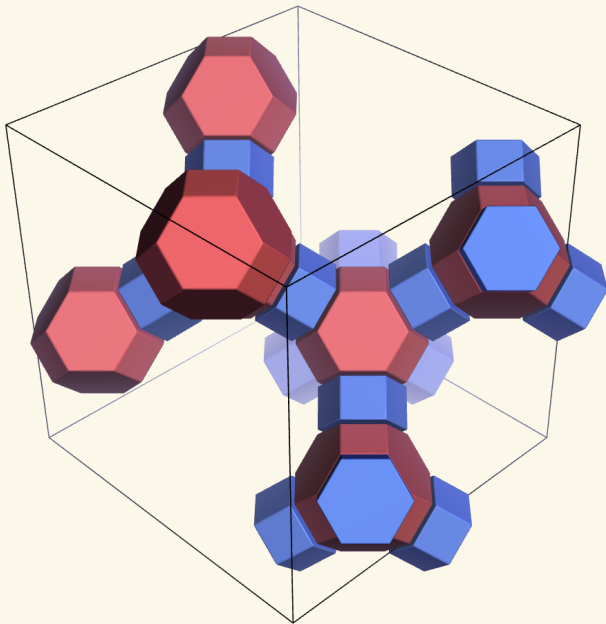
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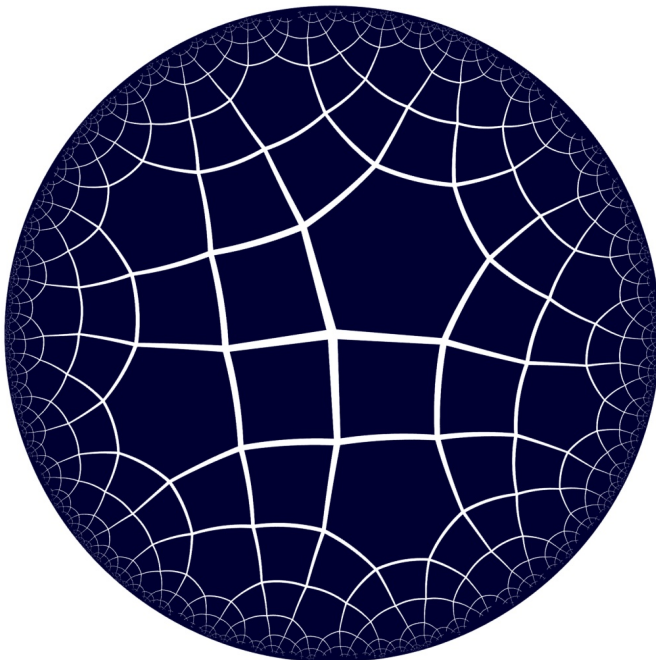
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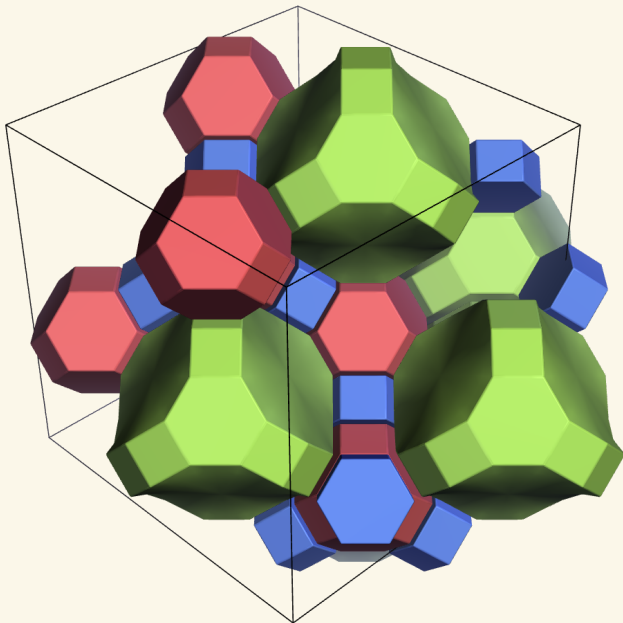
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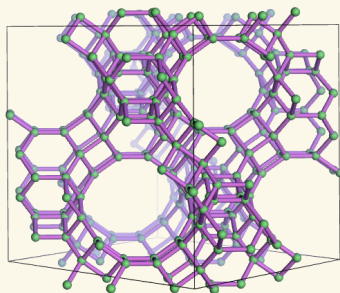
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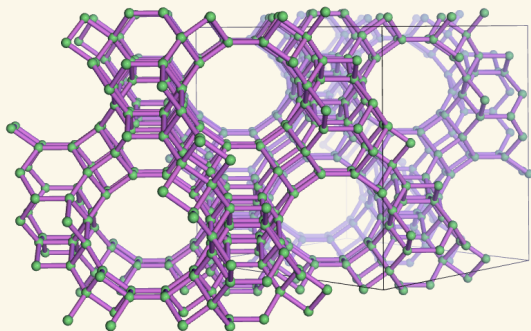
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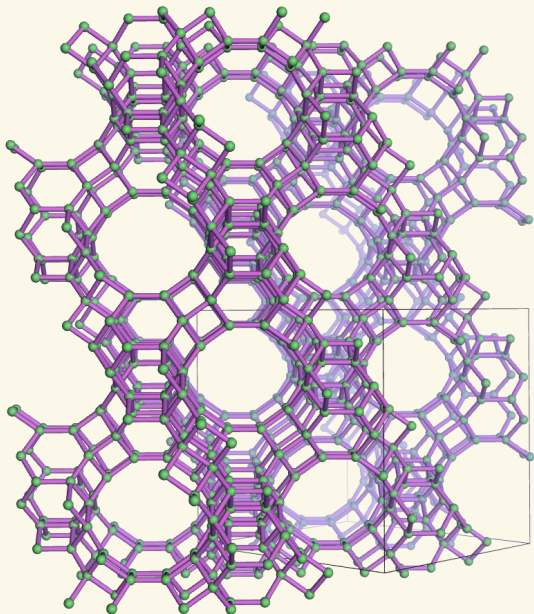
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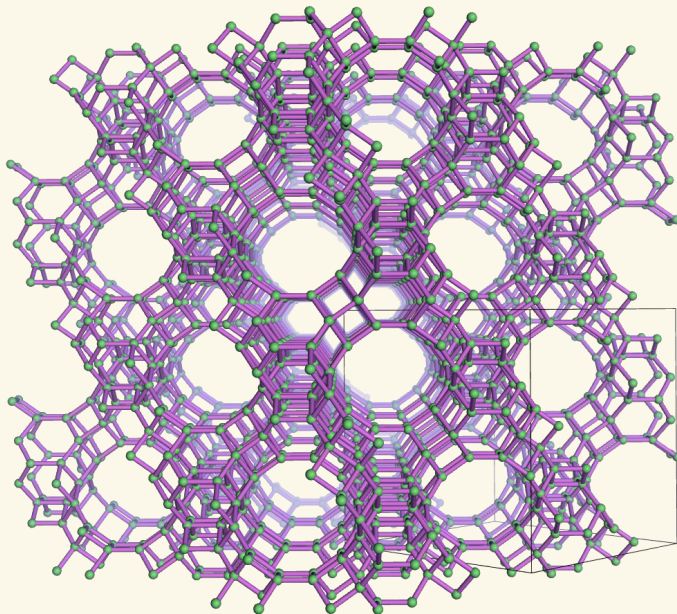
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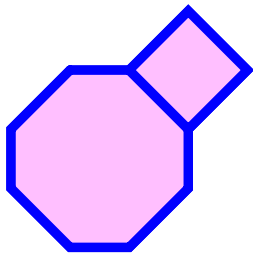
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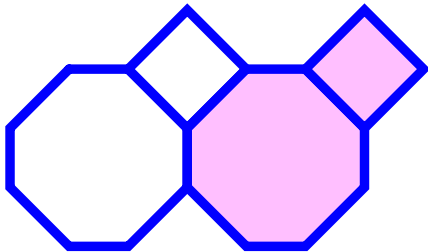
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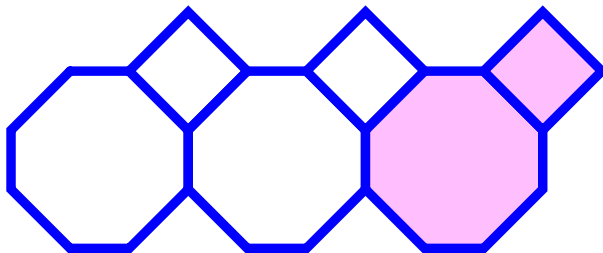
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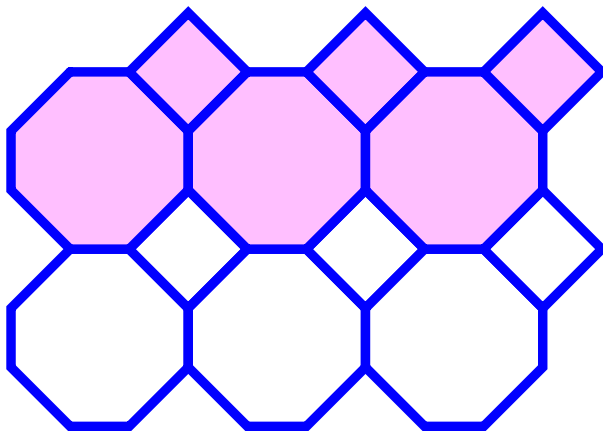
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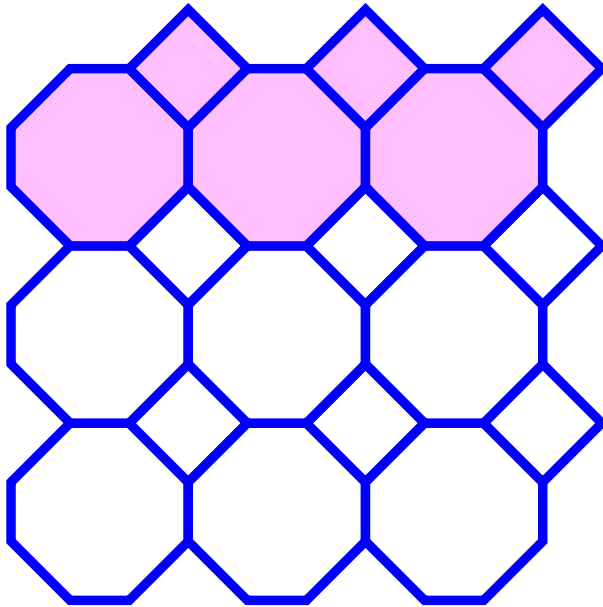
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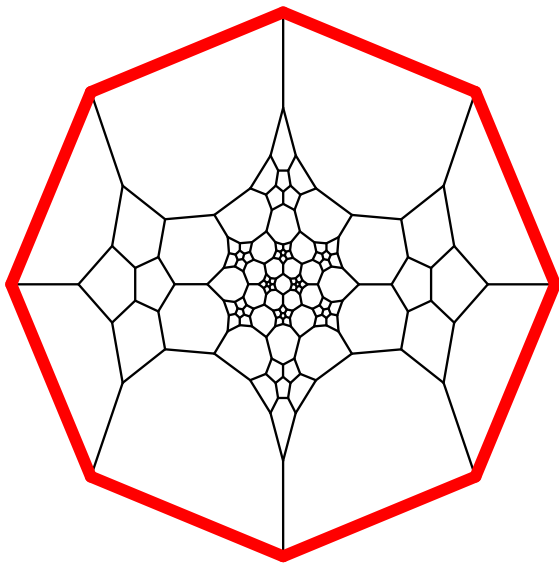
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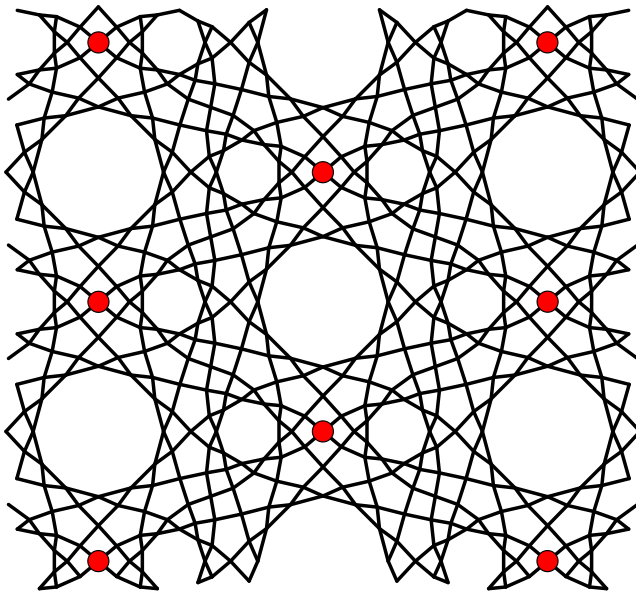
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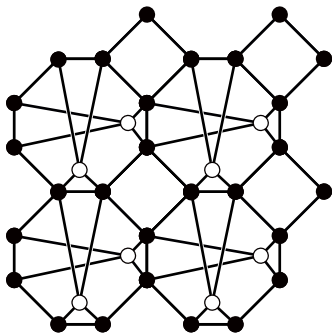
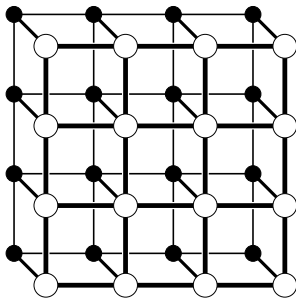
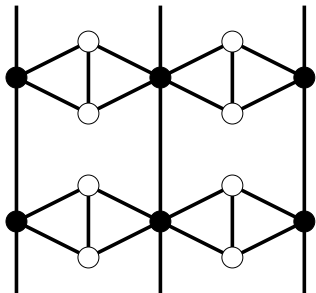
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