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High-pressure Al-rich hexagonal phases—What are their kin?

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ABSTRACT

The hexagonal Al-rich high-pressure phases are members of a structural family with the same type of framework composed of double-ribbons of edge-sharing octahedra, but variably occupied trigonal and hexagonal channels. This family includes jaffeite, fluoborite, yeremeyevite, painite, and synthetic Ba indates. This kinship broadens the spectrum of elements potentially accommodated by these phases in the mantle.

Keywords: Al-rich high-pressure phases, jaffeite, fluoborite, painite, framework of octahedra