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ABSTRACT

Apparatus and associated methods relate to forming an epitaxial layer of aluminum on an aluminum-nitride compound. The aluminum is epitaxially grown on the crystalline aluminum-nitride compound by maintaining temperature of a crystalline aluminum-nitride compound below a cluster-favoring temperature threshold within a vacuum chamber. Then, the crystalline aluminum-nitride compound is exposed to atoms of elemental aluminum for a predetermined time duration. The aluminum is epitaxially grown in this fashion for a predetermined time duration so as to produce a layer of epitaxial aluminum of a predetermined thickness. Such epitaxially-grown mono-crystalline aluminum has a lower resistivity than poly-crystalline aluminum.

