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(54) **THERMOELECTRIC COMPOSITION**

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(52) **U.S. Cl.** **136/203**; 136/205; 136/236.1; 136/238; 136/239; 136/240

(58) **Field of Search** 136/203, 205, 136/238, 239, 240

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(57) **ABSTRACT**

The thermoelectric properties (resistivity, thermopower and thermal conductivity) of single crystals of the low-dimensional pentatelluride materials are disclosed. The pentatellurides are well suited for use in thermoelectric devices. In general, the pentatellurides include hafnium pentatelluride and zirconium pentatelluride, which can both be substituted with selective amounts of various metals, including titanium, selenium, and antimony.

34 Claims, 9 Drawing Sheets

