

Chapter 6

Silicides and Other Thermoelectric Materials

In order to show the place of silicide thermoelectrics among other materials used in thermoelectric generators, it is necessary to consider two points. First, it concerns their sustainability, abundance, inexpensivity and recyclable elements; those materials possess all these positive aspects. Secondly, as one can see on the plot of the figure of merit the dependency of two of the better silicide (HfS₂ and Mg₂Si_{0.4}Sn_{0.6}) as a function of temperature, and compared with some good thermoelectric materials working in various temperature ranges, Fig. 4.7. For the base of these figures, we have taken the dependencies from the Ref. [58]. As one can see, magnesium silicide-based thermoelectric is the best material in the temperature range 600–850 K in comparison with the other thermoelectrics of n-type.