

Role of Pr addition on structure, thermomagnetic properties and magnetocaloric effect of GdGeSi alloy

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Materials exhibiting a large magnetocaloric effect in the vicinity of room temperature for potential applications in cooling technology belong to the group of materials, which are intensively studied in recent years. These materials used in refrigeration promise energy saving as well as application of an environmentally friendly technology. In this paper author investigates the role of RE (Rare Earth) addition to $\text{Gd}_{80}\text{Ge}_{15}\text{Si}_5$ (wt.%) on microstructure, topography, magnetocaloric effect and other thermomagnetic properties i.e. magnetization, hysteresis loops, heat capacity, AC/DC susceptibility, in wide range of temperature and external magnetic field. Moreover, magnetocaloric effect as magnetic entropy changes in the vicinity of room temperature is also investigated.