

Synthesis Thermoelectric Material Mg_2Si by Quartz Tube Vacuum Furnace from Starting Mg Powder and SiO_2 Rice Husk

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Magnesium silicide (Mg_2Si) is a promising for thermoelectric materials due to display a high performance for thermoelectric power generation with ZT about 0.9 at operation temperature 600 to 800 K. This work, Mg_2Si compound was prepared from starting powder of SiO_2 , which was attracted from rice husk, and Mg powder. The sintering process was performed in quartz tube vacuum at temperature 650 °C with argon atmosphere. Then MgO composition was demolished by chemical process. XRD patterns showed the pure phased of Mg_2Si . Thermoelectric characterization and properties will be reported.

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