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*Special Issue Reprint*

## Intermetallic Compound

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This Special Issue collects ten articles related to the broadly understood physical properties of intermetallic compounds. Differential thermal analysis was carried out, and the temperatures of thermal effects that arise during the reduction of neodymium from a technological salt mixture of  $\text{KCl-NaCl-CaCl}_2\text{-NdF}_3$  with a magnesium–zinc alloy were established. For sol–gel products of stoichiometric  $\text{MgTiO}_3$ , accurate thermal expansion coefficients were measured. The effect of various nanoparticles, such as  $\text{GaF}_3$ ,  $\text{ZnF}_2$ ,  $\text{Zn}(\text{BF}_4)_2$  and  $\text{Ga}_2\text{O}_3$  additions, on the activity of  $\text{CsF-RbF-AlF}_3$  flux and mechanical behavior of Al/Steel brazed joints is presented. The effect of Bi substitution on the structural and magnetic properties of  $\text{Nd}_{1-x}\text{Bi}_x\text{MnO}_3$  is investigated. Characteristics of hard magnetic materials based on  $\text{Nd}_2\text{Fe}_{14}\text{B}$  and  $\text{Ce}_2\text{Fe}_{14}\text{B}$  intermetallic compounds are presented. A special algorithm is presented to support vector regression for estimating the maximum magnetic entropy change of doped manganite-based compounds. We have received information about the mechanical properties of the reactively synthesized porous  $\text{Ti}_3\text{SiC}_2$  compound with different apertures. Furthermore, we have presented the experimental results of Zn-doped Al-rich for fast on-board hydrogen production.



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