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Sommario/riassunto	<p>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 KCl-NaCl-CaCl₂-NdF₃ with a magnesium-zinc alloy were established. For sol-gel products of stoichiometric MgTiO₃, accurate thermal expansion coefficients were measured. The effect of various nanoparticles, such as GaF₃, ZnF₂, Zn(BF₄)₂ and Ga₂O₃ additions, on the activity of CsF-RbF-AlF₃ flux and mechanical behavior of Al/Steel brazed joints is presented. The effect of Bi substitution on the structural and magnetic properties of Nd_{1-x}Bi_xMnO₃ is investigated. Characteristics of hard magnetic materials based on Nd₂Fe₁₄B and Ce₂Fe₁₄B 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 Ti₃SiC₂ compound with different apertures. Furthermore, we have presented the experimental results of Zn-doped Al-rich for fast on-board hydrogen production.</p>