Special Issue

Magnetostriction, Spectrometry and Magnetic Behavior of Materials

Message from the Guest Editors

Recently, the interest in high magnetostriction materials has significantly increased due to their application potential in the domain of effective sensors and actuators. Moreover, the systematic investigations of magnetoelastic properties broaden our knowledge on the fundamentals of magnetic interactions in modern magnetic materials and elements manufactured with novel industrial technologies—including subtractive ones (such as CNC machining) and additive ones (such as 3D printing with laser powder melting). There are several crucial questions that are still unresolved and require further research work, e.g.:Physics of high magnetostriction; Nonlinear behavior of inverse magnetostriction (Villari effect); Atomic-level description of strain-induced magnetic anisotropy; Theoretical reproducibility of magnetic hysteresis under stress; Origin of magnetomechanical hysteresis; Relation between internal stress and magnetic response in defectoscopy; Direct link of the spectroscopic results to the magnetism of materials.

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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