Special Issue

Spin Gapless Semiconductors and Half Metallic Ferromagnets

Message from the Guest Editor

This Special Issue is devoted to Spin Gapless Semiconductors and Half Metallic Ferromagnets. Both experimental and theoretical studies are here warmly welcomed. Spin gapless semiconductors are a new class of materials that have a zero gap in one spin channel and a finite band gap in the second spin channel. They can be very interesting for sensor applications, as no threshold energy is required to move electrons from valence to conduction band, and also, compounds can be highly tunable by a magnetic field or carrier concentration. In that way, such materials are even more interesting than half metallic ferromagnets which have a metallic character in one spin channel and semiconducting character in the second spin channel and have been well known for more than three decades. The quest for a prospective spin gapless semiconductor is now very intense, and many materials especially in the Heusler alloy family are predicted to have such behavior, but only in very few cases has this been proven. We would like to invite you to submit a manuscript for this Special Issue related to this very important topics.

Guest Editor

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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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