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Spin Gapless Semiconductors and Half Metallic Ferromagnets

Guest Editor:

Dr. Jerzy Goraus

August Chełkowski Institute of
Physics, University of Silesia in
Katowice, 75 Pułku Piechoty 1a,
41-500 Chorzów, Poland

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submissions:

closed (20 June 2023)

Message from the Guest Editor

Dear Colleagues,

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.

Dr. Jerzy Goraus

Guest Editor



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Special Issue



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Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Message from the Editor-in-Chief

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Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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