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Heusler and Half-Heusler Compounds

Guest Editor:

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Deadline for manuscript submissions:
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Message from the Guest Editor

The increasing interest in Heusler and half-Heusler compounds, since the first discovery of the 1st Cu_2MnAl Heusler compound by the German scientist Friedrich Heusler in 1903, passing 100,000 publications in 2017, with more than 1500 reported compounds, is due to their high potential for a wide variety of applications in future energy fields (including thermoelectrics, solar cells) and spintronics. New ferromagnetic, semiconducting, or even topological-insulating Heusler and half-Heusler compositions with unique properties are constantly reported, highlighting their scientific and applicative significance. The more than 250 semiconducting phases reported to date can be tuned to modify their energy gaps, from 0 to 4 eV, using chemical composition and process parameter variations. Magnetism can be controlled in the metallic phases and combining superconductivity with topological states can lead to new multifunctional materials.

For further information, please click:

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Prof. Yaniv Gelbstein
Guest Editor

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