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Magnetoresistance Effects and Their Application to Spintronic Devices

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Message from the Guest Editors

Dear Colleagues,

Half-metallic ferromagnets have been attracting intensive research in the view of realising an ideal 100% spin-polarised ferromagnet at room temperature. Among such ferromagnets, Heusler alloys have the greatest potential due to their high Curie temperatures, good lattice matching with major substrates, large minority-spin band-gap, and large magnetic moments in general. In this Special Issue, we focus on their magnetoresistance, in both vertical and lateral junctions, formed with a non-magnetic metallic or insulating layer. These junctions can be implemented in a read sensor in a hard disk drive or in a cell of magnetic random access memory to improve their recording density and operation efficiency. We intend to cover from theory and fundamentals of such junctions to their applications.

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Message from the Editor-in-Chief

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