

Special Issue

Interactions and Magneto-Optics in Magnetic Arrays

Message from the Guest Editor

Magnetic arrays are at the core of new fundamental developments and applied devices, and magneto-optics has proven to be an invaluable tool to characterize their properties. During the last few decades, there has been a considerable effort towards building an understanding of the phenomena associated with magnetic interactions between elements in arrays. For instance, in some applications using patterned media, it is necessary to ensure there is no cross-talk when switching single element magnetization in the array. On the other extreme, there is a rich plethora of phenomena associated with interaction effects, where switching one element's magnetization might provoke a switching cascade, much like tokens falling in the domino effect. These interactions, both 2D "in plane" and 3D "perpendicular to plane" in heterostructures like magnetic tunnel junctions, demand going beyond the dipolar approximation and are best characterized magneto-optically, having also unique aspects such as diffractive magneto-optics. They are also fundamental in designing spintronic devices and new computing concepts.

Guest Editor

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Deadline for manuscript submissions

closed (30 November 2021)



Magnetoechemistry

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 4.6



mdpi.com/si/45476

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