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Advances in Spintronics of Noncollinear Magnets

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submissions:

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Message from the Guest Editor

Dear Colleagues,

The term noncollinear magnetic materials refers to the class of materials in which the direction of spins depends on position in such a way that there is no specific direction in which all the spins are aligned (anti)parallel. This spin arrangement can be coplanar or noncoplanar, including systems with spin spirals and helicoids, canted spins and skyrmions. These noncollinear spin structures, which produce real-space or momentum-space Berry phases, can give rise to novel physical phenomena including the topological Hall effect, anomalous Hall effect, spin-polarized current, spin Hall effect, multiferroicity and Weyl fermions.

This Special Issue calls for original research and review articles on key developments of noncollinear magnets for spintronics. This includes novel theoretical developments towards the understanding of noncollinear spin effects and experimental works utilizing these effects to realize novel spintronic applications and device functionalities. It is my pleasure to invite you to submit original research papers, short communications, and state-of-the-art reviews for this Special Issue.



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Special Issue



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