Berry Phase and the Anomalous Hall Effect

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I will review the theory of Berry phase effects on electron dynamics in Bloch bands and its application on the anomalous Hall effect in ferromagnetic metals and semiconductors. I will review the theory of Berry phase effects on electron dynamics in Bloch bands and its application on the anomalous Hall effect in ferromagnetic metals and semiconductors.

[1] T. Jungwirth, Q. Niu, A. H. MacDonald, Anomalous Hall effect in ferromagnetic semiconductors, Phys. Rev. Lett. 88, 207208 (2002).

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