

Nernst effect as a probe of electrons in solids

Behnia, Kamran

ESPCI/CNRS, Paris Sciences et Lettres University, Paris, France

Abstract

The Nernst effect is the transverse electric field produced by a longitudinal thermal gradient in the presence of a magnetic field. As a measure of the flow of transverse entropy caused by a longitudinal particle flow, it opens a window quasi-particles in metals, to vortices in superconductors and fluctuations in the normal state of a superconductor. More recently, it has been employed to study the Berry curvature of topologically non-trivial electrons in magnetic materials. The talk will be an overview of this investigation.