Joint Annual Meeting of the Swiss and Austrian Physical Society 2023



Contribution ID: 183

Type: Talk

[606] Spin-orbit torques and thermal contributions to spin transport in CoFeB/LaTiO3/SrTiO3

Wednesday 6 September 2023 18:30 (15 minutes)

The Rashba-type spin orbit coupling found at the interface of two dimensional electron gases (2DEGs) is of great interest for spintronic applications. Here, we uncover the nature of spin transport from a 2DEG to magnetic metal via second harmonic Hall measurements, spin-torque ferromagnetic resonance, and temperaturedependent ferromagnetic resonance (FMR). While FMR indicates enhanced spin current absorption by the 2DEG, second harmonic Hall measurements reveal a large thermoelectric signal suggesting a strong in-plane thermal gradient generated by passing current through the LaTiO₃.

Theoretical Work

Author: RIDDIFORD, Lauren (Stanford University)

Co-authors: XUE, Fen (Stanford University); ALAEI, Sauviz (Stanford University); WANG, Shan X (Stanford University); ZHENG, Xin Yu (Stanford University); SUZUKI, Yuri (Stanford University)

Presenter: RIDDIFORD, Lauren (Stanford University)

Session Classification: Spintronics and Magnetism at the Nanoscale

Track Classification: Spintronics and Magnetism at the Nanoscale