W2S Seminar
(Webinar series on Spintronics)

Spin-Orbit Effects in Spintronics

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Date and time:
23.07.2020 at 11 am

Via
Google meet

Abstract

It is almost a century since the world of physics saw the unification of special theory of relativity and quantum mechanics through the advent of the Dirac equation. Yet many of the predictions such as concerning helicity, Chern number, Weyl fermions, etc., remained elusive in the laboratories of particle physics. It is then interesting to note that only recently, with the fabrication of nano and mesoscopic systems, it has been possible to experimentally realize many of these concepts in condensed matter physics in two-dimensions, for instance, in graphene and oxide materials.

We have recently observed some topological aspects of matter at oxide interface. I will discuss about the signature of possible Chiral anomaly, nontrivial Berry's phase, Quantum oscillations in resistivity and Rashba spin splitted band in 2-dimensional electron gas at oxide interface.

This work could be found in

Nature Communication, 1, 874 (2020), arxiv identifier: 1908.04977 (2019), Applied Surface Science 427, 861-866, (2018), Advanced Materials Interfaces, 1900941, (2019)

If interested to attend then please visit https://www.niser.ac.in/w2s-seminar/index.php