Joint Annual Meeting of SPS and ÖPG 2019



Contribution ID: 27

Type: Talk

## [121] Investigation of topological channels in twisted bilayer graphene

*Thursday 29 August 2019 17:00 (15 minutes)* 

We show electronic transport data on a particular interesting carbon system: Two vertically stacked layers of graphene that are twisted with respect to each other. With the twist angle, the properties change fundamentally. The two layers are decoupled at large and strongly coupled at small angles. It is even possible to achieve superconductivity at a certain twist angle.

To probe the system we make use of an electronic Fabry-Pérot interferometer. We probe a network of topological channels at tiny twist angles [1] and the physics of decoupled graphene layers at very large twists.

[1] P. Rickhaus, et.al. Nano Lett. 18, 11, 6725 (2018)

Author: Dr RICKHAUS, Peter (ETH Zürich)

**Co-authors:** Dr WALLBANK, John (National Graphene Institute, University of Manchester, Manchester, M13 9PL,); Dr SLIZOVSKIY, Sergey (National Graphene Institute, University of Manchester, Manchester, M13 9PL,); Mr PISONI, Riccardo (ETH Zürich); Dr OVERWEG, Hiske (ETH Zürich); Dr EICH, Marius (ETH Zürich); Dr LEE, Yongjin (ETH Zürich); Prof. LIU, Ming-Hao (Department of Physics, National Cheng Kung University, Tainan 70101, Taiwan ); Prof. ENSSLIN, Klaus (ETH Zürich); Prof. IHN, Thomas (ETH Zürich)

Presenter: Dr RICKHAUS, Peter (ETH Zürich)

Session Classification: Condensed Matter Physics

Track Classification: Condensed Matter Physics (KOND)