

Seminar on Condensed Matter Theory

Group of Theoretical Physics at the Department of Condensed Matter Physics of Charles University has a pleasure to invite you to attend the seminar

on 1 December 2022 at 13:00

at Faculty of Mathematics and Physics of Charles University, Ke Karlovu 5, 121 16 Praha 2

Seminar room F052



Mgr. Štěpán Marek

Charles University in Prague, Department of Condensed Matter Physics

Calculating Angular Momentum of Electron Current in Molecular Junction

Rotations of molecules driven by current are possible basis for construction of molecular motors. In "Geländer" molecules, the helical structure was thought to drive the momentum transfer from travelling electrons to the molecule. In the DFT based study, we explore the structure of the current density in such a molecule and identify the regions of the molecule that contribute most the angular momentum of the electron current. We also discuss the particularities of our results, especially the conservation of rotation direction under the exchange of electric bias direction.

