



Contribution ID: 73

Type: **Talk**

【207】 Magnetic tuning of mechanical dissipation in quantum graphene

Tuesday, August 31, 2021 3:00 PM (15 minutes)

We report on a low temperature ($T=5\text{K}$) measurement of striking singlets or multiplets of dissipation peaks above graphene nanodrums surface. The stress present in the structure leads to formation of few nanometre size graphene wrinkles and the observed dissipation peaks are attributed to tip-induced charge states transitions in quantum-dot-like entities. The dissipation peaks strongly depend on the external magnetic field ($B=0\text{T}-2\text{T}$). The magnetic field induce Peierls phase that shift the peaks to lower energy. At large magnetic field this shift induces the vanishing of the peaks.

Primary authors: OLLIER, Alexina (Swiss Nanoscience Institut); Dr KHOSRAVI, Ali (SISSA); Prof. TOSATTI, Erio (SISSA); Prof. MEYER, Ernst (University of Basel); Dr KISIEL, Marcin (University of Basel); Dr PAWLAK, Rémi (University of Basel); Dr GYSIN, Urs (University of Basel)

Presenter: OLLIER, Alexina (Swiss Nanoscience Institut)

Session Classification: Surfaces, Interfaces and Thin Films

Track Classification: Surfaces, Interfaces and Thin Films