



Contribution ID: 379

Type: **Talk**

[209] Quantification of Aligned GNRs Transfer Efficiency Using Raman Spectroscopy

Tuesday, 31 August 2021 15:30 (15 minutes)

Graphene nanoribbons (GNRs) synthesized with bottom-up technique allow electronic bandgap tuning, making GNRs an interesting candidate for room temperature switching applications as field-effect transistors (FET). We investigated various densities of aligned GNRs (by scanning tunneling microscopy) followed by transferring them to a target substrate. To investigate GNRs degree of alignment, Raman polarization anisotropy was used, which showed significant change in alignment for low GNR density samples. In this contribution, we will also discuss a modified fitting method for Raman polarization in which additional parameters are introduced to elucidate the effect of GNRs density on the degree of alignment.

Primary authors: DARAWISH, Rimah (nanotech@surfaces Laboratory, Empa, Swiss Federal Laboratories for Materials Science and Technology, 8600 Dübendorf, Switzerland); Dr BORIN BORIN, Gabriela (nanotech@surfaces Laboratory, Empa, Swiss Federal Laboratories for Materials Science and Technology, 8600 Dübendorf, Switzerland); Dr OVERBECK, Jan (Transport at Nanoscale Interfaces Laboratory, Empa, Swiss Federal Laboratories for Materials Science and Technology 8600 Dübendorf, Switzerland); Dr BRAUN, Oliver (Transport at Nanoscale Interfaces Laboratory, Empa, Swiss Federal Laboratories for Materials Science and Technology 8600 Dübendorf, Switzerland); Dr NARITA, Akimitsu (Max Plank Institute for Polymer Research, 55128 Mainz, Germany); Prof. MÜLLEN, Klaus (Max Plank Institute for Polymer Research, 55128 Mainz, Germany); Prof. CALAME, Michel (Transport at Nanoscale Interfaces Laboratory, Empa, Swiss Federal Laboratories for Materials Science and Technology 8600 Dübendorf, Switzerland); Dr RUFFIEUX, Pascal (nanotech@surfaces Laboratory, Empa, Swiss Federal Laboratories for Materials Science and Technology, 8600 Dübendorf, Switzerland); Prof. FASEL, Roman (nanotech@surfaces Laboratory, Empa, Swiss Federal Laboratories for Materials Science and Technology, 8600 Dübendorf, Switzerland)

Presenter: DARAWISH, Rimah (nanotech@surfaces Laboratory, Empa, Swiss Federal Laboratories for Materials Science and Technology, 8600 Dübendorf, Switzerland)

Session Classification: Surfaces, Interfaces and Thin Films

Track Classification: Surfaces, Interfaces and Thin Films