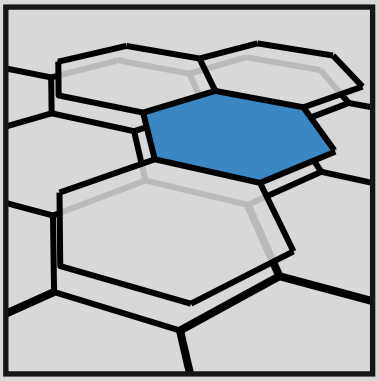

Aachen Graphene & 2D-Materials Center

Aachen-Graphene Flagship-Seminar

November 06, 2019
at the Physikzentrum Melaten
12:00h in 28A301

Electromechanical Behavior of Carbon Based Nano-Materials

Assaf Ya'akobovitz,
Department of Mechanical Engineering, Faculty of Engineering Sciences, Ben-Gurion University of the Negev, Israel

Vertically aligned carbon nanotube (VA-CNT) and graphene foams (GF) are among the most exciting nano-materials known today. VA-CNTs comprised of billions of aligned individual CNTs and have been the subject to intense research due to their myriad attractive properties, such as low mass density, high mechanical compliance, and micro-fabrication process compatibility. GF, on the other hand, have demonstrated high mechanical flexibility, piezoresistive behavior, large surface area, and low mass density. In the present talk, we will present our recent results in characterizing the electrostatic and electromechanical behavior of VA-CNT and GF. We will discuss the unique interactions between electrostatic field and these materials and show how it influences their mechanical stiffness, material capacitance and morphological structure.