

MS32-P114 - LATE | 2D MATERIALS IN ELECTRON MICROSCOPE

Singh, Rajendra (University of Vienna, Vienna, AUT)

Two dimensional materials are the ideal sample for transmission electron microscopy due to their intrinsically thin structure. These materials also allow to study the electron irradiation effects to individual atoms. Displacement cross section is a measure of the probability for displacing an atom by scattering event and is fully determined by the material dependent displacement threshold energy. It already has been measured for the pristine graphene structure, and we are currently extending the work for the undercoordinated atom at a single vacancy. Transmission electron microscopy also allows the measurement of the corrugation in 2D materials electron diffraction, which is practically impossible to do with any other technique. In our current work involves expanding this study to 2D materials beyond graphene and to van der Waals heterostructures.