

CONFOCAL RAMAN SPECTROSCOPY FOR INVESTIGATION OF BASIC PROPERTIES OF GRAPHENE

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Raman spectroscopy is one of the most powerful tools in graphene research. It has been used to study the number of layers, carrier concentration, edge types, thermal conductivity, mechanical properties, electronic band structures, chemical modifications, and so on. In order to study the local properties on a microscopic scale, a confocal spectroscopy scheme is usually used. The measurement capabilities are expanded when the Raman spectrum is measured as a function of the excitation and/or the scattered polarizations. One may also study the effects on the Raman spectrum due to external perturbations such as an electrical field or strain, from which one can extract valuable information regarding the basic physics of graphene. In this talk, I will explain the basics of the Raman spectroscopy of graphene and review most important results from Raman studies of graphene.

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