Raman Spectroscopy of Graphene: State of the Art

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SUMMARY

Raman spectroscopy is the most common and informative characterization technique in graphene science and technology. It is used to determine the number of layers, doping, strain, defects, functional groups, quality and type of edges. I will outline the state of the art in this field, the recent developments and future directions of research, focussing on the link between Raman spectra and sample mobility, the quantification and identification of defects, and the role of electron-electron interactions. Finally, I will discuss how Raman spectroscopy could play a similar role in the emerging field of topological insulators.

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