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Title:Terahertz properties of graphene

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Abstract:Graphene has proved itself as being unique in terms of fundamental physics, and of particular importance for post-silicon electronics. Research into graphene has divided into two branches, one probing the remarkable electronic and optical properties of graphene, and the other pursuing technologically viable forms of the material. Terahertz time domain spectroscopy (THz TDS) is a powerful tool for both, able to characterise the free carrier response of graphene and probe the inter and intraband response of excited carriers with sub-ps time resolution. We review THz TDS and related THz measurements of graphene. © Springer Science+Business Media, LLC 2012.

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