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**Undetectable Raman Spectrum of Graphene on Platinum Surface**  
A. ZETTL, QIN ZHOU, Department of Physics, University of California at Berkeley; Materials Sciences Division, Lawrence Berkeley National Laboratory — Raman spectrometry is often used as a quick and convenient tool to evaluate the growth quality of graphene. Recently there has been growing interest in platinum mediated graphene CVD growth for producing high-quality, large grain size, and highly flat graphene layers. Surprisingly, no Raman signal of graphene can be detected in the as-grown state on platinum substrates, despite using different laser wavelengths from 488 nm to 785nm. This phenomenon is briefly mentioned in earlier literature and has been attributed to strong platinum-graphene interaction. We investigate the disappearance of graphene Raman signatures on metal substrates, by performing Raman spectrum measurements on graphene layers transferred onto various substrates.

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