

# Nanoplasmonics and surface enhanced spectroscopy

## Raman scattering from organic molecules deposited on the noble metal nanoparticles and graphene

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Examples of both plasmonic and electron transfer influences on the Raman signals from the organic molecules deposited on graphene [1] and nanosized noble metal nanoparticles [2] are investigated in this work. Particularly graphene enhanced Raman scattering is detected for the adenine layer and compared with the SERS signal from adenine deposited on the surface previously decorated by noble metal nanoparticles.

Surface enhanced Raman detection and assignment of spectral bands for adenine as for a DNA constituent can be potentially important for those biomedical applications, in which monitoring of molecular conformations in DNA and its constituents is essential.

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