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MICROFABRICATION PROCESS of GRAPHENE FIELD EFFECT DEVICES and INVESTIGATION of LITHOGRAPHIC RESIDUES by SURFACE ENHANCED RAMAN SPECTROSCOPY

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Abstract: At the fabrication of Graphene Field Effect Transistor (GFET), microfabrication process has been extensively used. Microfabrication process has usually left impurities. However, impurities could be much more important at graphene-like two dimensional systems. In this work, pristine and photolithography-applied graphene samples were investigated by Surface Enhanced Raman Spectroscopy (SERS) which is a powerful method to detect molecules even if only one molecule [1-2]. Furthermore, after the photolithography process, to obtain more clean graphene surface, several methods were applied. The obtained electrical and SERS results were associated and compared to each other's to propound a new lift-off solvents.

Keywords: *Graphene; SERS; Lithographic Residues.*

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