Abstract Submitted
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Influence of the Raman laser power on the opto-electronics properties in graphene with water molecule[1] R R REY-GONZLEZ, Universidad Nacional de Colombia, A. CHAMPI, Universidade Federal do ABC, A. M. ROJAS CUERVO, Universidad Nacional de Colombia — The study of physical and chemical properties of nanostructures has contributed in great part with advance of the nanotechnology, which is important for the development of present and future technological applications. An important key in this purpose is the interaction of atoms and molecules with nanostructures. The principal interest of this experimental work is to study these processes on the interaction between liquid and vapor phases water with a graphene bilayer which is obtained through micromechanical exfoliation technique from a sample of natural graphite deposited on a SiO_2 substrate. The number of layers and the interaction water-bilayer are analyzed systematically by means of Raman spectroscopy $\lambda = 532$nm). Also, the influence of variation of the Raman laser power and its effects in the opto-electronic properties of the system are studied. From the usual G, D and 2D bands of these spectra, we analyze the relation between the laser power and some band parameters, such as its area, position and wide. Finally, these results permit us to quantify the density of defects and the distance among them as function of Raman power before and after of the water vapor incorporation in bilayers

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