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Generation of Carbon Scrolls from Graphene films HUMBERTO GUTIERREZ, AWNISH GUPTA, QIUJIE LU, VINCENT CRESPI, PETER EKLUND, Department of Physics, Pennsylvania State University — Using a chemical process to delaminate graphene from HOPG, we are able to produce suspended graphene and n-graphene layer films (i.e., nGL**,** n=integer) in various organic solvents. The nGLs have lateral dimensions of several microns. We observe that in a matter of a few hours, the nGLs "roll up" on themselves to form scrolls. Here we present results of a study which investigates the role of the solvent in determining the characteristic time to "roll up" the nGL. Raman scattering, AFM and TEM is used to characterize the scrolls. A model will be presented to explain why the scrolling occurs.

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