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STM Studies of Graphene Films Prepared by Sonication-Assisted Dispersion ELENA STOLYAROVA, KWANG TAEG RIM, GEORGE FLYNN, Columbia University, COLUMBIA UNIVERSITY TEAM — We present STM (Scanning Tunneling Microscopy) studies of thin graphene films prepared by a spraying technique via direct exfoliation of graphite in organic solvent (dimethylformamide). Our results show that these films are a patchwork of an unperturbed hexagonal graphene network mixed with heavily functionalized areas. The area of graphene-like spots does not exceed $10nm^2$. Further, we discuss the influence of chemical reduction of these films on their atomic structure.

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