

Abstract Submitted
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Investigation of the lyotropic liquid crystal phase of Graphene Oxide solution¹ YUE SHI, RIZWAN MAHMOOD, DONG CHEN, NOEL CLARK — Graphite Oxide spontaneously exfoliates into single-layer Graphene Oxide flakes in water. As the concentration becomes higher, Graphene Oxide solution shows a phase transition from the isotropic to the lyotropic liquid crystal phase. In the liquid crystal phase, the Graphene Oxide flakes can be ordered spontaneously by flow and shearing forces. We will report the investigation of the liquid crystal phase of the Graphene Oxide solution. In addition, the light scattering studies give dynamic information of the Graphene Oxide solution. Both the translational and rotational diffusion properties are investigated corresponding to different phases formed by Graphene Oxide at different concentrations.

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