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Landau Diamagnetism in Graphene FENGXIN CHEN, BO TIAN, YONG ZHANG, HONG ZHAO, WEIWEI CAI, Xiamen Univ — On the basis of the π electrons, which are free to move from carbon atom to adjacent carbon atom under the influence of impressed fields, graphene suspected has a properties of Landau diamagnetism discovered in 1930. Starting from colloidal graphene, we report an experiment of alignment of large quantity monolayer and few-layer graphene in a solution by magnetic field, due to the significant high diamagnetism and the anisotropy in graphene. By this method, an novel material in anisotropic optical transmittance was demonstrated.

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