

Abstract Submitted  
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**Nanodroplet Activated and Guided Folding of Graphene Nanostructures** PETR KRAL, NILADRI PATRA, BOYANG WANG, University of Illinois at Chicago — We demonstrate by molecular dynamics simulations that water nanodroplets can activate and guide the folding of planar graphene nanostructures [1]. Once the nanodroplets are deposited at selected spots on the planar nanostructure, they can act as catalytic elements that initiate conformational changes and help to overcome deformation barriers associated with them. Nanodroplets can induce rapid bending, folding, sliding, rolling and zipping of the planar nanostructures, which can lead to the assembly of nanoscale sandwiches, capsules, knots and rings.

[1] Patra, N.; Wang, B.; Kral, P. Nano Letters, 2009, in press

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