

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: Recording of an air bubble underneath graphene without lipids.

File Name: Supplementary Movie 2

Description: Recording of an air bubble underneath graphene surrounded with lipids.

File Name: Supplementary Movie 3

Description: Instability of graphene if not stabilized with lipids: an air bubble moves the graphene away from the camera field of view.