Graphene for its biomedical applications

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ABSTRACT

We investigate interaction of water droplets with different nanomaterials: Graphene and its allotropes – Biphenylene, Graphyne, Graphdiyne, Hexagonal and Cyclic graphene. Water microdroplets containing nanosheet are shown to spontaneously segregate into sack–cargo nanostructures upon drying. These cargo-filled nanosacks are promising for many potential applications where nanoscale materials should be isolated from the environment or biological tissue. Because of different topology of different nanomaterials, we observe different interaction. In addition, we investigate interface of nonmaterials with water droplet and its usage for water filtration.