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Reverse-engineering the anisotropic assembly of grafted nano-particels BEHNAZ BOZORGUI, SANAT KUMAR, Columbia University — We use computer simulations to study the self assembly and directed phase separation of nanoparticles grafted with polymeric chains in an implicit solvent. The formation of anisotropic clusters from building blocks that are symmetric (both in shape and interactions) has been the subject of recent studies. This anisotropy has roots in many body physics, which manifests itself as a directional assembly. Here we apply both full and coarse-grained simulations to get a better insight of the physics behind the assembly of such systems.

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