

Broken symmetries in cubic assemblies

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- Our simulations predict the break of symmetry in assemblies of DNA-coated nanocubes when DNA length is comparable to cube size. The predicted tetragonal phase matches with experiments, but simulations also predicts a wide range of other symmetries obtainable by changing DNA grafting densities. Predictive simulations can be used for to search for specific symmetries which may be tailored for precise optical properties.

