

## **2) Computational studies of particle self assembly in 3D, 2D, and confined environments**

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Assemblies of micro- and nano-sized particles are used in multiple applications involving, e.g., photonic materials, liquid armor, photovoltaic materials, etc. Particles of anisotropic (or non-spherical) shapes have gained significant importance as building blocks to produce many types of structures having total (crystal phases) or partial order (mesophases). This study is concerned with the self-assembly of particles not only in 3-dimensional bulk states but also in 2-dimensional flat surfaces (like those adsorbed onto solid substrates or at fluid-fluid interfaces) or in highly confined environments.