Self-assembly of rodlike colloids into 2D colloidal membranes

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Phase diagram illustrates two alternative assembly pathways observed in a mixture of rod -like molecules and non adsorbing polymer. Within a region indicated in blue rod-like molecules spontaneously assemble into novel 2D membranes consisting of a one-rod length thick monolayer of aligned rods. At higher polymer concentrations rods assemble into smectic filaments.

