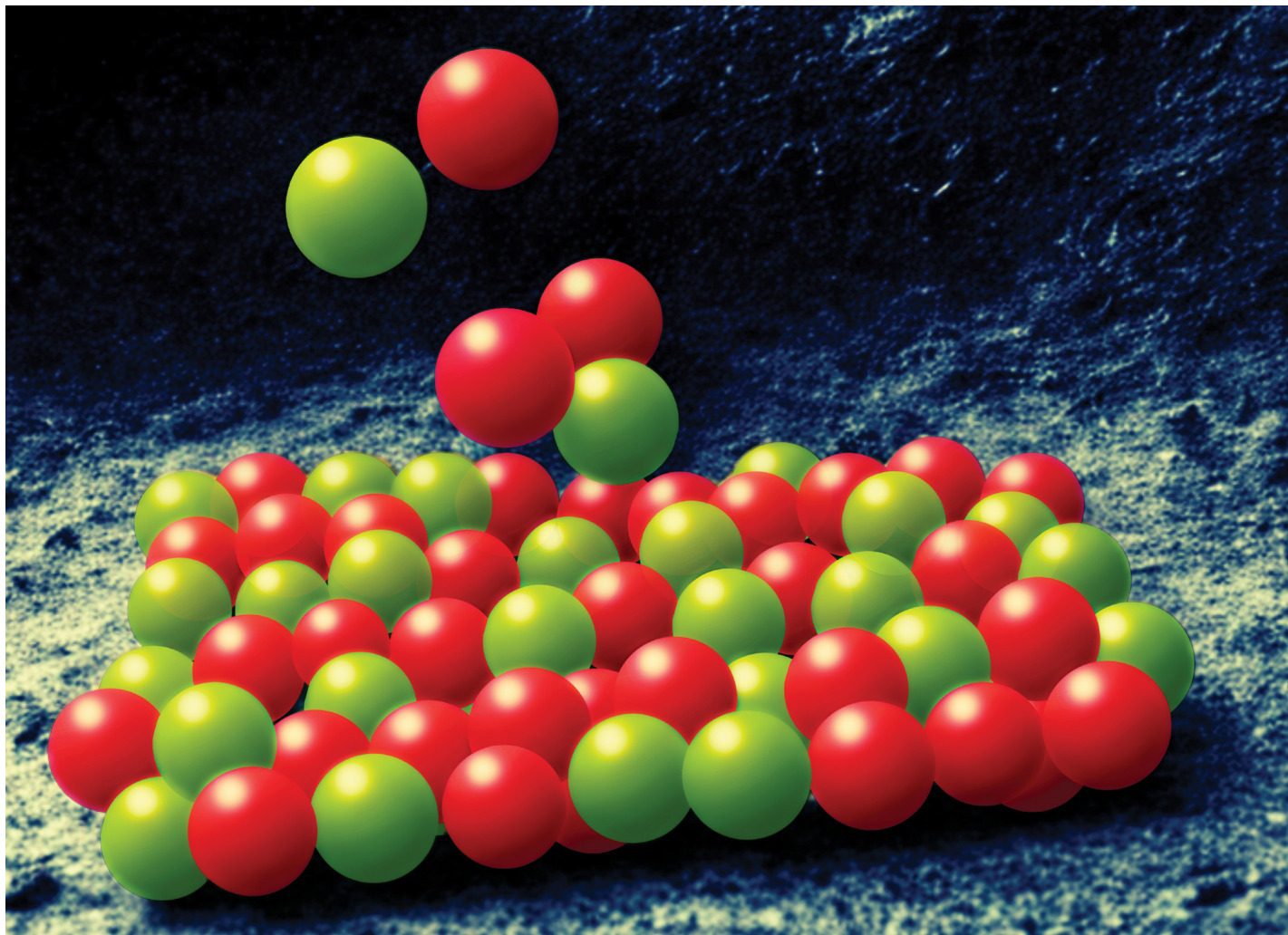




Showcasing research from Professor Tanjeem's Soft and Responsive Materials Laboratory, Department of Physics, California State University, Fullerton, USA.

Frustrated crystallization kinetics in marginally mismatched binary self-assembly driven by depletion interactions

We study the formation of self-assembled monolayers from a binary mixture of colloidal particles with marginally different sizes. The crystalline order of such monolayers is found to be lower compared to monolayers formed by particles with uniform size. A combination of experimental and computational investigation shows that the disordered assembly originates from the unique crystal growth mechanism of the layers rather than the topological frustration induced by the marginal size mismatch.

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As featured in:



See Nabila Tanjeem *et al.*,
Soft Matter, 2025, **21**, 5675.