Forming of Janus Particle by Adsorption and Phase Separation

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Location: 1000 MNTL at Illinois (KL 361 at UC Merced)

Abstract:

Janus particles possess two or more distinct properties on their surfaces. This asymmetric surface structure leads to interesting properties and enables potential applications in biomedical and biological fields. In this presentation, we focused on the competitive adsorption process of Au/PS Janus particles. Based on experimental observations, we used a coarse-grain molecular dynamics (CGMD) model to seek mechanistic explanation of forming of Janus-type surface structures. Our simulations suggest that the two regions with different properties would not form two hemispheres. The interface between regions of different properties is more likely to be curve similar to that on a tennis ball or baseball.