

Influence of Oligo- and Polysaccharides on Structures and Mechanics of Membranes

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Functional modification of solid surfaces with plasma membrane models draws an increasing attention as a straightforward strategy to bridge soft biological materials and hard inorganic materials. By the use of ultrathin polymer supports that mimic the generic role of extracellular matrix and glycocalyx, both artificial model membranes and native membranes (polymer-supported membranes) can be immobilized on various solid surfaces. I will introduce some of our recent studies where we physically model the roles of "soft" biopolymers (carbohydrates) in fine-adjustment of contacts at biological interfaces using specular and off-specular scattering and fluorescence methods.