

Abstract Submitted
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Shear-induced alignment of “bicellar” phospholipid membranes¹

MU-PING NIEH, Institute of Materials Science, Chemical, Materials & Biomolcular Engineering Department, University of Connecticut, MING LI, Institute of Materials Science, Polymer Program, University of Connecticut, NORBERT KUCERKA, Canadian Neutron Beam Centre, National Research Council — “Bicellar” phospholipid mixtures, composed of two types of lipids (i.e., long-chain and short-chain lipids), self-assemble into a magnetically alignable bilayered structure. As a result, the model membranes have been used as membrane substrates for the structural study on membrane-associated proteins in many nuclear magnetic resonance experiments. In this presentation, I will demonstrate the shear-alignability of the bicellar model membranes through an in-situ neutron diffraction study under shear flows, the important controlling parameters and their applications and biological implications.

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