

Elastic response of bilayers with intrinsic proteins

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Abstract

Intrinsic membrane proteins affect the ordering of neighbouring lipid chains. We have used a model of protein-lipid interactions in bilayers proposed by Owicki et al. (Owicki, J.C., Springgate, M.W. and McConnell, H.M. (1978) *Proc. Natl. Acad. Sci. U.S.A.* 75, 1616, 1619) to show that near the lipid phase transition this effect may significantly increase the magnitude of a membrane's lateral compressibility (or correspondingly, decrease the magnitude of the membrane's elastic moduli).

Author Keywords: Elastic response; Intrinsic protein; Lipid chain ordering; Lateral compressibility

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