

Abstract Submitted  
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**Effect of dipolar moments in domain sizes of lipid bilayers and monolayers**<sup>1</sup> ALEX TRAVESSET, Iowa State University and Ames Lab — Lipid domains are found in systems such as multi-component bilayer membranes and single component monolayers at the air water interface. It was shown by McConnell and collaborators that in monolayers the size of the domains results from balancing the line tension, which favors the formation of a large singular single circular domain, against the electrostatic cost of assembling the dipolar moments of the lipids. In this talk, I will generalize this argument to include effects of ionic strength, dielectric discontinuities (or image charges) and the polarizability of the dipoles and extend the results to bilayer membranes. I will finish with a discussion on the experimental implications of the calculations.

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