

Abstract Submitted
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Crystallization of Polyelectrolyte-Surfactant Complexes at the Air-Water Interface¹ ALEX TRAVESSET, Iowa State University, DAVID VAKNIN, Ames Laboratory and Iowa State, GILAT NIZRI, Hebrew University, SHLOMO MAGDASSI, Hebrew University — A system consisting of a strong polyelectrolyte (poly-allyldimethylchloride) and surfactant (sodium-dodecyl-phosphate) is studied by surface synchrotron x-ray techniques combined with surface-tension measurements. It is found that distinct phases are formed at the gas-water interface in regimes where no order is present in bulk. In particular, we find that the addition of salt (NaCl) to a very dilute surfactant in polyelectrolyte solution induces a crystallization of cylindrical micelles with distorted-hexagonal symmetry.

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