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**Shape instabilities in absorbed polymer condensates** GERALD PEREIRA, Victoria University of Wellington — Self-assembly in polymeric liquids results in morphological structures which show ordering on a range of length scales. Two examples of this phenomena are the structures which result from a homopolymer in a poor solvent and a polyelectrolyte in a poor solvent. We specifically consider the scenario of imaging such condensates via techniques such as Atomic Force Microscopy or Surface Force Apparatus, where the condensate strongly adsorbs to the surface. We demonstrate that the real-space, Self-Consistent Field method is an ideal numerical tool in predicting equilibrium morphologies. New structures are predicted, which are supported by explicit free energy calculations.

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