

Abstract Submitted
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The effect of multivalent ions on the thermal transition of hydrated polyelectrolyte multilayers DARIYA REID, JODIE LUTKENHAUS, Texas A&M University, Department of Chemical Engineering — Layer-by-layer (LbL) assembly is a commonly studied technique in the production of uniform thin films. Hydrate LbL assemblies made of model polyelectrolytes, poly(diallyldimethylammonium chloride) (PDAC) and poly(styrene sulfonate) (PSS), exhibit a thermal transition with features of a glass transition and a lower critical solution temperature transition when assembled in the presence of sodium chloride. The question remains as to how multivalent cations affect the nature of the transition. Here, we present results on the thermal transition of PDAC/PSS LbL assemblies exposed to various multivalent salts. Quartz crystal microbalance (QCM-D) and modulated differential scanning calorimetry (MDSC) is used to assess the transition.

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