Collaborative Investigations of Supramolecular Polymer Assembly Processes. KAREN WOOLEY, Washington University — It is a pleasure to participate in this symposium, honoring Darrin J. Pochan’s awarding of the John H. Dillon Medal for advancing our understanding of the physics of assembly and chain conformation of synthetic polypeptides. Assemblies of polypeptides, polysaccharides and polymers of nucleic acids are, of course, complex natural systems that form the bases of life. Over the past three years, we have worked together as a highly interdisciplinary team of investigators, to investigate the self assembly behaviors and resulting morphologies for synthetic amphiphilic block copolymer systems. This presentation will highlight the findings from these collaborative studies, including the importance of the block copolymer composition and topology and the significance of the assembly conditions.