Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

Time Resolved Studies of Bundle Formation in Rod-Like Polyelectrolytes JOHN C. BUTLER, Department of Materials Science and Engineering, TOMMY ANGELINI, Department of Physics, GERARD C. L. WONG, Department of Materials Science and Engineering, Department of Physics, Department of Bioengineering, University of Illinois at Urbana Champaign — It is known that multivalent ions can generate attractions between like-charged polyelectrolytes in a wide range of systems. We find that sparteine, a chiral divalent cation, can condense polyelectrolytes in a temperature dependent manner. The condensation behavior of the fd virus, a negatively charged polyelectrolyte, can be modulated by tuning the sparteine mediated attraction via temperature. Moreover, we use real-time fluorescence microscopy imaging to study the temporal evolution of bundle formation.

John Butler
University of Illinois at Urbana Champaign

Date submitted: 04 Dec 2004 Electronic form version 1.4