



## Microrheological studies of flexible polyelectrolytes in multivalent salt solution

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**Abstract:** Polyelectrolyte behavior in the presence of multivalent salts has attracted considerable attention due to the potential relevance for the understanding and development of biological phenomena and applications such as gene delivery. Here we report the rheological studies of flexible polyelectrolytes in the presence of different multivalent salts using microrheology. Microrheological measurements are well suited for these studies because only microliter-sized samples are needed and it allows fast measurements. In this presentation, we show that the collapse (or expansion) of the polyelectrolyte coils upon the addition of salt due to the electrostatic interaction between polyelectrolyte and counterions can be quantitatively evaluated by measuring changes in polyelectrolyte solution viscosity. Different viscous responses of polyelectrolyte solution upon adding different salts were observed.



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