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Kinetics of swelling enhancement of polyelectrolyte brushes XIAO CHU, JINGFA YANG, Institute of Chemistry, Chinese Academy of Sciences, GUANGMING LIU, University of Science and Technology of China, JIANG ZHAO, Institute of Chemistry, Chinese Academy of Sciences — The swelling of polystyrene sulfonate brushes is enhanced due to the break-up of the multiplets formed by dipole-dipole interactions inside, when external salt concentration is increased to moderate value. By quartz crystal balance with dissipation, the kinetics of this process is investigated and a systematic study on the effect of grafting density and salt concentration is conducted. The results demonstrate the effect of spatial hindrance due to uneven distribution of segments and osmotic pressure of the external ions.

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