

Abstract Submitted
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Dependence of surface diffusivity on the molecular conformation of single hydrophobic polyelectrolytes molecules¹ JIANG ZHAO, SHENGQIN WANG, Institute of Chemistry, Chinese Academy of Sciences, Beijing 100080, China — Hydrophobic polyelectrolytes are found to have their conformation change from an extended chain to globule via neck-lace structures. In this work, surface diffusion of single poly (2-vinylpyridine) (P2VP) molecule was studied under different chemical environment (pH value and ionic strength). Via hydrophobic interaction, P2VP molecules adsorbed to a hydrophobic surface. By fluorescence correlation spectroscopy, fluorescence labeled P2VP molecules were found to raise their surface diffusivity moderately but monotonously when the pH value was tuned from 2.0 to 6.5. The physical mechanism of the diffusivity dependence on molecular conformation is discussed.

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