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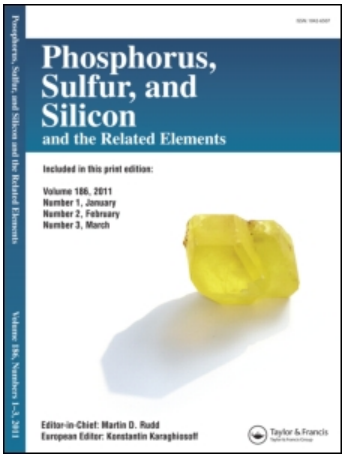

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Complex Formation of Polyphosphate Sodium with Cationic Polymers

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COMPLEX FORMATION OF POLYPHOSPHATE SODIUM WITH CATIONIC POLYMERS

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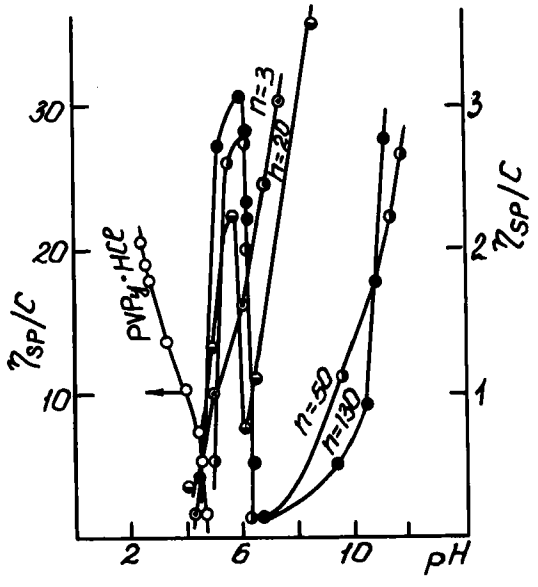
The products of the interaction of opposite charged complementary macromolecules, the so called polyelectrolyte complexes (PEC) in polyphosphate sodium - hydrochlorided poly--2-vinylpyridine (PPhNa-P2VPy.HCl) and polyphosphate sodium - polyhexamethylenguanidine (PPhNa-PMG) systems, are studied. The composition of PEC was determined by electrochemical methods. At [polyanion]:[polycation]=1 (base-mol) ratio the forming stoichiometric complex precipitates. The investigation in solutions were carried out at [polyanion]: :[polycation]=1.25 ratio. In Figure the dependencies of the reduced viscosity of PPhNa-P2VPy.HCl solutions on pH at different degrees of polymerization of PPhNa (n) are given. The curves resemble those for polyampholytes. Probably PEC can be considered as polyampholyte in some cases. For PPhNa-PMG systems the η_{sp}/C-pH dependencies point to the weakly expressed character of complex formation.



Dependencies of reduced viscosity on pH for P2VPy. HCl (o) and its complexes with PPhNa with n=3 (o), 20 (o), 50 (o), 130 (o).