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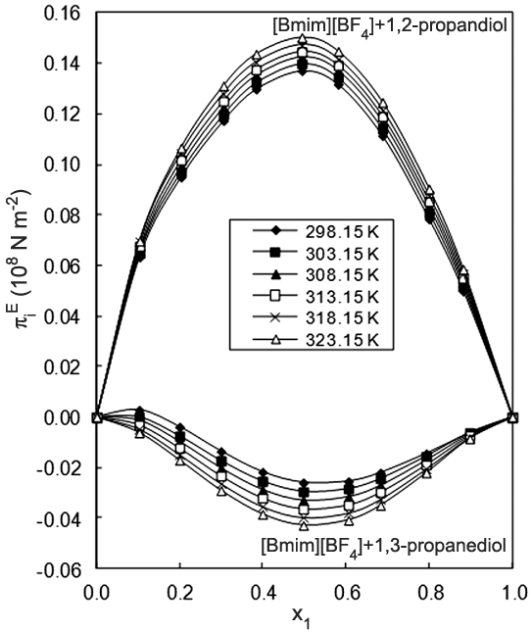
CONTENTS

664 Temperature dependent study of thermophysical and optical properties of binary mixtures of imidazolium based ionic liquids

T S Krishna, M G Sankar, A K Nain* & B Munibhadrayya

The excess thermodynamic parameters and deviations in refractive index of [Bmim][PF_4]+α,ω-propanediol binary mixtures indicate significant interactions in these mixtures, which follows the order: 1,2-propanedio l> 1,3-propanediol. The results indicate the applicability of various mixing rules of refractive index in theoretically estimating refractive indices of these mixtures.

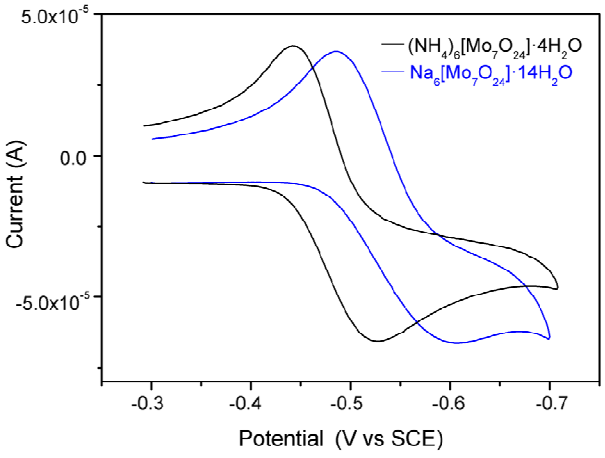


Notes

676 Sodium paramolybdate revisited

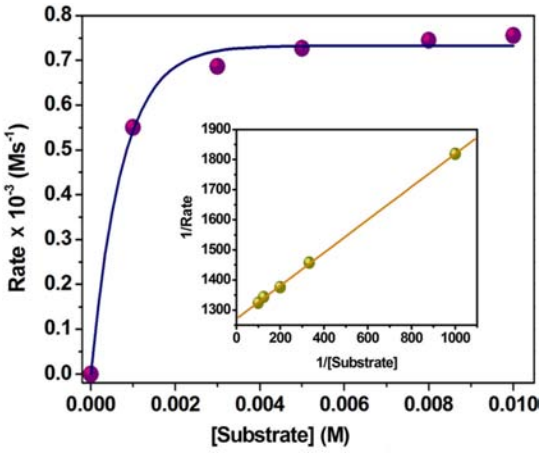
Bikshandarkoil R Srinivasan* & Sudesh M Morajkar

A rational synthesis of $Na_6[Mo_7O_{24}]\cdot 14H_2O$ and its spectral, thermal and electrochemical characterization is reported. Cyclic voltammetric and conductivity studies of an aqueous solution of $Na_6[Mo_7O_{24}]\cdot 14H_2O$ reveal the presence of hydrated Na^+ ions and heptamolybdate anions in solution, unlike a sodium coordinated heptamolybdate in the solid state.



681 Phenoxazinone synthase activity of a mononuclear cobalt(III) complex

The trivalent cobalt complex, $[Co(HL)_2](OAc).H_2O$ (**1**) [H_2L = *N*-(2-hydroxyethyl)-3-methoxysalicylaldimine], is as an effective model for phenoxazinone synthase to oxidize *o*-aminophenol to 2-aminophenoxazine-3-one in methanol in presence of aerial oxygen. The reaction follows Michaelis-Menten enzymatic reaction kinetics with high turnover number (K_{cat} = 2.83×10^4 h^{-1}).



Merry Mitra & Rajarshi Ghosh*

686 One-step synthesis of ZnO nanowires on zinc foils and their photocatalytic properties

ZnO nanostructures with different morphologies have been grown on zinc foil substrate by a novel and facile hydrothermal method, without the assistance of any catalyst or template. The resulting ZnO nanorods have diameter of ~ 70-90 nm and average length in the range of 0.5-2.0 μm. The as-grown ZnO samples have very good crystallinity. A comparison of the photocatalytic degradation of methyl orange with different ZnO shows that the photocatalytic properties of the ZnO nanostructures depend on the morphology of ZnO. The growth process of the ZnO nanorods is proposed based on the solid-liquid-solid mechanism.

Mohamad Mohsen Momeni*

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