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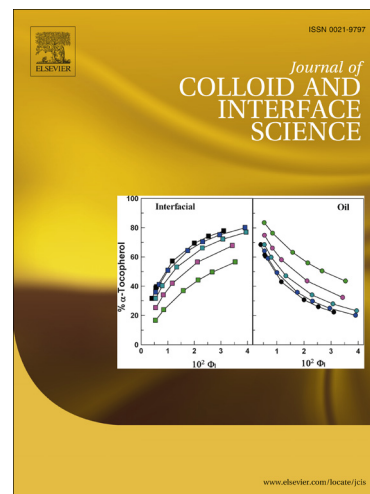
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Hydroxide Ion-Mediated Synthesis of Monodisperse Dopamine-Melanin Nanospheres

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Abstract

Dopamine-melanin nanospheres are promising materials for photoprotection, structural coloration, and thermoregulation due to their unusual optical and chemical properties. Here, we report the experimental parameters which influence size of dopamine-melanin nanospheres and uniformity. Dopamine precursors are oxidatively polymerized in basic aqueous medium. Therefore, concentration of hydroxide ions significantly influences reaction rate and size of nanospheres. To investigate the effect of hydroxide ions, we adjust three different parameters which affect pH of medium: concentration of sodium hydroxide

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