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Influence of reaction mixture ligand background at the formation of CdS – PbS thin films by chemical bath deposition

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Abstract

The concentration planes of lead and cadmium sulphide formation in "Cd^{2+} – Pb^{2+} – L – OH^- – N_2H_4CS" systems, where L – $C_6H_5O_7^{3-}$, $H_2NCH_2CH_2NH_2$, $C_6H_5O_7^{3-}$ + $H_2NCH_2CH_2NH_2$, $(HO\text{-}CH_2CH_2)_3N$ + $H_2NCH_2CH_2NH_2$, $(HO\text{-}CH_2CH_2)_3N$ were calculated by analyzing of the ion equilibrium. Scaning electron microscopy and energy dispersive analysis results showed the effect of the nature and strength of the complexing agents on composition and morphology of synthesized nanocrystalline CdS – PbS films.