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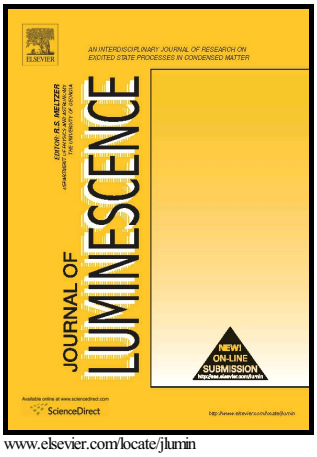

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Solution-Deposited Highly Luminescent Eu^{3+}-Doped $CdMoO_4$ Thin Films

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Abstract: Eu^{3+}-doped $CdMoO_4$ luminescent ultra-thin films were fabricated by a facile aqueous solution method. The thin films were characterized by means of X-ray diffraction (XRD), atomic force microscopy (AFM), X-ray photoelectron spectroscopy (XPS), scanning electron microscopy (SEM) and energy dispersive spectrometer (EDS), and the results showed that Eu^{3+}ions are doped into $CdMoO_4$ and the luminescent thin films are dense and smooth. Photoluminescence (PL) spectra, UV-vis absorption spectra and lifetimes were also used to characterize luminescent properties of the resulting films. The optimal doping concentration was found to be 10 mol% for the Eu^{3+}-doped $CdMoO_4$ luminescent ultra-thin films.

Keywords: $CdMoO_4$; rare earth doping; solution processed; luminescent thin films