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Preparation and spectral properties of europium hydrogen squarate microcrystals

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Abstract

A simple scheme for preparation of europium hydrogen squarate octahydrate microcrystals, $\text{Eu}(\text{HSq})_3 \cdot 8\text{H}_2\text{O}$ is demonstrated. The microcrystalline powders obtained have a potential application as non-centrosymmetric and UV radiation – protective hybrid optical material. The site-symmetry of the Eu – ion is C_{2v} or lower, obtained from diffuse reflectance spectra. The formation of europium hydrogen squarate is supported by IR – spectroscopy, UV / Vis spectroscopy, chemical analysis and X-ray diffraction. A detailed analysis of the UV/Vis and IR spectra of the micropowders prepared is presented.

Keywords

europium, hydrogen squarate, UV/Vis spectroscopy, IR spectroscopy

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