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Calcium molybdate impurified by Eu3+ for gas sensing

To detect changes or events produced by physical phenomena in our environment, it is necessary to use sensors. The presence of some gases on high concentrations can be dangerous for the living beings and its early detection is of vital importance. Nowadays there are several sensing devices, among them those with luminescent properties represents an attractive option, because the interaction of the sensing material with the analyte is perceptible by naked eye, this due to that the guest molecules adsorbed by the material can change its color and/or its luminescent intensity.
On this work we synthetized calcium molybdate impurified by Eu3+ metallic ions by means of the solvohydrothermal microwave assisted method. We show results of structural and optical properties obtained by XRD, FTIR and photoluminescence. In a future this material will be evaluated as luminescent sensor.

Keywords

microwave, sensing, gas, photoluminescence

Reference

Hong, W. T., Lee, J. H., Jang, H. Il, et al. (2015). Orange-red light emitting europium doped calcium molybdate phosphor prepared by high energy ball milling method. 2015 20th Microoptics Conference (MOC), 1, 1–2. https://doi.org/10.1109/MOC.2015.7416428

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I confirm

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