Phosphors
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Synthesis and Near-Infrared Luminescence of $La_3GaGe_5O_{16}:Cr^{3+}$ Phosphors. — The new title phosphor is synthesized by solid state reaction of La_2O_3, Ga_2O_3, GeO_2, and Cr_2O_3 (alumina crucible, 1250 °C, 5 h in air). It exhibits near-infrared emission with maximum at 700 nm under excitation of 415 nm UV irradiation. The optimal doping concentration of Cr^{3+} is 3 mol%. The phosphor has potential applications in luminescence solar concentrators with broad-band absorption and emission. — (ZHOU, J.; XIA*, Z.; RSC Adv. 4 (2014) 86, 46313-46318, http://dx.doi.org/10.1039/C4RA09793A ; Sch. Mater. Sci. Technol., China Univ. Geosci., Beijing 100083, Peop. Rep. China; Eng.) — W. Pewestorf