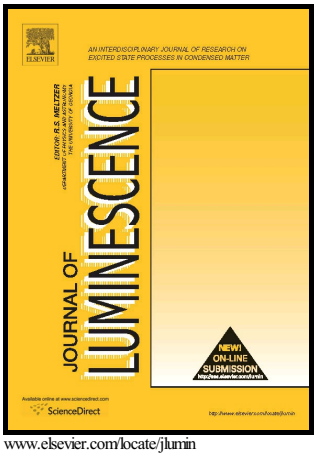

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Abnormal photo-stimulated luminescence in $Ba_2Ga_2GeO_7$: Tb^{3+}, Bi^{3+}

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Abstract

A novel green-emitting phosphor $Ba_2Ga_2GeO_7$: Tb^{3+}, Bi^{3+} was successfully synthesized by solid-state reaction. The photoluminescence (PL), photo-stimulated luminescence (PSL) and long persistent luminescence (LPL) were investigated in detail. After pre-irradiation upon UV light, the PSL spectrum of $Ba_2Ga_2GeO_7$: Tb^{3+}, Bi^{3+} exhibits peaks centered at 493, 547, 589, and 627 nm