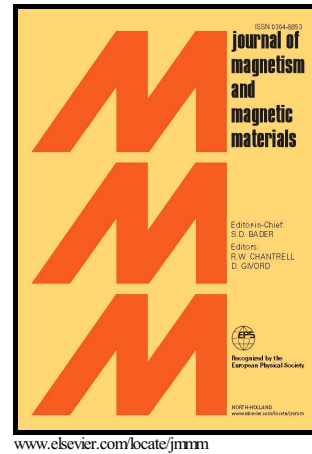


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Magnetic susceptibility measurements of pure and mixed gadolinium-terbium fumarate heptahydrate crystals

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Letter**Magnetic susceptibility measurements of pure and mixed gadolinium-terbium fumarate heptahydrate crystals****B. Want*, M.D. Shah**

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Abstract

Magnetic moment and susceptibility measurements of single crystals of pure and mixed rare earth fumarates of gadolinium and terbium were carried out at room temperature. The experimental values of molar susceptibilities for $\text{Gd}_2(\text{C}_4\text{H}_2\text{O}_4)_3 \cdot 7\text{H}_2\text{O}$, $\text{Tb}_2(\text{C}_4\text{H}_2\text{O}_4)_3 \cdot 7\text{H}_2\text{O}$ and $\text{GdTb}(\text{C}_4\text{H}_2\text{O}_4)_3 \cdot 7\text{H}_2\text{O}$ are 2.68×10^{-2} , 3.89×10^{-2} , and 3.18×10^{-2} (in $\text{emu mol}^{-1} \text{Oe}^{-1}$), respectively. The calculated effective magnetic moments are in good agreement with the theoretical predictions on rare earth ions.

Keywords: Rare earth fumarates; Magnetic measurements.

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