

Electronic Supporting Information

Recovery rate and homogeneity of doping europium into luminescent metal hydrides by chemical analysis

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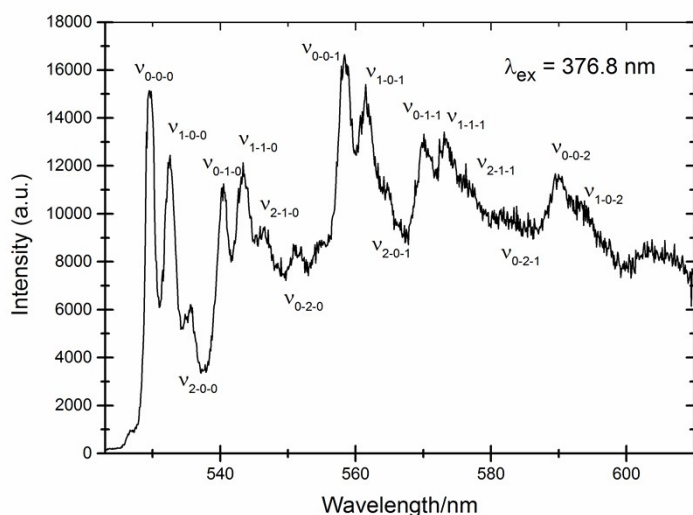


Figure 1 High resolution emission spectrum of $\text{LiSrH}_3:\text{Eu}^{2+}$ 0.0037 mol % at 10 K. The small band at 19011 cm^{-1} is due to anti stokes.

In the assignment of the vibronic lines in Fig. 1 with v_{x-y-z} the number x indicates the vibronic replica of the lower energy 100 cm^{-1} vibration, the number y the 370 cm^{-1} vibration and z the third vibrational mode at about 970 cm^{-1} .

Table 1 Vibronics in the emission spectrum at 10 K für the $4f^65d^1-4f^7$ transition of Eu^{2+} in $\text{LiSrH}_3:\text{Eu}^{2+}$ 0.0037 mol %. The energy of the vibrational modes is given with respect to their zero phonon lines.

Line	ΔE [cm^{-1}]
V_{1-0-0}	102
V_{2-0-0}	214
V_{0-1-0}	373
V_{1-1-0}	479
V_{2-1-0}	584
V_{0-2-0}	740
V_{0-0-1}	970
V_{1-0-1}	1072
V_{2-0-1}	1179

v ₀₋₁₋₁	1340
v ₁₋₁₋₁	1435
v ₂₋₁₋₁	1559
v ₀₋₂₋₁	1688
v ₀₋₀₋₂	1912
v ₁₋₀₋₂	2024
