Supporting information:

Vibrationally induced color shift tuning of photoluminescence in Ce$^{3+}$-doped garnet phosphors

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1 Supporting figures

Fig. S1 Variable temperature emission spectra, corresponding to the experimental $4f$ bands and to the $4f$, $^2F_{7/2}$, and $^2F_{5/2}$ bands obtained from the fits, of YAG:1%Ce$^{3+}$, YAG:2%Ce$^{3+}$ and YAG:3%Ce$^{3+}$. 
Fig. S1 (continued) Variable temperature emission spectra, corresponding to the experimental $4f$ bands and to the $4f, ^2F_{7/2}$, and $^2F_{5/2}$ bands obtained from the fits, of CSS:1%Ce$^{3+}$ and SYG:1%Ce$^{3+}$. 
Fig. S2 Deconvolution of the emission spectra of YAG:1%Ce<sup>3+</sup>, YAG:2%Ce<sup>3+</sup>, YAG:3%Ce<sup>3+</sup>, and CSS:1%Ce<sup>3+</sup> at 80, 500, and 860 K, respectively, and SYG:1%Ce<sup>3+</sup> at 80, 300, and 440 K, respectively. Solid curves and thicker dashed curves correspond to the 5d<sub>1</sub> → 4f emission band (4f band) obtained from the experimental (exp.) measurements and peak fits, respectively. The peak fits were performed using two Gaussian functions (cf. two thinner dashed curves) which correspond to the 5d<sub>1</sub> → 2F<sub>7/2</sub> and 5d<sub>1</sub> → 2F<sub>5/2</sub> emission bands (2F<sub>7/2</sub> and 2F<sub>5/2</sub> bands, centered at lower and higher energies, respectively).