

Weak thermal quenching of the luminescence in the $\text{Ca}_3\text{Sc}_2\text{Si}_3\text{O}_{12}:\text{Ce}^{3+}$ garnet phosphor (Supporting information)

Suchinder K. Sharma,^{a,‡} Yuan-Chih Lin,^a Irene Carrasco,^{b,§} Tobias Tingberg,^c Marco Bettinelli,^b Maths Karlsson^{*a}

^aDepartment of Chemistry and Chemical Engineering, Chalmers University of Technology, SE-412 96 Göteborg, Sweden. Tel: +46 31 772 6770; E-mail: maths.karlsson@chalmers.se (Maths Karlsson); ^bLuminescent Materials Laboratory, Department of Biotechnology, University of Verona, and INSTM, UdR Verona, Strada Le Grazie 15, 371 34 Verona, Italy; ^cDepartment of Microtechnology and Nanoscience, Chalmers University of Technology, 412 96 Göteborg, Sweden [‡]Current address: Institute of Applied Physics, TU Bergakademie Freiberg, Leipziger Str. 23, 09596 Freiberg, Germany.; [§]Current address: Advanced Technology Institute, Department of Electrical and Electronic Engineering, University of Surrey, Guildford GU2 7XH, United Kingdom;

1 Supporting figures

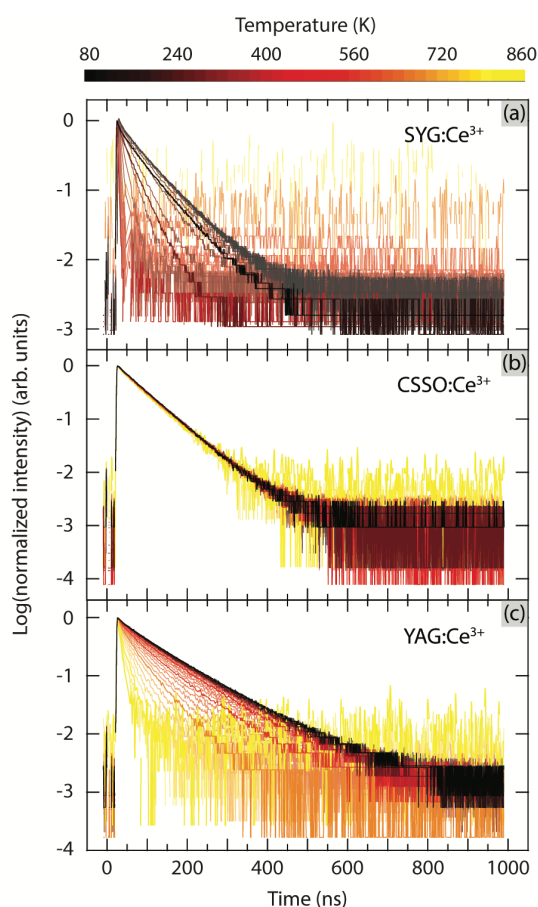


Fig. S1 Variable temperature luminescence decay curves for (a) $\text{SYG}:\text{Ce}^{3+}$, (b) $\text{CSSO}:\text{Ce}^{3+}$, and (c) $\text{YAG}:\text{Ce}^{3+}$.

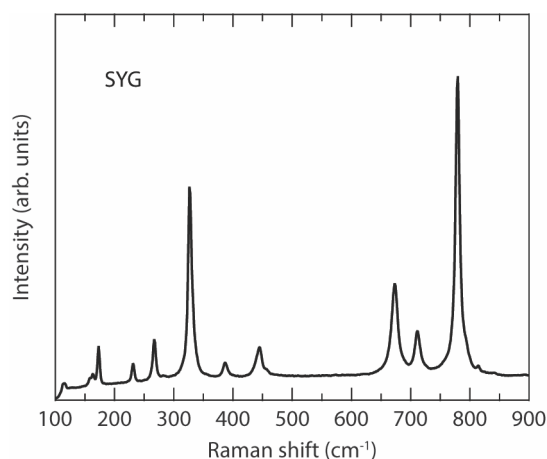


Fig. S2 Room temperature Raman spectrum of SYG, measured using a Renishaw InVia Reflex spectrometer equipped with a CCD and a 2400 l/mm grating, as a 532 nm laser source was focused on the sample through a $\times 50$ objective lens ($\text{NA} = 0.5$, power ≈ 2 mW on the sample), for 10 s of acquisition time over 16 accumulations.^{S1}

References

S1 Y.-C. Lin, P. Erhart, M. Bettinelli, M. Karlsson, *To be published*.