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Supporting Information for

Growth and optical properties of $(Y_{1-x}Gd_x)_3Al_5O_{12}$:Ce single crystal phosphors for high-brightness neutral white LEDs and LDs

Stelian Arjoca,*[a,b] Daisuke Inomata,[c] Yoshitaka Matsushita[a] and Kiyoshi Shimamura[a,b]

[a] *National Institute for Materials Science, Tsukuba 305-0044, Japan.*
[b] *Graduate School of Advanced Science and Engineering, Waseda University, Shinjuku, Tokyo 169-8555, Japan.*
[c] *Tamura Corporation, Sayama, Saitama 350-1328, Japan.*

*E-mail: arjoca.stelian@nims.go.jp

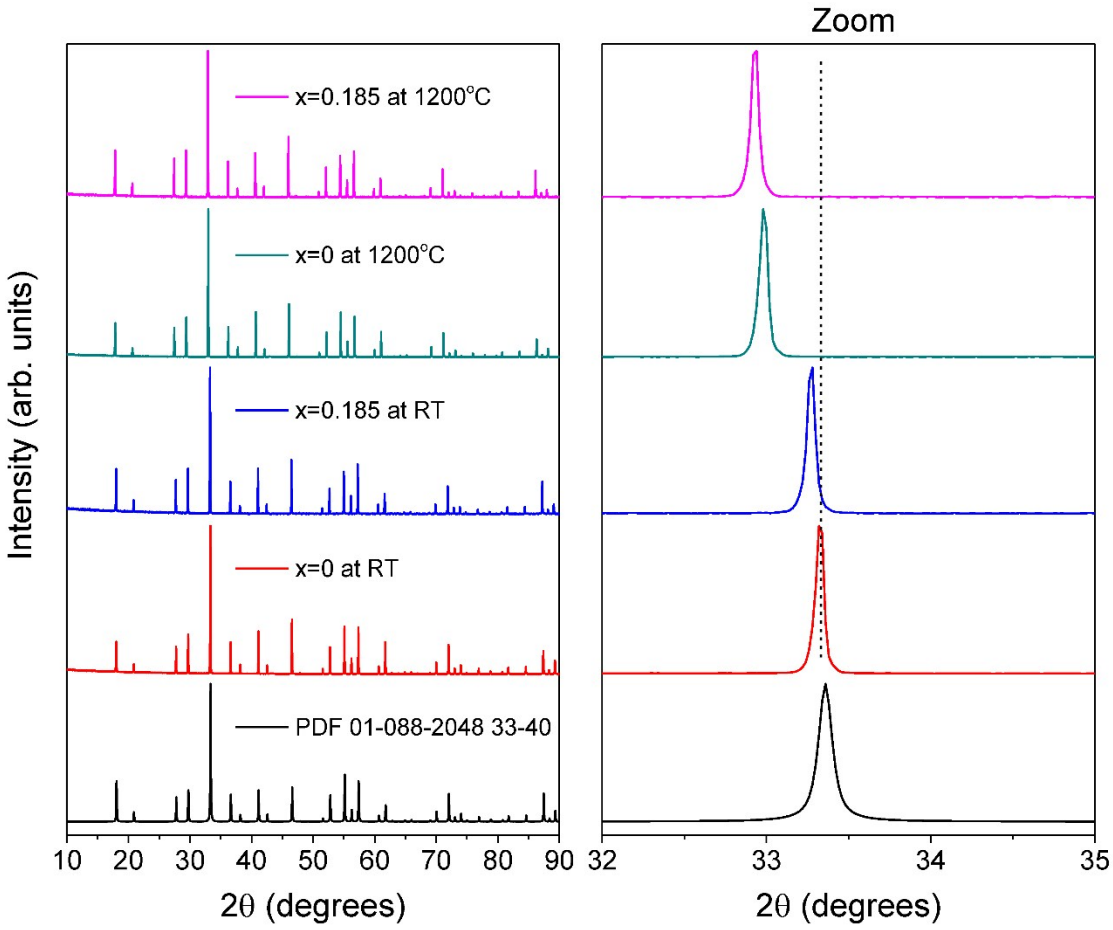

Fig. S1: XRD patterns of $(Y_{1-x}Gd_x)_3Al_5O_{12}$:Ce (x=0, 0.185) single crystals at room temperature (RT) and 1200°C in comparison with reference YAG pattern. (Right) Zoom around the position of the highest intensity peak.

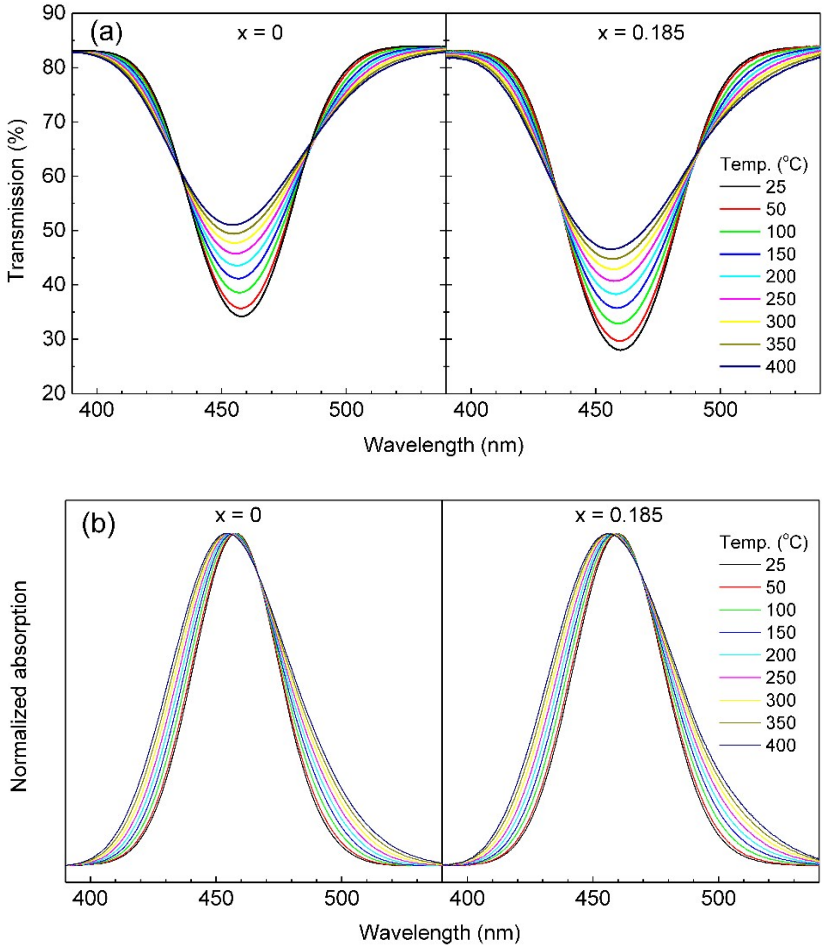

Fig. S2: (a) Transmittance and (b) normalized blue absorption of $(Y_{1-x}Gd_x)_3Al_5O_{12}$:Ce (x=0, 0.185) single crystals as a function of temperature from 25 to 400°C.

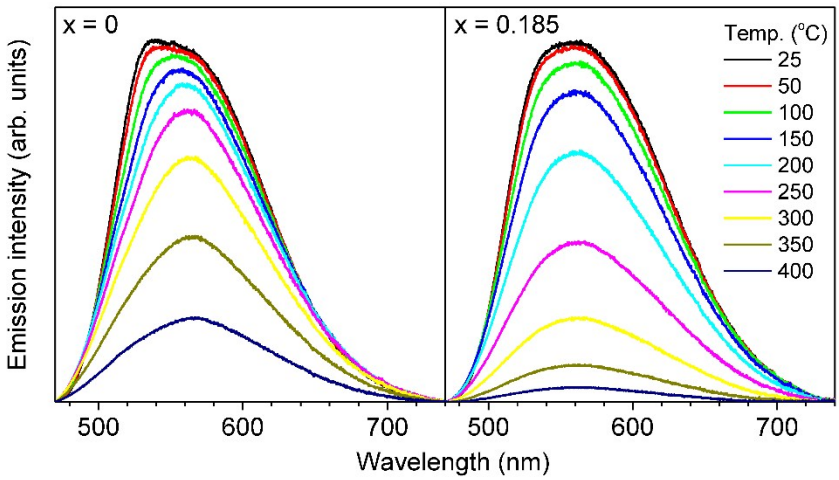

Fig S3: Emission spectra of $(Y_{1-x}Gd_x)_3Al_5O_{12}$:Ce (x=0, 0.185) single crystals as a function of temperature under constant power 450 nm excitation.

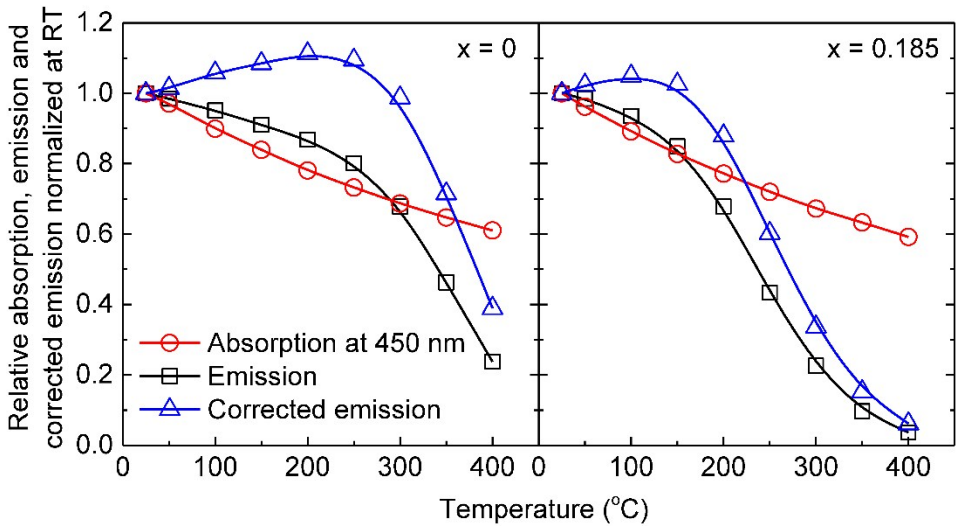

Fig S4: Relative absorption at 450 nm, emission intensity at constant excitation power and corrected emission intensity of $(Y_{1-x}Gd_x)_3Al_5O_{12}$:Ce (x=0, 0.185) single crystals as a function of temperature.

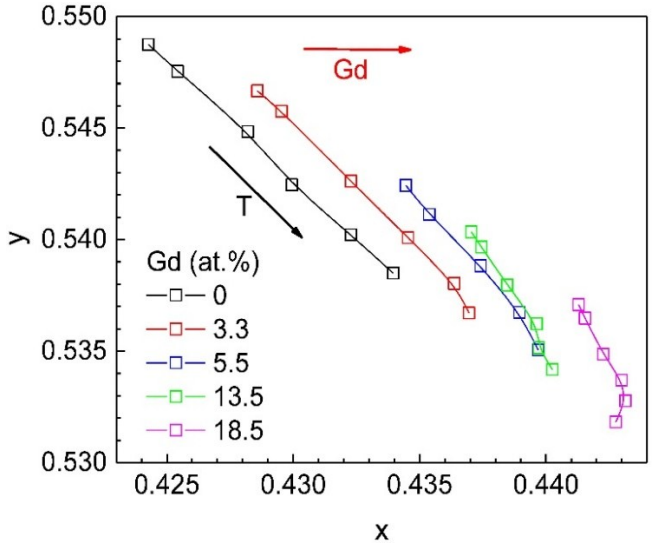

Fig. S5: CIE color coordinates of $(Y,Gd)_3Al_5O_{12}$:Ce SCPs as a function of temperature, at room temperature and from 50 to 250°C using with a 50° step.