

Supplemental materials for “Highly efficient and thermally robust cyan-green phosphor-in-glass film for high-brightness laser lighting ”

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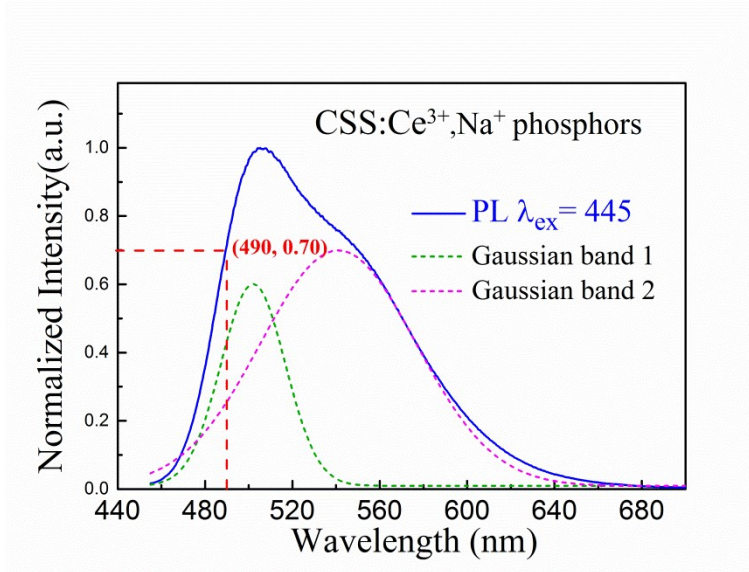


Fig. S1 The ratio of PL intensity at 490 nm to 514 nm for CSS:Ce³⁺,Na⁺ phosphors; Gaussian fitting into two emission bands 502 nm and 543 nm

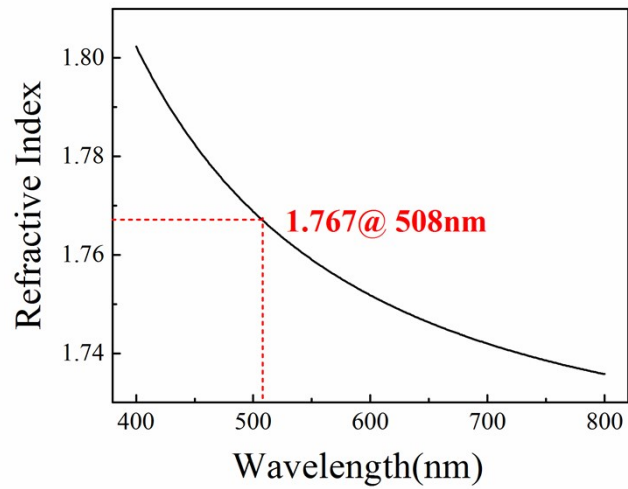


Fig. S2 Dispersion of refractive index of borosilicate glass measured using ellipsometry

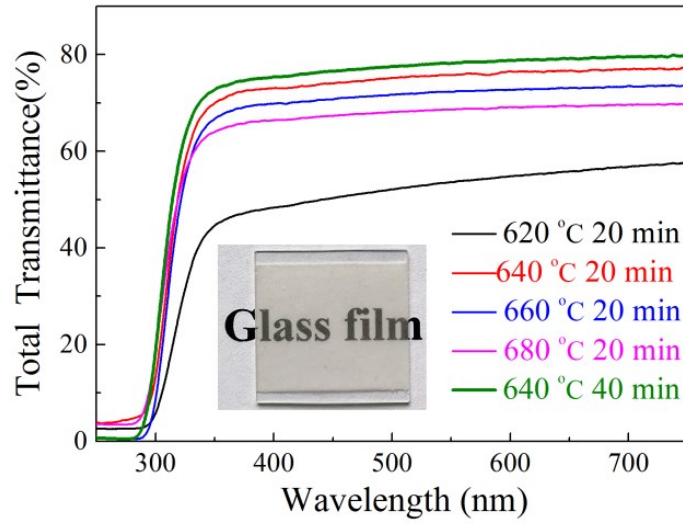


Fig. S3 Total transmittance spectrum of the Glass Film ($\sim 73\mu\text{m}$) prepared with different sintering parameter; insert is the photographs of the glass film sintered at 640°C for 40 min

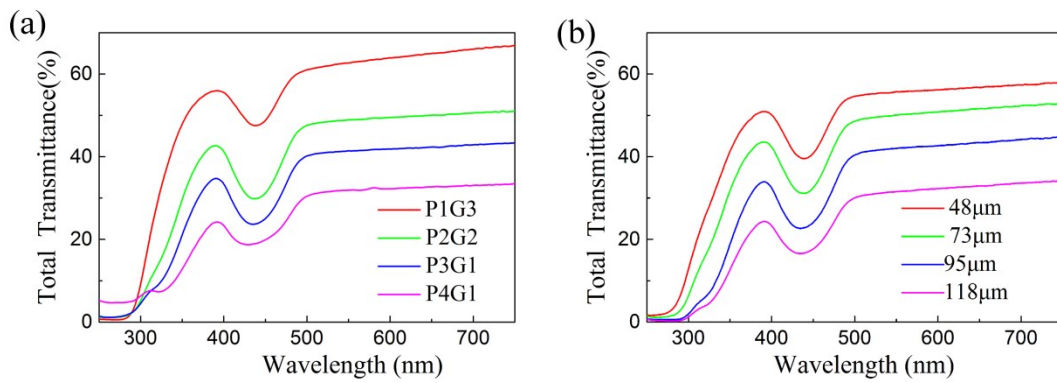


Fig. S4 Total transmittance spectra of the film with (a) various PiG ratios ($\sim 73\mu\text{m}$) and (b) various film thickness (P2G3)

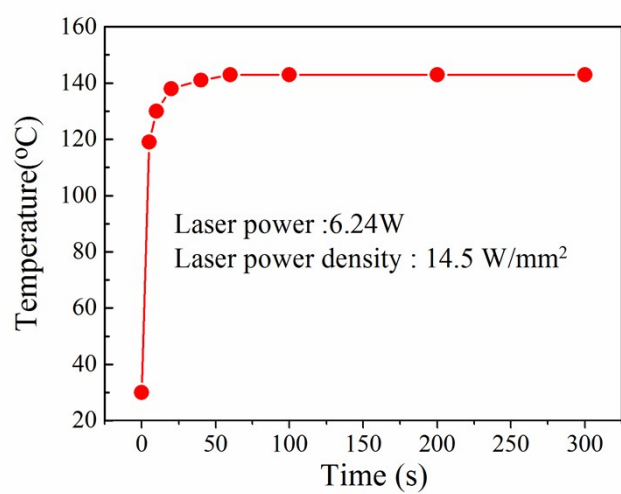


Fig. S5 Surface temperature of the CSS-PiG film under 14.5 W/mm² laser excitation

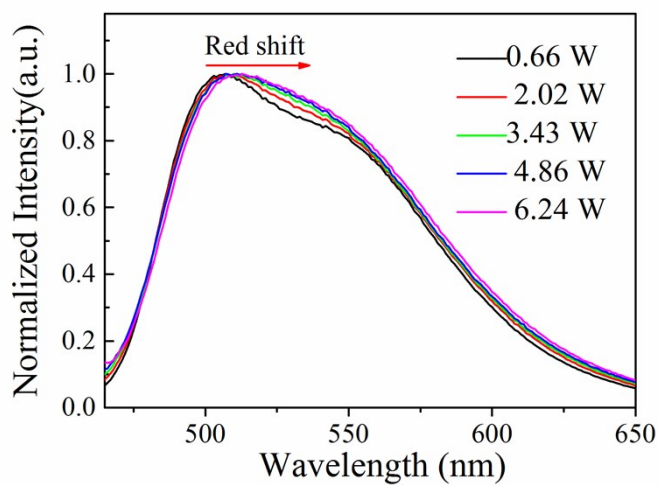


Fig. S6 Normalized emission spectra of the CSS-PiG film pumped by varying incident laser power

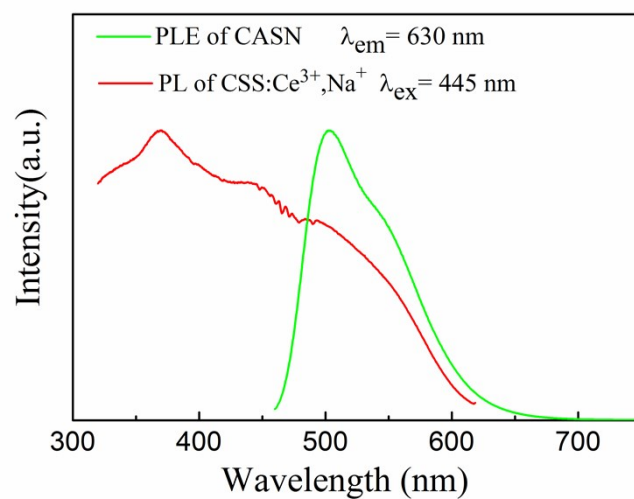


Fig. S7 Emission spectrum of the CSS:Ce³⁺,Na⁺ phosphors; Excitation spectrum of the CaAlSiN₃:Eu²⁺ phosphors