Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

ELECTRONIC SUPPLEMENTARY INFORMATION

Sulforhodamine B-LDH composite as a rare-earth-free red-emitting phosphor for LED lighting.

Paul Legentil[a], Fabrice Leroux[a]*, Sandrine Therias[a], Damien Boyer[a] and Geneviève Chadeyron[a]*

[a] *Université Clermont Auvergne, CNRS, SIGMA Clermont, ICCF, F-63000 Clermont–Ferrand, France.*

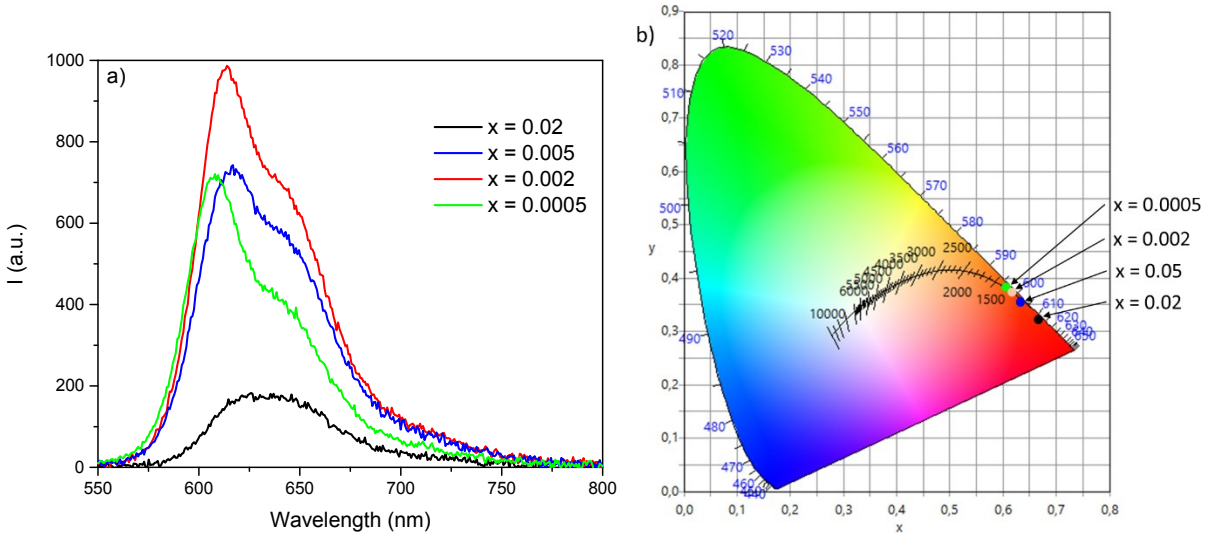

Figure S1. a) Evolution of the emission spectra and b) CIE chromaticity coordinates of LDH-DS-SRB (x = 0.0005, 0.005, 0.002, 0.02) powders.

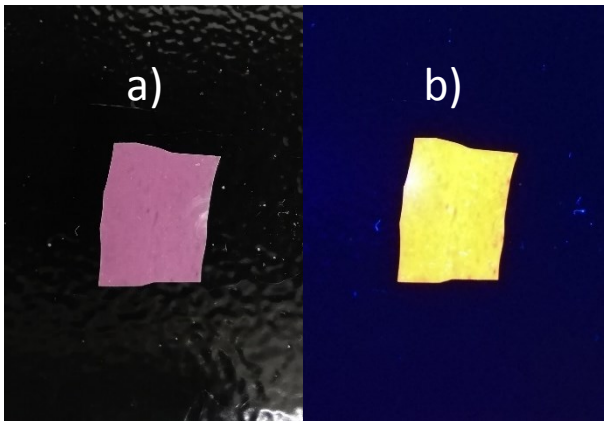

Figure S2. Photograph of the Si-LDS composite film a) under daylight and b) under UV radiation (365 nm).

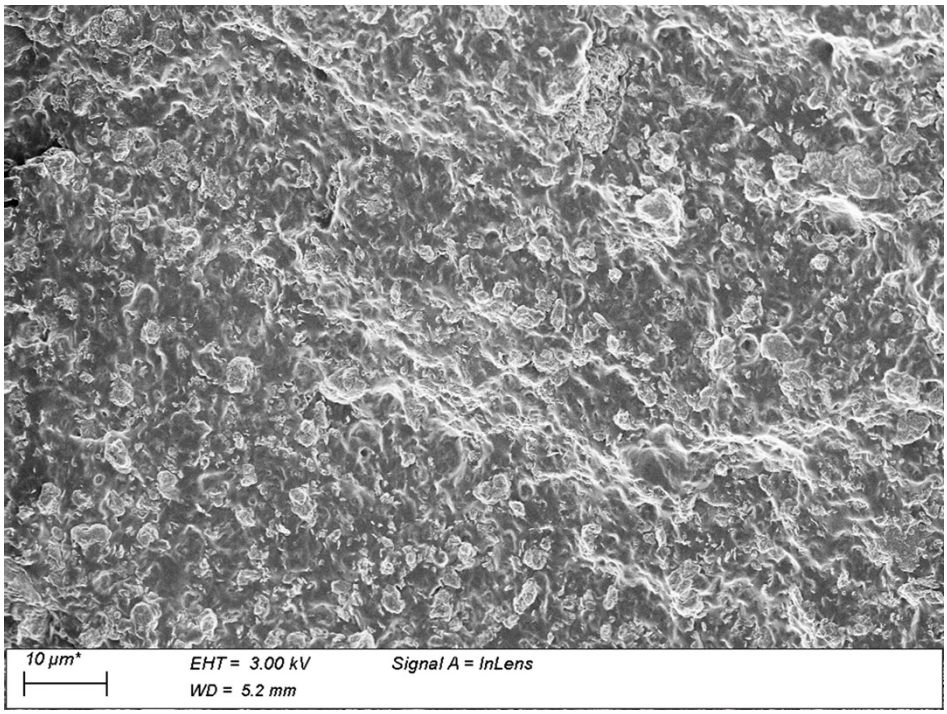

Figure S3. SEM image of Si-LDS composite film.

Scanning electron microscopy (SEM)

Scanning electron microscopy was performed with a ZEISS Supra 55 VP scanning electron microscope in high vacuum at 20 kV using a back-scatter electron detector (QBSD).

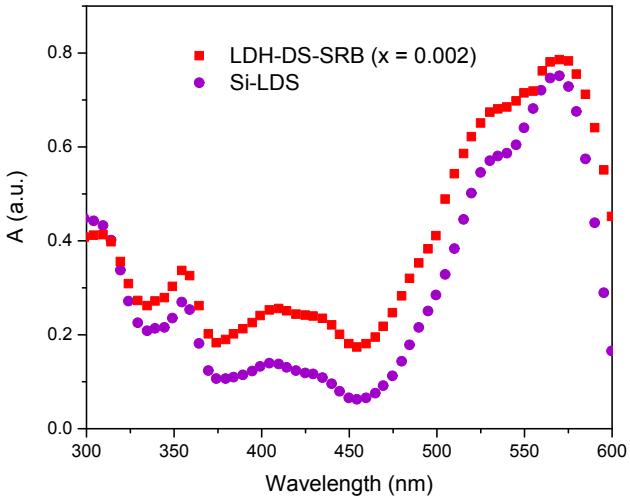

Figure S4. Evolution of the absorbance with the excitation wavelength for the composite film Si-LDS and the LDH-DS-SRB (x = 0.002) powder.

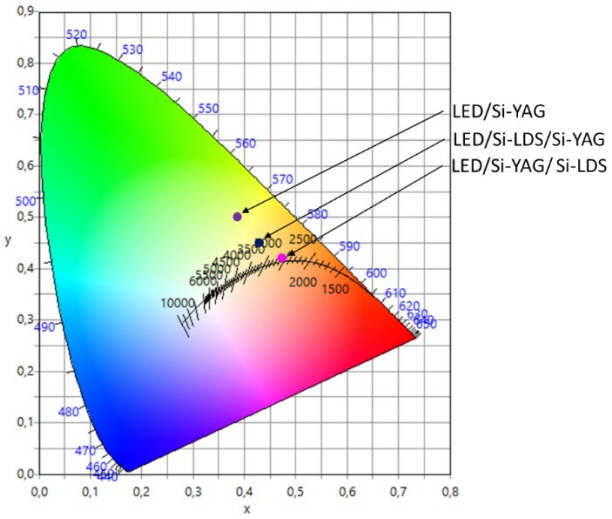

Figure S5. CIE chromaticity coordinates given by the configuration b, c and d on Fig. 9.

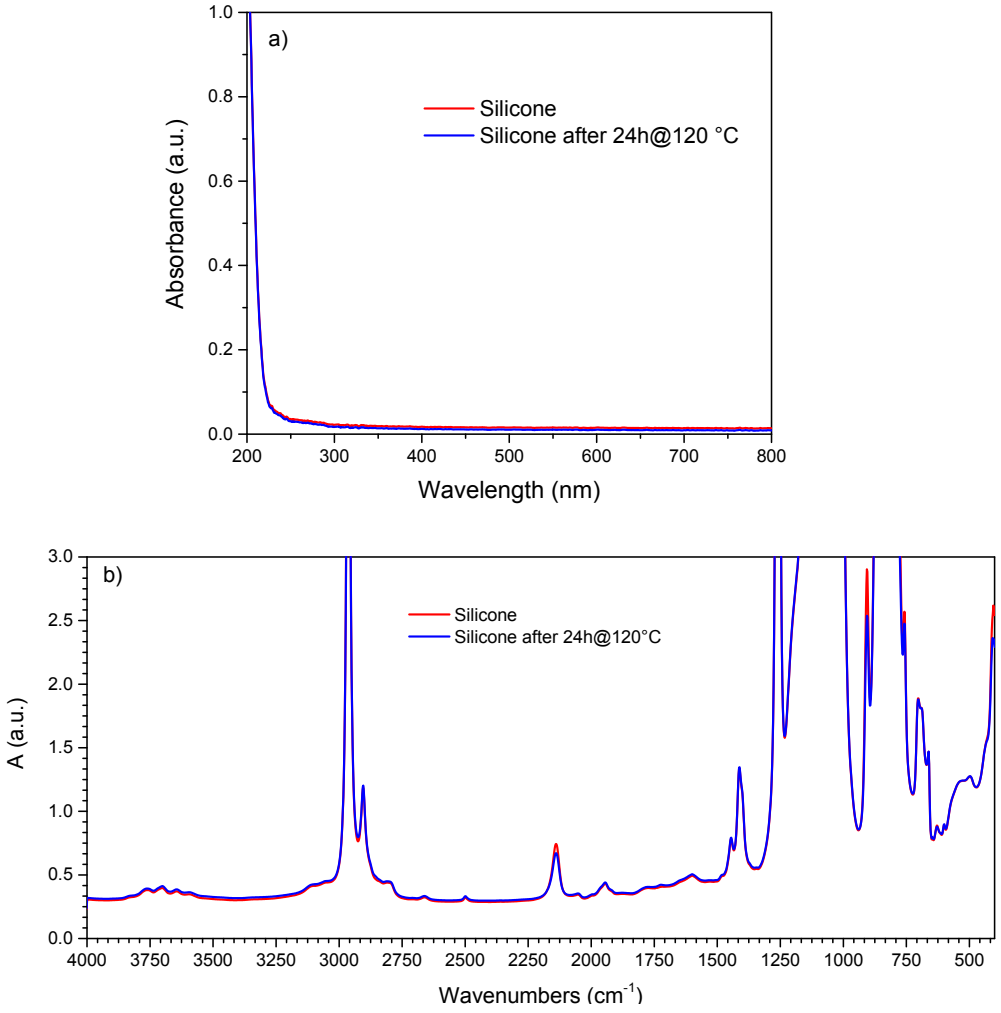

Figure S6. a) UV-vis spectra and b) IR spectra of a silicone film before and after a 24h thermal treatment at 120°C.