Supplementary Files

Utilizing host-guest interaction enables the simultaneous enhancement of the quantum yield and Stokes shift in organosilanefunctionalized, nitrogen-containing carbon dots for laminated luminescent solar concentrators

Hsiu-Ying Huang¹, Maria Jessabel Talite², Kun-Bin Cai¹, Ruth Jeane Soebroto³,

Sheng-Hsiung Chang¹, Wei-Ren Liu⁴, Wu-Ching Chou²*, and Chi-Tsu Yuan¹*

¹Department of Physics, Chung Yuan Christian University, Taoyuan, Taiwan

²Department of Electrophysics, National Chiao Tung University, Hsinchu, Taiwan

³Master Program in Nanotechnology, Chung Yuan Christian University, Taoyuan,

Taiwan

⁴Department of Chemical Engineering, Chung Yuan Christian University, Taoyuan,

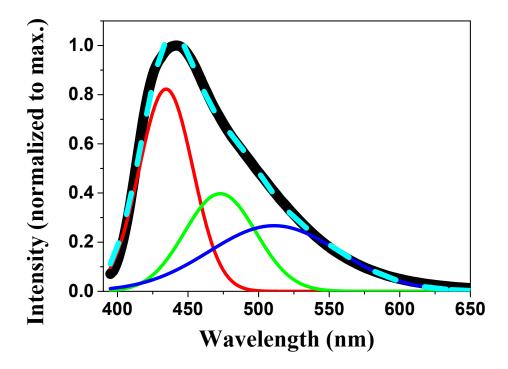
Taiwan

AUTHOR INFORMATION

Corresponding Author

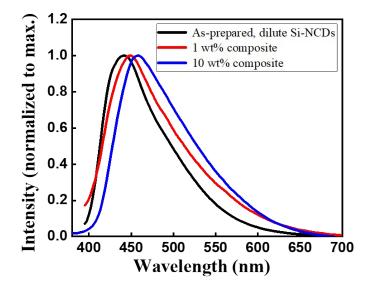
*E-mail: <u>wuchingchou@mail.nctu.edu.tw</u>. Phone: +886-3-5712121#56129 *E-mail: <u>ctyuan@cycu.edu.tw</u>. Phone: +886-3-2653219

Fig. S1. Fitted PL spectrum of as-synthesized, dilute Si-NCDs.



The PL spectrum of as-synthesized, dilute Si-NCDs can be fitted using three Gaussian functions, yielding three PL peaks at ~435, ~475, and ~515 nm.

Fig. S2. Comparison of PL spectra for as-prepared, dilute Si-NCDs, and non-treated Si-NCDs@silica composites with ~1 and ~10 wt% loadings.



It can be found that except for slight PL red-shift due to reabsorption effect, their PL lineshape are similar with dominated blue-emitting centers.