Intercalation of organic sensitisers into layered europium hydroxide and enhanced luminescence property

Nankai Chu,\textsuperscript{a} Yahong Sun,\textsuperscript{a} Yushuang Zhao,\textsuperscript{a} Xinxin Li,\textsuperscript{b} Genban Sun,\textsuperscript{a} Shulan Ma \textsuperscript{a,\*} and Xiaojing Yang \textsuperscript{a,\*}

\textsuperscript{a} College of Chemistry, Beijing Normal University, Beijing 100875, China.

\textsuperscript{b} Analysis and Test Center, Beijing Normal University, Beijing 100875, China.

\textbf{Fig. S1} Powder XRD patterns of the NO\textsubscript{3}–LEuH precursors at different drying conditions: dried in air at ambient humidity (a), vacuum–dried at 70 °C (b), and vacuum–dried at 40 °C.
**Fig. S2** Powder XRD patterns of the composite BPC–LEuH at different drying conditions: air-dried at ambient humidity (a), vacuum–dried at 40 °C (b), and vacuum–dried at 70 °C (c).

**Fig. S3** Powder XRD patterns of the composite TA–LEuH at different drying conditions: dried in air at ambient humidity (a), vacuum–dried at 40 °C (b), and vacuum–dried at 70 °C.
Fig. S4 Powder XRD patterns of the composite BPC–LEuH reacted at 120 °C using different NaOH amount: the NaOH/BPC molar ratios were 1 (a), 1.2 (b), 1.5 (c), 2 (d) and 3 (e), respectively.
**Fig. S5** Room-temperature emission spectra of composite BPC–LEuH at excited wavelengths of 318 (a) and 395 nm (b), respectively.

**Fig. S6** Room-temperature emission spectra of the composite TA–LEuH at different excited wavelengths: 300 nm (a), 395 nm (b).