Self-Assembly and Photo-Responsive Behavior of Bis-terpyridyl Eu\textsuperscript{3+}-Complex

Chuan Dong,\textsuperscript{a} Jin Yuan,\textsuperscript{a} Heinz Hoffmann\textsuperscript{b} and Jingcheng Hao*,\textsuperscript{a}

\textsuperscript{a} Key Laboratory of Colloid and Interface Chemistry & Key Laboratory of Special Aggregated Materials, Shandong University, Ministry of Education, Jinan 250100, China

\textsuperscript{b} Physikalische Chemie I, Bayreuth Universität, D-95440, Germany

* Corresponding author. Fax: +86-531-88564750. E-mail: jhao@sdu.edu.cn
Figure S1. MALDI-TOF-MS spectrum of compound L1.

Figure S2. $^1$H-NMR (400 MHz) spectrum of compound L2.
Scheme S1. Synthetic route of compound L2 and bis-terpyridyl Eu$^{2+}$-complex L2.

Figure S3. XPS analysis of bis-terpyridyl Eu$^{3+}$-complex L1. (a) Energy survey of spectrum. (b) High-resolution spectrum in the N1s.
Figure S4. Fluorescence quantum yield of the solution before (a) and after (b) UV exposure of 120 minutes.

Quantum Yield Results for 'Multi Scans'

Excitation Range: 350.00 to 380.00 nm
Luminescence Range: 380.00 to 600.00 nm

QY = 2.90%

Quantum Yield Results for 'Multi Scans'

Excitation Range: 350.00 to 380.00 nm
Luminescence Range: 380.00 to 600.00 nm

QY = 10.57%

Figure S5. Short fluorescent life of the solution before (a) and after (b) UV exposure of 120 minutes.

Fitting Result = 2.2663 x 55.73% + 10.3565 x 44.27% = 5.84783154 ns

Fitting Result = 4.1706 x 56.14% + 17.1539 x 43.86% = 9.86507538 ns
**Figure S6.** SEM images of bis-terpyridyl Eu\(^{2+}\)-complex L2 with no specific aggregates.

**Figure S7.** Fluorescence photographs and emission strength at 410 nm of the bis-terpyridyl Eu\(^{2+}\)-complex L2 solutions (0.2 mg/ml) after UV exposure of 0, 5, 15, 30, 60, 120 min.