Electronic Supplementary Materials

Immobilization of Folic Acid on Eu^{3+}-doped Nanoporous Silica Spheres

Motohiro Tagaya,[a, b, *] Toshiyuki Ikoma,[a] Tomohiko Yoshioka,[a]

Zhefeng Xu,[a] and Junzo Tanaka[a]

a *Department of Metallurgy and Ceramics Science, Tokyo Institute of Technology,*

O-okayama 2-12-1, Meguro-ku, Tokyo 152-8550, Japan.

b *Research Fellow of the Japan Society for the Promotion of Science, Tokyo, Japan.*

*** Author to whom correspondence should be addressed:**

Tel: +81-3-5734-3960, Fax: +81-3-5734-3369, E-mail: tagaya.m.aa@m.titech.ac.jp

Table. S1. Initial and equilibrium concentrations of the FA solution and the immobilized amounts of FA. The concentrations were measured by the UV-Visible absorbance changes at 352 nm.

Sample	Initial concentration (mM)	Equilibrium concentration (mM)	Immobilized amount (μmol (g of APTES-Eu:NPS)$^{-1}$)
FA**1**-APTES-Eu:NPS	0.73	0.66	38.9
FA**2**-APTES-Eu:NPS	1.46	1.24	60.8
FA**3**-APTES-Eu:NPS	2.92	2.69	83.0
FA**4**-APTES-Eu:NPS	5.85	5.14	205.8
FA**5**-APTES-Eu:NPS	11.71	8.79	857.6

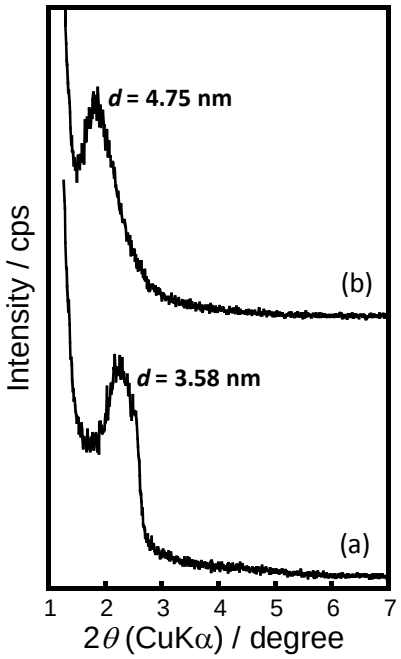

Fig. S1. XRD patterns of the (a) APTES-Eu:NPS and (b) FA**5**-APTES-Eu:NPS

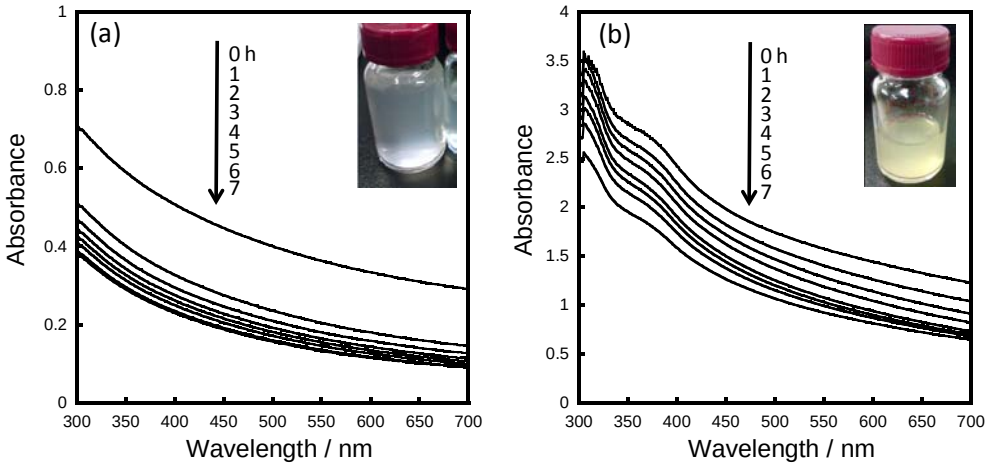

Fig. S2. UV-Visible absorption spectra of the (a) Eu:NPS and (b) FA**5**-APTES-Eu:NPS dispersed into PBS at the concentration of 500 μg/mL for 7 h (Inset: the photographs of the suspensions at 0 h).