Electronic Supplementary Material (ESI) for RSC Advances.

Electronic Supplementary Information

Surface-Engineered Mesoporous Silica Particles with Luminescent, Cytocompatible and Targeting Properties for Cancer Cell Imaging

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Fig. S1

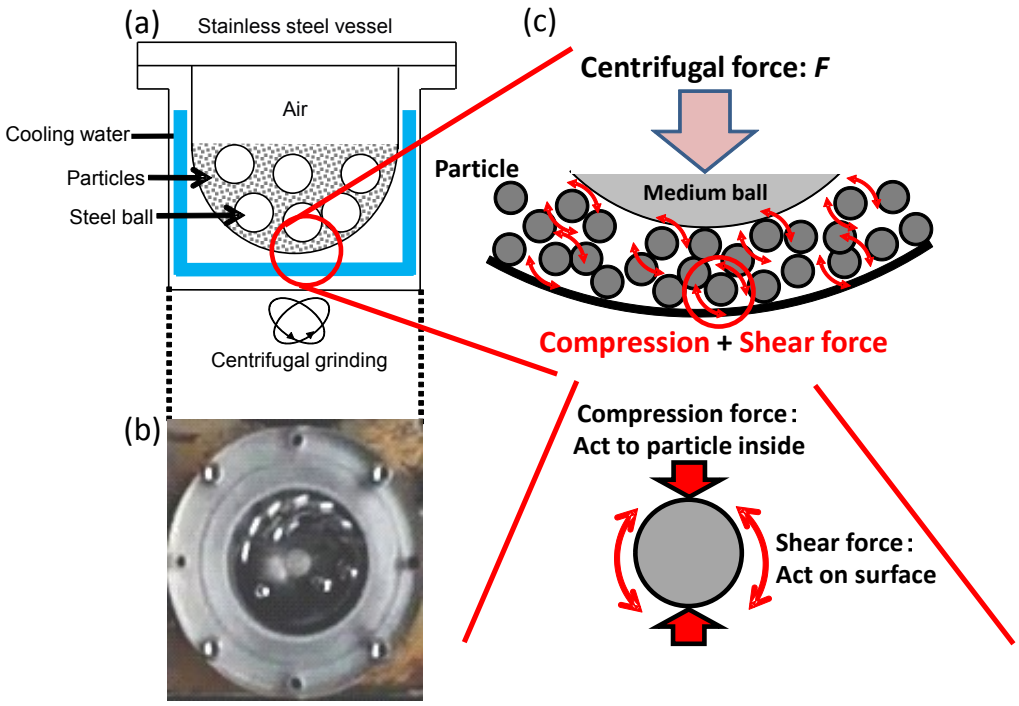
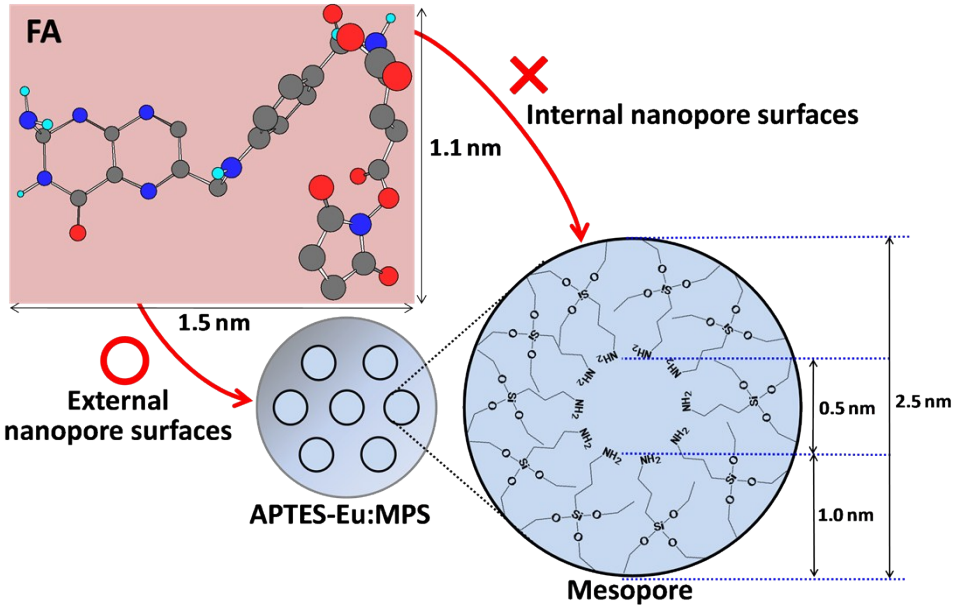


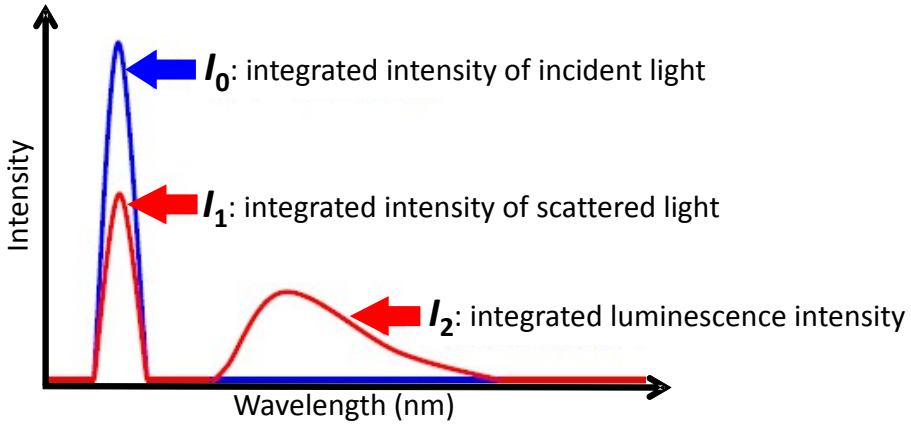
Fig. S1 (a) Scheme of the set-up for the mechanochemical reaction of the Eu:MPS particles and (b) the photograph of the equipment top view during the milling. (c): Possible forces being generated between medium balls and Eu:MPS particles during the milling.

Scheme S1



Scheme S1 Scheme of the FA incorporation into the external and internal nanopore surfaces. The internal nanopore size after the immobilization with monolayer APTES becomes approx. 0.5 nm ever if overestimated, indicating the difficulty in the FA incorporation into the nanopore.

Scheme S2



Scheme S2 Scheme of the representative incident, scattering, and luminescence light intensity spectra for the calculation of internal quantum efficiency. The integrated peak intensities attributed to the incident, scattering, and luminescence were abbreviated as I_0, I_1 and I_2, respectively.

Fig. S2

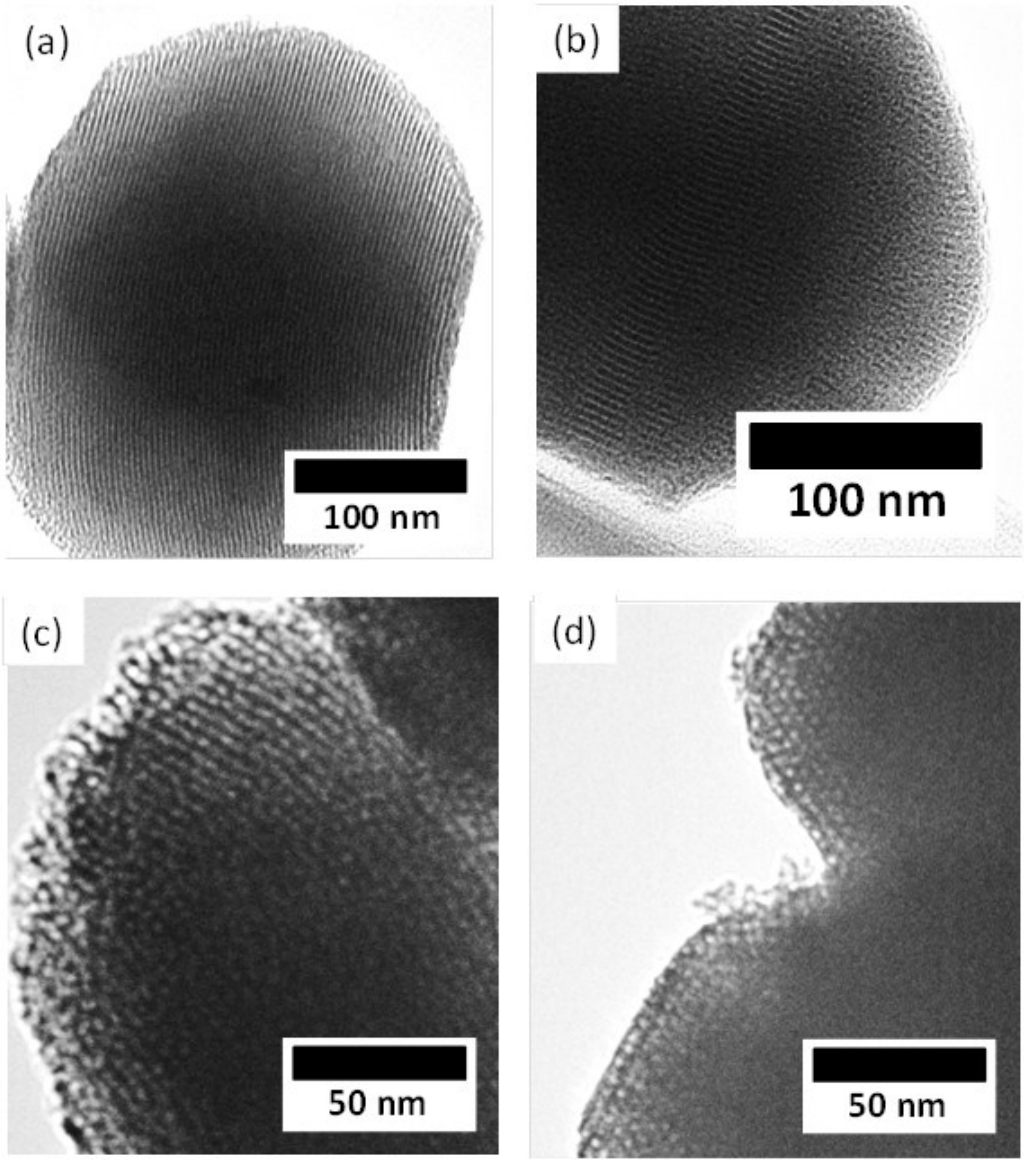


Fig. S2 TEM images of the (a) Eu:MPS, (b) MC**1**-Eu:MPS, (c) MC**2**-Eu:MPS and (d) MC**3**-Eu:MPS particles.

Fig. S3

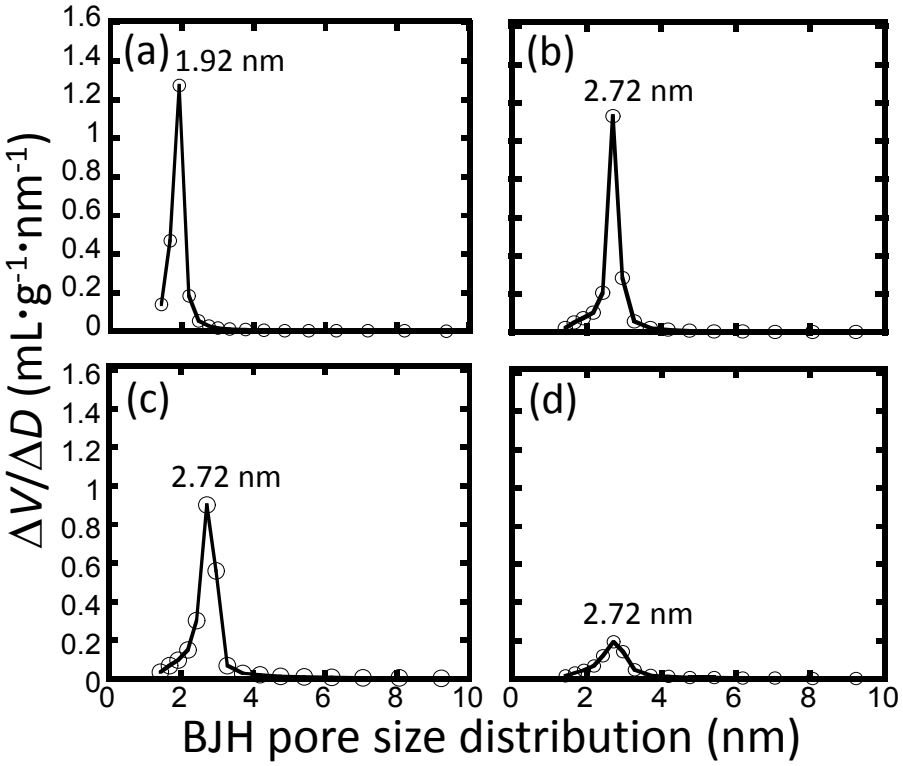


Fig. S3 BJH pore size distributions of the (a) Eu:MPS, (b) MC**1**-Eu:MPS, (c) MC**2**-Eu:MPS and (d) MC**3**-Eu:MPS particles.

Fig. S4

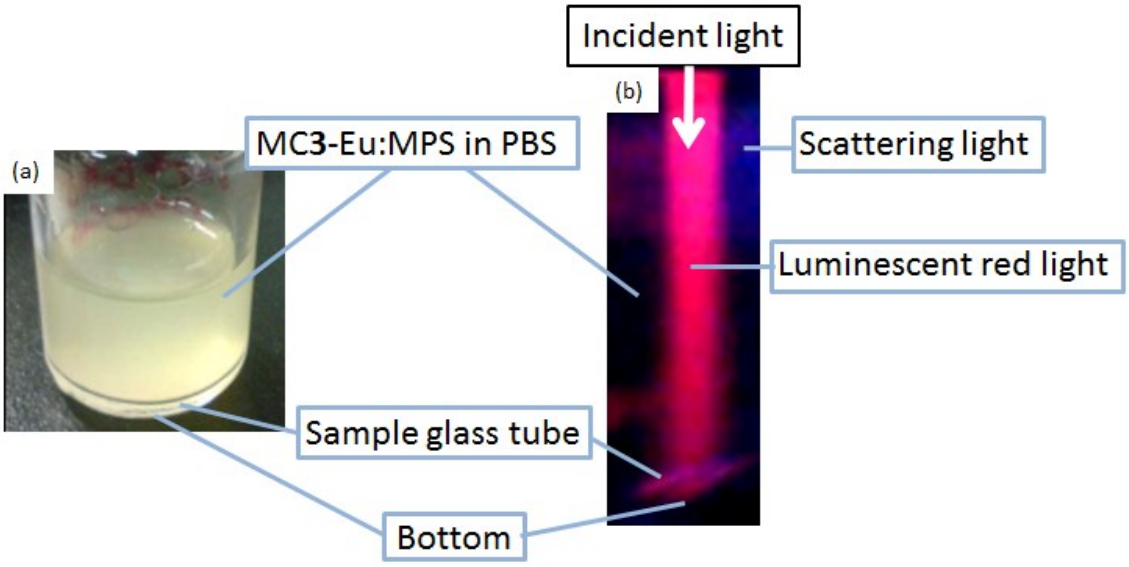


Fig. S4 Photographs of (a) bright-field and (b) fluorescent images of the MC**3**-Eu:MPS in PBS at the concentration of 500 μg/mL. The excitation in (b) was conducted using the fluorescent microscope light at the wavelength of 380–420 nm.

Fig. S5

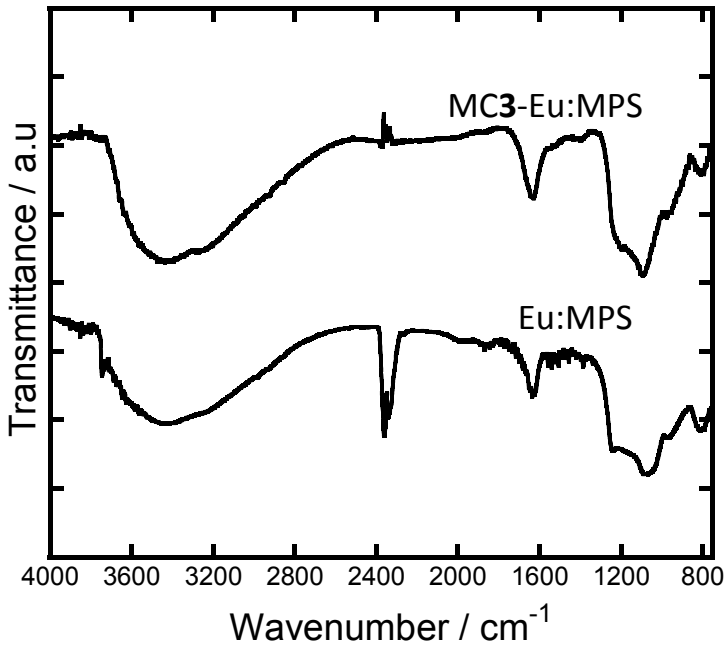


Fig. S5 FT-IR spectra of the Eu:MPS and MC**3**-Eu:MPS particles.