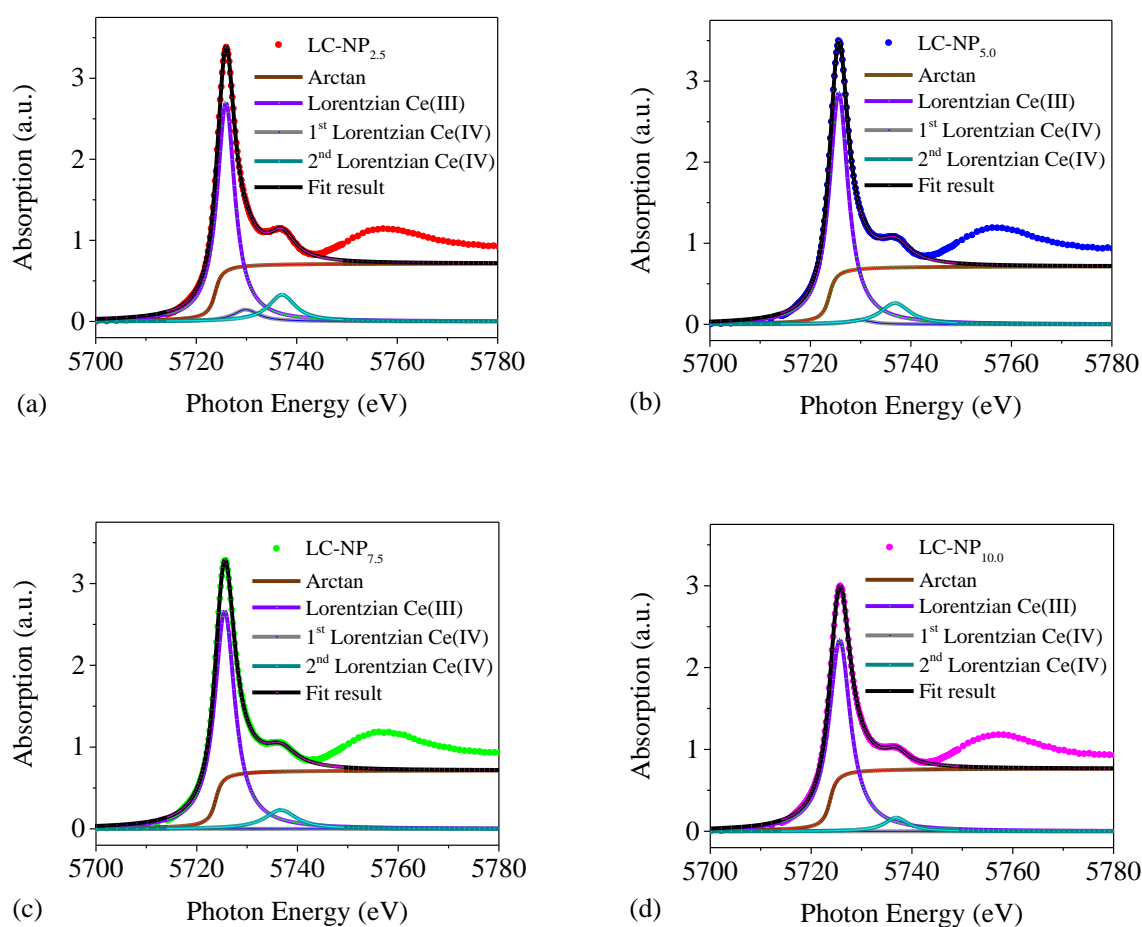


Electronic Supplementary Information

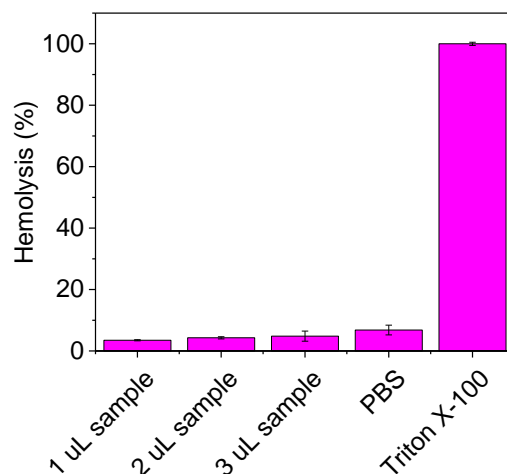
## Artificial cerium-based proenzymes confined in lyotropic liquid crystal: synthetic strategy and *on-demand* activation

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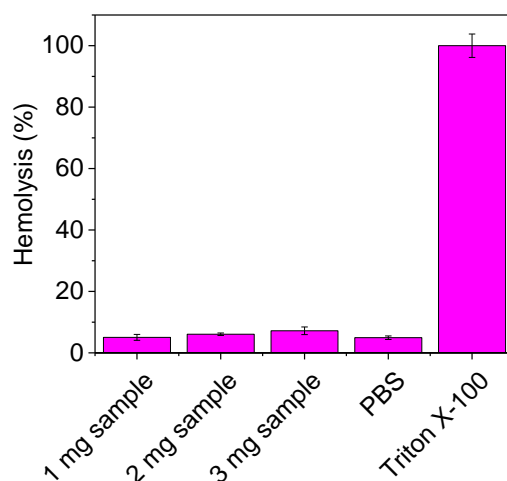
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**Figure S1.** XANES spectra at the Ce L<sub>3</sub> edge for the as prepared samples (a) LC-NP<sub>2.5</sub>, (b) LC-NP<sub>5.0</sub>, (c) LC-NP<sub>7.5</sub>, and (d) LC-NP<sub>10.0</sub> (circles) and the corresponding functions used in the fitting procedure as well the fit result (solid lines).



**Figure S2.** Hemoglobin release from human erythrocytes (100  $\mu\text{L}$  of fresh whole blood) after contact with an aqueous dispersion of LC-NP<sub>10.0</sub> (1, 2, and 3  $\mu\text{L}$  in 100  $\mu\text{L}$  PBS). The data were normalized to the hemoglobin release level promoted by the contact of blood with Triton X-100 as control. The experiments were made in triplicate.



**Figure S3.** Hemoglobin release from human erythrocytes (100  $\mu\text{L}$  of fresh whole blood) after contact with ox-NP<sub>10.0</sub> (1, 2, and 3 mg in 100  $\mu\text{L}$  PBS). The data were normalized to the hemoglobin release level promoted by the contact of blood with Triton X-100 as control. The experiments were made in triplicate.