

# Highly Luminescent Water Soluble Lanthanide Nanoparticles through Surface Coating Sensitization

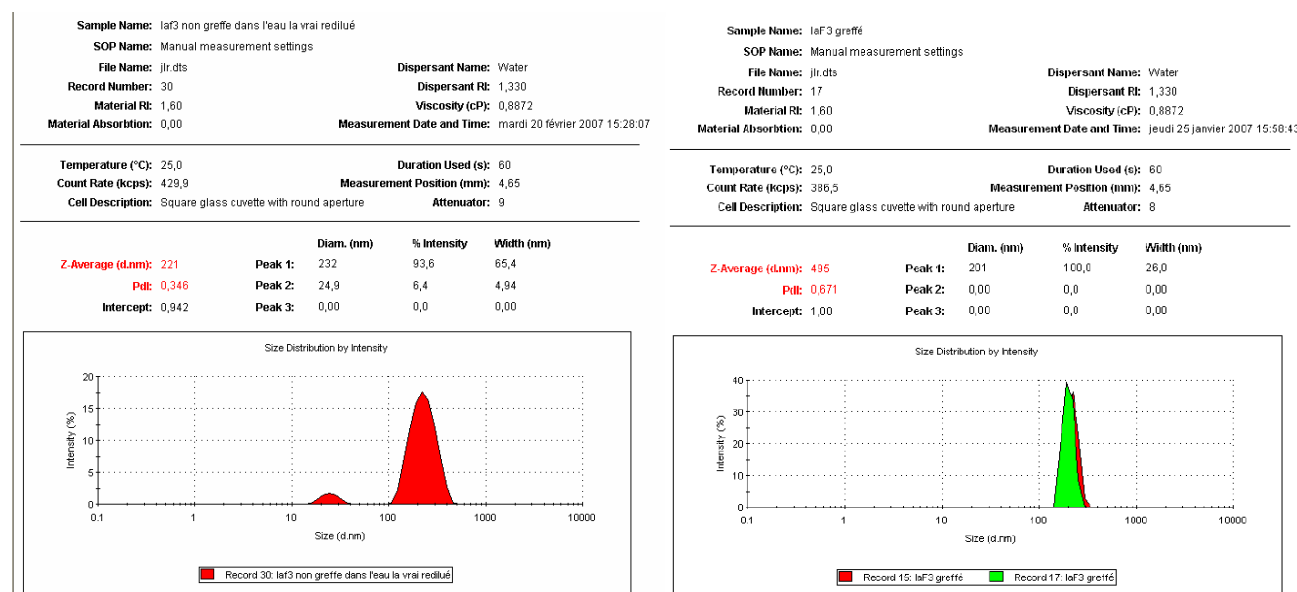
Loïc J. Charbonnière,<sup>\*a</sup> Jean-Luc Rehspringer,<sup>b</sup> Raymond Ziessel,<sup>a</sup> and Yvan Zimmermann<sup>a</sup>

## Supplementary Information (2 pages including this one)

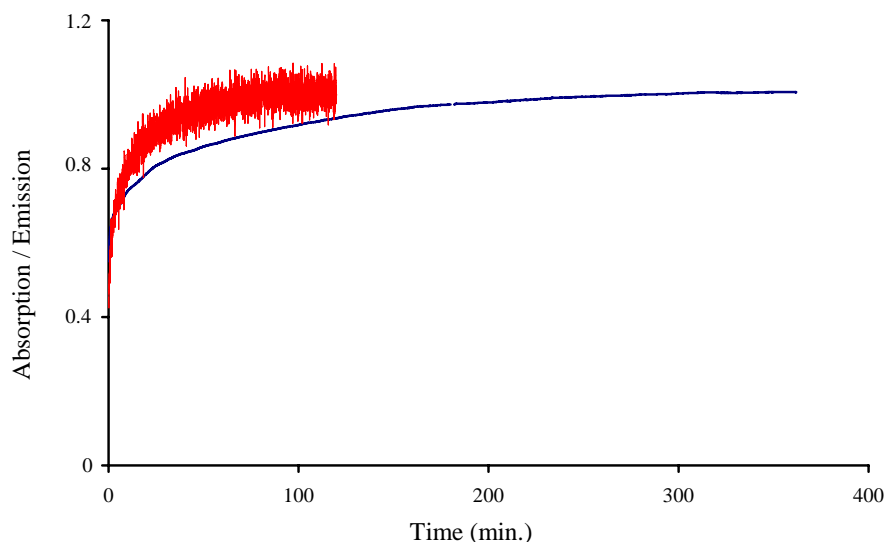
**Figure S1.** Dynamic Light Scattering analysis of LaEuF<sub>3</sub>·AEP and LaEuF<sub>3</sub>·(bipyCOO<sup>-</sup>) LnNPs in water.

**Figure S2.** Time dependent evolution of the absorption (305 nm, blue) and emission ( $\lambda_{\text{exc}} = 305 \text{ nm}$ ,  $\lambda_{\text{em}} = 610 \text{ nm}$ , red) of a 2 mL solution of LaEuF<sub>3</sub>·AEP (35.2 mg.L<sup>-1</sup>, 0.01 M TRIS/HCl, pH=7.0) after addition of 250  $\mu\text{L}$  of a 10<sup>-3</sup> M solution of bipyCOO<sup>-</sup> in the same buffer.

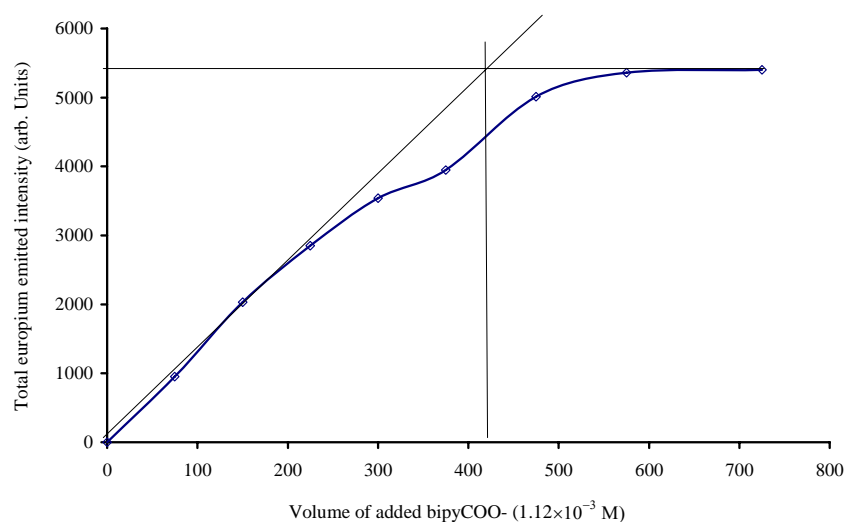
**Figure S3.** Evolution of the europium emission intensity of LnNPs ( $c = 50.2 \text{ mg.L}^{-1}$ ,  $\lambda_{\text{exc}} = 305 \text{ nm}$ ) as a function of added bipyCOO<sup>-</sup> ( $c = 1.12 \times 10^{-3} \text{ M}$ ) in TRIS/HCl 0.01M buffer at pH = 7.0, showing the plateau region for large excesses of added ligand.



**Figure S1.** Dynamic Light Scattering analysis of LaEuF<sub>3</sub>·AEP (left) and LaEuF<sub>3</sub>·(bipyCOO<sup>-</sup>) (right) LnNPs in water.



**Figure S2.** Time dependent evolution of the absorption (305 nm, blue) and emission ( $\lambda_{\text{exc}} = 305 \text{ nm}$ ,  $\lambda_{\text{em}} = 610 \text{ nm}$ , red) of a 2 mL solution of  $\text{LaEuF}_3\text{.AEP}$  ( $35.2 \text{ mg.L}^{-1}$ , 0.01 M TRIS/HCl, pH=7.0) after addition of 250  $\mu\text{L}$  of a  $10^{-3} \text{ M}$  solution of bipy $\text{COO}^-$  in the same buffer.



**Figure S3.** Evolution of the europium emission intensity of LnNPs ( $c = 50.2 \text{ mg.L}^{-1}$ ,  $\lambda_{\text{exc}} = 305 \text{ nm}$ ) as a function of added bipy $\text{COO}^-$  ( $c = 1.12 \times 10^{-3} \text{ M}$ ) in TRIS/HCl 0.01M buffer at pH = 7.0, showing the plateau region for large excesses of added ligand.