## **Supplementary information**

Europium doped-double sodium bismuth molybdate nanoparticles as contrast agents for luminescent bioimaging and X-ray computed tomography

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Fig. S1. Particle size histograms corresponding to the  $NaBi(MoO_4)_2$ @PAA samples having different Eu content.



Fig. S2. DLS curves corresponding to the NaBi(MoO<sub>4</sub>)<sub>2</sub>@PAA samples having different Eu content, dispersed in water (pH=6).



Fig. S3. X-ray diffraction patterns of NaBi(MoO<sub>4</sub>)<sub>2</sub>@PAA samples having different Eu content. PDF for tetragonal NaBi(MoO<sub>4</sub>)<sub>2</sub> is also included.



Fig. S4. Experimental (black solid line) and theoretical (red dashed line) XRD patterns of the Eu(20%):NaBi(MoO<sub>4</sub>)<sub>2</sub>NPs. The difference curve is shown in blue. Weighted profile residual (Rwp) factors are also included.



Fig S5. Evolution of the unit cell parameters calculated for the Eu-doped  $NaBi(MoO_4)_2$  samples with different Eu content.



Fig S6. STEM-HAADF-BF image of a single Eu(20%):NaBi(MoO<sub>4</sub>)<sub>2</sub> nanoparticle, and the Na, Mo, Bi and Eu EDX mapping on the same nanoparticle.



Fig. S7. FTIR spectrum recorded for the Eu(20%):NaBi(MoO<sub>4</sub>)<sub>2</sub> sample



Fig. S8. TGA curve registered for the Eu(20%):NaBi(MoO<sub>4</sub>)<sub>2</sub> sample