

Supplement information for the article:

Mancic, L., Djukic-Vukovic, A., Dinic, I., Nikolic, M.G., Rabasovic, M.D., Krmpot, A.J., Costa, A.M.L.M., Trisic, D., Lazarevic, M., Mojovic, L., Milosevic, O., 2018. NIR photo-driven upconversion in NaYF<sub>4</sub>:Yb,Er/PLGA particles for in vitro bioimaging of cancer cells. *Materials Science and Engineering C* 91, 597–605.  
<https://doi.org/10.1016/j.msec.2018.05.081>

## Supplement information

### NIR photo-driven upconversion in NaYF<sub>4</sub>:Yb,Er/PLGA particles for *in vitro* bioimaging of cancer cells

Lidija Mancic<sup>1\*</sup>, Aleksandra Djukic-Vukovic<sup>2</sup>, Ivana Dinic<sup>3</sup>, Marko G. Nikolic<sup>4</sup>, Mihailo D. Rabasovic<sup>4</sup>, Aleksandar J. Krmpot<sup>4</sup>, Antonio M.L.M. Costa<sup>5</sup>, Dijana Trisic<sup>6</sup>, Milos Lazarevic<sup>7</sup>, Ljiljana Mojovic<sup>2</sup>, Olivera Milosevic<sup>1</sup>

<sup>1</sup>Institute of Technical Sciences of the Serbian Academy of Sciences and Arts, Belgrade, Serbia

<sup>2</sup>Department of Biochemical Engineering and Biotechnology, Faculty of Technology and Metallurgy, University of Belgrade, Serbia

<sup>3</sup>Innovation Center of the Faculty of Chemistry, University of Belgrade, Serbia

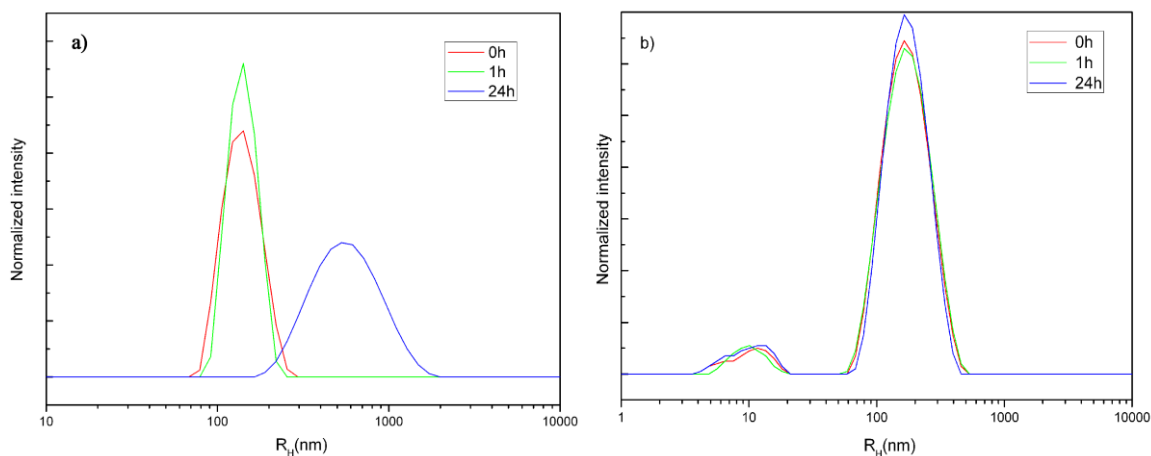
<sup>4</sup>Photonic Center, Institute of Physics Belgrade, University of Belgrade, Zemun, Belgrade, Serbia

<sup>5</sup> Department of Chemical and Materials Engineering, Pontifical Catholic University of Rio de Janeiro, Rio de Janeiro, Brazil

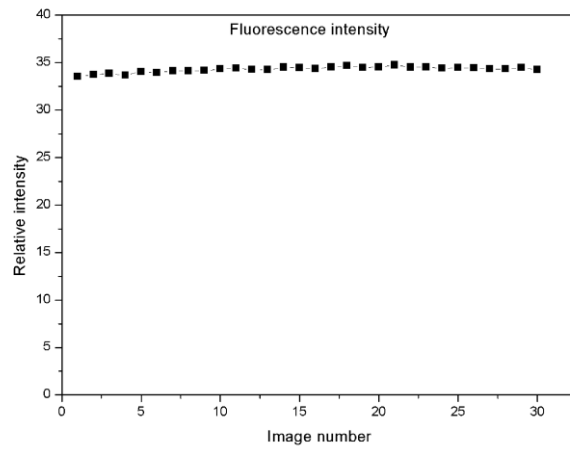
<sup>6</sup>Clinic for Pediatric and Preventive Dentistry, School of Dental Medicine, University of Belgrade, Serbia

<sup>7</sup>Institute of Human Genetics, School of Dental Medicine, University of Belgrade, Serbia

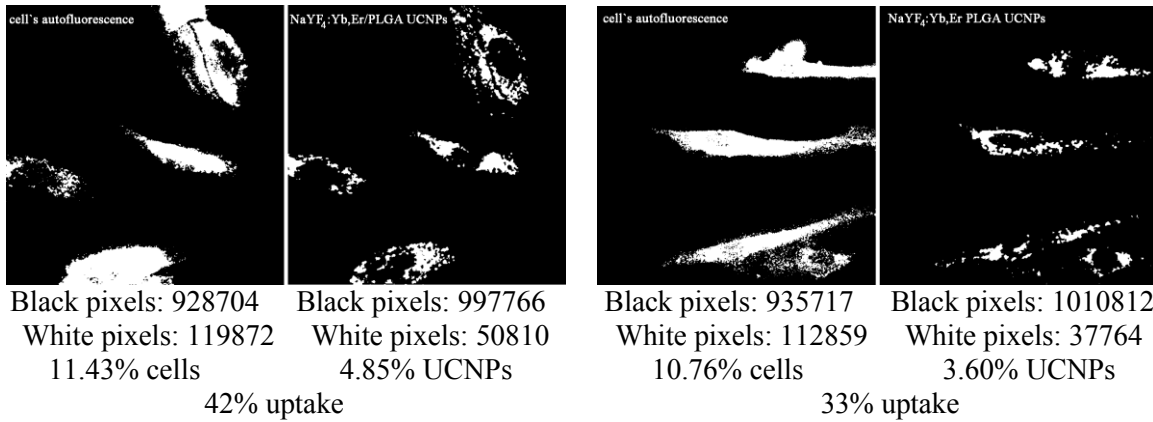
Contacting author: [lidija.mancic@itn.sanu.ac.rs](mailto:lidija.mancic@itn.sanu.ac.rs);



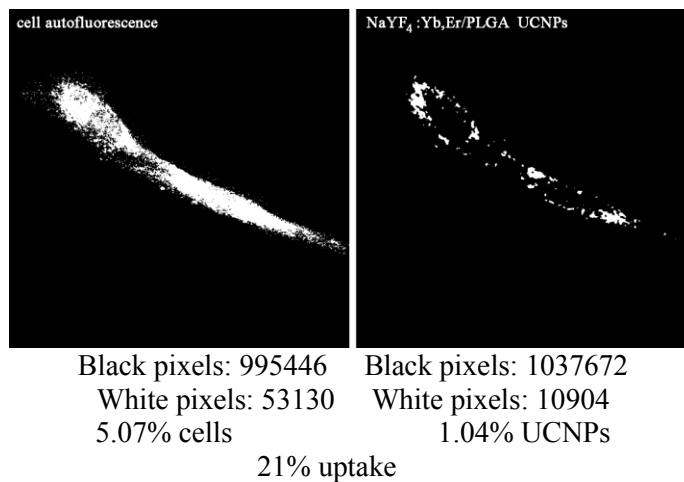
**Fig. S1.** Hydrodynamic radius distribution over time of NaYF<sub>4</sub>:Yb,Er/PLGA UCNPs (1 mg/mL) in water (a) and medium used for testing of cell viability and imaging (b).



**Fig. S2.** Photostability of the NaYF<sub>4</sub>:Yb,Er/PLGA UCNPs. The emission intensity was traced during 1h (CW laser, 980 nm, power density 2MW/cm<sup>2</sup>)



**Fig.S3.** Quantification of the NaYF<sub>4</sub>:Yb,Er/PLGA UCNPs uptake in cells): left Fig.6 (OSCC, 42%) and right Fig.7 (HGC, 33%)



**Fig.S4.** Quantification of the NaYF<sub>4</sub>:Yb,Er/PLGA UCNPs uptake in single OSCC: 21%