Electronic Supplementary Information

PEGylated poly(lactic-co-glycolic acid) nanoparticles doped with molybdenum-iodide nanoclusters as a promising photodynamic

therapy agent against ovarian cancer

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Figure S5. Emission spectra and phosphorescence decay kinetics of fresh and 1-week old 1 in air-saturated PBS.

Figure S6. DNA damage study results by the H2AX method (ImPACcell platform, Rennes).

Figure S1. Size distributions by number of fresh (red) and 1-week old (green) PBS dispersion of 1@PLGA-PEG at room temperature, as obtained by dynamic light scattering.



Figure S2. Absorption spectra of 1@PLGA-PEG dispersion in PBS.



Figure S3. Phosphorescence emission spectra of **1** in argon- (red) and air- (black) saturated PBS, excited at 400 nm (**A**). Phosphorescence decay kinetics at 700 nm of **1** in argon- (red) and air- (black) saturated PBS, excited at 405 nm (**B**).



Figure S4. Emission spectra of fresh (black) and 1-week old (red) 1@PLGA-PEG (A) in air-saturated PBS, excited at 400 nm. Phosphorescence decay kinetics at 700 nm of fresh (black) and 1-week old (red) 1@PLGA-PEG (B) in air-saturated PBS, excited at 405 nm.



Figure S5. Emission spectra of fresh (black) and 1-week old (red) **1** (**A**) in air-saturated PBS, excited at 400 nm. Phosphorescence decay kinetics at 700 nm of fresh (black) and 1-week old (red) **1** (**B**) in air-saturated PBS, excited at 405 nm.



Figure S6: DNA damage on SKOV-3 cells incubated 5 hours with 1@PLGA-PEG or 2@PLGA-PEG, then left in the dark (black) or irradiated at 365 nm (blue). The results were obtained by the H2AX method (ImPACcell platform, Rennes). The negative control is obtained by the value of the DMEM media, the positive controls are evaluated for 2 concentrations of H_2O_2 . Results are the mean \pm s.d of 3 true replicates. P value <0.005, Mann-Whitney test (R software).

