Electronic Supplementary Information

Plasmon-mediated cancer phototherapy: the combined effect of thermal and photodynamic processes

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E-mail address: loredana.ricciardi@cnr.it; massimo.ladeda@unical.it
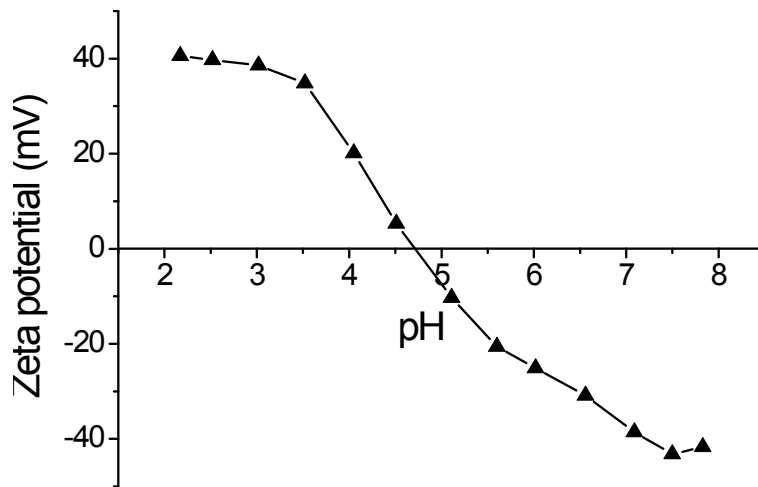
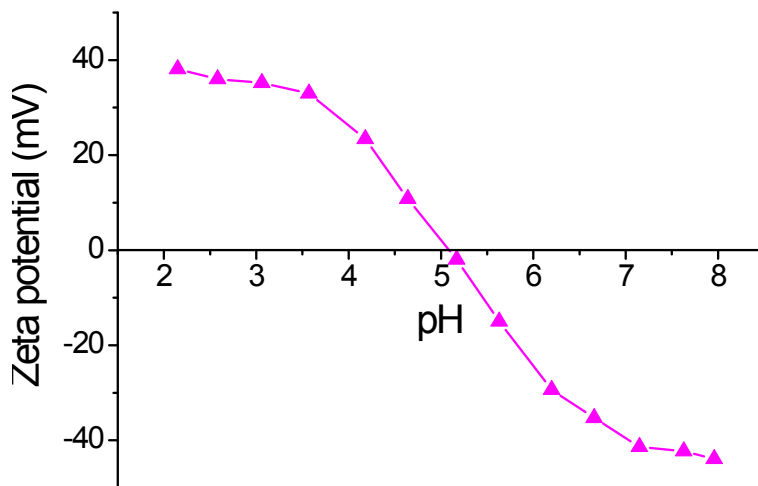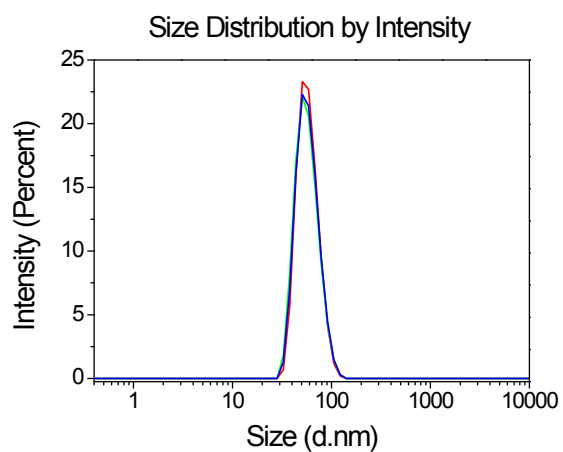**Figure S1.** Zeta-potential of **Ir$_1$-SiO$_2$** nanoparticles as a function of pH.
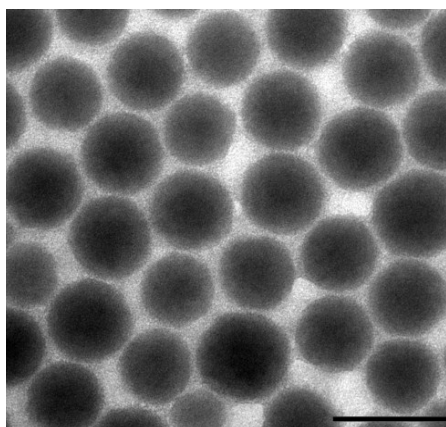

Figure S2. Zeta-potential of **AuSiO$_2$** nanoparticles as a function of pH.
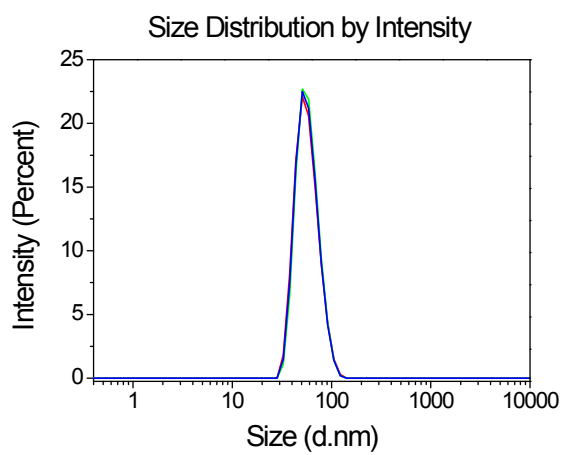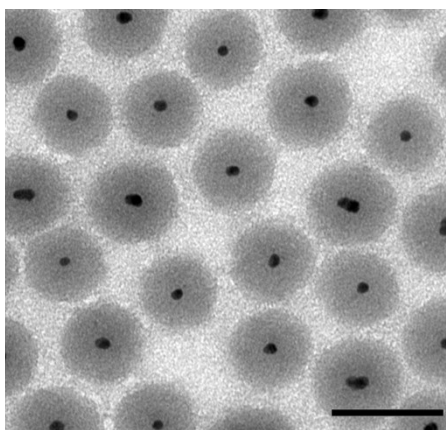
a)

b)

Figure S3. TEM images (scale bar: 50 nm) (left) and size distribution (right) of a) $\mathbf{Ir_1\text{-}SiO_2}$ and b) $\mathbf{AuSiO_2}$. The hydrodynamic diameter of $\mathbf{Ir_1\text{-}SiO_2}$ and $\mathbf{AuSiO_2}$ is 59 ± 3 nm (PdI = 0.051) and 56 ± 3 nm (PdI = 0.058), respectively.
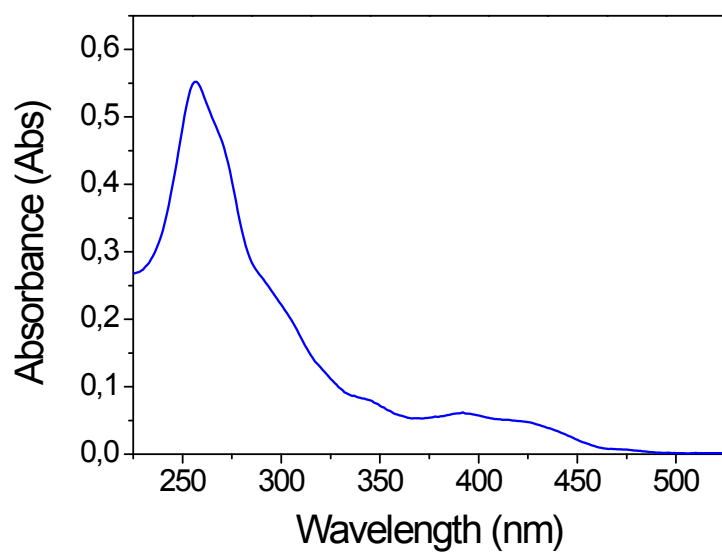
Figure S4. Absorption spectrum of **Ir₁** in water solution.
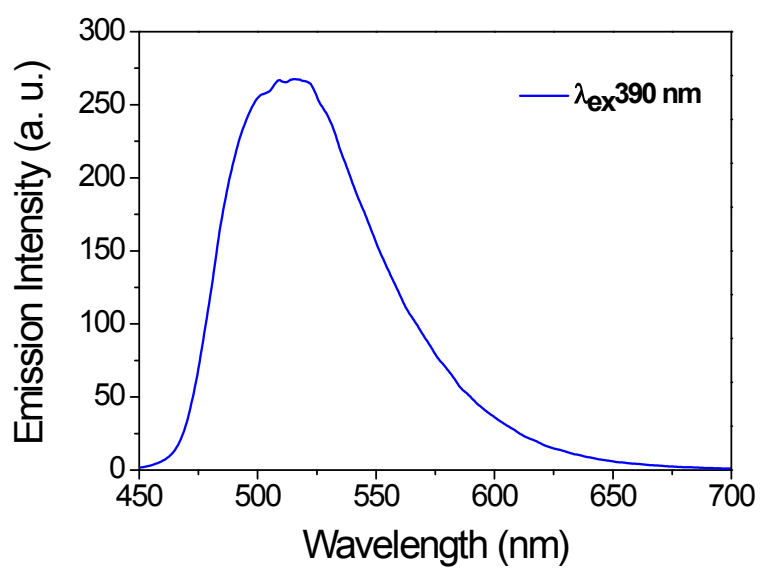

Figure S5. Emission spectrum of **Ir₁** in water solution at room temperature under 390 nm excitation beam.
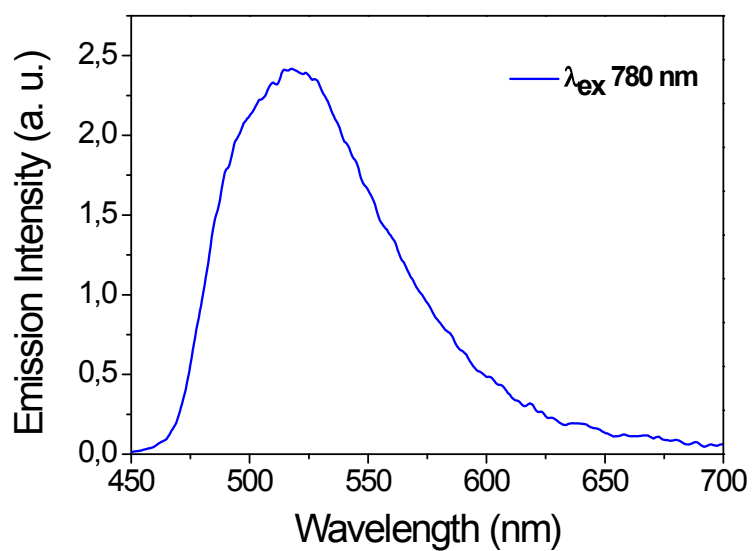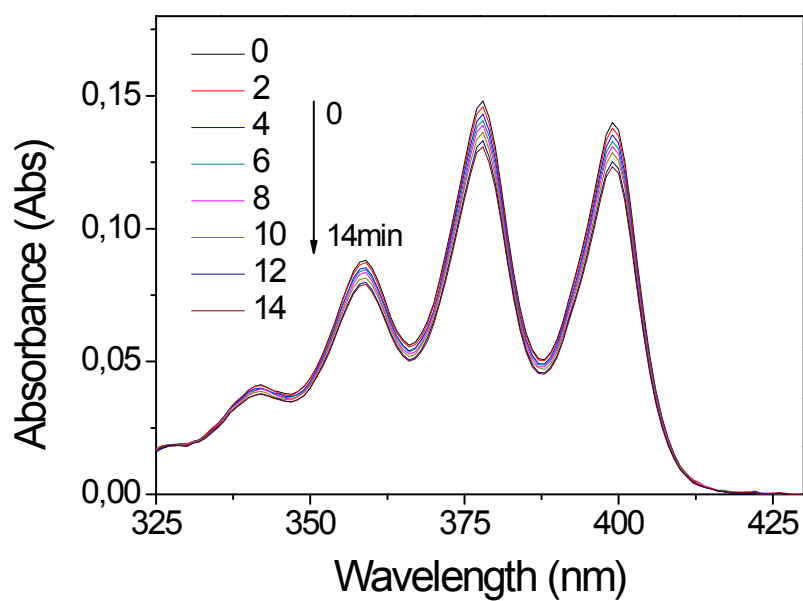
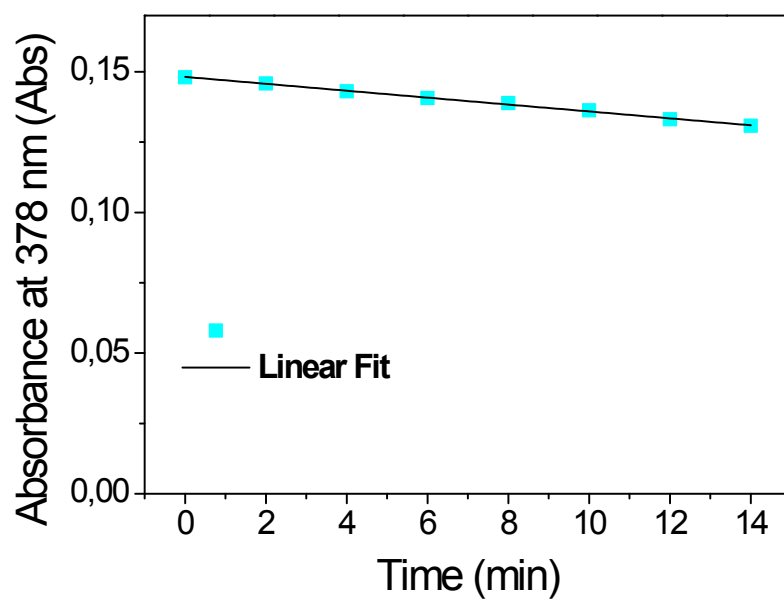**Figure S6.** Emission spectrum of **Ir₁** in water solution at room temperature under 780 nm excitation beam.

a)

b)

Figure S7. a) Photobleaching of ABDA by singlet oxygen at different irradiation times in presence of [Ru(2,2'-bpy)₃]Cl₂ and b) plotting of ABDA absorption at 378 nm as a function of illumination time.