

# Upconversion nanoparticle as a versatile light nanotransducer for photoactivation applications

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## List of abbreviations

<sup>1</sup> O <sub>2</sub>	Singlet oxygen
Ad5V	Adenovirus type 5
ALA	5-aminolevulinic acid
AlC4Pc	Tetrasubstituted carboxy aluminum phthalocyanine
AlPcS <sub>4</sub>	Tetra-sulfonic phthalocyanine aluminium
APBA	Aminophenylboronic acid
BSA	Bovine serum albumin
C18PMH-PEG	PEG-grafted poly (maleic anhydride-alt-1-octadecene)
C <sub>60</sub> MA	Monomalonic fullerene
CD44	Cluster determinant 44
Ce6	Chlorin e6
CW	Continuous wave
DENV2	Dengue virus serotype 2
DPP	trans,trans,trans-[Pt(N <sub>3</sub> ) <sub>2</sub> -(NH <sub>3</sub> )(py)(O <sub>2</sub> CCH <sub>2</sub> CH <sub>2</sub> COOH) <sub>2</sub> ]

DTE	Dithienylethenes
EGFP	Enhanced green fluorescent protein
EPR	Enhanced permeation and retention
FA	Folic acid
FITC	Fluorescein isothiocyanate
FR	Folate receptors
Gd <sup>3+</sup>	Gadolinium ion
GFP	Green fluorescent protein
GQ	G-quadruplex
HA	Hyaluronic acid
HAC <sub>60</sub>	Hyaluronated fullerene
IC <sub>50</sub>	Half maximal inhibitory concentration
LbL	Layer-by-layer
LD <sub>50</sub>	Median lethal dosage
NaYF <sub>4</sub>	Sodium yttrium fluoride
MB	Methylene blue
MC540	Merocyanine 540
Mn <sup>2+</sup>	Manganese ion
MRI	Magnetic resonance imaging
NIR	Near-infrared
PAA	Polyacrylic acid
PAH	Poly(allylamine hydrochloride)
PBS	Phosphate buffered saline
PDT	Photodynamic therapy
PEG	Polyethylene glycol
PEI	Polyethylenimine

PPIX	Protoporphyrin IX
PSA	Prostate specific antigen
PTT	Photothermal therapy
RES	Reticuloendothelial system
RGD	Cyclic arginine glycine aspartic acid
ROS	Reactive oxygen species
TAT	Trans-activating transcriptional activator
TEM	Transmission electron microscope
TiO <sub>2</sub>	Titanium dioxide
TMPyP4	5,10,15,20-tetrakis-(1-methyl-4-pyridyl)-21H, 23H-porphine
TPP	Tetraphenylporphyrin/ <i>meso</i> -tetraphenyl porphine
TPPS2a	<i>meso</i> -tetraphenylporphyrine
UV	Ultraviolet
UCN	Upconversion nanoparticle
ZnPc	Zinc phthalocyanine