

Electronic Supporting Information (ESI)

Cytotoxicity of multifunctional surfactant containing capped mesoporous silica nanoparticles†

Adem Yildirim,^{‡*ab} Muge Turkaydin,^c Bora Garipcan^c and Mehmet Bayindir^{*abd}

^aUNAM-National Nanotechnology Research Center, Bilkent University, 06800 Ankara, Turkey,
Email: yildirim.adem83@gmail.com (A. Y.)

^bInstitute of Materials Science and Nanotechnology, Bilkent University, 06800 Ankara, Turkey,
E-mail: bayindir@nano.org.tr. Phone: +90 312 2903500. Fax: +90 312 266 4365 (M. B.)

^cInstitute of Biomedical Engineering, Bogazici University, 34684 İstanbul, Turkey ^dDepartment of Physics, Bilkent University, 06800, Ankara, Turkey

[‡]Present address: Department of Chemical and Biological Engineering, University of Colorado Boulder, 80309, Boulder, Colorado, United States

Fig. S1 TEM image of surfactant extracted rMSN-ts sample.

Fig. S2 Low magnification bright-field optical microscope images of untreated and rMSN or rMSN-ts treated cells.

Fig. S3 Time-dependent bleaching of DPBF dye in the presence of particles and under illumination of green light.

Table S1. IC₅₀ values of MSNs against L2929 and MCF-7 cell lines.

SI. Supporting Figures

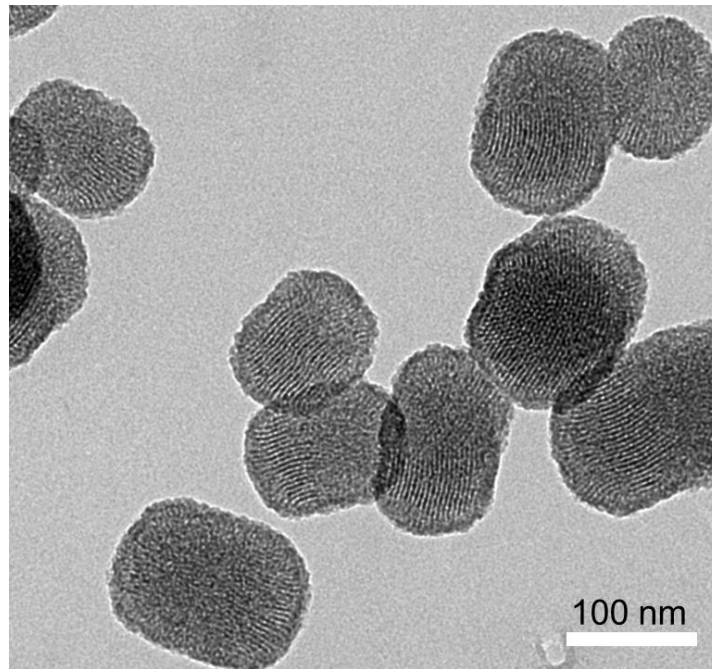


Fig. S1 TEM image of surfactant extracted rMSN-ts sample.

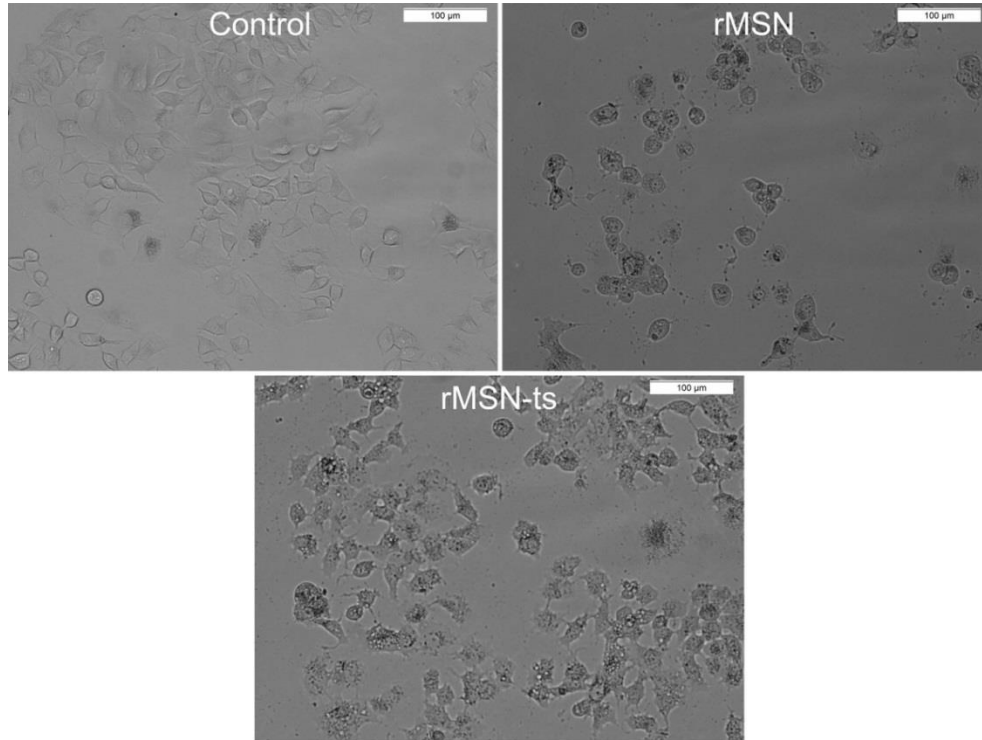


Fig. S2 Low magnification bright-field optical microscope images of untreated and rMSN or rMSN-ts treated cells.

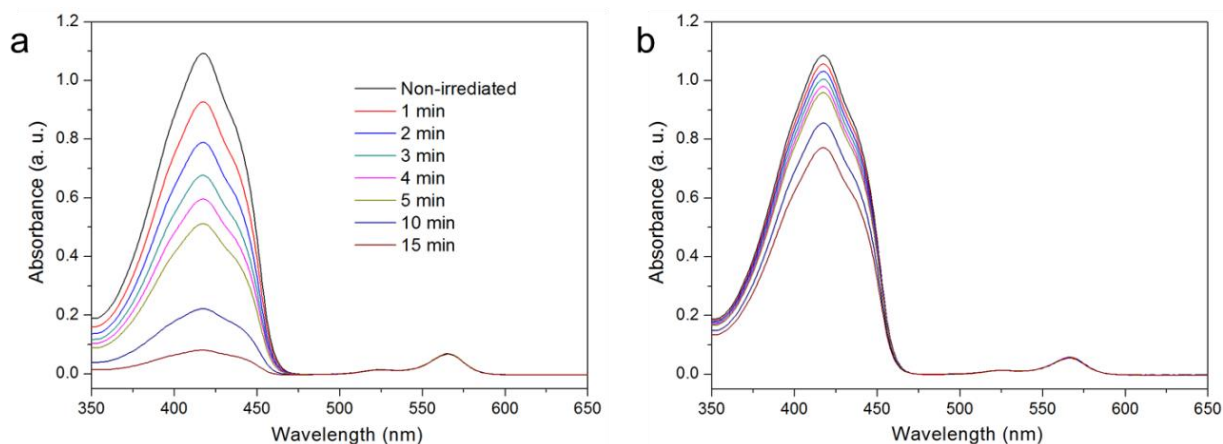


Fig. S3 Time-dependent bleaching of DPBF dye (0.05 mM in DMSO) in the presence of (a) rMSN and (b) rMSN-ts. RB concentration was 0.5 $\mu\text{g/mL}$ for both rMSN and rMSN-ts and solutions were illuminated using an array of green LEDs.

SII. Supporting Tables

Table S1. IC_{50} values of MSNs against L2929 and MCF-7 cell lines.

Sample	IC_{50} for L2929 ($\mu\text{g CTAB}^a / \text{mL}$)	IC_{50} for MCF-7 ($\mu\text{g CTAB}^a / \text{mL}$)
4 h		
rMSN	49	52
rMSN-ts	n/a ^b	n/a ^b
24 h		
rMSN	9	<3.5
rMSN-ts	14	3
72 h		
rMSN	n/a ^c	n/a ^c
rMSN-ts	n/a ^c	n/a ^c
	IC_{50} for L2929 ($\mu\text{g MSN} / \text{mL}$)	IC_{50} for MCF-7 ($\mu\text{g MSN} / \text{mL}$)
4 h		
rMSN-ex	n/a ^b	n/a ^b
24 h		
rMSN-ex	n/a ^b	n/a ^b
72 h		
rMSN-ex	161	121

^aCTAB amount in the MSNs, ^bAbove the studied concentration region, ^cBelow the studied concentration region.