

# Supplementary Materials: pH-Responsive Release of Ruthenium Metallotherapeutics from Mesoporous Silica-Based Nanocarriers

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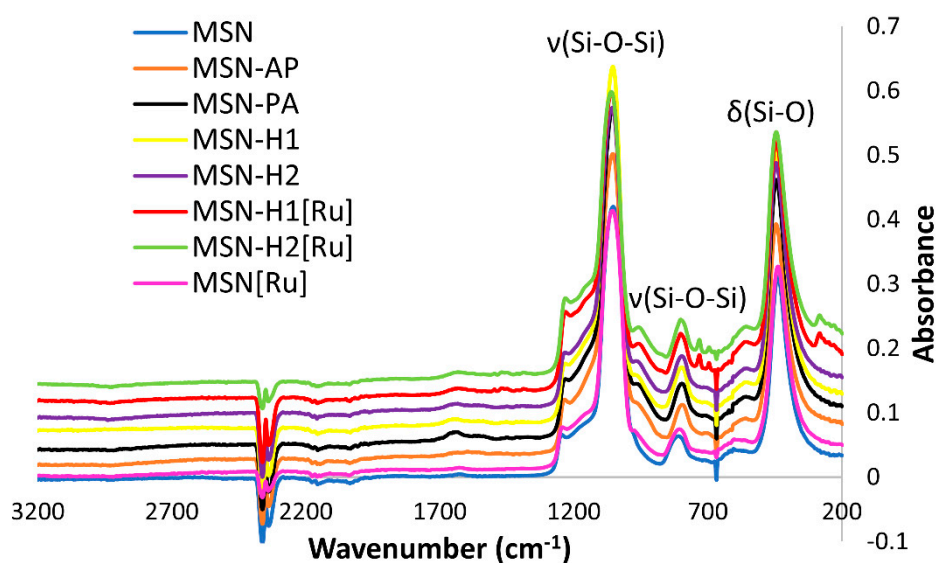


Figure S1. Full range FTIR spectra of the synthesized materials.

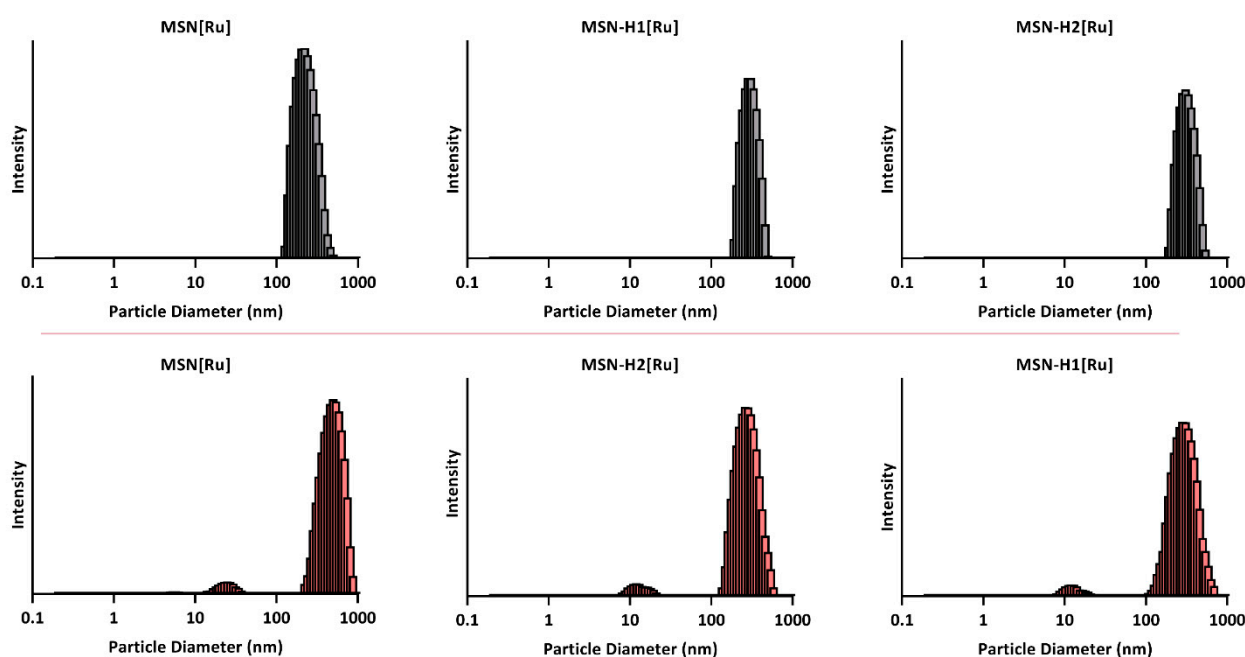
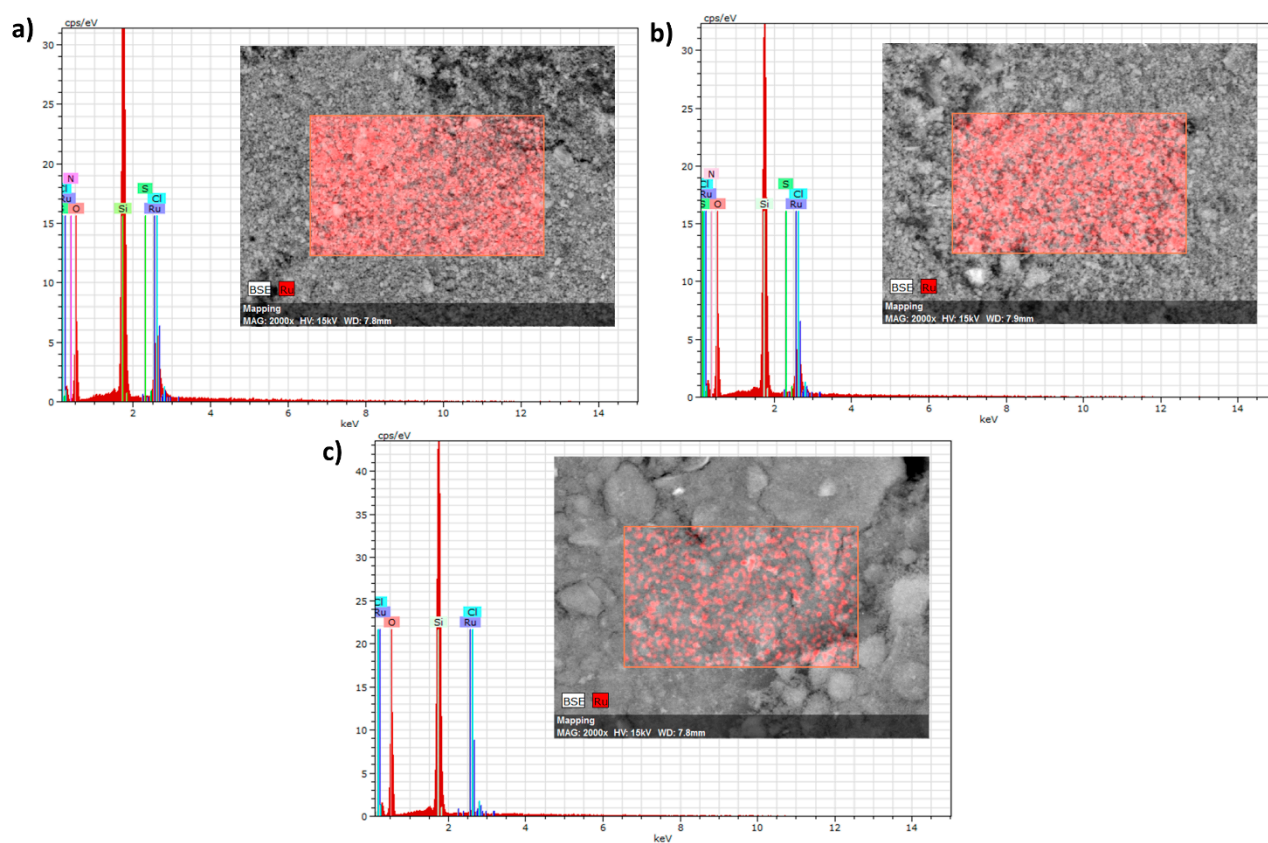
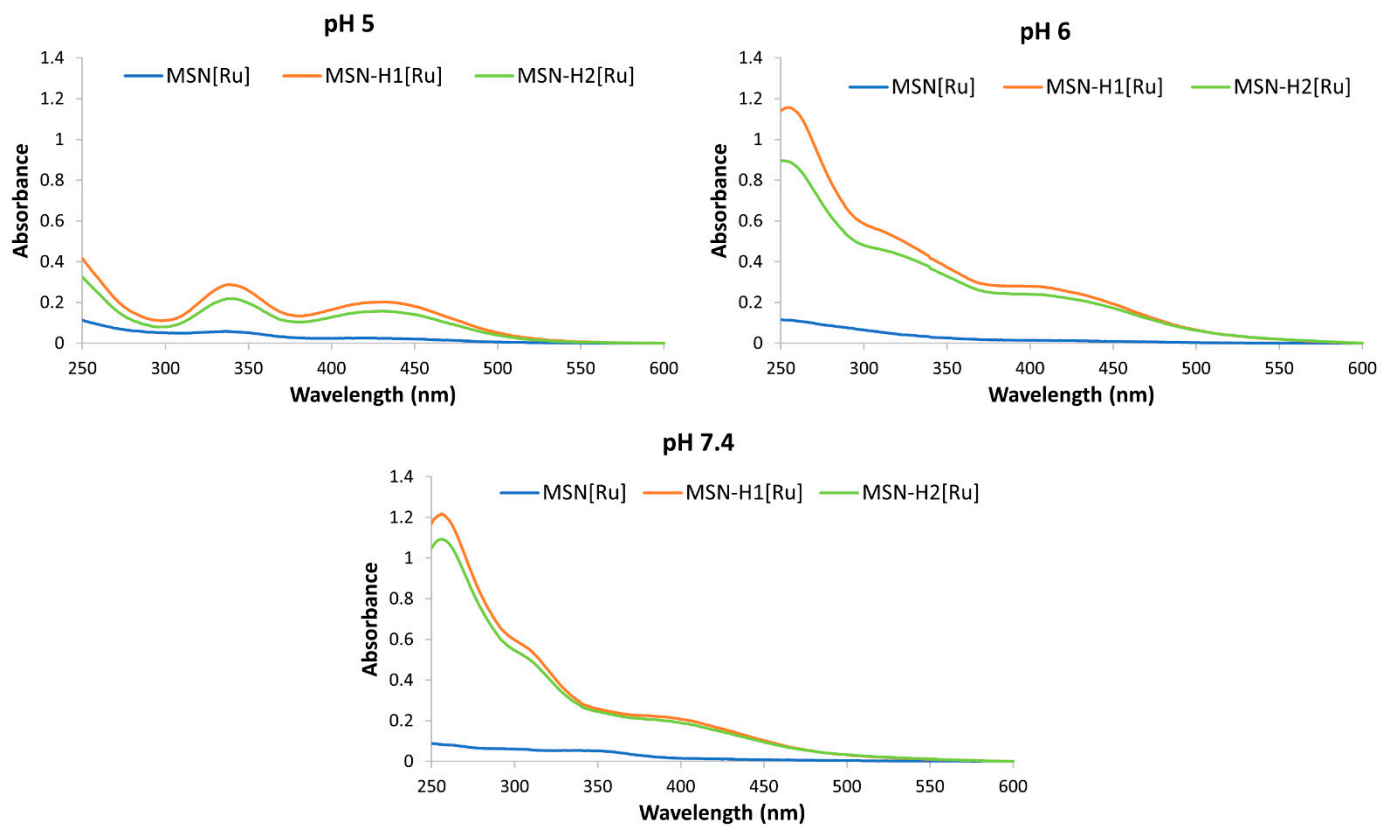


Figure S2. Particle size distribution of Ru-modified nanoparticles in water (top) and culture medium (bottom).

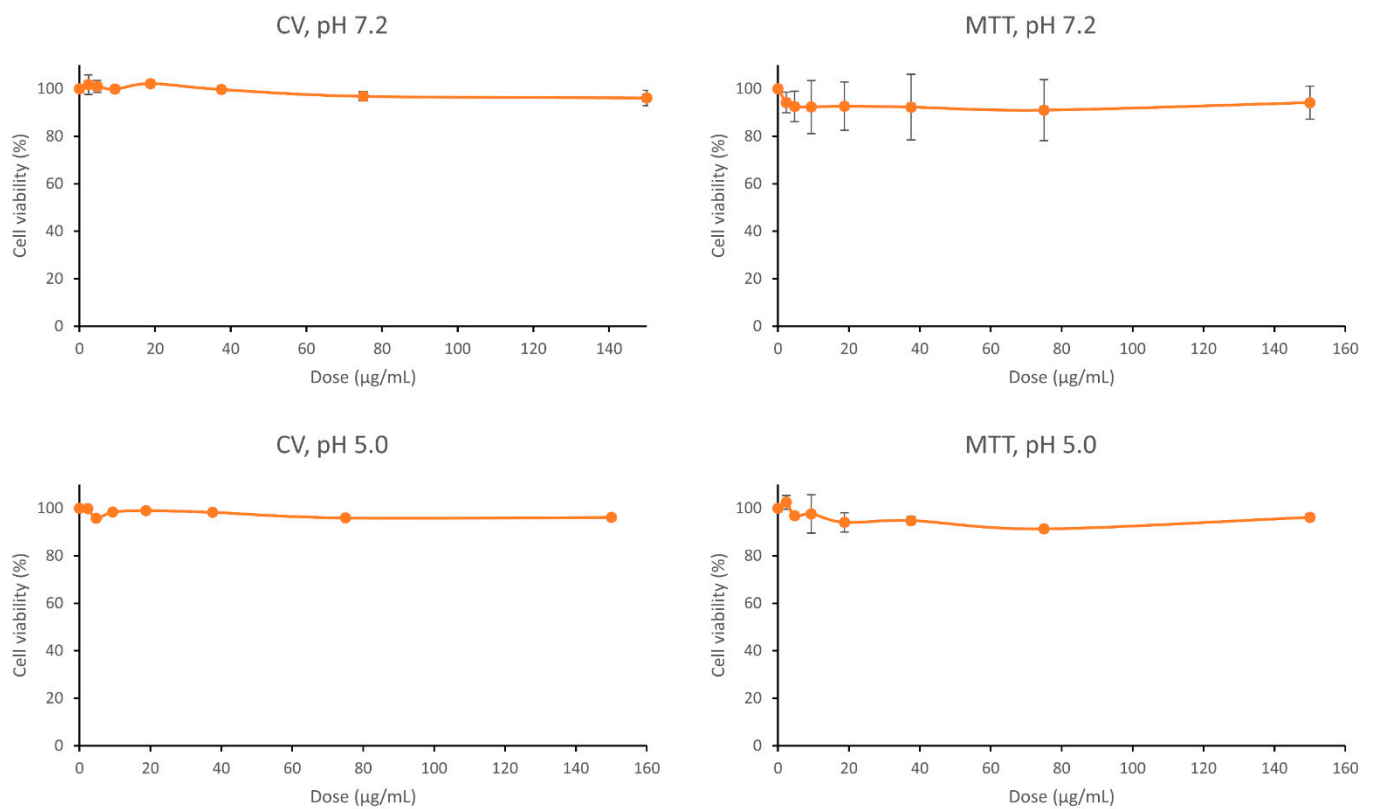
**Table S1.** Variation of ruthenium and chloride concentrations from EDS measurement.

Material	Ruthenium		Chloride	
	norm. C	Atom. C	norm. C	Atom. C
	[wt.%]	[at.%]	[wt.%]	[at.%]
MSN[Ru]	0.315 ± 0.25	0.08 ± 0.075	0.314 ± 0.10	0.187 ± 0.069
MSN-H1[Ru]	8.361 ± 0.92	1.884 ± 0.25	7.287 ± 0.51	4.68 ± 0.45
MSN-H2[Ru]	7.916 ± 0.92	1.706 ± 0.26	6.239 ± 0.59	3.85 ± 0.49

**Figure S3.** EDS chromatograms of (a) MSN-H1[Ru]; (b) MSN-H2[Ru] and (c) MSN[Ru] with insets representing Ru mapping.



**Figure S4.** UV/VIS spectra of supernatants at different pH values after 48 h of stirring.



**Figure S5.** Viability of the B16F1 cells determined with CV and MTT assays treated (48 h) with pristine MSN on pH 5.0 and 7.2.