

SUPPORTING INFORMATION

Emission Tunable, Cyto/Hemocompatible, Near-IR-Emitting Ag₂S Quantum Dots by Aqueous Decomposition of DMSA

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Table S1: Properties of Ag₂S-DMSA NIRQDS at different DMSA/Ag ratios

DMSA/Ag.	λ_{cutoff} ^a (nm)	Size ^b (nm)	Band Gap (eV)	$\lambda_{\text{em,max}}$ (nm)	FWHM (nm)	Zeta potential (mV)	QY ^c %
1.5	844	2.73	1.47	828	158	-57	-
2.5	810	2.62	1.53	810	139	-54	6.5
3.5	837	2.70	1.48	834	134	-56	6.4*

T= 70 °C pH=7.5, reaction time =4h. ^a Absorbance onset, ^b Calculated by Brus equation,
^c Quantum yield is calculated with respect to LDS 798 NIR dye, * QY is calculated from the
7h. sample.

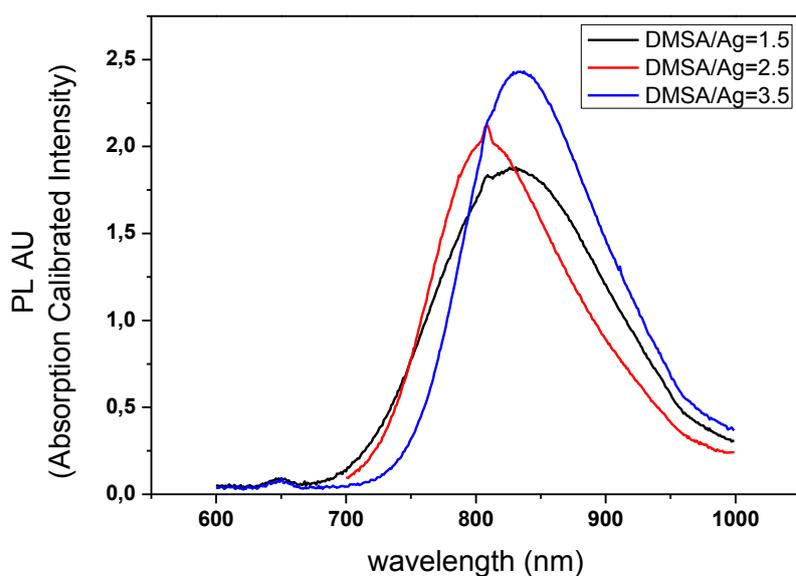


Fig. S1: Comparison of the Photoluminescence spectra of the Ag₂S-DMSA NIRQDs at different SH/Ag ratio at the same reaction time (4h.) and the temperature (90 °C).

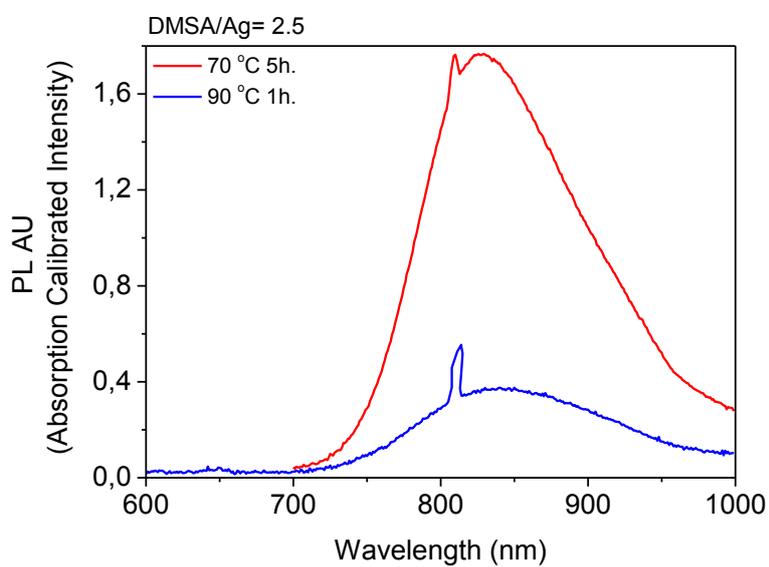


Fig. S2: Comparison of the Photoluminescence spectra of the Ag_2S -DMSA NIRQDs synthesized at different temperature but same DMSA/Ag ratio of 3.5

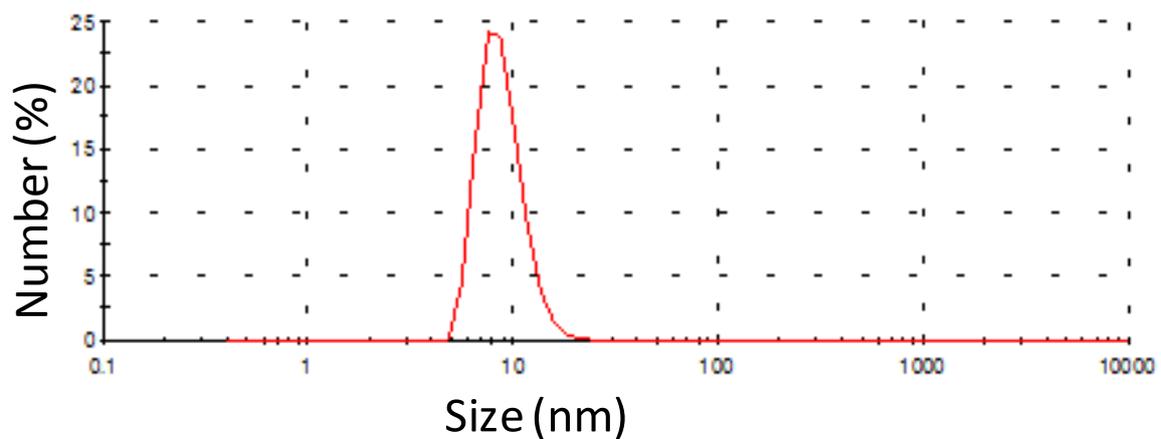


Fig. S3: Hydrodynamic size of the Ag_2S -DMSA NIRQDs (9 nm) by DLS. Sample is identical to the sample analyzed by TEM and shown in Fig.4.

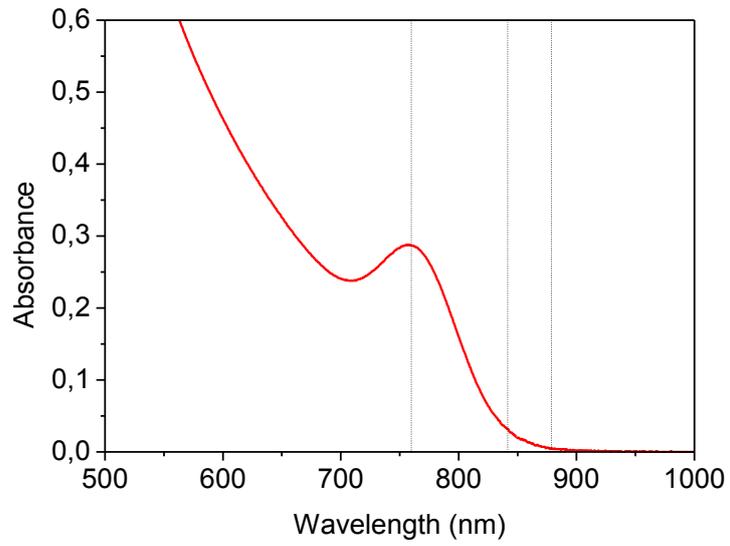


Fig S4: Absorbance spectrum of Ag₂S-DMSA NIRQDs DMSA/Ag=2.5 for Brus evaluation. Sample is identical to the sample analyzed by TEM and shown in Fig.4.