Supporting Information

Water-soluble photoluminescent Ag nanoclusters stabilized by amphiphilic copolymer as nanoprobe for hypochlorite detection

Xiangfang Lin [1,2*], Qinhui Dong [1], Yalin Chang [1], Shusheng Zhang [1] and Pengfei Shi [1,*]

1. Shandong Provincial Key Laboratory of Detection Technology for Tumor Markers, College of Medicine, Linyi University, Linyi 276005, P. R. China

2. Beijing Key Laboratory for Bioengineering and Sensing Technology, School of Chemistry and Biological Engineering, University of Science and Technology Beijing

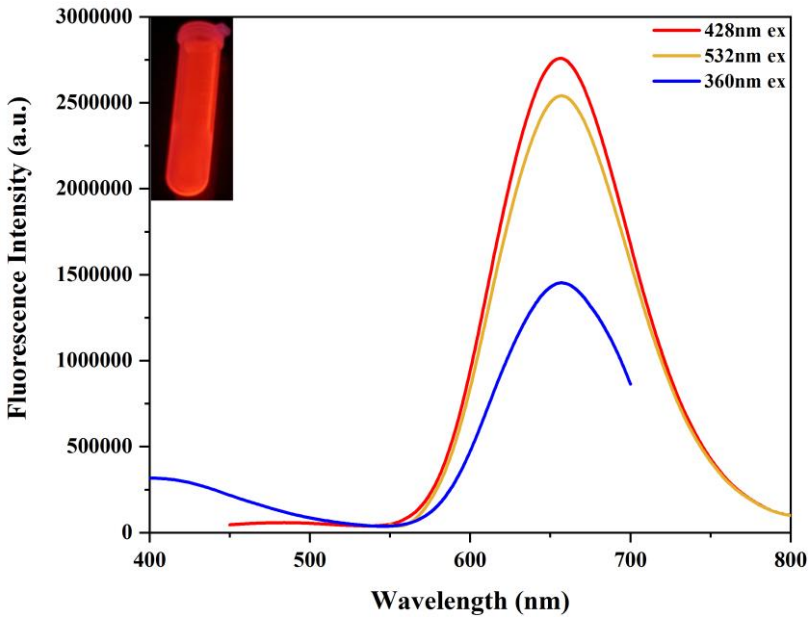


Figure S1. Emission curves of the pristine Ag NCs excited at different excitation wavelength. Inset: hotograph of the pristine Ag NCs under an excitation wavelength of 365 nm.

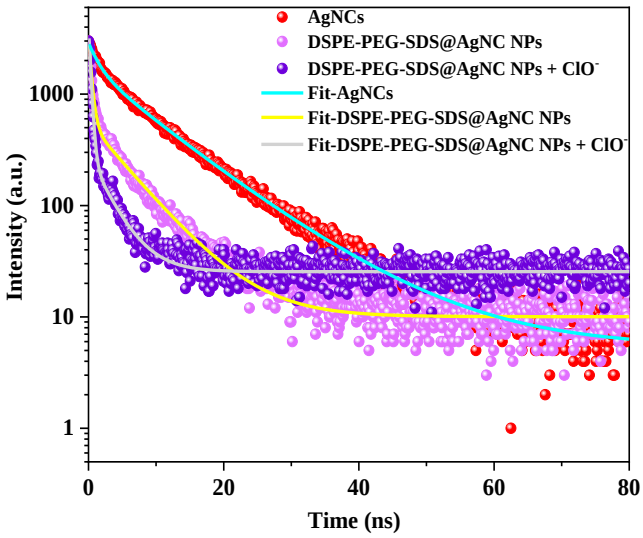


Figure S2. Photoluminescent (PL) decay profiles of the pristine Ag NCs, the DSPE-PEG-SDS@Ag NCs, and the DSPE-PEG-SDS@Ag NCs after reacting with ClO^-, respectively.

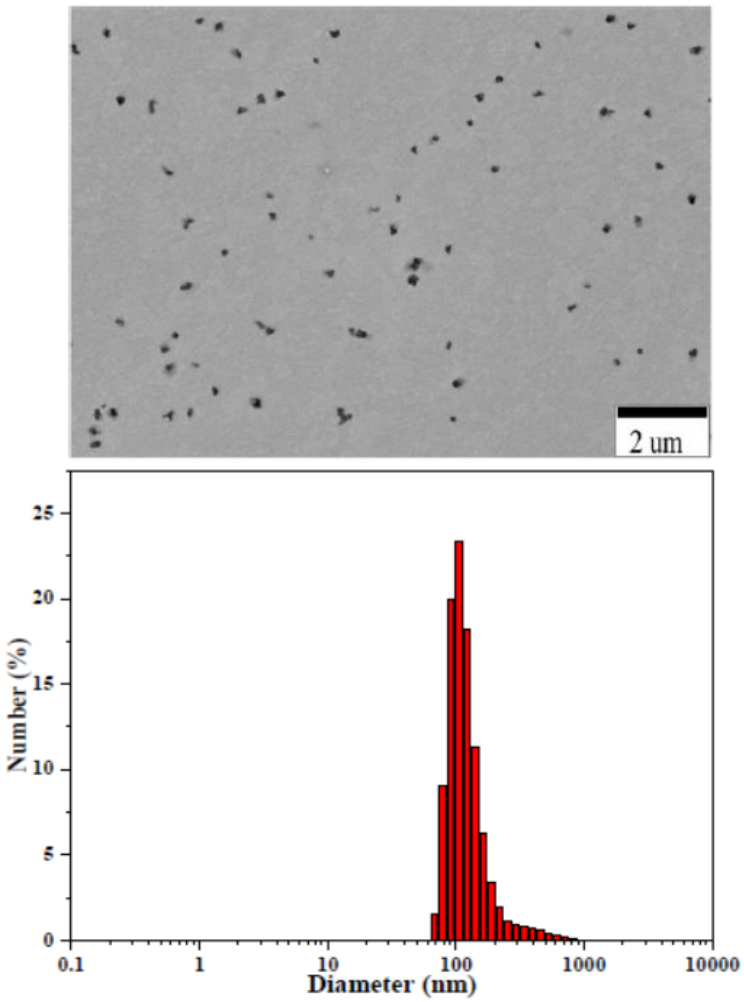


Figure S3. (**a**) TEM image of the DSPE-PEG-SDS@Ag NCs prepared under slow evaporation to remove the organic solvents for at least 12 hours and (**b**) their hydrodynamic size distribution histogram measured by DLS.

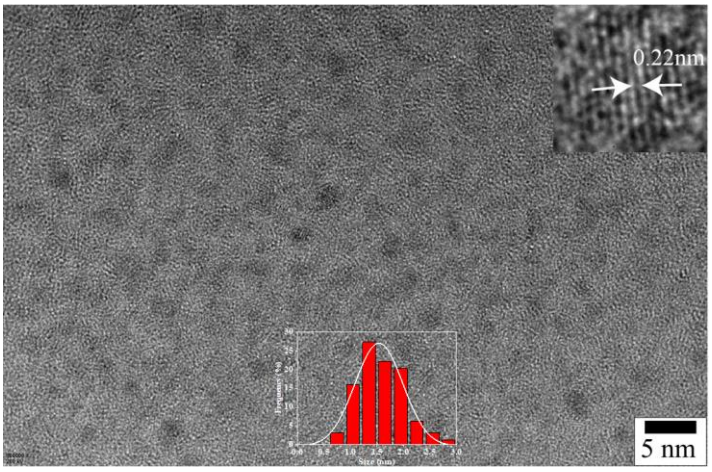


Figure S4. TEM image of the pristine Ag NCs. Inset is its high-resolution TEM image. Inset: the size distribution histogram of the pristine Ag NCs and the lattice spacing.

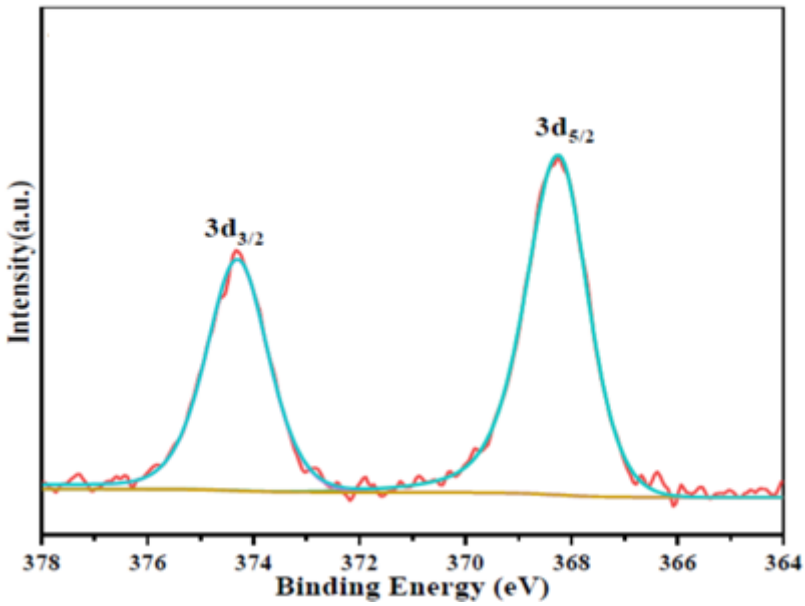


Figure S5. XPS of Ag 3d of the pristine Ag NCs.

Table S1. Comparison of the proposed sensor with previously reported nanomaterials-based hypochlorite sensors.

Sensor	Linear range	LOD	ROS selectively	Response time	Refs
DSPE-PEG-SDS@Ag NCs	1-100μM	0.67μM	Good	1 min	This work
BSA-Au NCs	0.34-1.72μM	0.1 μM	Poor	2 min	1
Au NCs	10-1000 μM	0.1 μM	Poor	30 min	2
Vitamin B_1@Au NCs	0.09-27.2 μM	0.05 μM	Poor	6 min	3
Au NCs@NMOFs	0.08-1.0 μM	0.03μM	Poor	1 min	4
peptide@Au/Ag NCs	0.1-100 μM	0.08μM	Good	15 min	5
PVP@Cu NCs	1-30 μM	0.1μM	-	10 min	6
Cu NCs	0-412 μM	24 μM	Good	3 min	7
Carbon dots	2.5-90 μM	0.46 μM	Good	30 min	8
N-doped Carbon dots	0.067-98 μM	0.013 μM	Poor	-	9
Au NRs@UCNPs	0.5-140μM	0.156μM	Good	20 min	10

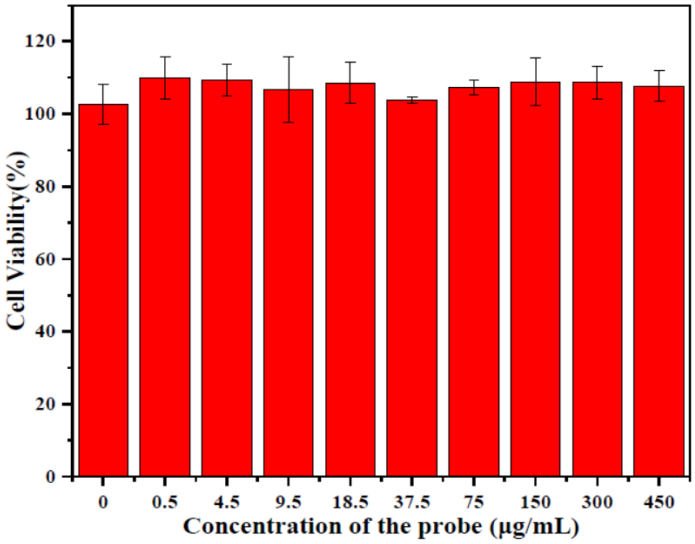


Figure S6. Cell viabilities of Hela cells incubated with the DSPE-PEG-SDS@Ag NCs with different concentrations (from 0 to 450 μg/mL) for 24 h, respectively.

References

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