## **Electronic Supplementary Information**

Spectroscopic/colorimetric dual-mode rapid and ultrasensitive detection of reactive oxygen species based on shape-dependent silver nanostructures

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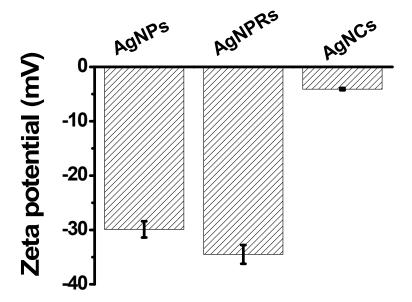
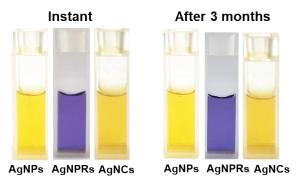


Fig. S1. Zeta potential of AgNPs, AgNPRs and AgNCs.



**Fig. S2.** Colloidal dispersion of AgNPs, AgNPRs, and AgNCs as synthesized and after 3 months storage.

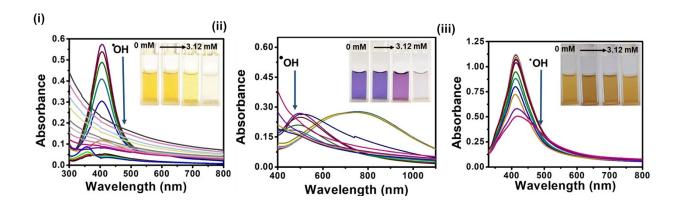
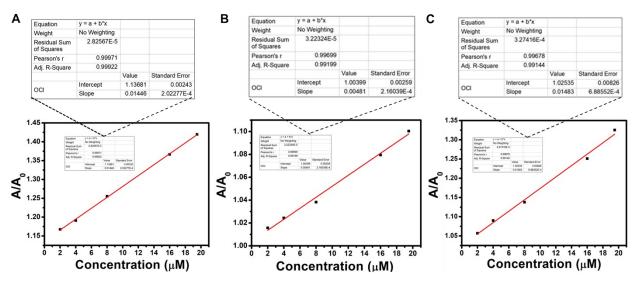
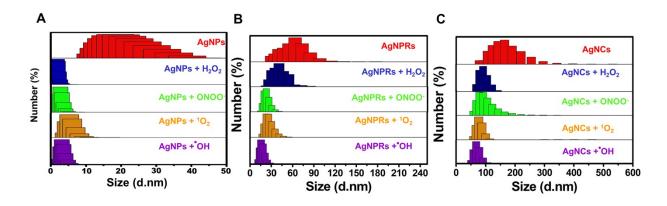


Fig. S3. UV-vis absorbance spectra of (i) AgNPs, (ii) AgNPs, and (iii) AgNCs for OH radical.



**Fig. S4.** Linear plots of A/A<sub>0</sub> vs. the concentration of ClO<sup>J-</sup> for **(A)** AgNPs, **(B)** AgNPs and **(C)** AgNCs.



**Fig. S5.** DLS analysis of AgNPs, AgNPRs and AgNCs with different ROS analytes at a concentration of 3.12 mM.

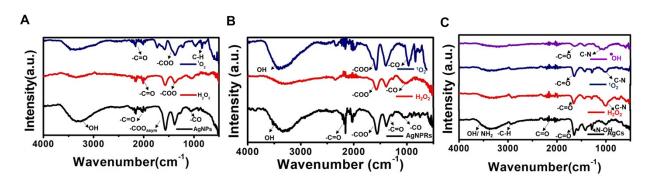


Fig. S6. FTIR spectra of (A) AgNPs, (B) AgNPRs and (C) AgNCs with different ROS.

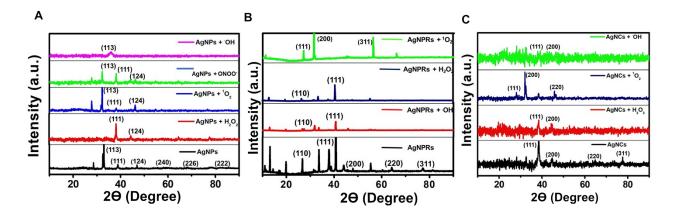


Fig. S7. XRD spectra of (A) AgNPs, (B) AgNPRs and (C) AgNCs in the presence of multiple ROS.