

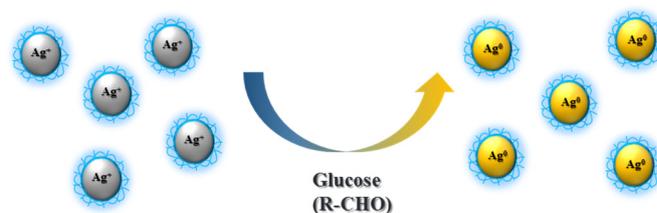
# Supporting Information

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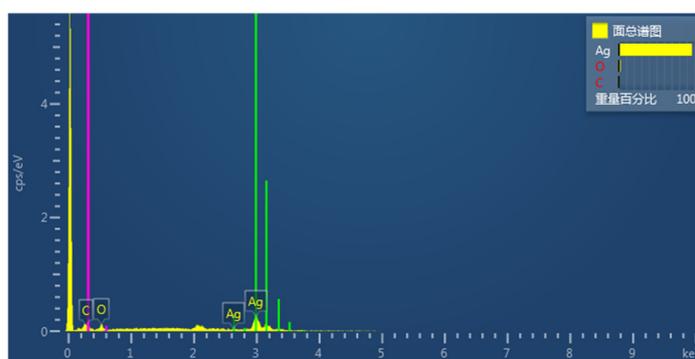
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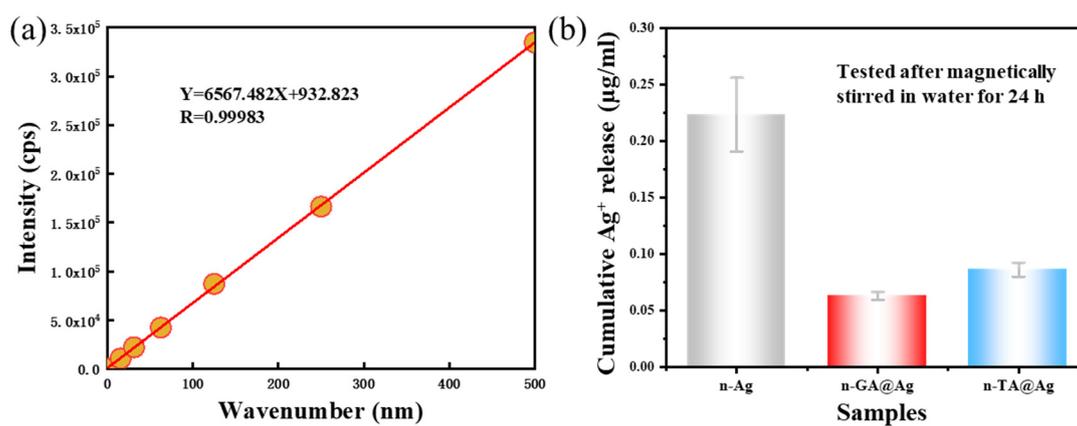
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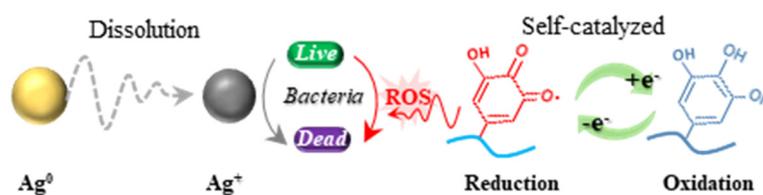
**Figure S1.** Schematically illustrate the underlying mechanisms and the polyphenol-mediated silver mirror reaction, where silver ions are reduced to AgNPs by glucose in ammonia solutions



**Figure S2.** EDX measurements of the C/O/Ag element distribution on n-TA@Ag.



**Figure S3.** (a) Calibration curves of silver metal ions show the linearly correlations between the intensities and concentrations. (b) Cumulative Ag ions released from the fabrics of n-Ag, n-GA@Ag and n-TA@Ag.



**Figure S4.** Proposed synergistic antibacterial properties based on sustainable dissolution of AgNPs and release of reactive oxygen species (ROS) generated from the redox reactions of catechol groups in polyphenols.