

Electronic Supplementary Information

**A novel biosensor for copper (II) ions based on turn-on
resonance light scattering of ssDNA templated silver
nanoclusters**

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Table S1. Comparison of the present assays with other reported methods for the detection of Cu²⁺ in aqueous solution.

Method	LOD	Linearity	Ref.
DNA-Ag NCs LS probe	0.5 μ M	5-125 μ M	16a
Fluorescent DNA-Ag NCs probe	8 nM	10-200 nM	21a
PMAA-Ag NCs fluorescent probe	8 nM	10-6000 nM	21b
ICP-AES	4 nM	-	21c
ICP-MS	Several nM	-	21d
Fluorescent fiber optical probe	1.2 μ M	0.78-6.3 μ M	21e
CN-DPA fluorescent probe	Several μ M	2-5 μ M	21f
Fluorescence turn-on probe	0.261 μ M	-	21g
RLS biosensor based on AGR of Ag NCs	2 nM	5-750 nM	This work

-: The value was not provided in the literature.

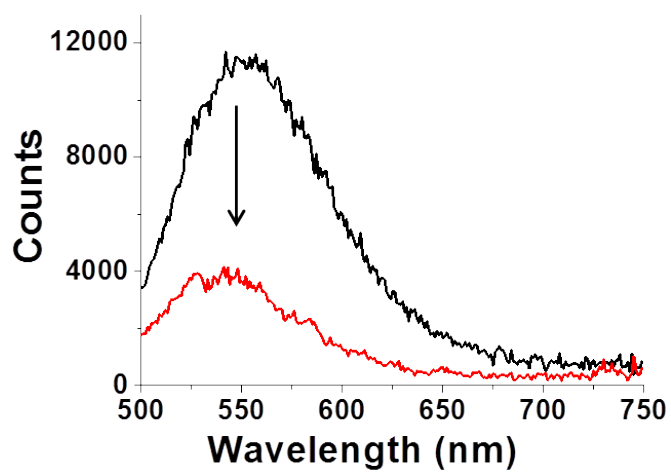


Figure S1. Emission spectra of ssDNA-Ag NCs in the absence (the black line) and presence (the red line) of the concentration of 80 μM Cu^{2+} ions solution.

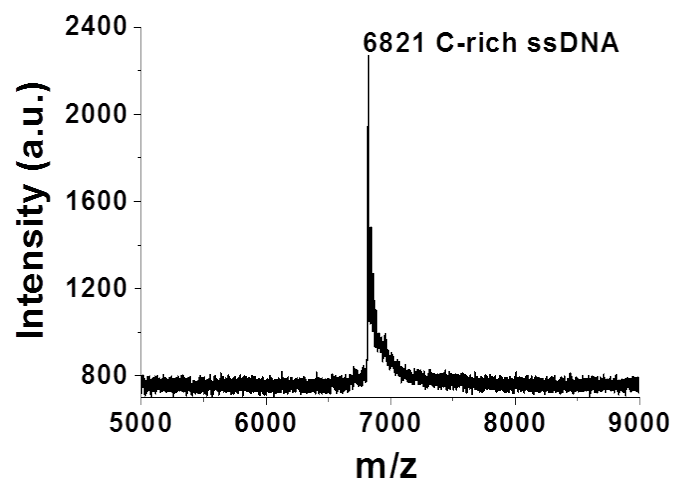


Figure S2. MALDI-TOF mass spectra of C-rich ssDNA.

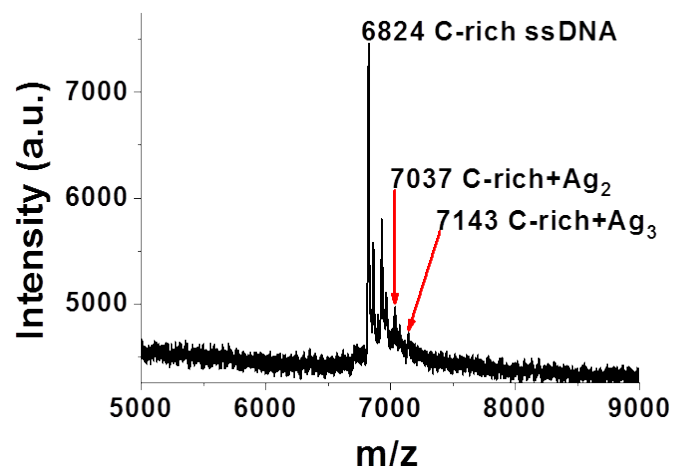


Figure S3. MALDI-TOF mass spectra of synthesized C-rich ssDNA templated silver nanoclusters in the absence of 1 mM Cu²⁺ ions.

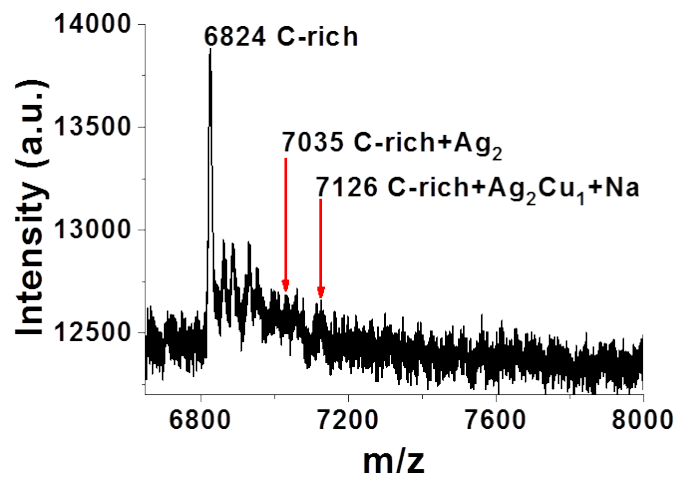


Figure S4. MALDI-TOF mass spectra of synthesized C-rich ssDNA templated silver nanoclusters in the presence of 1 mM Cu²⁺ ions.