#### Supplementary information

# Alternative platform for COVID-19 diagnosis based on AuNPs

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**Figure. S1** Absorption spectra of AuNPs (green line) and AuNPs-Ab in the absence (red line) and presence (blue line) of the SARS-CoV-2 spike antigen.



Figure S2. Standard color chart of the colorimetric sensor towards different urea concentrations, and a calibration plot between G value and urea concentration ranging from 0-200 mg/dL.

#### Standard color chart for urea



Scheme S1. The mechanisms of enzymatic-based colorimetric sensor of urea.



**Figure S3**. Stability of the colorimetric immunoassay of SARS-CoV-2 antigen were stored for: 1 day and 14 days, n=3 (insets: the corresponding photographs).