

## Supporting Information

## Advances in Aptamer-Based Electrochemical Biosensors for Disease

## Diagnosis: Integration of DNA and Nanomaterials

SaRi GeGen <sup>a#</sup>, Gedong Meng <sup>b#</sup>, Gerile Aodeng <sup>a\*</sup>, Lu Ga<sup>c</sup>, Jun Ai<sup>a\*</sup>

- College of Chemistry and Environmental Science, Inner Mongolia Key Laboratory of Environmental Chemistry, Inner Mongolia Normal University, 81 Zhaowudalu, Hohhot 010022, China
- Department of Spine Surgery, The Second Affiliated Hospital of Inner Mongolia Medical University, Hohhot, 010010, Inner Mongolia, China.
- College of Pharmacy, Inner Mongolia Medical University, Jinchuankaifu, Hohhot, 010110, China

E-mail: [imacaj01@163.com](mailto:imacaj01@163.com).

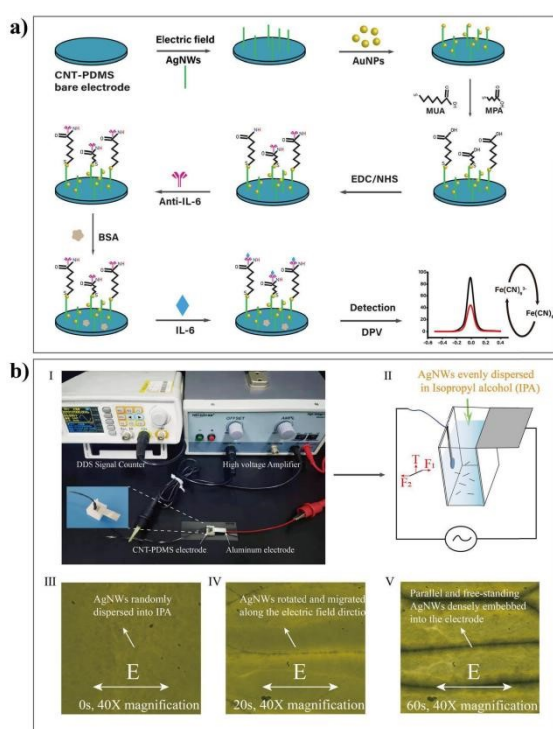


FIG. S 2.1.1 A free-standing AgNWs/AuNPs electrochemical biosensor

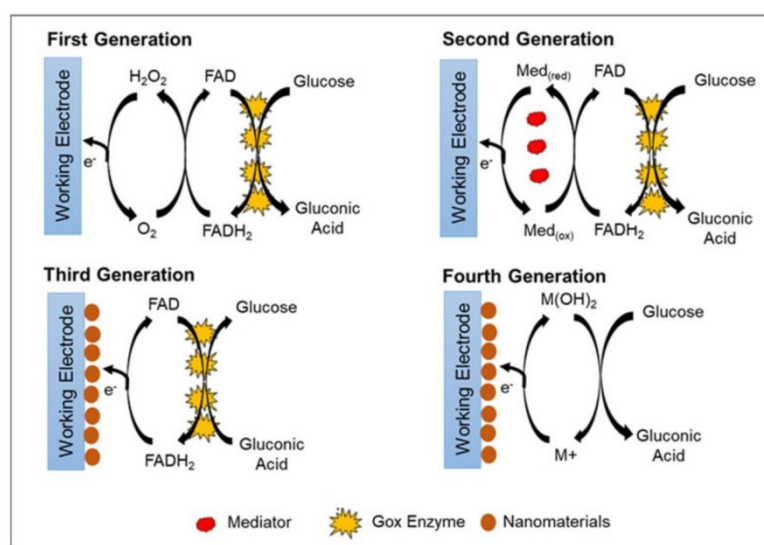


FIG.S. 2.1.2 Schematic diagram of fourth-generation electrochemical glucose sensor

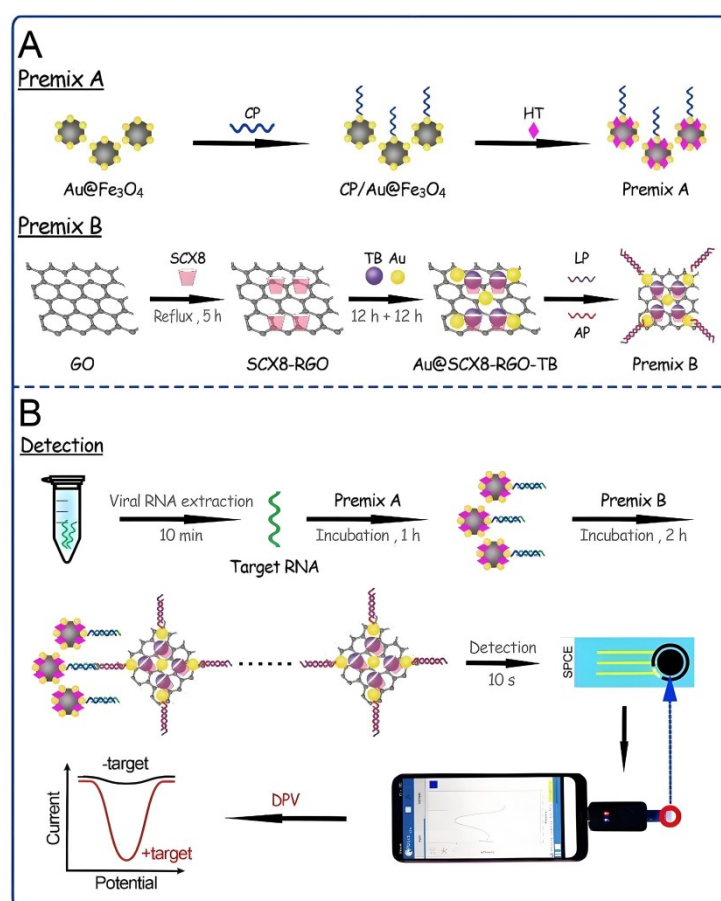


FIG. S. 2.3.1 Schematic diagram of novel coronavirus detection by electrochemical biosensor

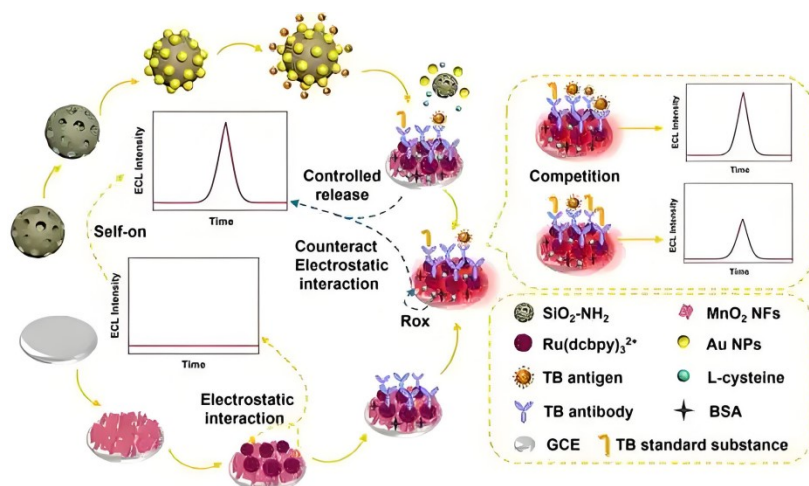


FIG.S. 2.3.4 TB detected by an electroluminescence sensor with controlled release triggering the electrostatic attraction elimination mechanism

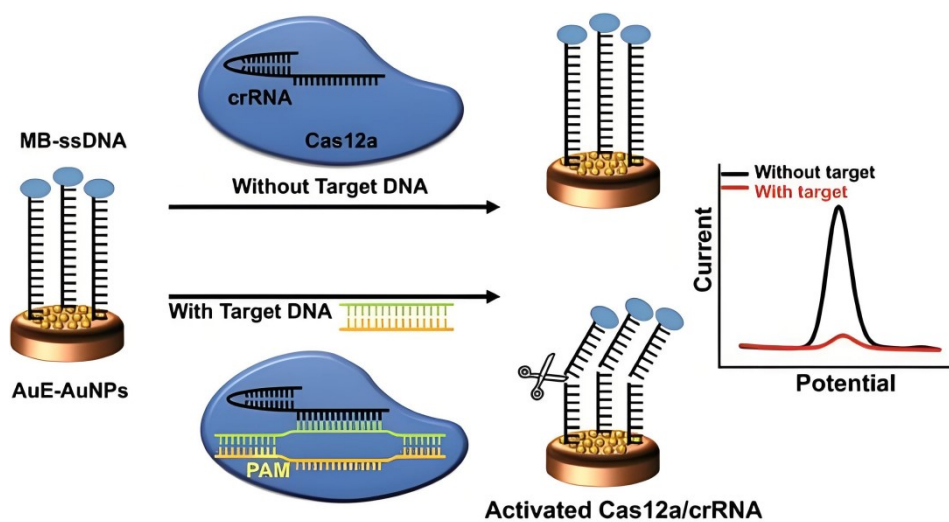


FIG.S. 3.2.2 CRISPR-Cas12A-enabled electrochemical biosensor for rapid and ultra-sensitive detection of SARS-CoV-2 Delta variant strains

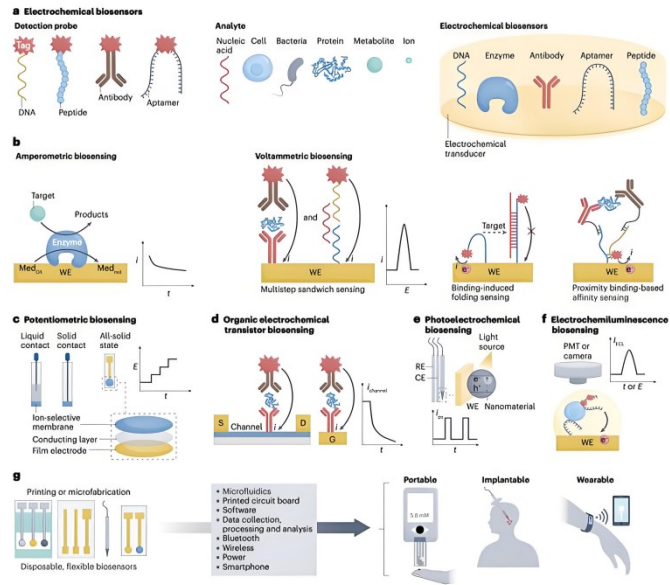


FIG.S. 3.4.3 Electrochemical biosensor



FIG.S. 4.1.2 Design, mechanism and application of superinfiltration biosensor