# Electronic Supplementary Information

# Preparation of Janus fluorescent probe based on an asymmetrical silica and its application in glucose and alpha-fetoprotein detection

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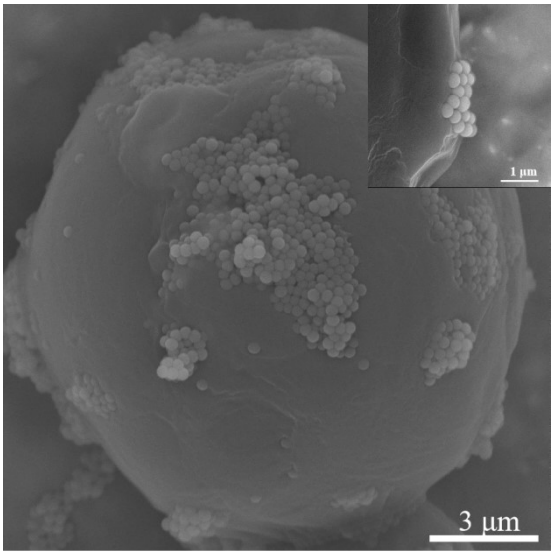


**Fig. S1.** TEM images of $SiO_2$-$NH_2$/wax. Inset: the side view of $SiO_2$-$NH_2$/wax.

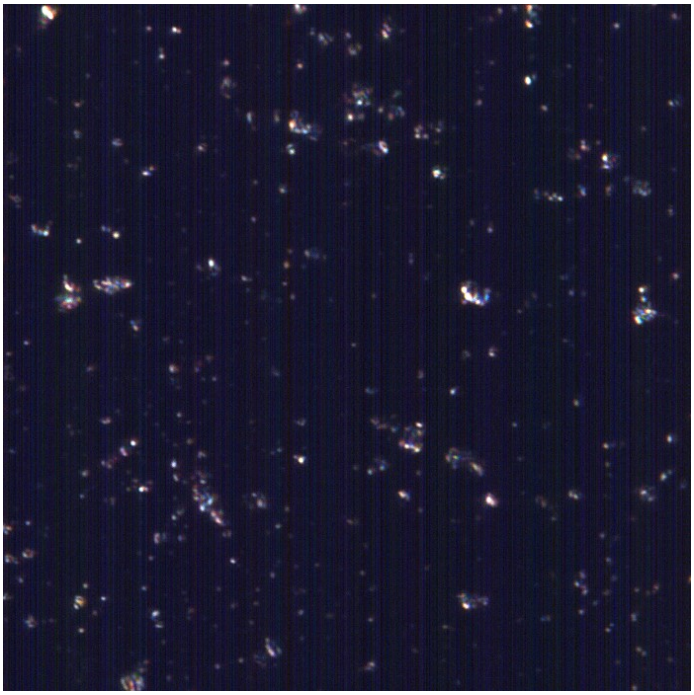

**Fig. S2.** The dark field hyperspectral image of GAdS-S.

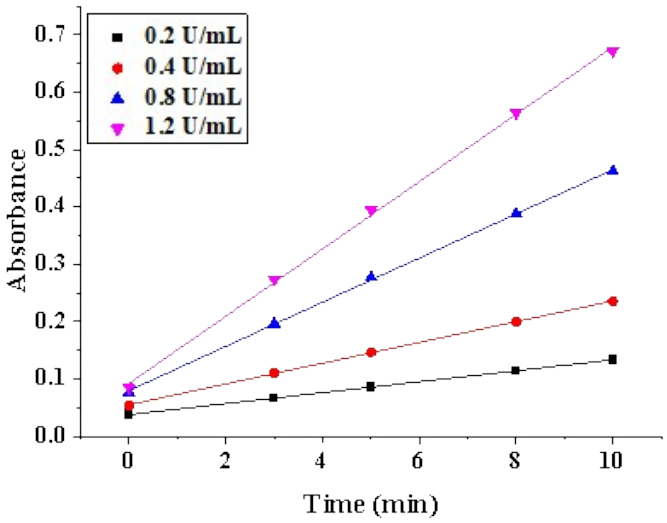


**Fig. S3.** The line plot of absorption spectra of free GOx.

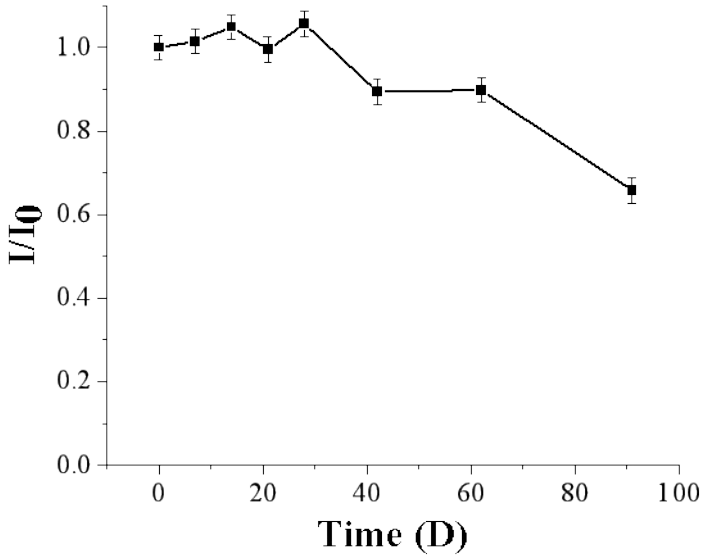


**Fig. S4.** Fluorescence stability of GAdS-S within 3 month.

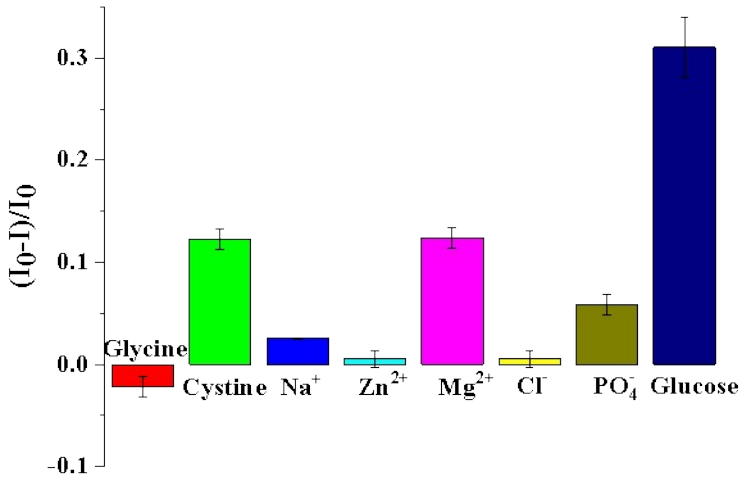


**Fig. S5.** The anti-interference performance of GAdS-S.

**Table. S1** Comparison of different methods for glucose detection.

| System | Method | Linear range (μM) | Limit of detection (μM) | Reference |
|---|---|---|---|---|
| Papain/OPD/$H_2O_2$ | Fluorometry | 10-1000 | 4.6 | 1 |
| CuO@rGO | Colorimetry | 1000-10000 | 7 | 2 |
| SiNPs/OPD/HRP/GOx | Fluorometry | 20-1250 | 6.8 | 3 |
| $Ni_5P_4$ | Electrochemical | 2-5300 | 0.7 | 4 |
| $Pd_{85}Cu_9PtTNC_8$ | Electrochemical | 100-1000 | 1.29 | 5 |
| GAdS-S | Fluorometry | 7.5-100 | 0.5 | This work |

**Table. S2** Comparison of different methods for AFP detection.

| System | Method | Linear range (ng/mL) | Limit of detection (ng/mL) | Reference |
|---|---|---|---|---|
| Wax-printed paper-based lateral flow device | ELISA | 0.1-100 | 1 | 6 |
| TH/RGO/Au NPs | electrochemical | 1000-10000 | 50 | 7 |
| Multicolor QDs based ICTS | Fluorometry | 0-150 | 3 | 8 |
| AuNFs | Chemiluminescence | 1–250 | 1.751 | 9 |
| GAdS-S | Fluorometry | 7.5-100 | 0.5 | This work |

## References


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