

## Electronic Supporting Information

**Sensitive and selective colorimetric probe for fluoride detection based on interaction between 3-aminophenylboronic acid and dithiobis(succinimidylpropionate) modified gold nanoparticles**

**Titilope John Jayeoye,<sup>ab</sup> and Thitima Rujiralai<sup>\*ab</sup>**

<sup>a</sup>Department of Chemistry and Center of Excellence for Innovation in Chemistry, Faculty of Science, Prince of Songkla University, Hat Yai, Songkhla, 90112, Thailand

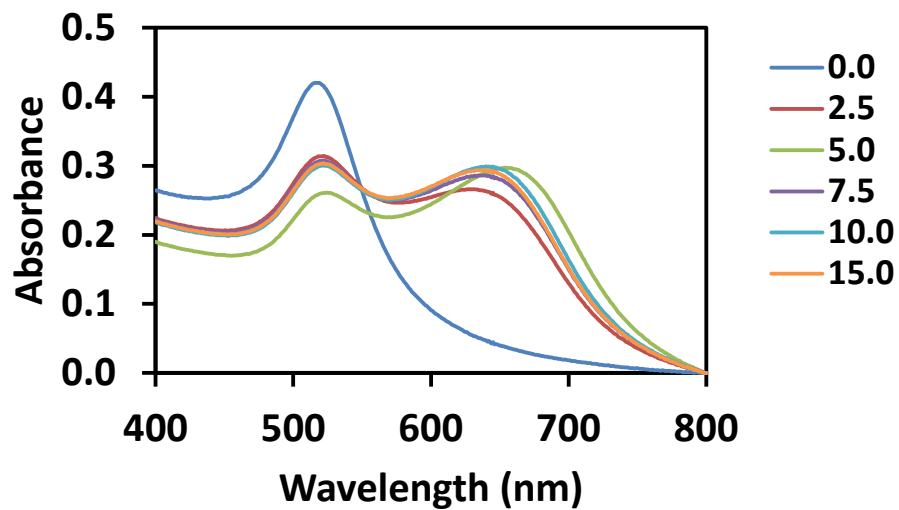
<sup>b</sup>Analytical Chemistry and Environment Research Unit, Division of Chemistry, Department of Science, Faculty of Science and Technology, Prince of Songkla University, Pattani, 94000, Thailand

**\*Corresponding author:**

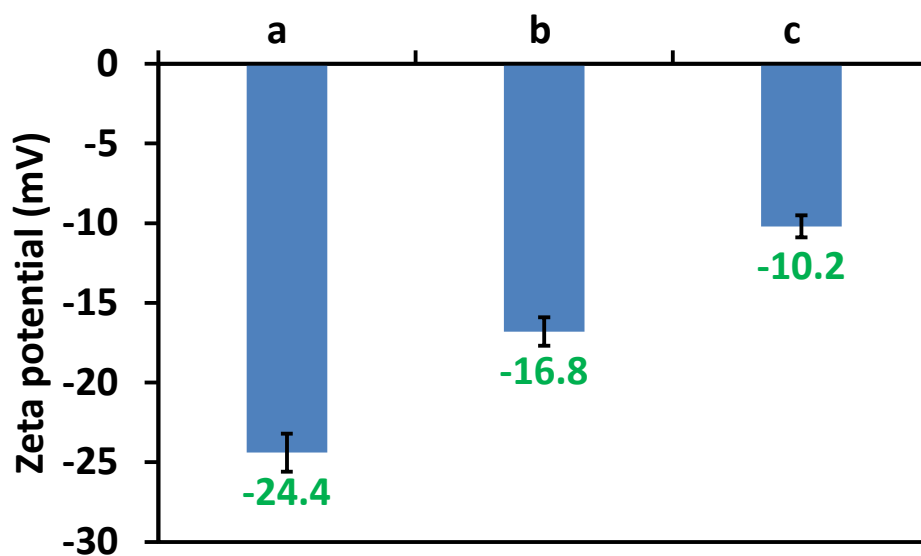
Department of Chemistry and Center of Excellence for Innovation in Chemistry, Faculty of Science, Prince of Songkla University, Hat Yai, Songkhla, 90112, Thailand

Thitima Rujiralai. e-mail: [thitima.r@psu.ac.th](mailto:thitima.r@psu.ac.th)

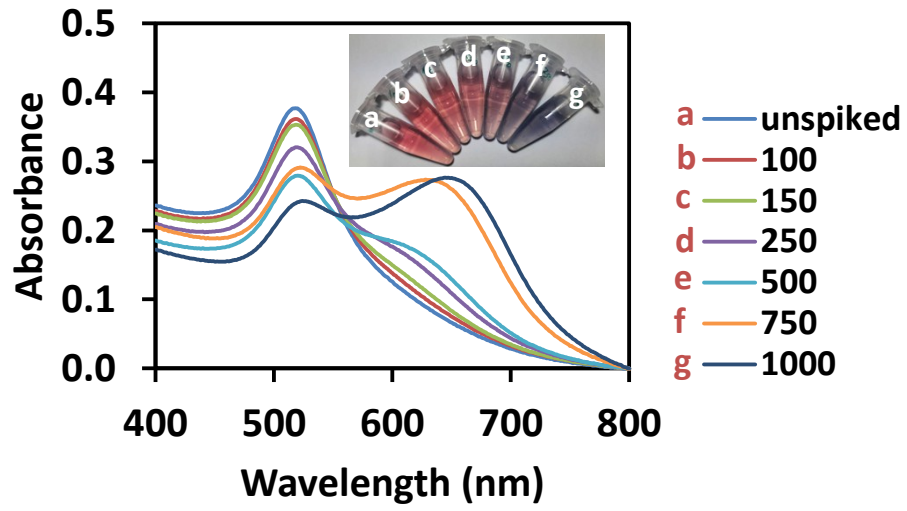
To be published in New Journal of Chemistry



**Fig. S1** UV-vis absorption spectra of DSP@AuNP under different concentrations of 3-aminophenylboronic acid (APBA) from 0.0 to 15.0  $\mu\text{M}$ . The concentration of fluoride is 1500  $\mu\text{M}$ .



**Fig. S2** Zeta potential values of (a) APBA-DSP@AuNP, (b) APBA-DSP@AuNP with 250  $\mu\text{M}$  fluoride, (c) APBA-DSP@AuNP with 2000  $\mu\text{M}$  fluoride.



**Fig. S3** UV-vis absorption spectra of APBA-DSP@AuNP probe towards detection of fluoride in the range of 100-1000  $\mu\text{M}$  in spiked tap water.