

## Supporting Information

### **Enzymatic reaction modulation of G-quadruplex formation for the sensitive homogeneous fluorescence sensing of cholinesterase and organophosphate pesticides**

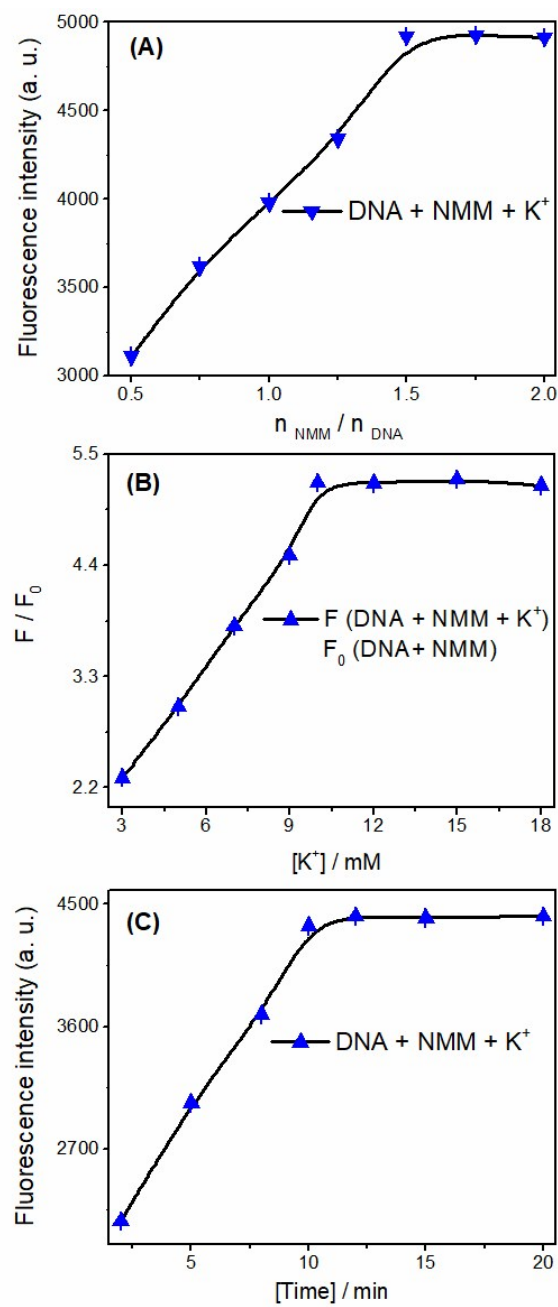
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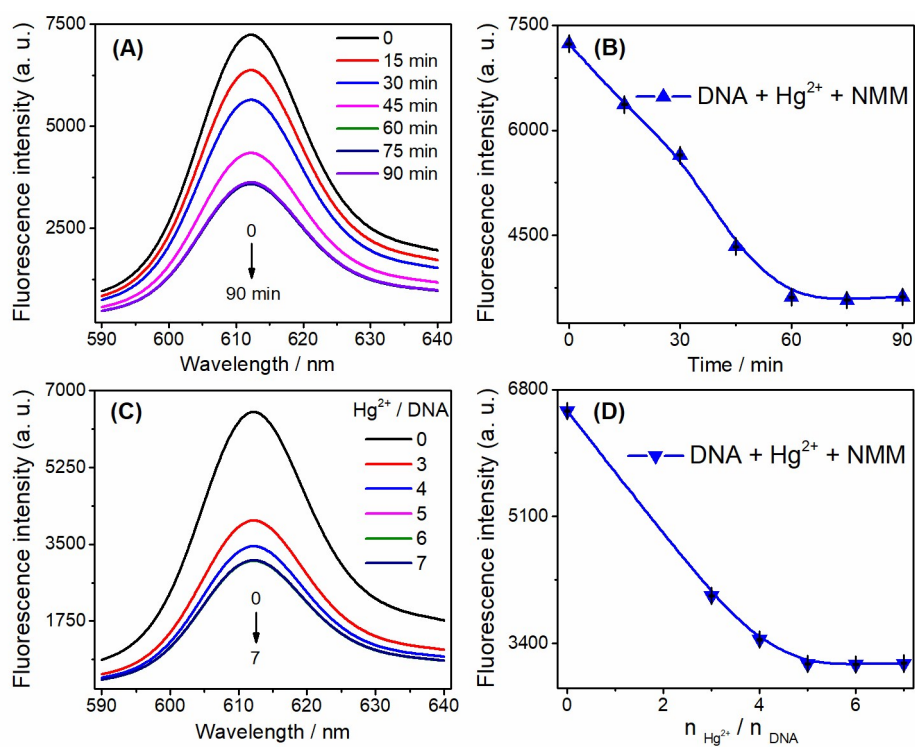
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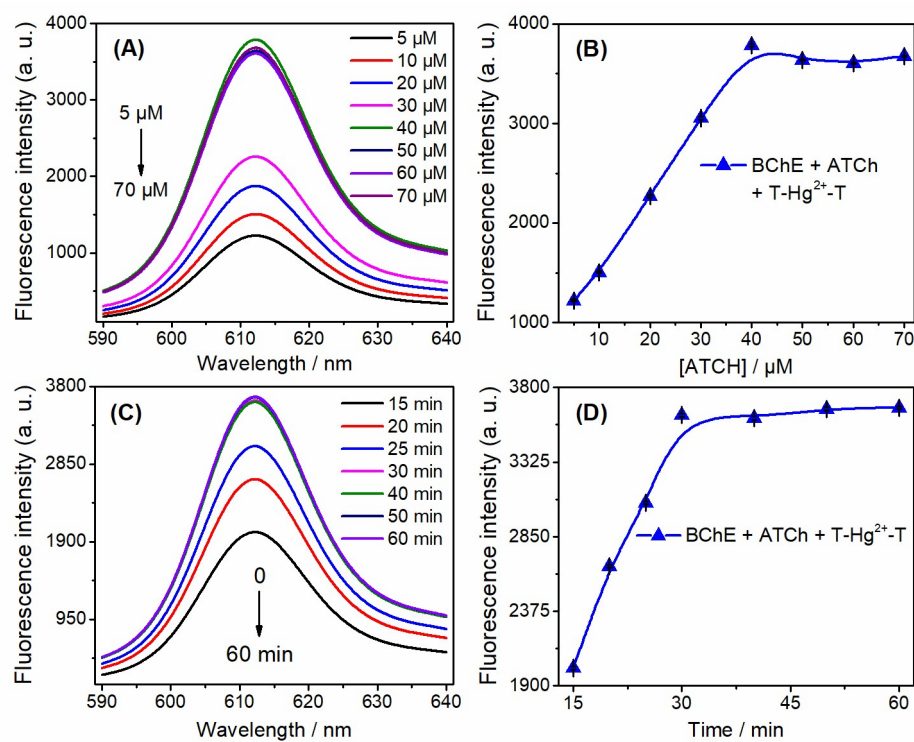
*E-mail address:* huangke@sicnu.edu.cn (K. Huang);



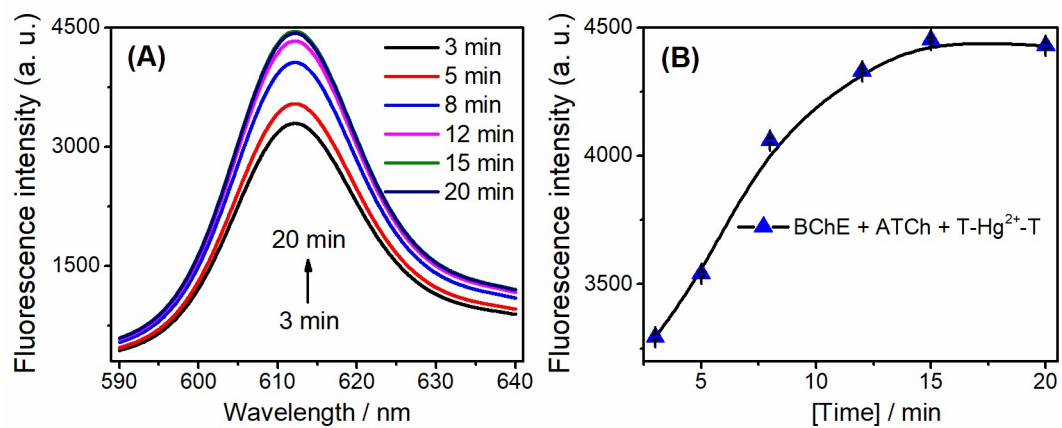
**Fig. S1.** Effect of the formation of the G-quadruplex. (A) The ratio of NMM and probe DNA, (B) the concentration of K<sup>+</sup>, and (C) the reaction time between probe DNA and NMM.



**Fig. S2.** Effect of the formation of the T-Hg<sup>2+</sup>-T hairpin structure. (A) and (B) Reaction time between the probe DNA with Hg<sup>2+</sup>; (C) and (D) the ratio of Hg<sup>2+</sup> and probe DNA.



**Fig. S3.** Effect of the concentration of ATCh (A) and (B), and the enzymatic hydrolysis time between BChE and ATCh (C) and (D).



**Fig. S4.** Competitive reaction time between TCh (hydrolysate of ATCh) and the T-Hg<sup>2+</sup>-T hairpin structure.