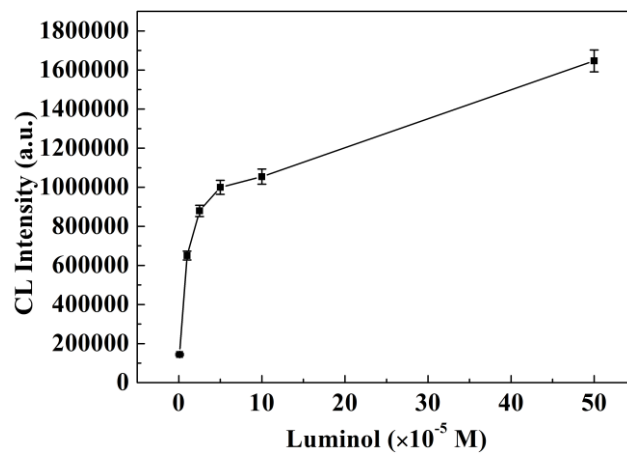


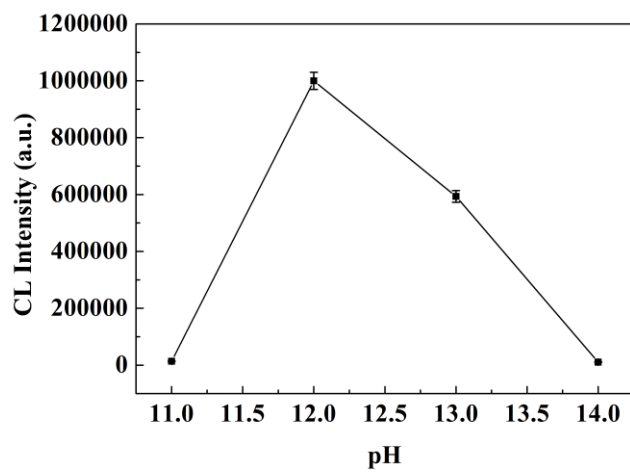
Electronic Supplementary Information

**A novel microarray chemiluminescence method based on chromium oxide nanoparticles catalysis for indirect determination of the explosive Triacetone Triperoxide at the scene**

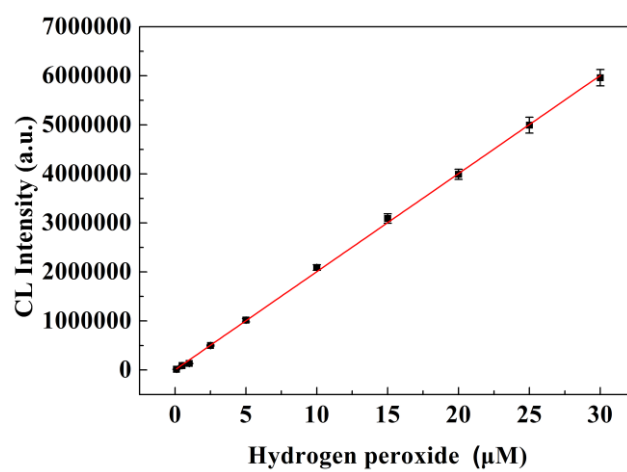
**Xiaohua Li, Zhujun Zhang\*, Liang Tao**



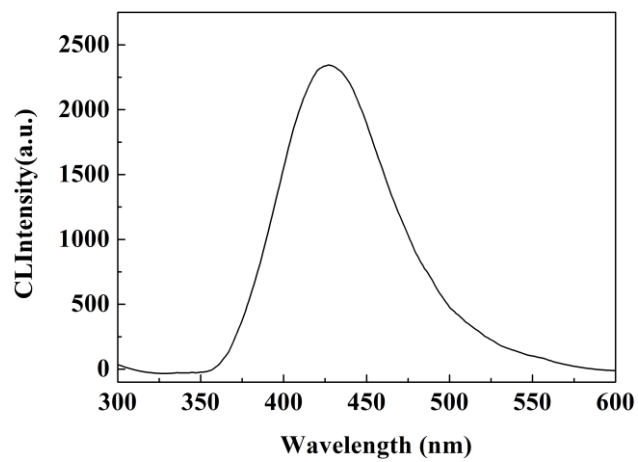
**Fig. S1.** The effect of luminol concentration on the CL intensity. Experimental parameters: pH 12.0 luminol,  $1 \times 10^{-6}$  M  $\text{H}_2\text{O}_2$  and  $1 \times 10^{-5}$  g.L $^{-1}$   $\text{Cr}_2\text{O}_3$  nanoparticles



**Fig. S2.** The effect of pH on the CL intensity. Experimental parameters:  $5 \times 10^{-5}$  M luminol,  $1 \times 10^{-6}$  M  $\text{H}_2\text{O}_2$  and  $1 \times 10^{-5}$  g.L<sup>-1</sup>  $\text{Cr}_2\text{O}_3$  nanoparticles.



**Fig. S3.** Calibration graph for H<sub>2</sub>O<sub>2</sub> Experimental parameters: pH 12.0, 5×10<sup>-5</sup> M luminol, , and 1×10<sup>-5</sup> g.L<sup>-1</sup> Cr<sub>2</sub>O<sub>3</sub> nanoparticles.



**Fig. S4.** CL spectra of luminol-H<sub>2</sub>O<sub>2</sub>-Cr<sub>2</sub>O<sub>3</sub> nanoparticles. Experimental condition: pH =12.0,  $1 \times 10^{-4}$  M luminol,  $1 \times 10^{-3}$  M H<sub>2</sub>O<sub>2</sub>,  $1 \times 10^{-5}$  g.L<sup>-1</sup> Cr<sub>2</sub>O<sub>3</sub> nanoparticles.