

**A peroxyoxalate chemiluminescence recovery system based on the interaction of  
N-doped graphene oxide nanosheets and oligopeptide for ultra-sensitive and  
selective copper ion (II) detection**

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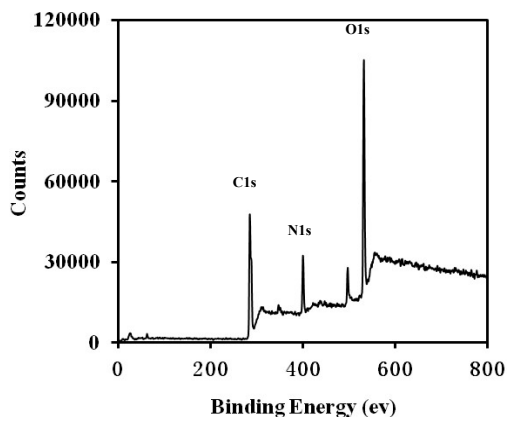
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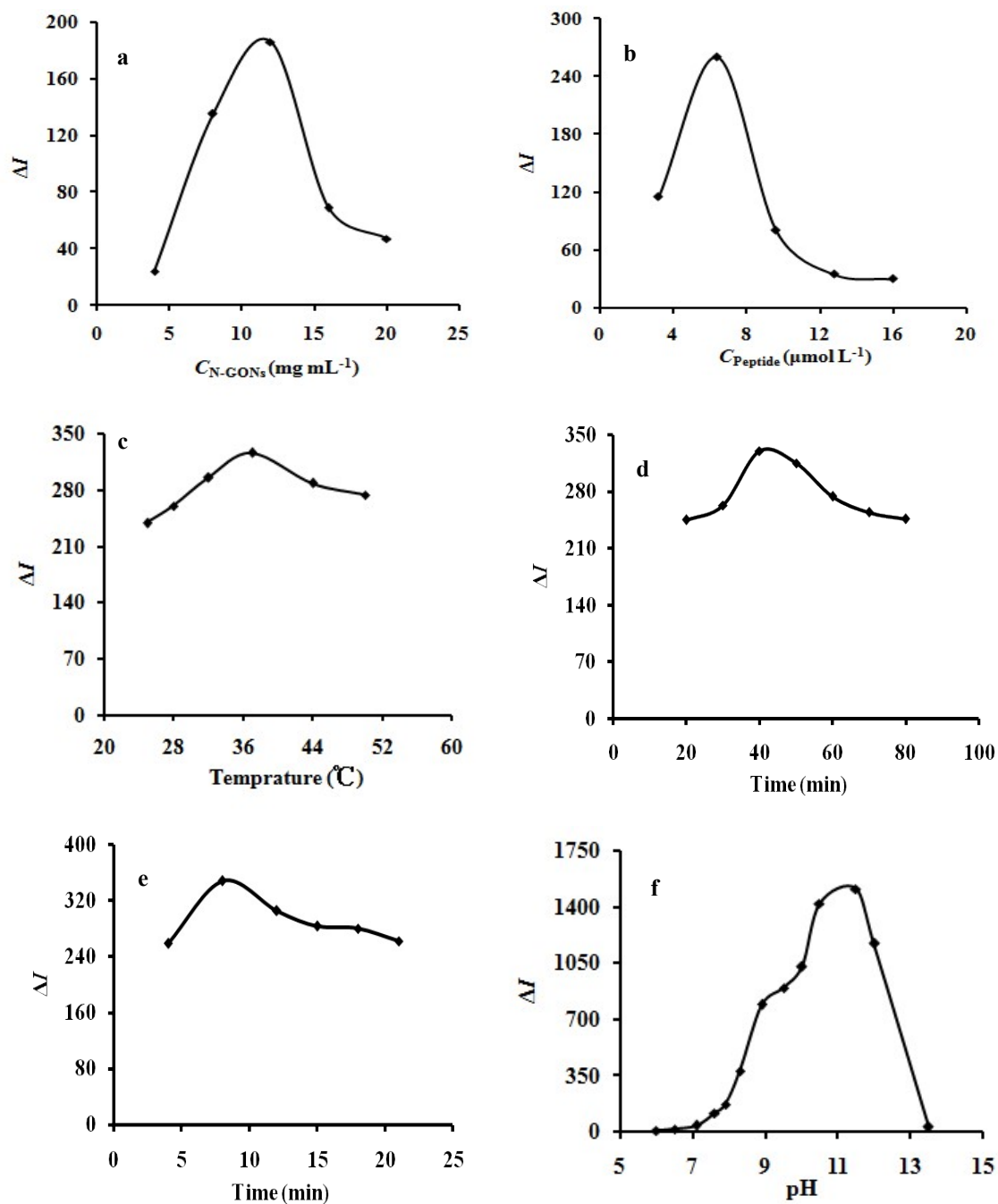
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XPS results (Figure S1) showed that there were characteristic peaks at 531.8, 285 and 400 eV corresponding to O, C and N elements respectively for N-GONs.



**Figure S1. Characterization of the N-GONs by XPS.**



**Figure S2. Optimization of the CL assay conditions.** The amount of N-GONs (a), the amount of oligopeptide (b), the incubation temperature (c) and time (d) of the forming of N-GONs/oligopeptide, the incubation time of the  $Cu^{2+}$  adding to N-GONs/oligopeptide solution (e), and the pH value of the buffer solution (f). The concentrations were as follows:  $5 \times 10^{-4} mol L^{-1}$  TCPO,  $0.1 mol L^{-1} H_2O_2$  and  $5 \times 10^{-12} mol L^{-1} Cu^{2+}$ .