## Probing the unexpected behavior of AuNPs migrating through nanofibers: a new strategy for the fabrication of carbon nanofibers-noble metal nanocrystals hybrid nanostructures

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Figure S1 Schematic of chemical reactions in the graphitization process.



Figure S2 Amperometric response of the fabricated CNFs/GCE (1000 °C, 2 °C/min) sensor to successive addition of different concentration of  $H_2O_2$  to 1.0 M PBS



**Figure S3** The CVs cycles of the prepared Au-CNFs-1000 (2 °C/min) functionalized GCE with 5.0 mM HQ in 0.1 M PBS in the presence of 5.0 mM  $H_2O_2$  (scan rate, 50 mV s<sup>-1</sup>).