

Electronic Supplementary Information:

**Facile synthesis of nitrogen-doped graphene for
measuring the releasing process of hydrogen peroxide
from living cells**

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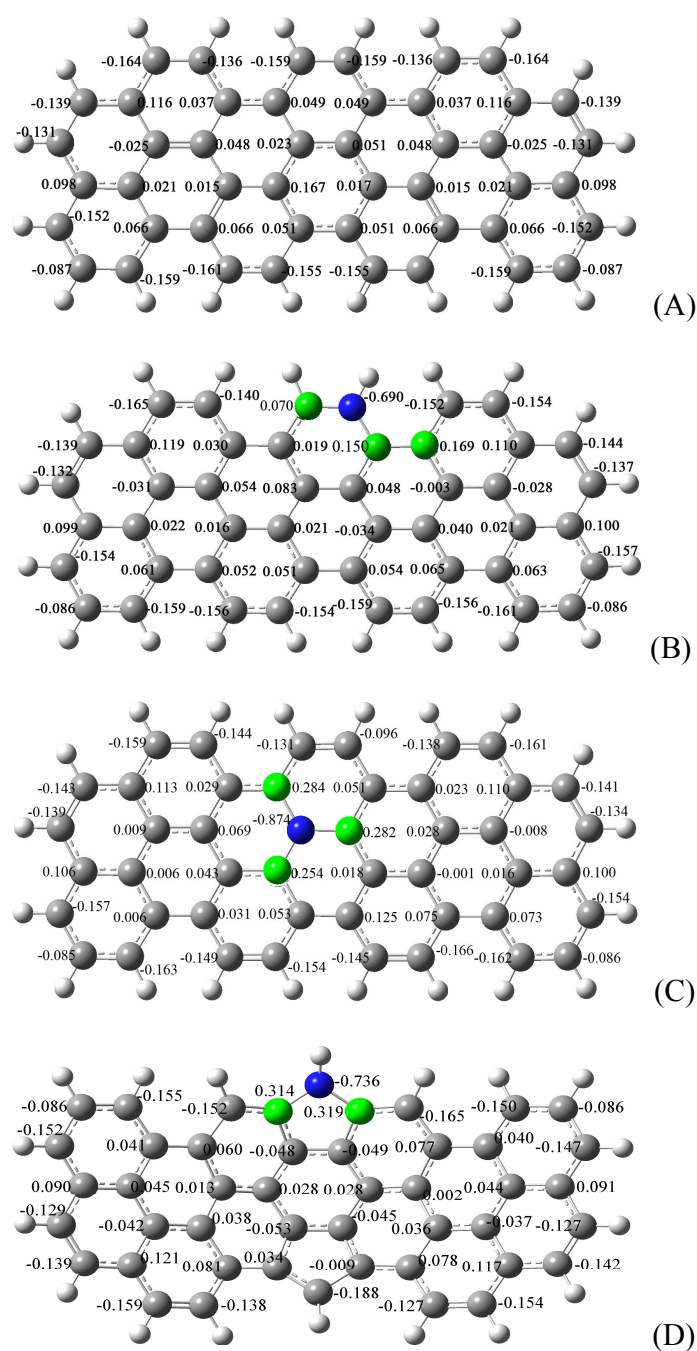


Fig. S1 Charge distributions on the pure (A) and N-graphene with pyridinic (B), graphitic (C), and pyrrolic nitrogen-doped structure (D), respectively, in their optimized forms. The gray balls are carbon atoms, the blue balls are nitrogen atoms, and the smaller white balls are hydrogen atom. The green balls are those carbon atoms having significant enhancement in charge density after N doping.

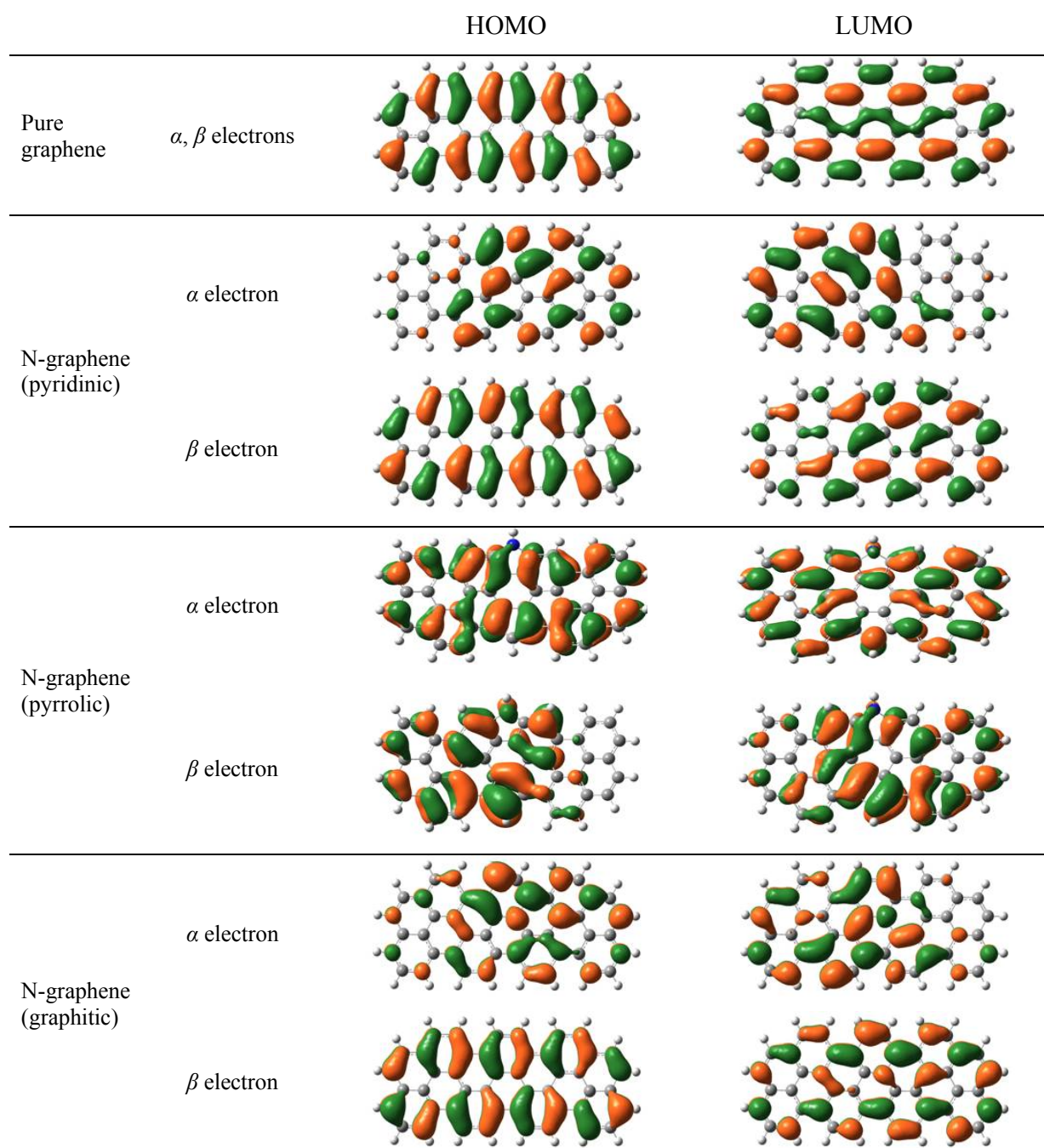


Fig. S2 HOMO and LUMO spatial distributions of α electron and β electron for pure graphene and N-graphene with pyridinic, pyrrolic, and graphitic nitrogen-doped structure, respectively.

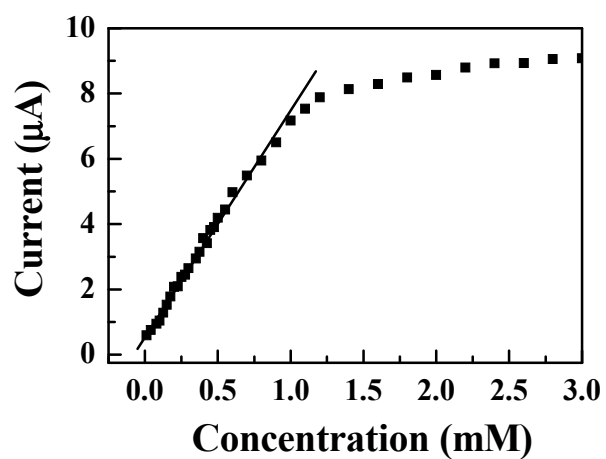


Fig. S3 Dependence of the steady state current response of the electrocatalytic reduction of H_2O_2 by N-graphene on the concentration of H_2O_2 .