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## ACCEPTED MANUSCRIPT

## Electrochemical determination of paracetamol based on Au@graphene core-shell nanoparticles doped conducting polymer PEDOT nanocomposite

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<sup>b</sup>Molecular Sciences and Biomedicine Laboratory, State Key Laboratory for Chemo/Biosensing and Chemometrics, College of Chemistry and Chemical Engineering, College of Biology and Collaborative Innovation Center for Molecular Engineering and Theronastics, Hunan University, Changsha 410082, China.

\* Corresponding author. Tel: (+86) 532 84022990; Fax: (+86) 532-84022681. E-mail: <u>xiliangluo@qust.edu.cn</u>; <u>zhuochen@hnu.edu.cn</u>; <u>songzhiling2010@163.com</u>. Highlights

- A sensitive electrochemical sensor for paracetamol detection was developed;
- Au@graphene core-shell nanoparticles were electrochemically polymerized with PEDOT;
- Au@graphene doped PEDOT exhibited good catalytic activity to the redox of paracetamol.

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