

## Supporting Information

### Novel L-lactic Acid Biosensors Based on Conducting Polypyrrole-Block Copolymer Nanoparticles

Chong Sun<sup>a,†</sup>, Daoying Wang<sup>a,†</sup>, Muhan Zhang<sup>a</sup>, Yanxiu Ni<sup>\*,b</sup>, Xiaohui Shen<sup>c</sup>,

Youchao Song<sup>c</sup>, Zhiming Geng<sup>a</sup>, Weimin Xu<sup>a</sup>, Fang Liu<sup>a</sup>, Chun Mao<sup>\*,c</sup>

<sup>a</sup>*Institute of Agricultural Products Processing, Jiangsu Academy of Agricultural Sciences, Nanjing 210014, PR China*

<sup>b</sup>*Institute of Veterinary Medicine, Jiangsu Academy of Agricultural Sciences, Nanjing 210014, PR China*

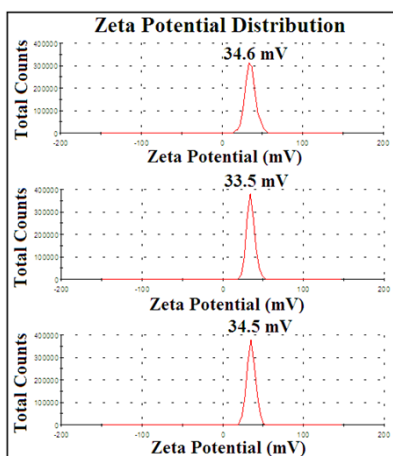
<sup>c</sup>*National and Local Joint Engineering Research Center of Biomedical Functional Materials, Jiangsu Key Laboratory of Biofunctional Materials, College of Chemistry and Materials Science, Nanjing Normal University, Nanjing 210023, PR China*

*\*Corresponding authors.*

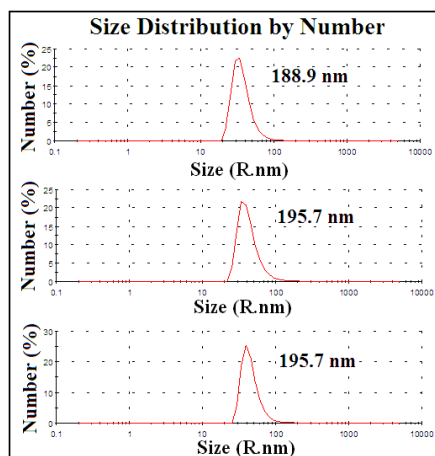
*†* These authors contributed equally to this work.

E-mail address: er1998@126.com (Y. Ni), maochun127@aliyun.com (C. Mao)

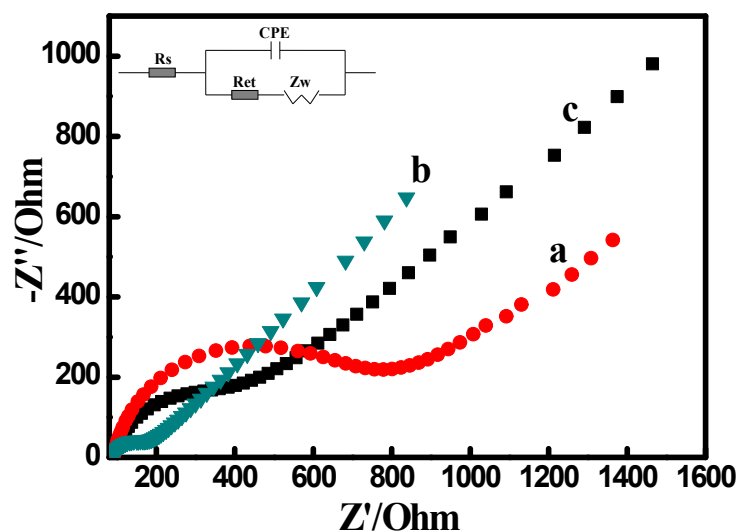
Tel.: +86 25 84390065, Fax: +86 25 84390065



**Fig. S1.** Zeta potential distribution of the PPy-F127 NPs measured by a Zetasizer Nano ZS90 dynamic light scattering.



**Fig. S2.** Particle size distribution of the PPy-F127 NPs measured by a Zetasizer Nano ZS90 dynamic light scattering.



**Fig. S3.** Nyquist plot of Faradic impedance obtained in 0.10 M PBS (pH = 7.4) containing 10 mM  $K_3Fe(CN)_6/K_4Fe(CN)_6$  and 0.1 M KCl for (a) bare GCE, (b) (PPy-F127)/GCE and (c) LOx/(PPy-F127)/GCE. Inset is a schematic of the equivalent circuit.