Electronic Supplementary Material (ESI) for Analytical Methods.


# Supporting Information for

## Molecularly imprinted polymer-based potentiometric sensor based on covalent recognition for determination of dopamine

Chan Wang[a,#], Longbin Qi[b,#], Rongning Liang[b,*]

[a] *Yantai Center of Shandong Integrated Technology Transfer Center, Chinese Academy of Sciences, Yantai, Shandong 264003, China*

[b] *Key Laboratory of Coastal Environmental Processes and Ecological Remediation, Yantai Institute of Coastal Zone Research (YIC), Chinese Academy of Sciences (CAS); Shandong Provincial Key Laboratory of Coastal Environmental Processes, YICCAS, Yantai, Shandong 264003, China*

*E-mail: rnliang@yic.ac.cn

Tel: +86-535-2109234

Fax: +86-535-2109000

# Contributed equally to this work.

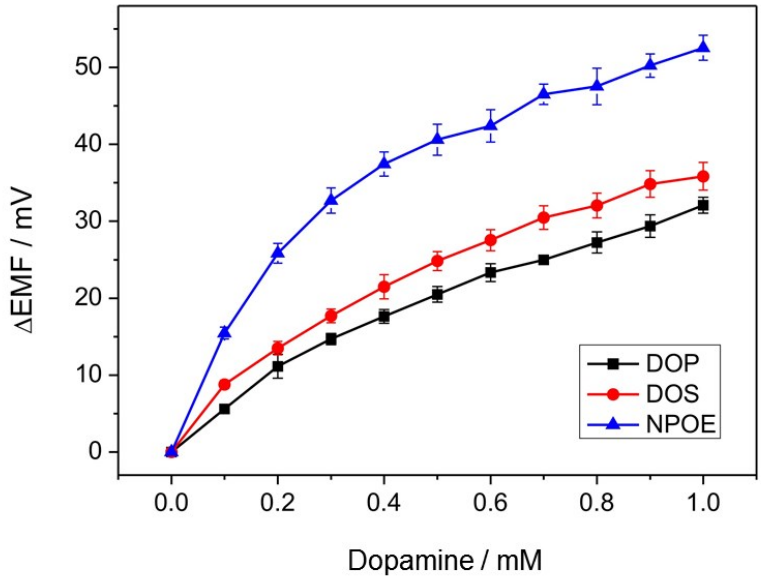


**Fig. S1.** Effect of the plasticizer on the potential response of the DA-MIP-ISE. Unless indicated otherwise, the membrane composition was as follows: DA-MIP (6.0 wt%), NaTFPB (1.0 wt% ), ETH 500 (2.0 wt%), plasticizer (60.7 wt%) and PVC (30.3 wt%). Each error bar represents one standard deviation for three measurements.

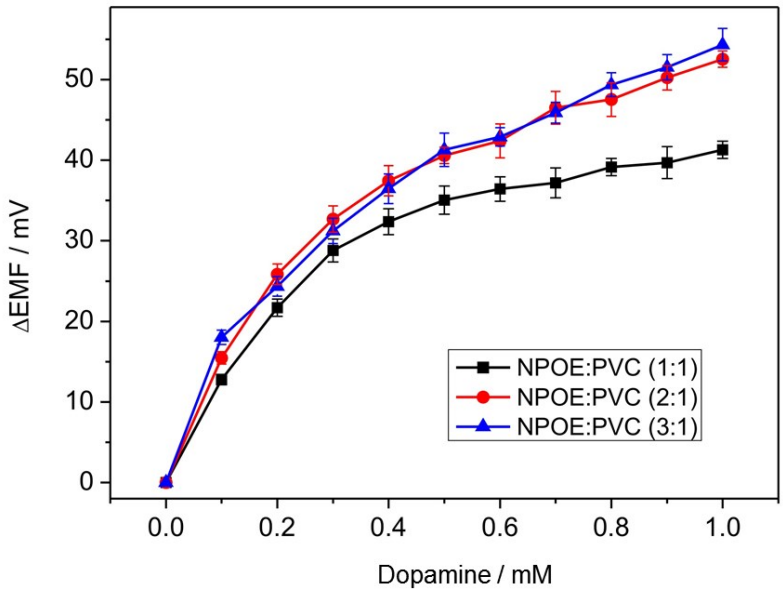


**Fig. S2.** Influence of the ratio of *o*-NPOE/PVC on the potential response of the DA-MIP-ISE. Other conditions are as given in Fig. S1. Each error bar represents one standard deviation for three measurements.

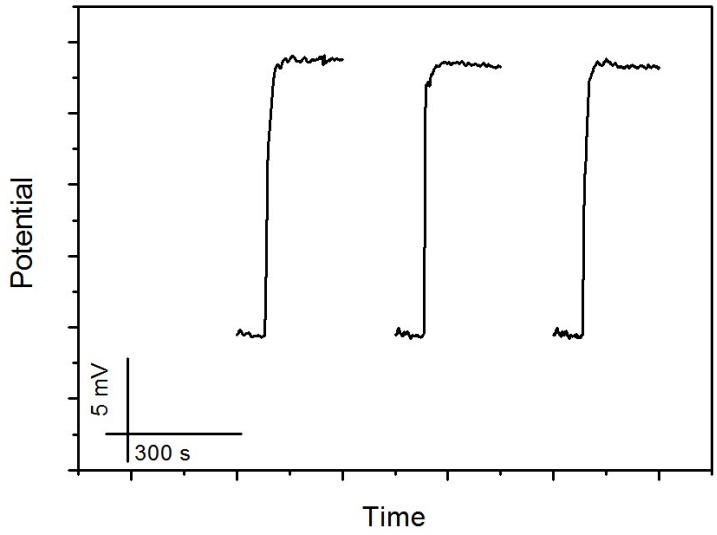


**Fig. S3.** Regenerability of the DA-MIP-based membrane electrode for detection of 0.1 mM DA. After each measurement, a 10 mM HCl solution was employed to regenerate the electrode. All electrodes were finally reconditioned in a 2 mM PBS background with a pH of 6.5 for 10 min before next measurement.

**Table S1.** Application of the DA-MIP-ISE to determination of DA in spiked human urine samples

| Sample [a] | Final concentration of DA in diluted samples ($10^{-5}$ M) | | Recovery (%) |
|---|---|---|---|
| | Amount added | Amount found [b] | |
| Diluted urine 1 | 1.0 | 1.0 ± 0.2 | 90 |
| Diluted urine 2 | 3.0 | 3.2 ± 0.4 | 107 |

[a] All samples were diluted 10-fold with 2 mM PBS of pH 6.5 before measurement.

[b] Average value of three determinations ± SD.