Supplementary Information

Conjugated Polymer Dots/Oxalate Anodic Electrochemiluminescence

System and Its Application for detecting Melamine Qiyi Lu,^{*a*} Juanjuan Zhang,^{*a*} Yuanya Wu^{*b*} and Shihong Chen*^{*a*}

^a Key Laboratory of Luminescent and Real-Time Analytical Chemistry (Southwest University),

Ministry of Education, College of Chemistry and Chemical Engineering, Southwest University,

Chongqing 400715, PR China

^b Chongqing Key Laboratory for Advanced Materials and Technologies of Clean Electrical Power

Sources, Institute for Clean Energy & Advanced Materials, Southwest University, Chongqing

400715, P.R. China



Fig. S1. SEM images of PFO dots. Inset: the fluorescent photo of the PFO dots

illuminated by a UV beam of 365 nm

 Table S1 Comparison of this study with other sensor for the detection of Mel.

Electrodes	Method	Linear range (M)	Detection limit (M)	references
poly(para-aminobenzoic acid) film/GCE	CV	4.0×10 ⁻⁶ ~4.5×10 ⁻⁴	3.6×10-7	1
Ru(bpy) ₃ ²⁺ /mesoporous silica nanospheres/Nafion composite/GCE	ECL	7.8×10 ⁻⁹ ~5.0×10 ⁻⁶	2.6×10-9	2
CdTe QDs/GCE	ECL	1.0×10 ⁻⁹ ~1.0×10 ⁻⁵	6.7×10 ⁻¹⁰	3
Luminol/GCE	ECL	$8.0 \times 10^{-9} \sim 8.0 \times 10^{-7}$	8.0×10 ⁻¹⁰	4
PFO/GCE	ECL	$9.0 \times 10^{-11} \sim 1.1 \times 10^{-8}$	2.7×10 ⁻¹¹	This work

Sample	Added(nM)	Found(nM)	Recovery(%)
milk	1.50	1.45	96.7
	3.20	3.30	103
	9.00	9.10	101

 Table S2 Recoveries of Mel in milk sample at PFO/GCE.

References

- H. M. Cao, X. Q. Hu, C. Y. Hu, Y. Zhang, N. Q. Jia, *Biosens. Bioelectron.*, 2013,
 41 911–915.
- 2 F. Y. Liu, X. Yang, S. G. Sun, Analyst, 2011, 136, 374–378.
- 3 Y. T. Liu, J. Deng, X. L. Xiao, L. Ding, Y. L. Yuan, H. Li, X. T. Li, X. N. Yan, L.
- L. Wang, *Electrochim. Acta*, 2011, **56**, 4595–4602.
- 4 W. Jing, S. Y. Lü, X. J. Li, X. F. Jiang, M. S. Chen, M. Liang, X. Tang, C. M. Xu,
- J. Q. Chen, Chin. J. Chem. 2011, 29, 1601-1605.