

1 **Electronic Supplementary Material**

2 A non-enzymatic electrochemical sensor based on nitrogen-doped
3 mesoporous carbon@hydroxyl-functionalized ionic liquid composites
4 modified electrode for the detection of fenitrothion

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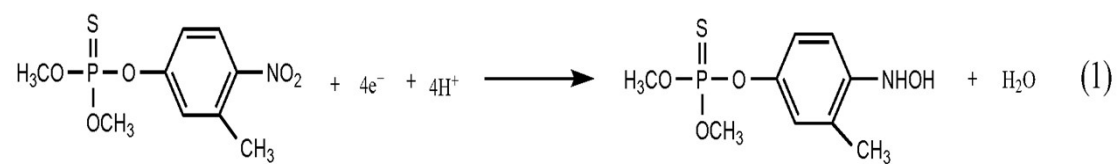
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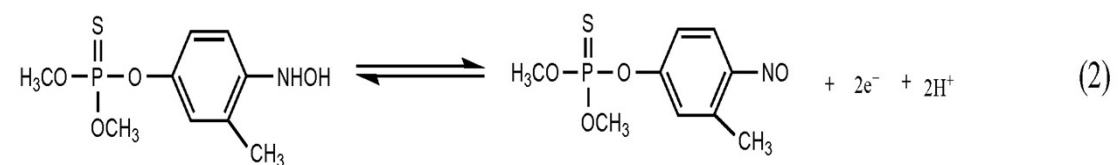
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1 Results and discussion

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4 Scheme S1 The possible reaction mechanism of FNT on N-CMK-3@IL/GCE.

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1 Table S1 The effects of potential interfering substances on the response of FNT ($C_{\text{FNT}} =$
 2 $20.0 \mu\text{g L}^{-1}$)

Interfering substance	Concentration / mg L^{-1}	Signal changes
K^+	20.0	-0.06
Ca^{2+}	20.0	-0.03
Cd^{2+}	20.0	+0.01
Fe^{2+}	20.0	+0.03
Zn^{2+}	20.0	+0.02
Cl^-	20.0	-0.03
NO_3^-	20.0	+0.01
SO_4^{2-}	20.0	+0.03
DA	2	-0.01
AA	2	+0.06
UA	2	-0.01
glucose	2	-0.01
P-nitrophenol	0.2	-0.05
nitrobenzene	0.2	+0.01

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Table S2 The Rct values of different electrodes

Electrode	GCE	IL/GCE	N-CMK-3@IL/GCE
Rct value / Ω	626	107	36

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Table S3 Effect of IL concentration in composites on the current signal of FNT.

IL / %	1.0	3.0	5.0	7.0	10.0
I / μ A	1.0257	1.3740	2.0223	1.3520	1.3000

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1 Table S4 Effect of N-CMK-3 content in composites on the current signal of FNT.

N-CMK-3 / mg mL ⁻¹	0.3	0.5	1.0	1.3	1.5
I / μ A	1.5823	1.7197	1.9430	1.4137	1.3627

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Table S5 Effect of the accumulation potential on the current signal of FNT.

Accumulation potential / V	-0.7	-0.6	-0.5	-0.4	-0.3	OCP
I / μA	1.6830	1.6070	1.7220	1.6410	1.5950	1.8660

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Table S6 Effect of the accumulation time on the current signal of FNT.

Accumulation time / s	10	30	60	90	120
I / μA	1.7690	1.8550	1.9910	1.9290	1.8850

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Table S7 Reproducibility and stability

electrode	1	2	3	4	5	6
I / μA	1.946	1.910	1.973	1.956	1.940	1.960

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Table S8 Determination of FNT on N-CMK-3@IL/GCE in vegetable samples

samples	I1 / μA	I2 / μA	I3 / μA
Cabbage	0.9305	0.8944	0.9088
Lettuce	0.9061	0.9094	0.9463
Greens	0.9046	0.9018	0.9168

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