# Supplementary materials

## Ultrasonic Synthesis of Highly Dispersed Au Nanoparticles supported on Ti-based Metal-organic Frameworks for Electrocatalytic Oxidation of Hydrazine

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**Table S1** Comparison of analytical parameters for electrochemistry detection of $N_2H_4$ at Au/NH$_2$-MIL-125(Ti)/GCE with other composites modified electrodes.

| Electrode | Method | Detection limit (μM) | Linear Range (μM) | Ref. |
|-----------|--------|---------------------|-------------------|------|
| AuNP-GPE | Amperometry | 3.07 | 0.05-250 | 1 |
| Au/PPy/GCE | LSV | 0.10 | 0.5-500 | 2 |
| GNPs/Ch/GCE | DPV | 0.10 | 0.5-500 | 3 |
| HMWCNT/GCE | DPV | 0.68 | 2.0-123 | 4 |
| HTP-MWCNT-CPE | LSV | 0.13 | 1.0-6000 | 5 |
| Au/ZnO-MWCNTs/GCE | Amperometry | 0.15 | 0.5-1800 | 6 |
| Ni(II)/BA/MWCNTs/PE | Amperometry | 0.810 | 2.5-200 | 7 |
| AuNPs/poly(BCP/CNT)/GCE | LSV | 0.1 | 0.5-1000 | 8 |
| GR-Bi nanocomposite | Ampermetry | 0.005 | 0.02-280 | 9 |
| Quinizarine/TiO$_2$ NPs | DPV | 0.077 | 0.5-1900 | 10 |
| Au/NH$_2$-MIL-125(Ti)/GCE | Amperometry | 0.0005 | 0.01-100 | Presnt work |

LSV, linear sweep voltammetry; DPV, differential plus voltammetry; HMWCNT, hematoxylin multi-wall carbon nanotubes; MWCNT, Multiwalled carbon nanotubes; Ni(II)/BA/MWCNTs/PE, Ni(II)-baicalein multiwalled carbon nanotube paste electrode; GR-Bi nanocomposite, bismuth nanoparticles (Bi) decorated graphene nanosheets nanocomposite.

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