

Supplementary materials

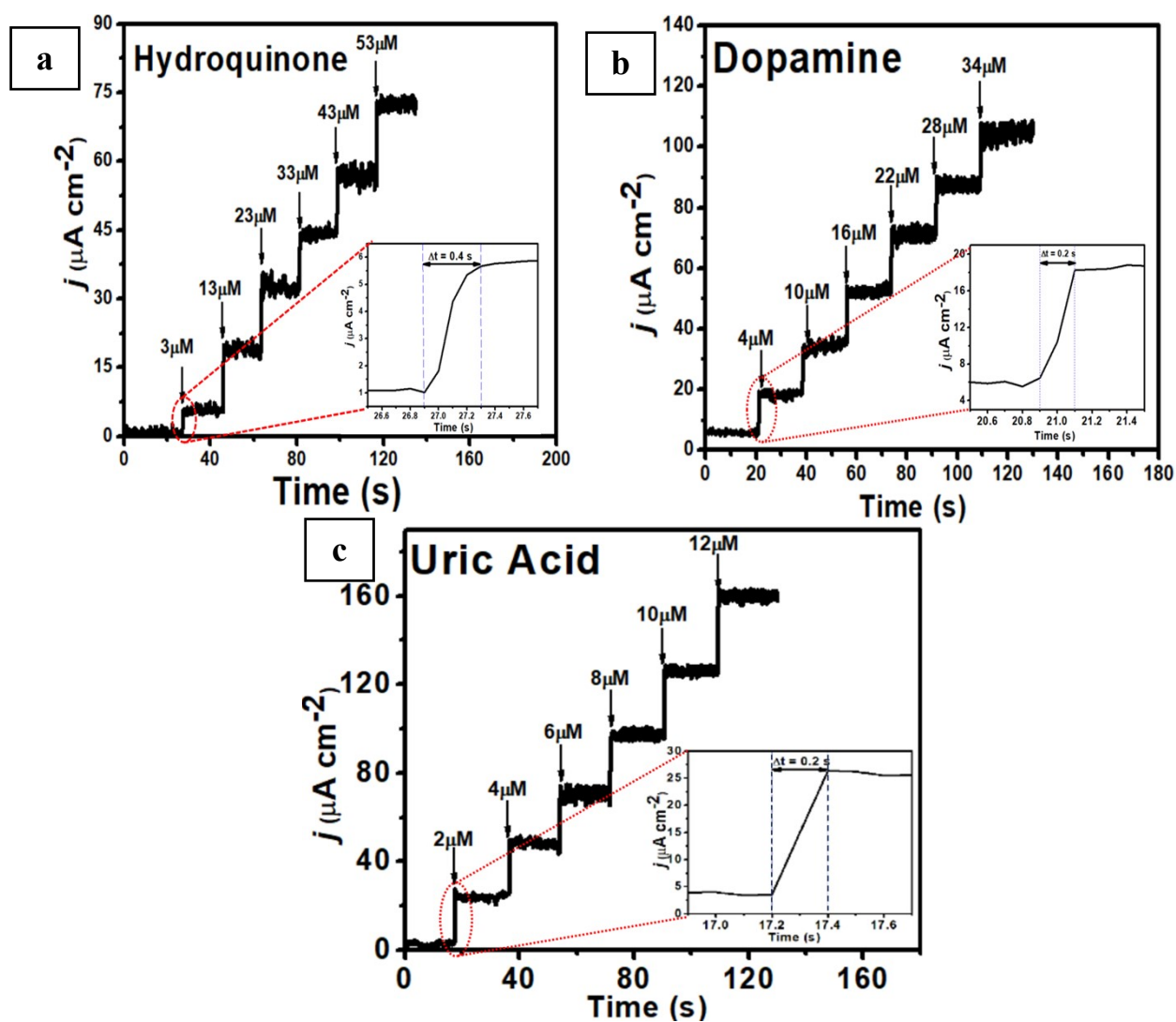


Figure S1. The response time of RGO/MWCNT (1:1)-modified GCE after the injection of (a) hydroquinone, (b) dopamine, and (c) uric acid at the optimized potential using chronoamperometric methods.

Table S1 Percentage of recovery obtained from 6 different human urine samples

| Sample | Spiked | | | Found | | | %Recovery | | |
|---------|--------|----|----|-----------|-----------|----------|-----------|---------|---------|
| | HQ | DA | UA | HQ | DA | UA | HQ | DA | UA |
| Urine 1 | 5 | 3 | 1 | 4.8±0.1 | 2.9±0.02 | 1.0±0.06 | 96±1.5 | 95±0.6 | 99±2.7 |
| | 10 | 6 | 2 | 9.6±0.2 | 5.7±0.1 | 2.0±0.1 | 96±2.2 | 95±1.0 | 101±2.5 |
| | 15 | 9 | 3 | 15.2±0.3 | 9.0±0.04 | 3.0±0.06 | 101±1.8 | 100±0.4 | 99±2.0 |
| | 20 | 12 | 4 | 20.0±0.1 | 11.5±0.2 | 3.8±0.1 | 100±0.7 | 96±1.3 | 96±2.8 |
| | 25 | 15 | 5 | 25.3±0.4 | 14.9±0.1 | 4.8±0.06 | 101±1.9 | 99±0.4 | 95±1.2 |
| Urine 2 | 5 | 3 | 1 | 5.1±0.06 | 2.9±0.1 | 1.0±0.1 | 101±1.2 | 96±2.2 | 103±1.1 |
| | 10 | 6 | 2 | 10.4±0.04 | 5.8±0.1 | 2.0±0.2 | 104±0.5 | 96±2.0 | 100±2.6 |
| | 15 | 9 | 3 | 15.8±0.3 | 9.1±0.2 | 2.9±0.1 | 105±1.7 | 101±2.5 | 97±2.0 |
| | 20 | 12 | 4 | 20.8±0.1 | 11.6±0.2 | 3.8±0.02 | 104±0.7 | 97±1.5 | 95±0.7 |
| | 25 | 15 | 5 | 26.0±0.2 | 14.9±0.4 | 4.8±0.06 | 104±0.7 | 99±2.8 | 95±1.2 |
| Urine 3 | 5 | 3 | 1 | 5.1±0.06 | 2.9±0.08 | 1.0±0.02 | 101±1.3 | 96±2.7 | 103±2.3 |
| | 10 | 6 | 2 | 10.4±0.04 | 5.8±0.05 | 2.1±0.01 | 104±0.3 | 96±0.9 | 103±0.1 |
| | 15 | 9 | 3 | 15.8±0.1 | 8.8±0.03 | 2.9±0.01 | 105±0.8 | 98±0.4 | 98±0.2 |
| | 20 | 12 | 4 | 20.6±0.6 | 11.6±0.06 | 3.8±0.03 | 103±2.8 | 97±0.5 | 96±0.8 |
| | 25 | 15 | 5 | 26.0±0.08 | 14.4±0.2 | 4.8±0.04 | 104±0.3 | 96±1.6 | 96±0.9 |
| Urine 4 | 5 | 3 | 1 | 4.9±0.2 | 3.1±0.02 | 1.0±0.05 | 98±2.5 | 102±0.7 | 98±2.7 |
| | 10 | 6 | 2 | 10.3±0.04 | 6.1±0.04 | 2.0±0.01 | 103±0.5 | 101±0.7 | 98±0.5 |
| | 15 | 9 | 3 | 15.5±0.2 | 9.1±0.03 | 3.0±0.03 | 103±1.6 | 101±0.4 | 99±0.9 |
| | 20 | 12 | 4 | 20.6±0.3 | 11.5±0.1 | 3.8±0.1 | 103±1.6 | 96±0.8 | 96±2.3 |
| | 25 | 15 | 5 | 24.8±0.4 | 14.9±0.08 | 4.8±0.1 | 99±1.6 | 99±0.5 | 95±1.9 |
| Urine 5 | 5 | 3 | 1 | 5.2±0.08 | 2.9±0.02 | 1.0±0.06 | 104±1.7 | 98±0.8 | 100±2.4 |
| | 10 | 6 | 2 | 10.2±0.01 | 6.1±0.04 | 2.0±0.06 | 102±0.07 | 102±0.7 | 100±1.9 |
| | 15 | 9 | 3 | 15.0±0.1 | 8.9±0.03 | 2.9±0.03 | 100±0.8 | 99±0.4 | 95±1.0 |
| | 20 | 12 | 4 | 20.2±0.08 | 11.9±0.1 | 3.8±0.02 | 101±0.4 | 99±0.8 | 96±0.5 |
| | 25 | 15 | 5 | 24.5±0.2 | 15.0±0.08 | 4.8±0.05 | 98±0.8 | 100±0.6 | 96±1.0 |
| Urine 6 | 5 | 3 | 1 | 5.1±0.02 | 2.9±0.04 | 1.0±0.02 | 102±0.4 | 96±1.4 | 101±1.8 |
| | 10 | 6 | 2 | 10.2±0.02 | 5.9±0.03 | 2.0±0.03 | 102±0.2 | 98±0.5 | 98±1.7 |
| | 15 | 9 | 3 | 15.2±0.1 | 8.9±0.1 | 2.9±0.03 | 101±0.8 | 99±1.2 | 95±1.0 |
| | 20 | 12 | 4 | 19.6±0.07 | 11.8±0.1 | 3.8±0.02 | 98±0.3 | 98±0.8 | 96±0.7 |
| | 25 | 15 | 5 | 24.3±0.01 | 14.7±0.1 | 4.8±0.03 | 97±0.06 | 98±0.7 | 96±0.7 |