

Supplementary information

Boron/Nitrogen-doped $\text{Ti}_3\text{C}_2\text{T}_x$ MXene quantum dots-based sensor for determining acute kidney injury biomarker

Rijo Rajeev, Ann Mariella Babu, Anitha Varghese*

¹*Department of Chemistry, Christ University, Bangalore, Karnataka, India- 560029*

²*Centre for Renewable energy and Environmental Sustainability, Christ University, Karnataka, India-560 029*

*Corresponding Author Email: anitha.varghese@christuniversity.in

SI. Results and discussion

SI 1. XPS analysis

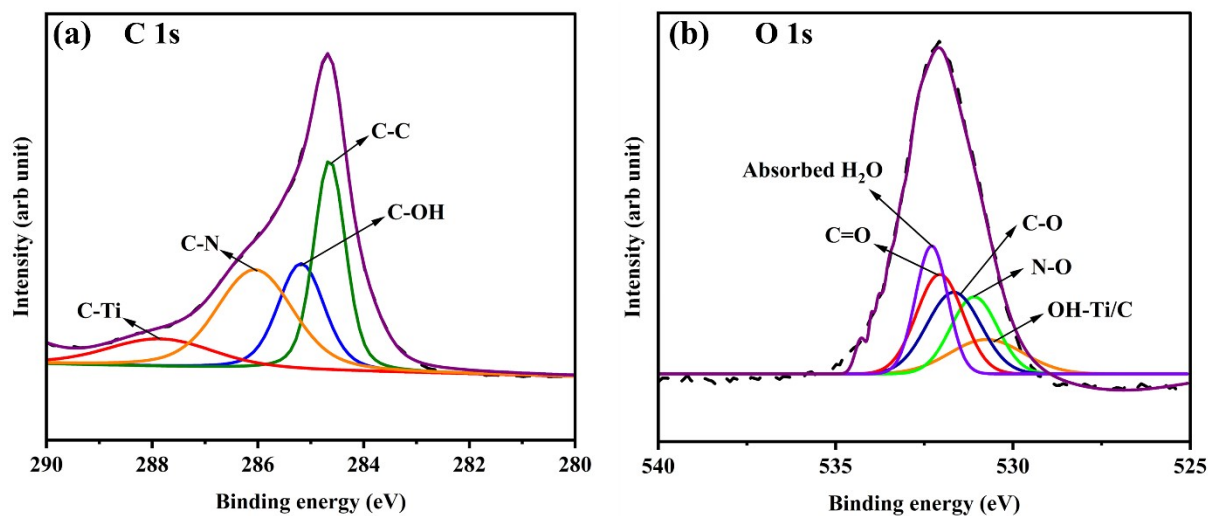


Figure S1 XPS analysis of BNMQD/CFP electrode after oxidation of Crt. The obtained XPS spectrum has been shown with a dotted line.

SI 2. Buffer pH effect on Crt detection

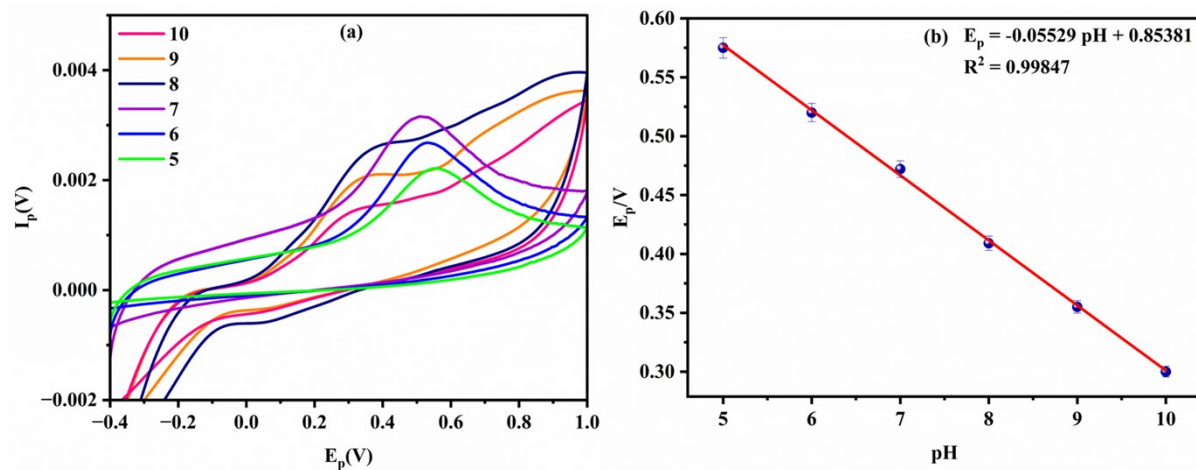


Figure S2 (a) CVs of BNMQD/CFP electrode containing 100 μ M Crt in 0.1 PBS at various pH (b) Plot of pH vs. anodic peak potential of 100 μ M Crt.

SI 3. Reproducibility, repeatability, and stability studies of BNMQD/CFP

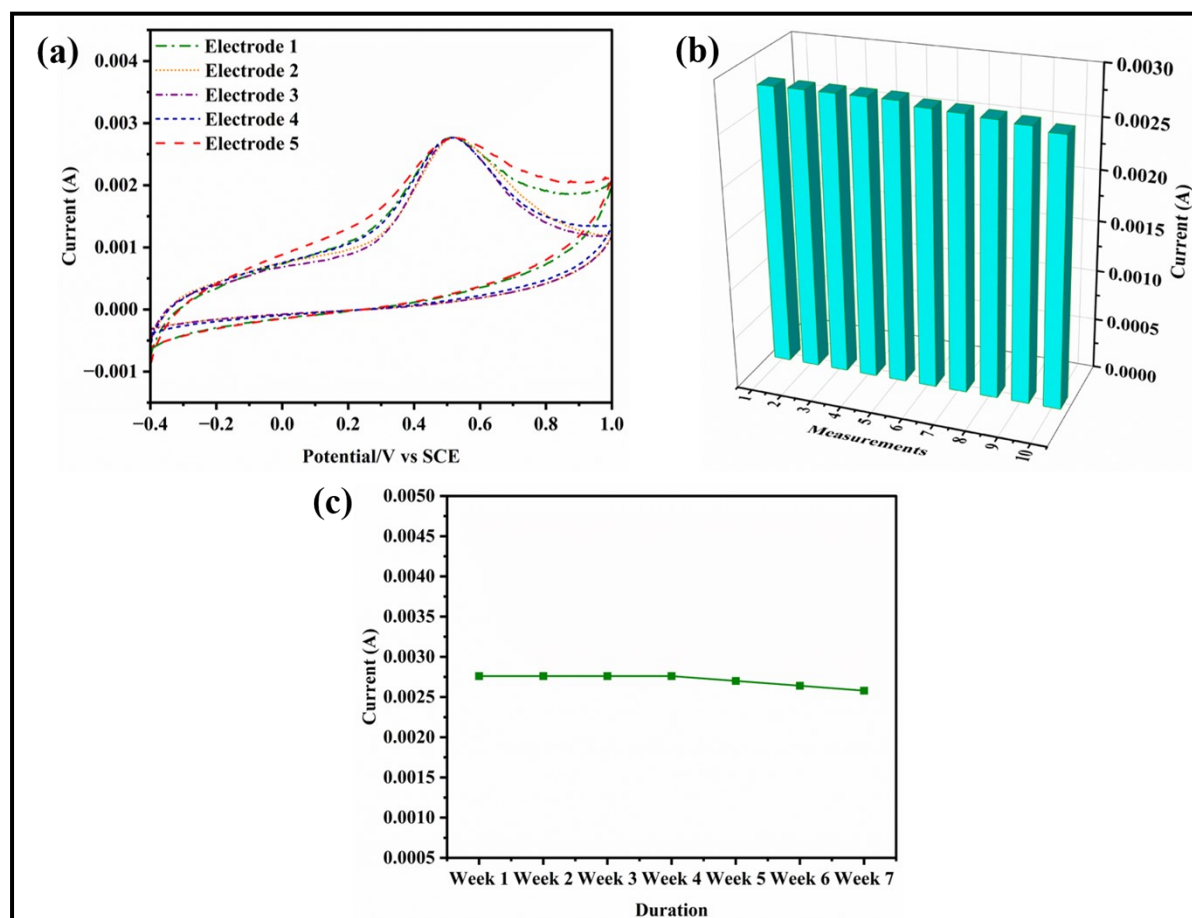


Figure S3 (a) Reproducibility of five BNMQD/CFP electrodes in the presence of Crt. (b) Repeatability of BNMQD/CFP electrodes for a series of 10 repetitive CV studies in the presence of Crt. (c) Long-term stability of BNMQD/CFP for electrooxidation of Crt for 7 weeks.