

Supplementary information

Boron/Nitrogen-doped $Ti_3C_2T_x$ MXene quantum dots-based sensor for determining acute kidney injury biomarker

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SI. Results and discussion

SI 1. XPS analysis

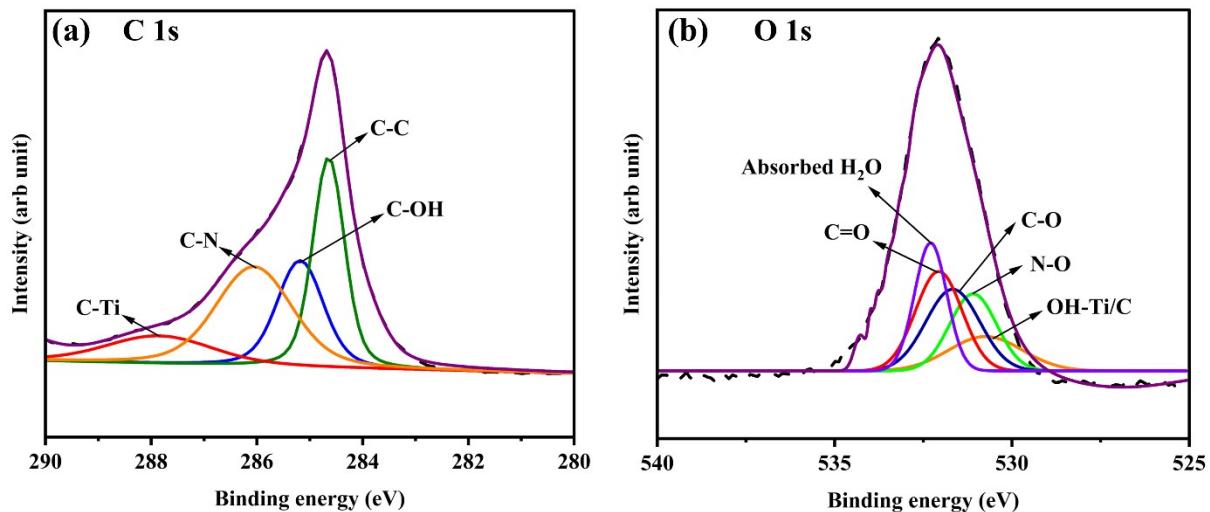


Figure S1 XPS analysis of BNMQD/CFP electrode after oxidation of Crt. The obtained XPS spectrum has been shown with a dotted line.

SI 2. Buffer pH effect on Crt detection

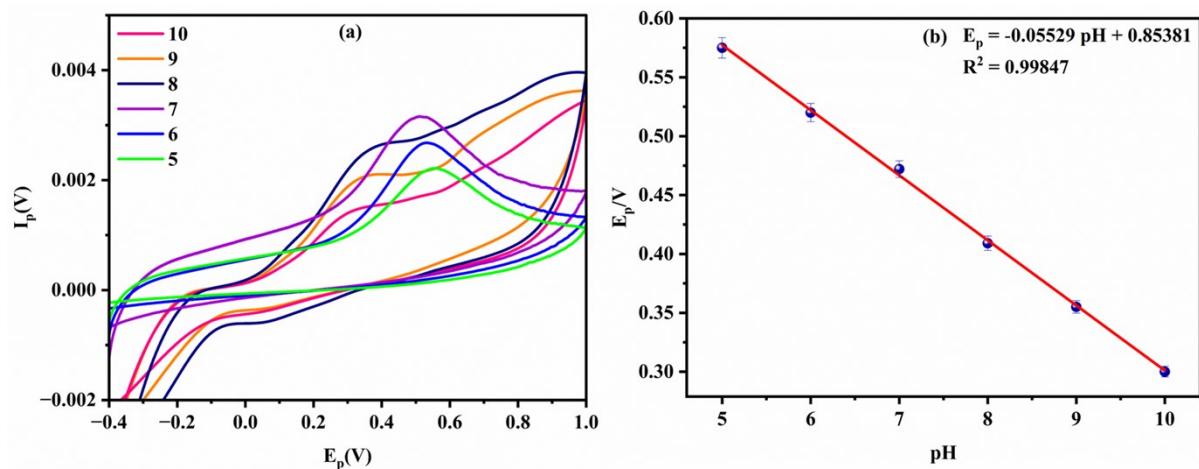


Figure S2 (a) CVs of BNMQD/CFP electrode containing 100 μM Crt in 0.1 PBS at various pH (b) Plot of pH vs. anodic peak potential of 100 μM Crt.

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

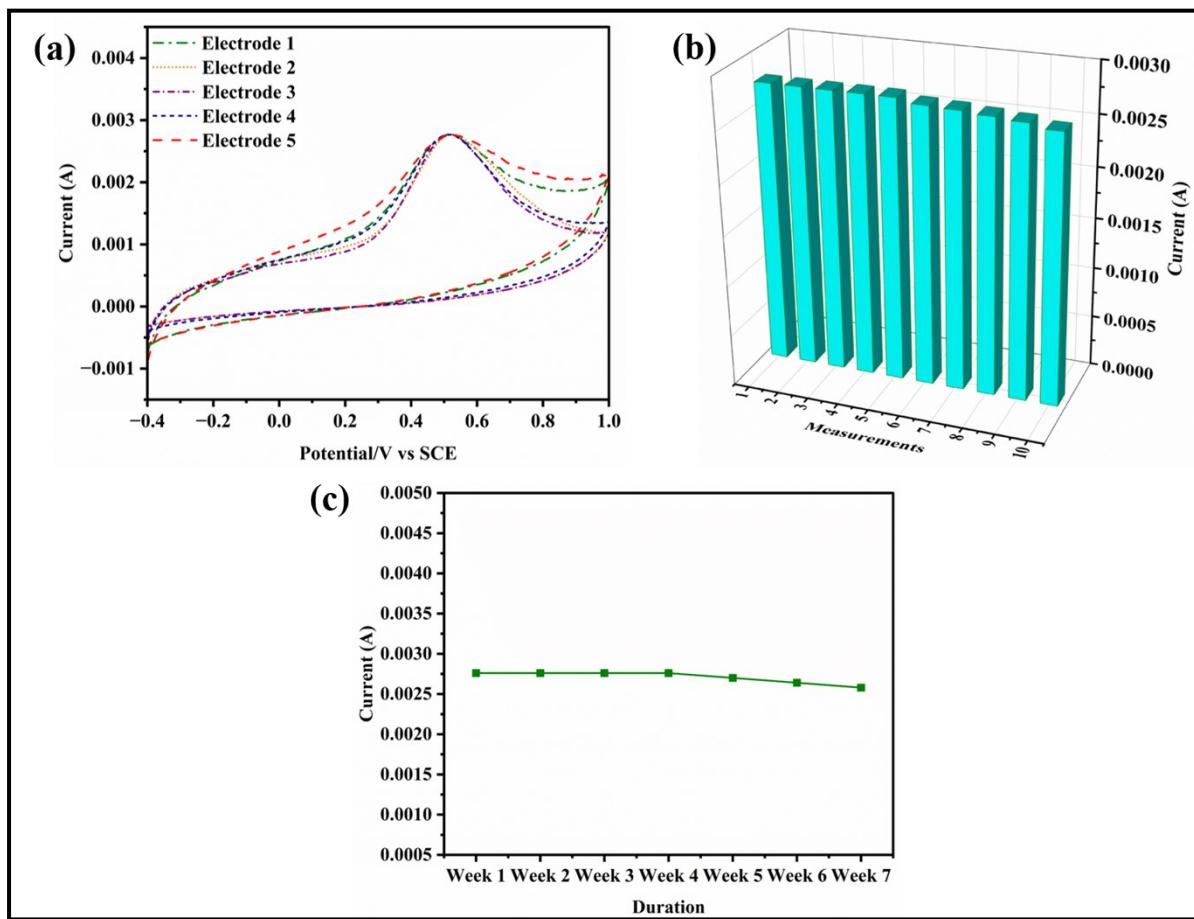


Figure S3 (a) Reproducibility of five BNMQD/CFP electrodes in the presence of Crt. (b) Repeatability of BNMQD/CFP electrodes for a series of 10 repetitive CV studies in the presence of Crt. (c) Long-term stability of BNMQD/CFP for electrooxidation of Crt for 7 weeks.