

Carbon quantum layer modified BiVO₄ photoelectrochemical aptamer biosensor for ultra-sensitive cTnI biomarker detection: basing on interface nephelauxetic effect and heterojunction assistance

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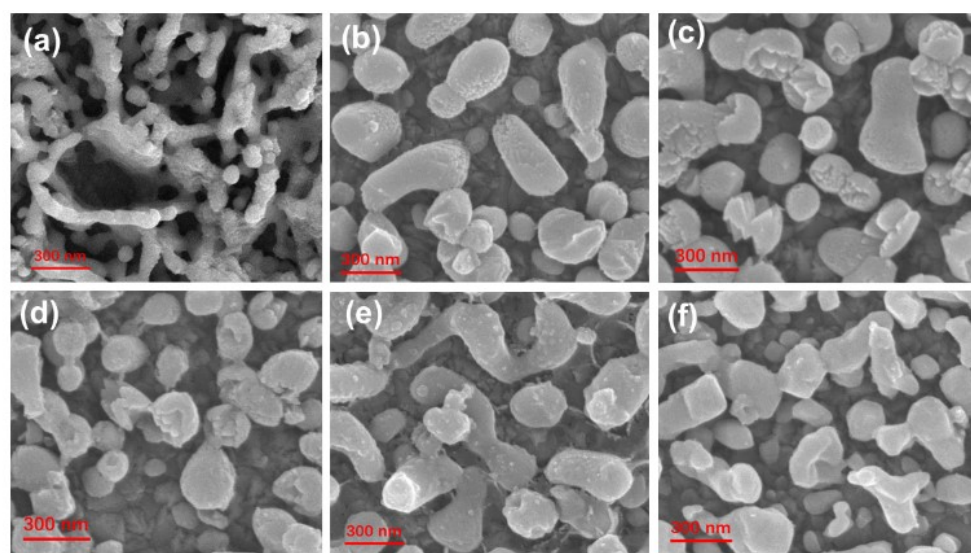


Fig. S1 SEM images of (a) BVO thin-film, and 2 Min-C@BVO thin-film with different annealing temperature (b) 300 °C; (c) 350 °C; (d) 400 °C; (e) 450 °C; (f) 500 °C.

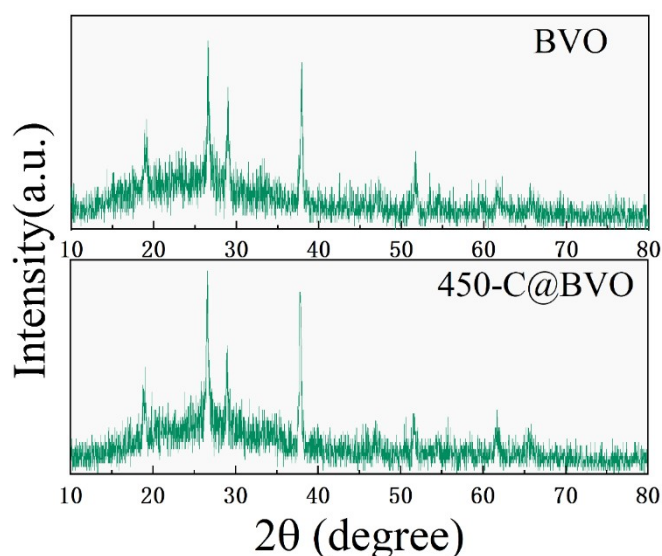


Fig. S2 XRD patterns of BVO thin-film and 2 Min-450°C-C@BVO thin-film.

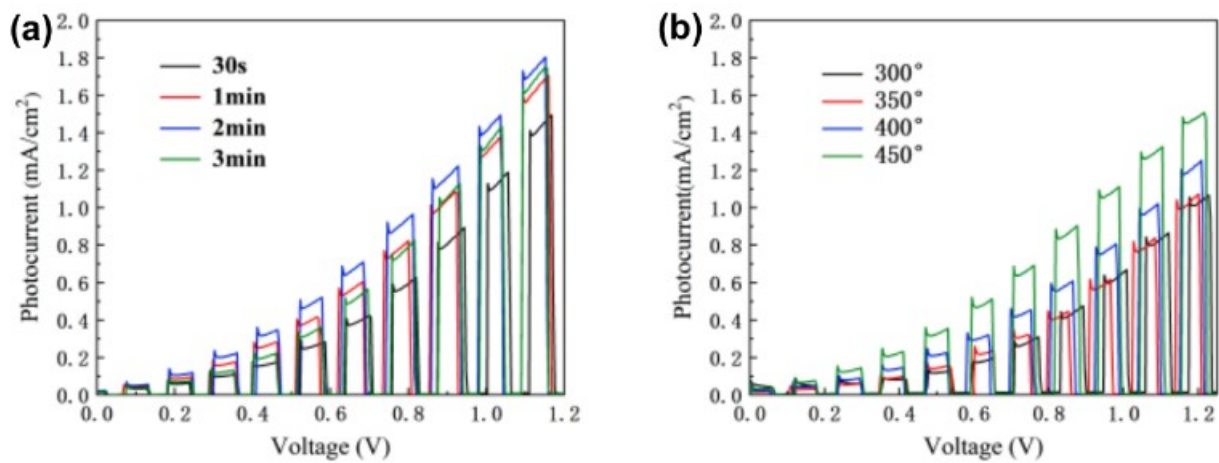


Fig. S3 Photoinduced I-V curves of C@BVO photoanodes (a) different deposition times of chitosan; (b) different annealing temperatures for carbon layer formation with a chitosan deposition time of 2 Min.

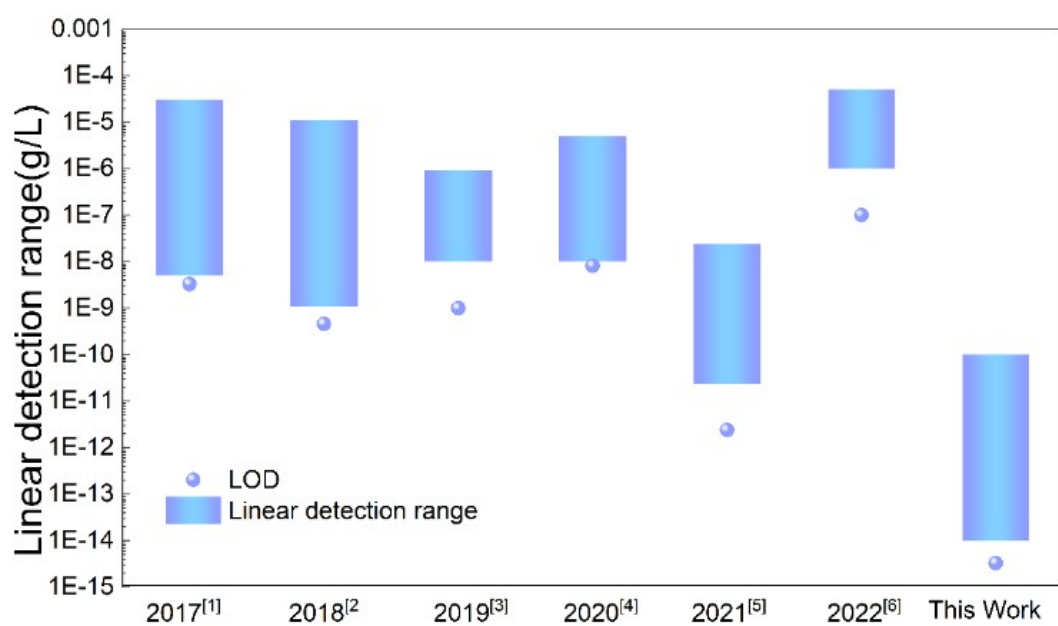


Fig. S4 cTnI detection performance of the biosensors presented in this work compares with the published works from 2017 to 2022¹²³⁴⁵⁶

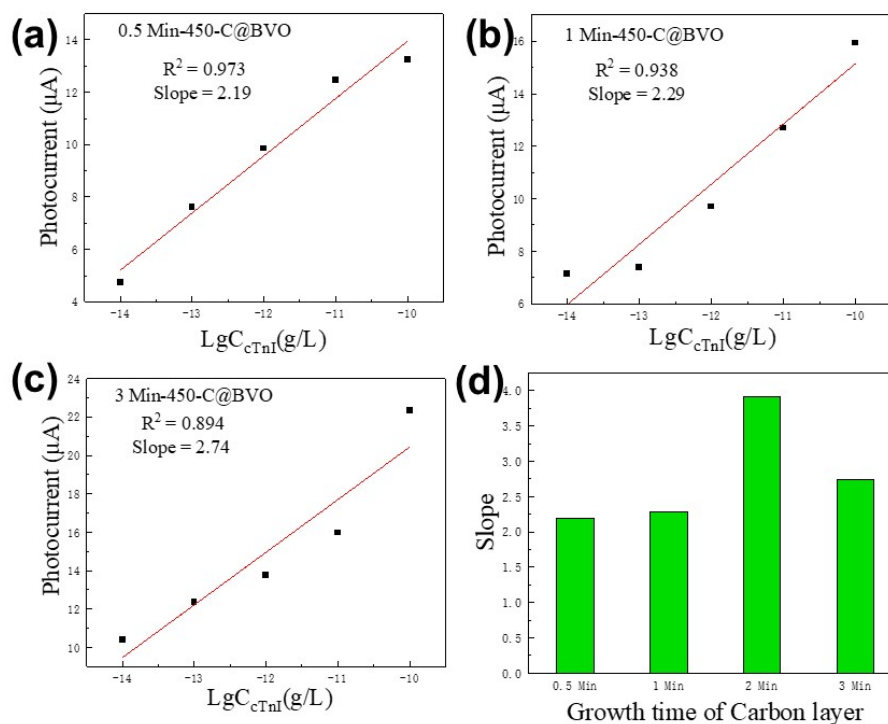


Fig. S5 detection liner curves of C@BVO PEC aptamer sensor with different chitosan deposition time (a) 0.5 Min; (b) 1 Min; (c) 3 Min; (d) slopes of these detection liner curves

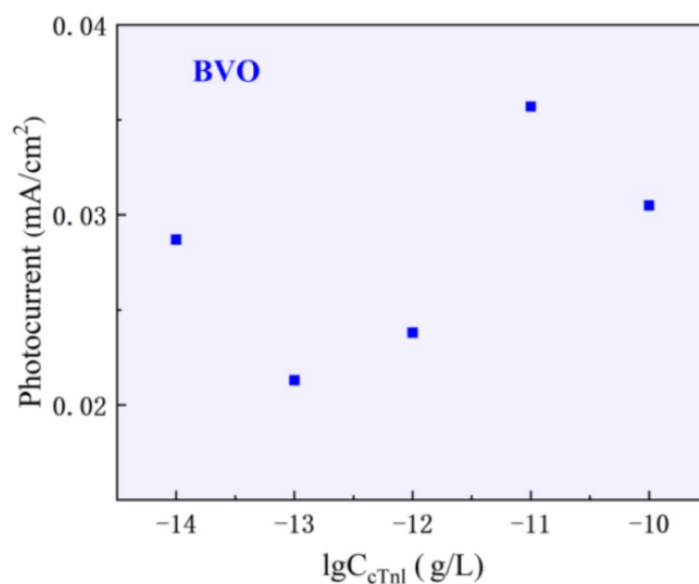


Fig. S6 detection liner curves of BVO PEC cTnl aptamer sensor.

References

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