

Electronic Supplementary Information

Effect of the Length of Alkyl Chain in the Porphyrin Meso-Substituent on the Performance of the Dye-Sensitized Solar Cells

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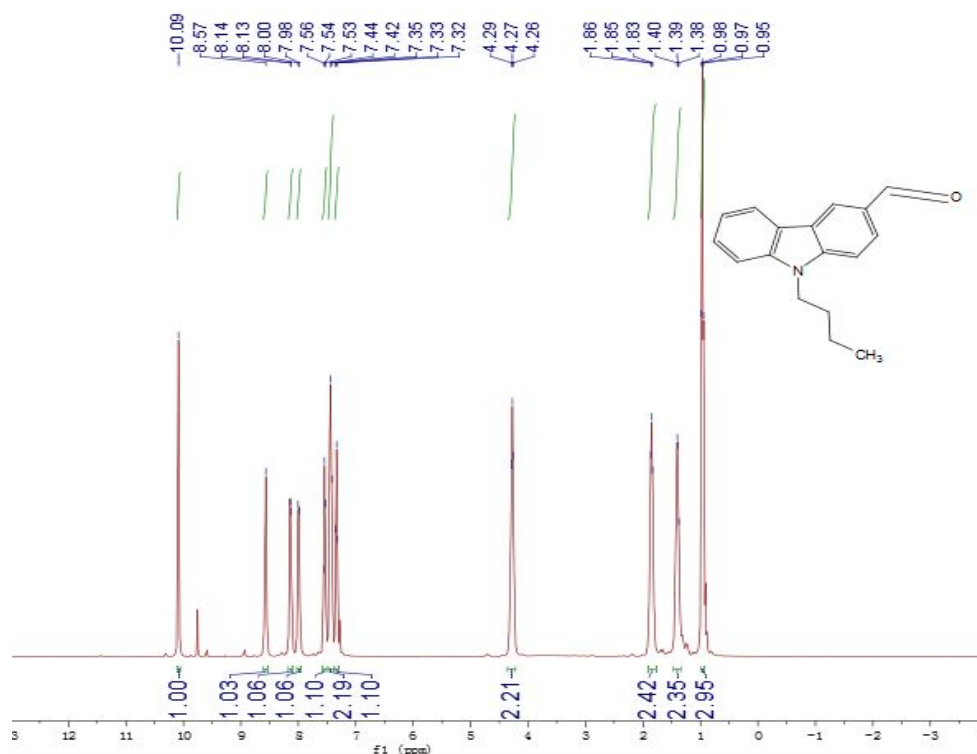


Figure S1. ¹H NMR spectrum of 2a

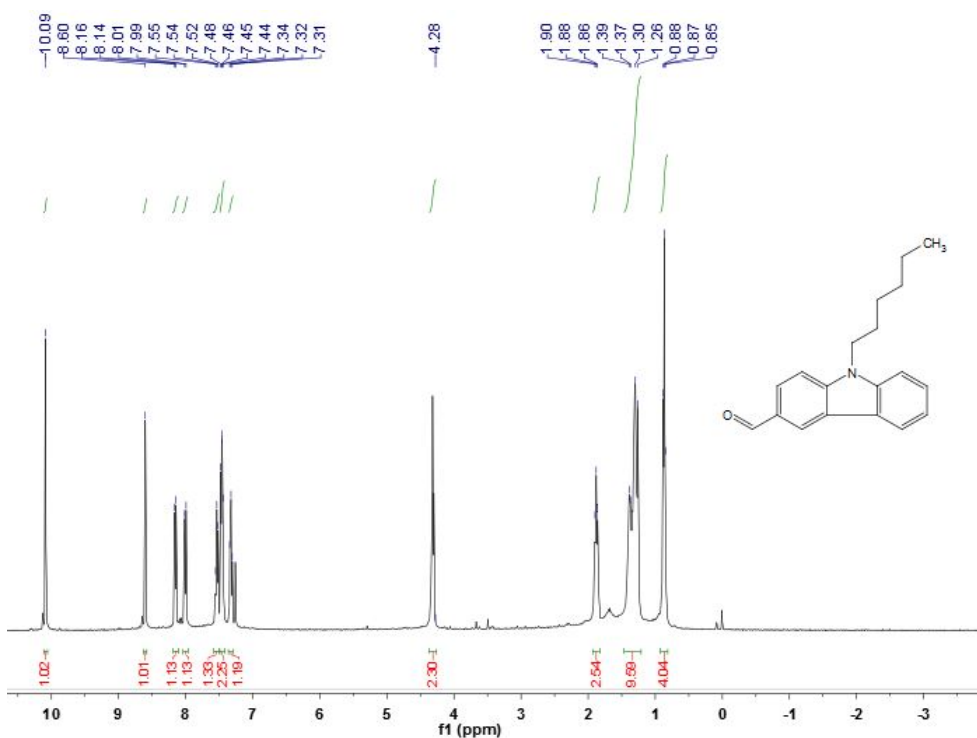


Figure S2. ¹H NMR spectrum of 2b

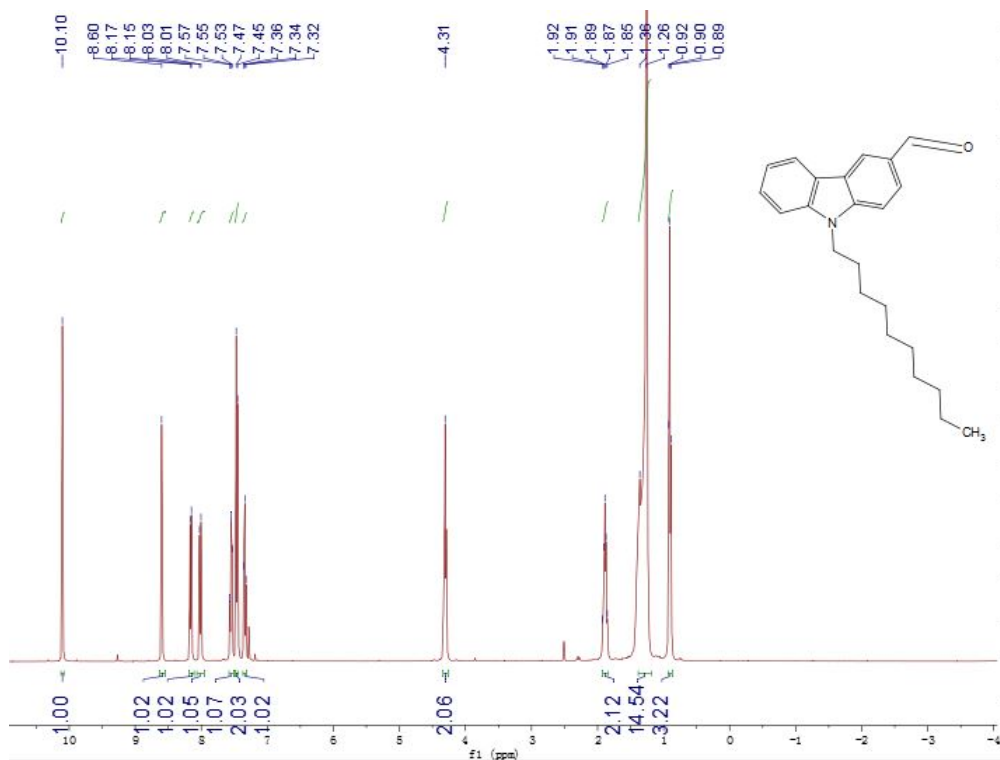


Figure S3. ^1H NMR spectrum of **2c**

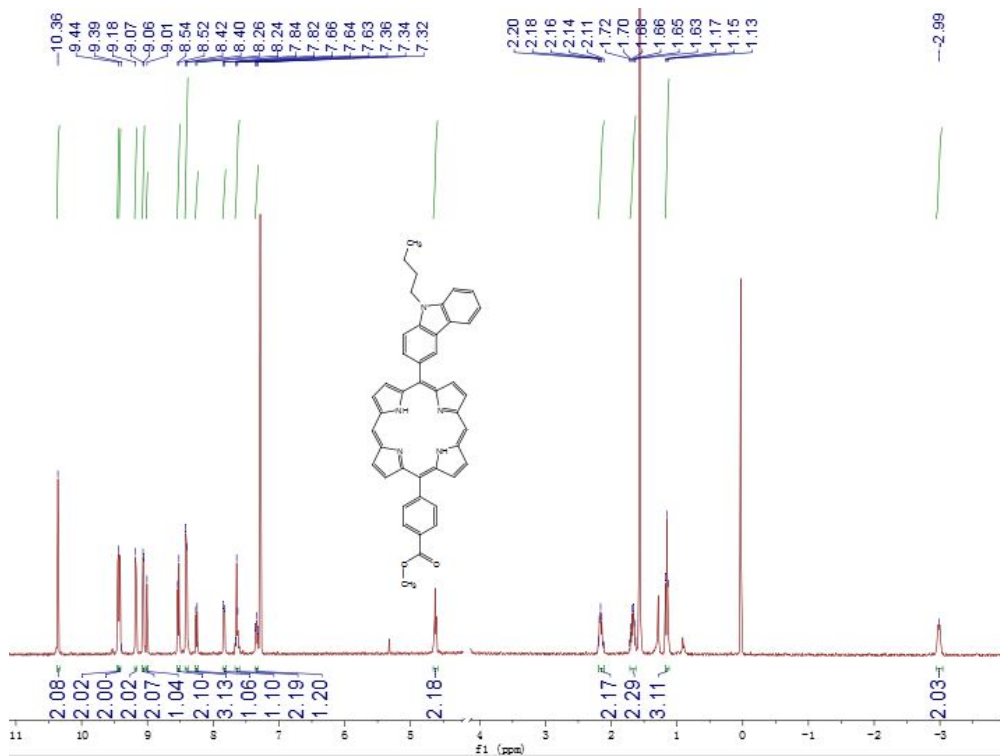
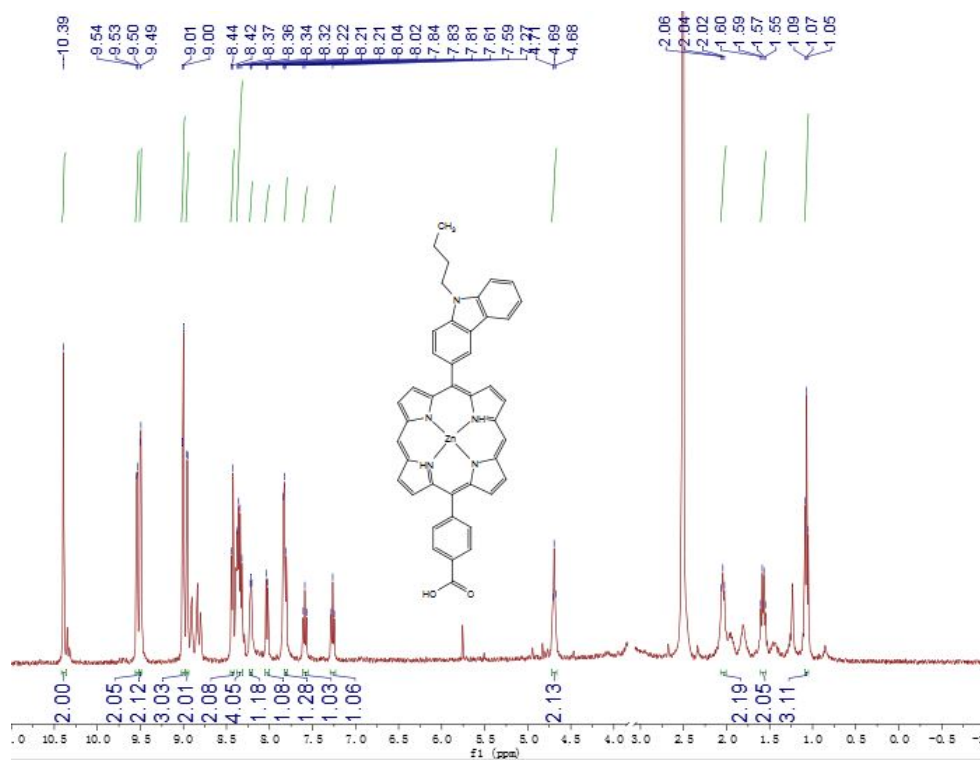
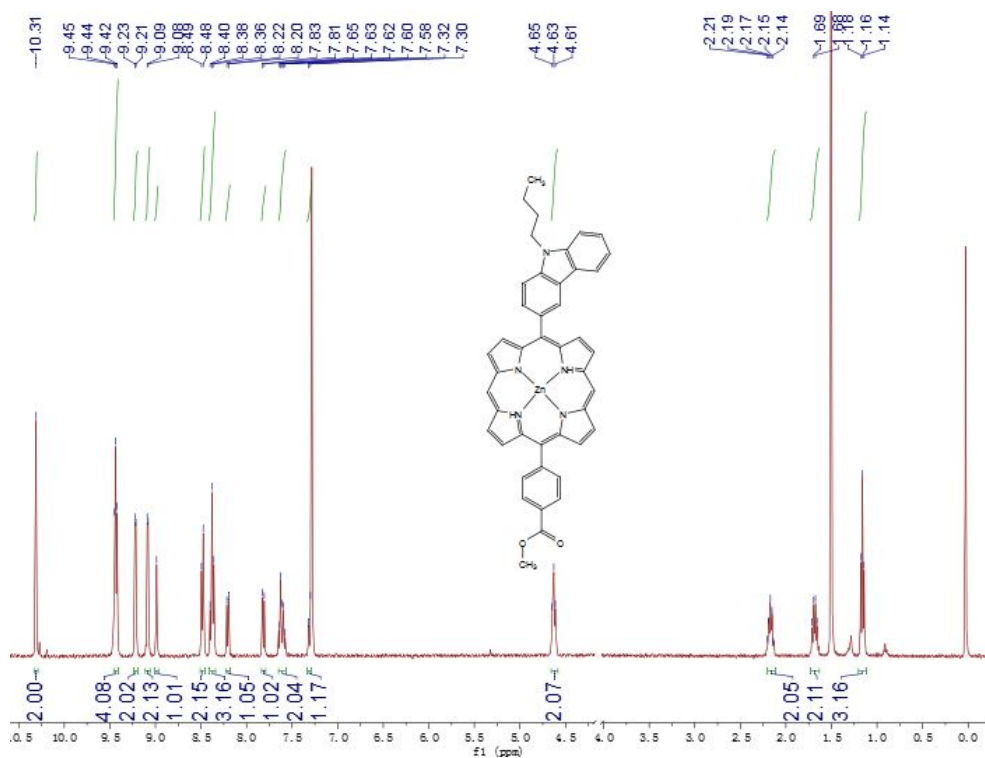


Figure S4. ^1H NMR spectrum of **3a**



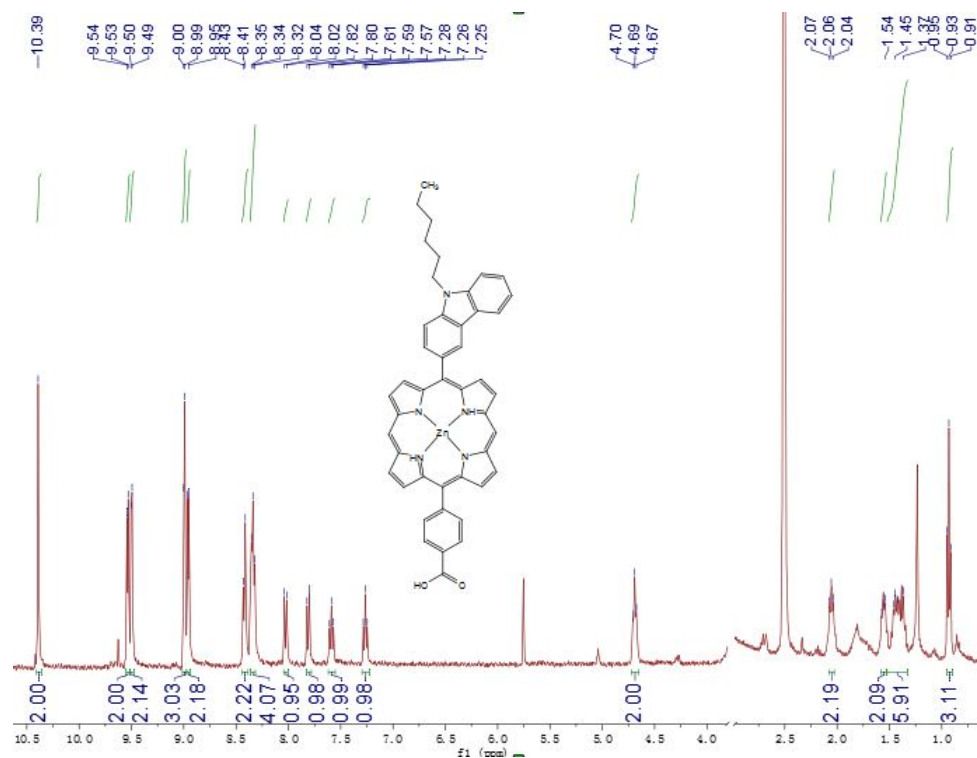


Figure S9. ¹H NMR spectrum of CZ-6

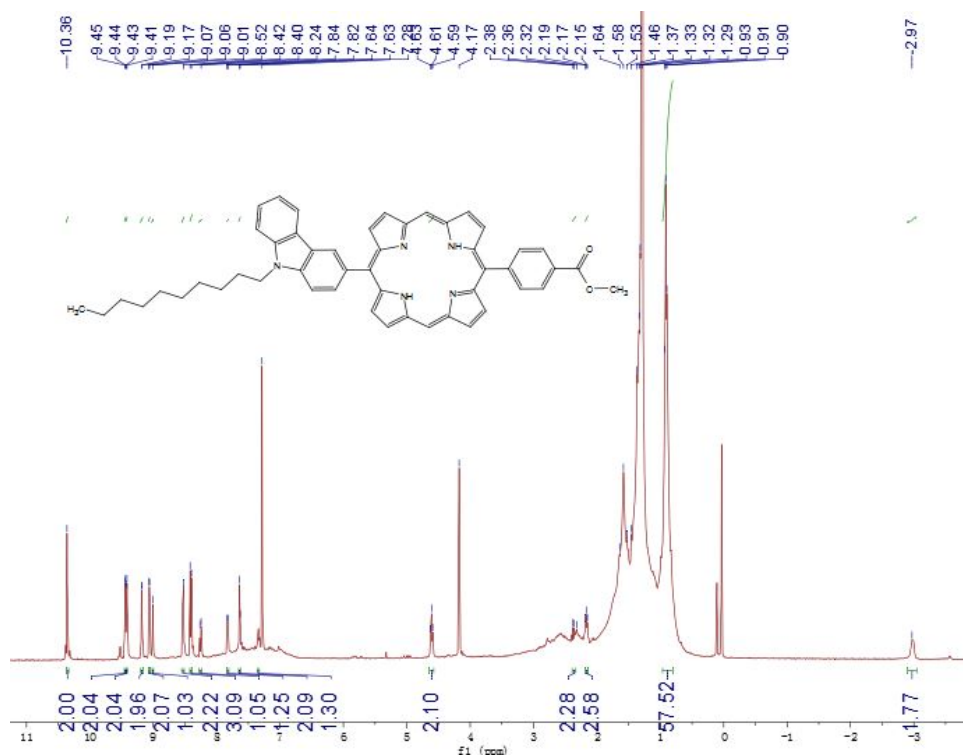
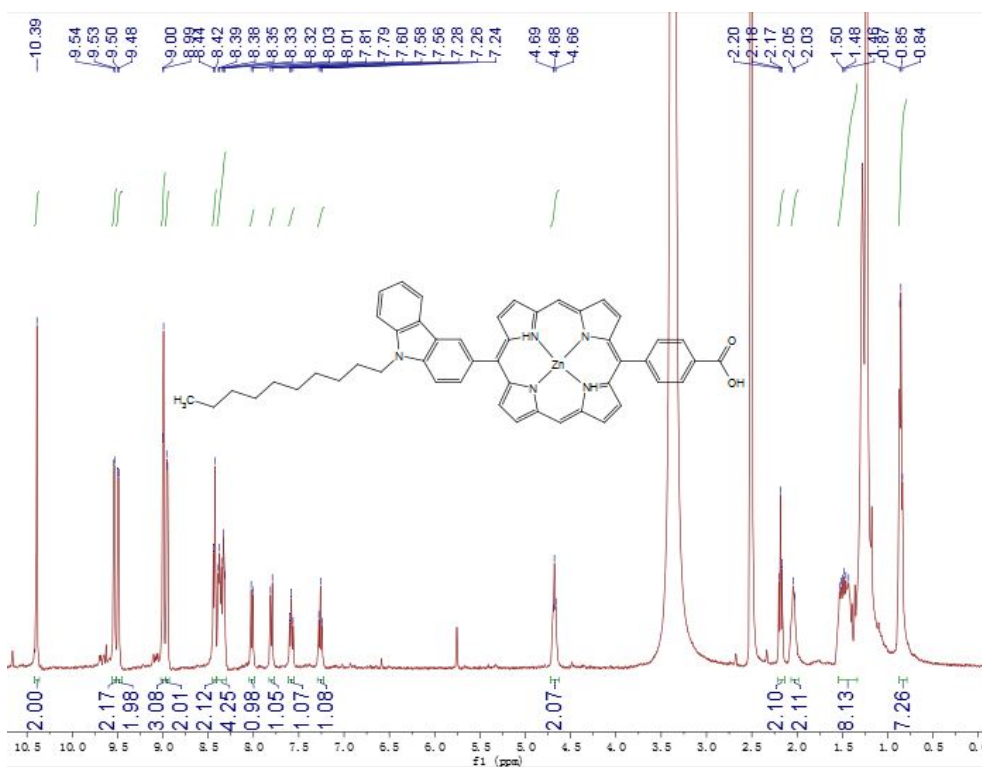
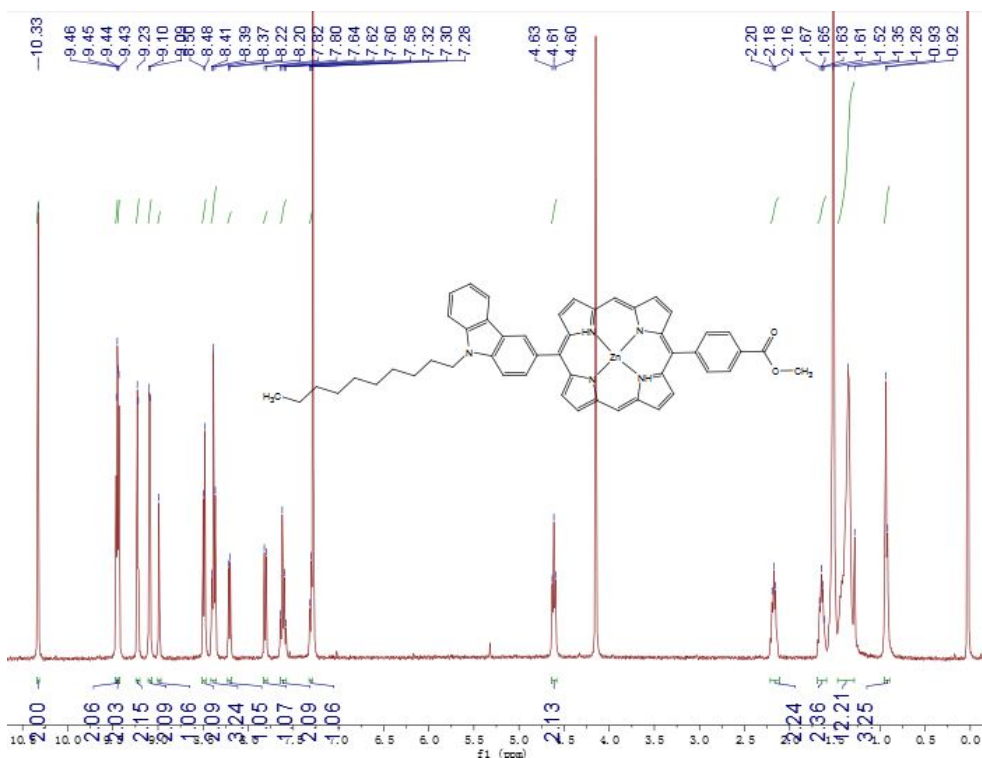


Figure S10. ¹H NMR spectrum of 3c



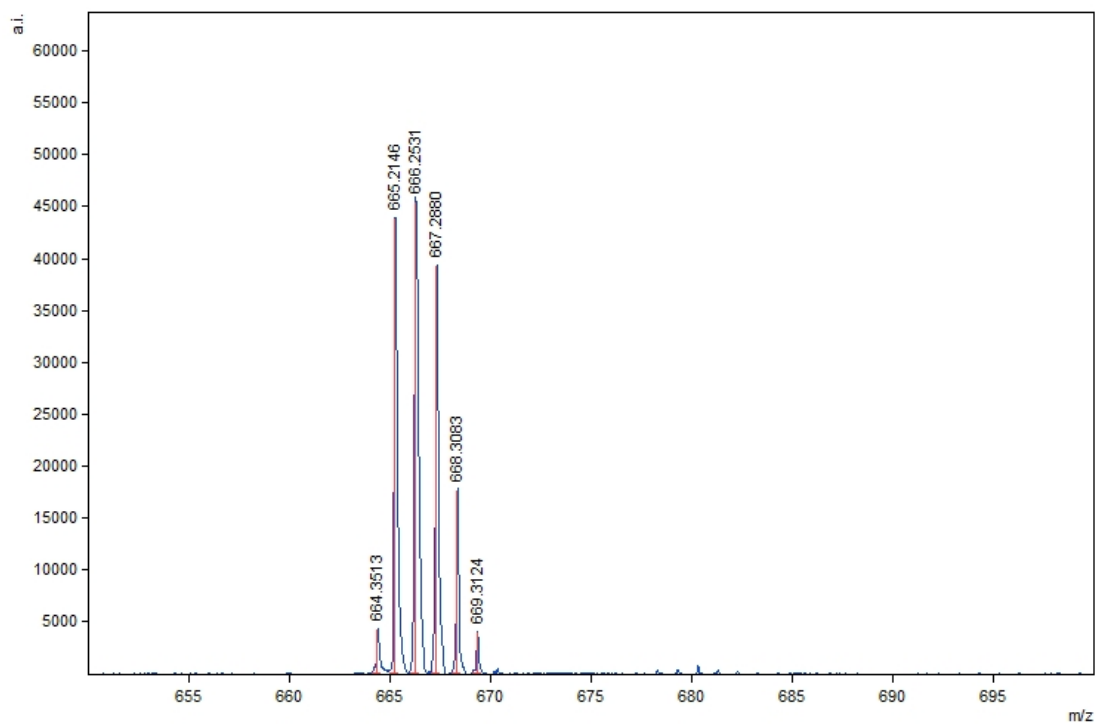


Figure S13. MALDI-TOF MS of **3a**

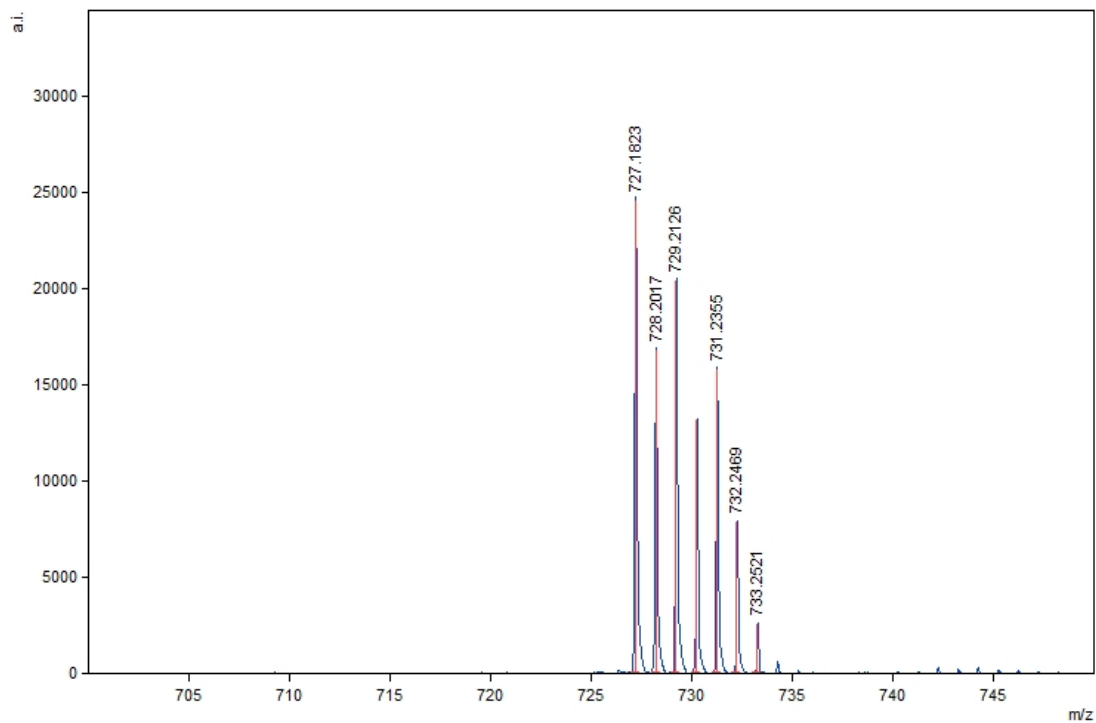


Figure S14. MALDI-TOF MS of **4a**

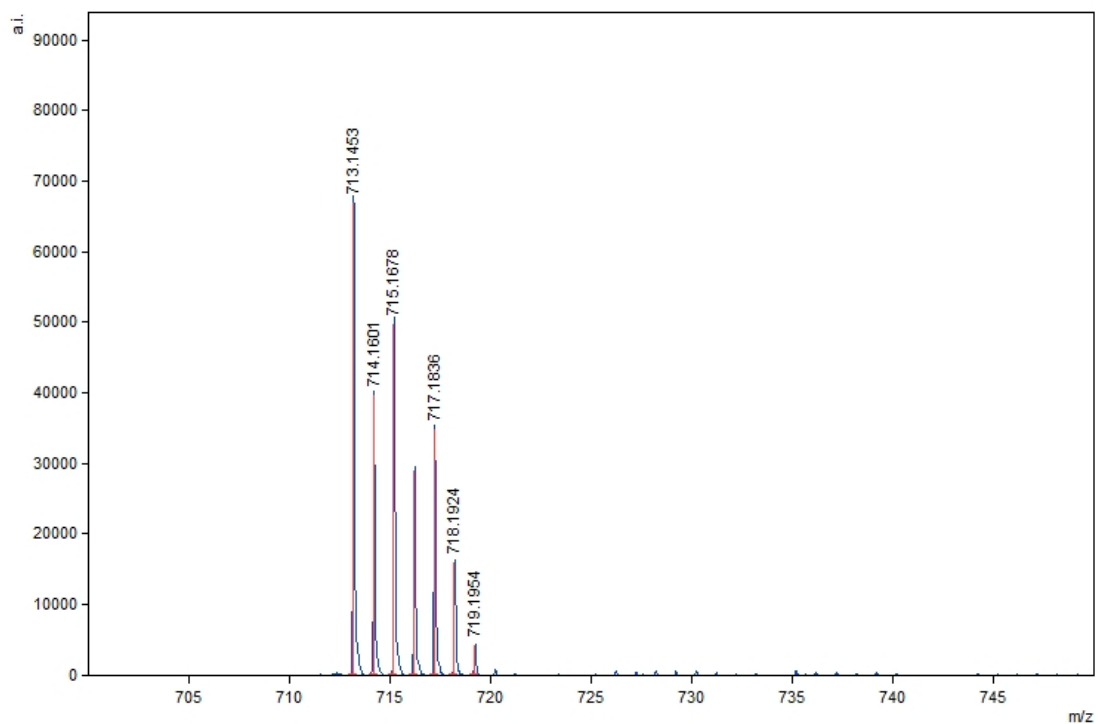


Figure S15. MALDI-TOF MS of **CZ-4**

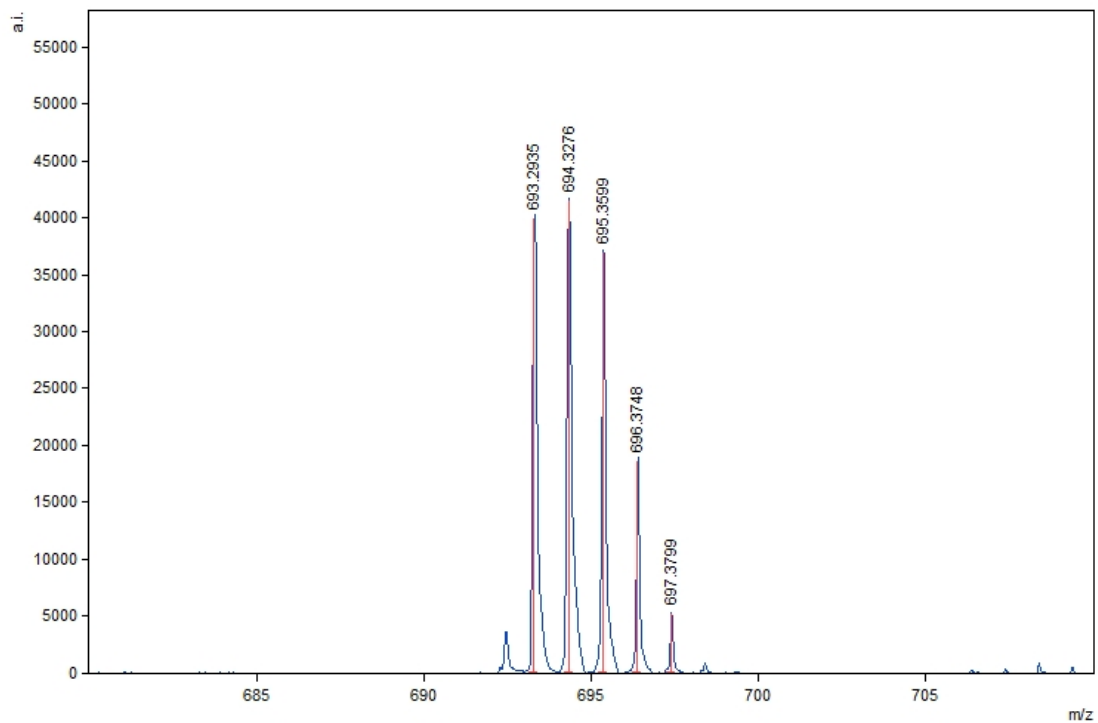


Figure S16. MALDI-TOF MS of **3b**

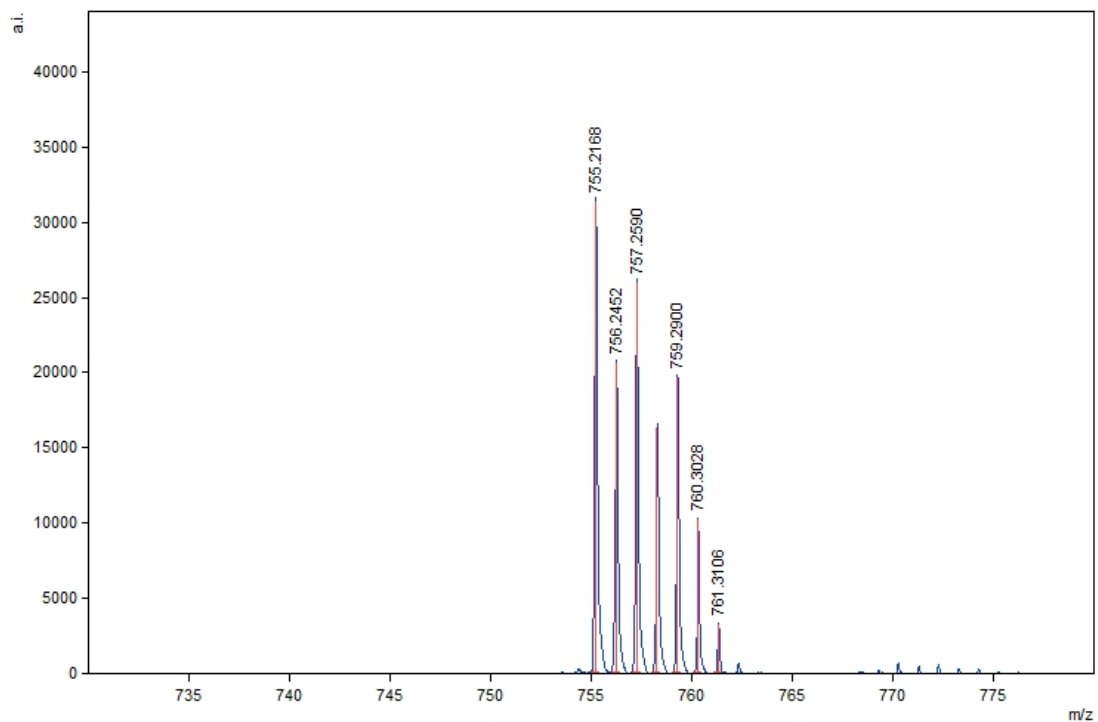


Figure S17. MALDI-TOF MS of **4b**

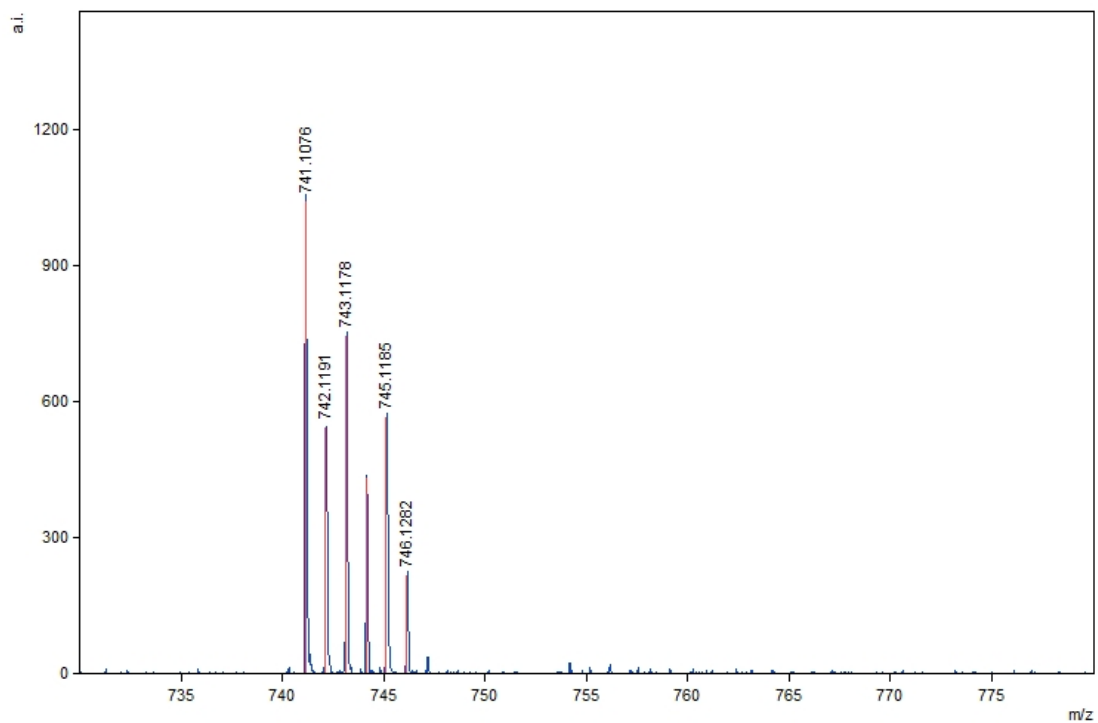


Figure S18. MALDI-TOF MS of **CZ-6**

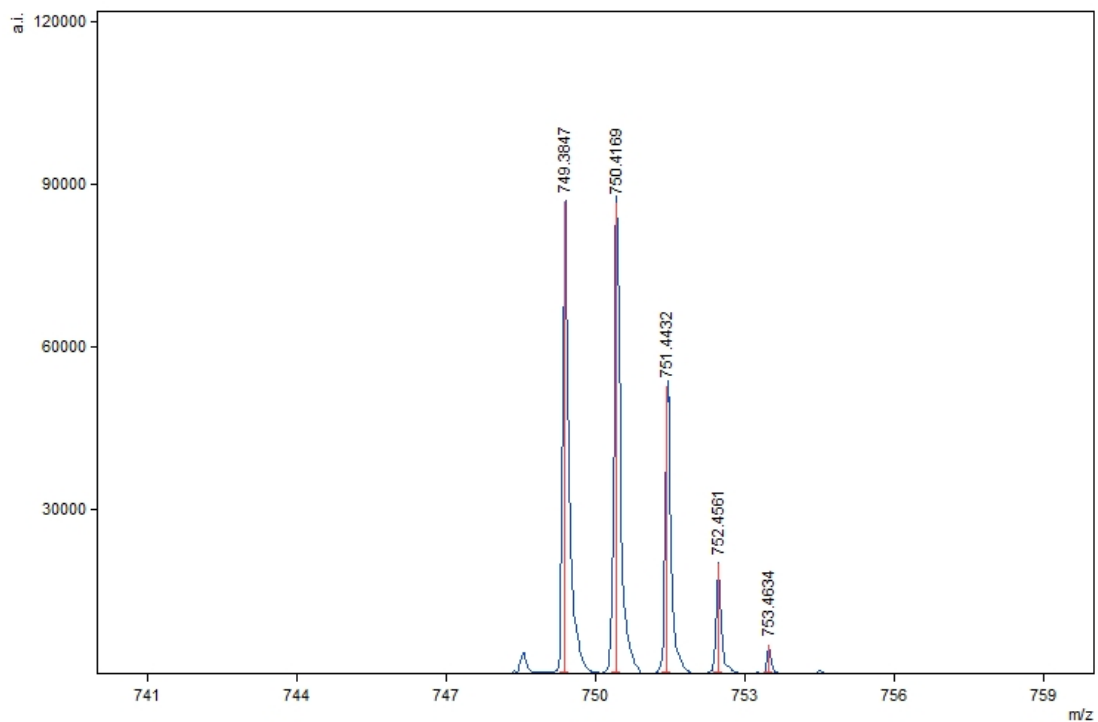


Figure S19. MALDI-TOF MS of **3c**

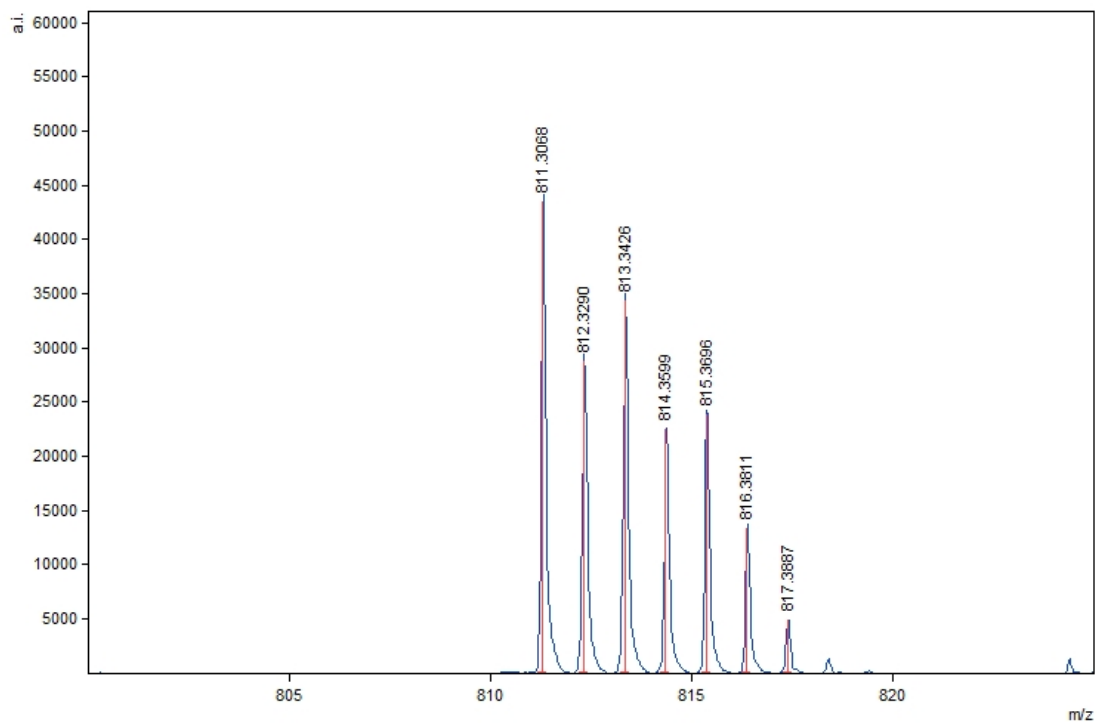


Figure S20. MALDI-TOF MS of **4c**

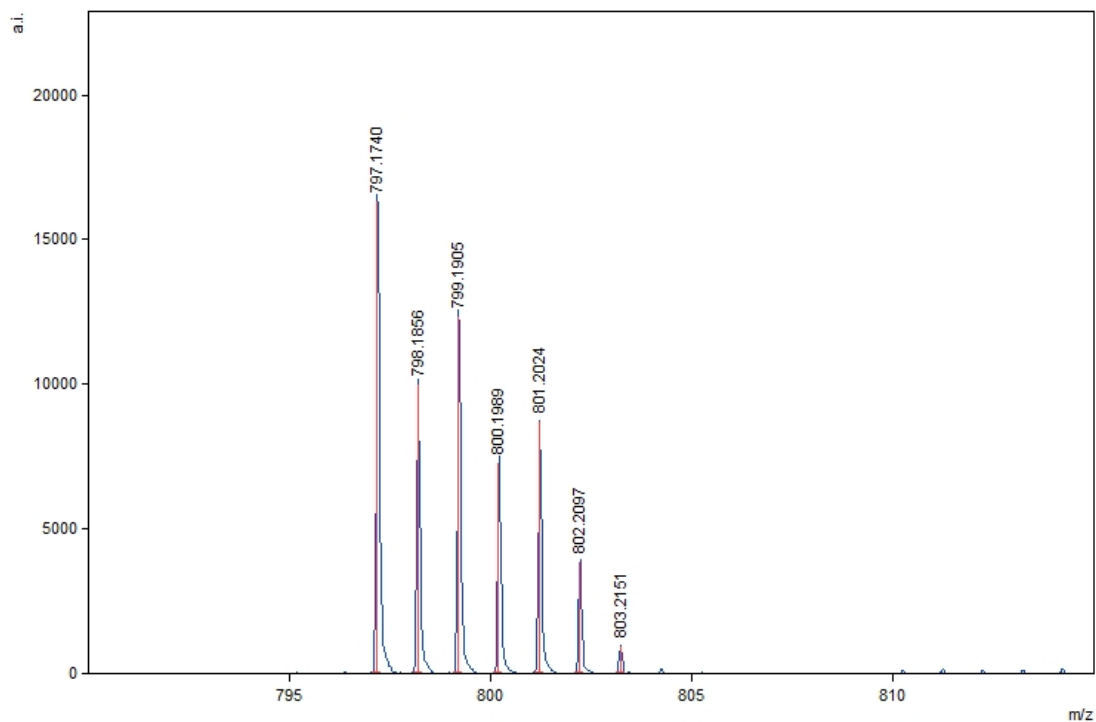


Figure S21. MALDI-TOF MS of **CZ-10**

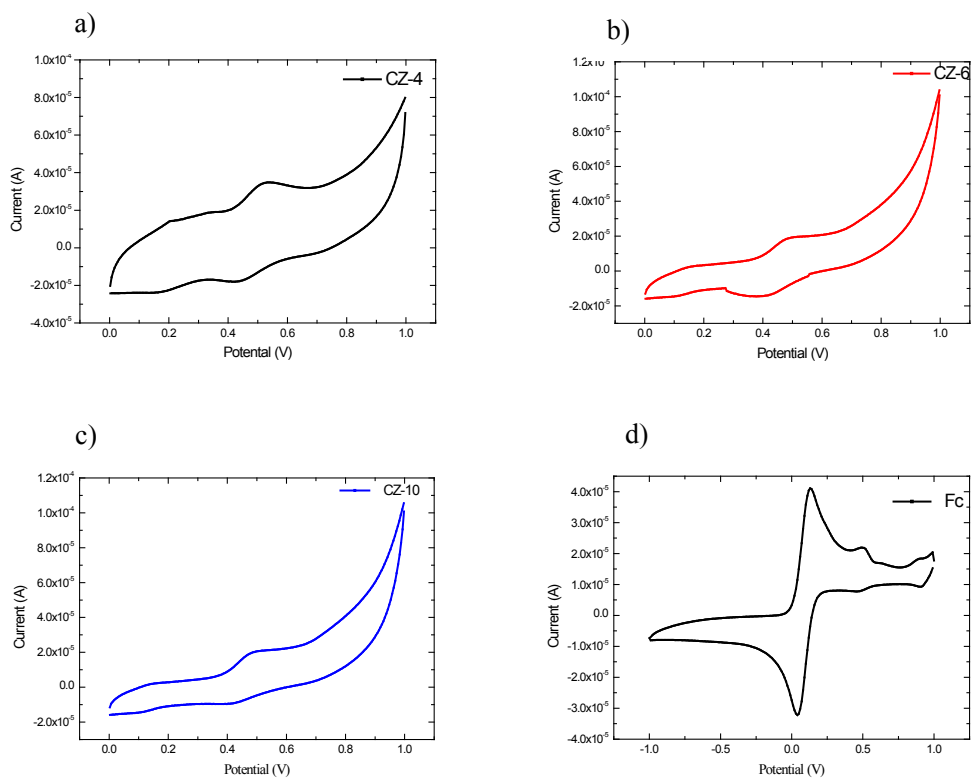


Figure S22 Cyclic voltammetry of a) dye **CZ-4**, b) dye **CZ-6**, c) dye **CZ-10**, d) **Fc** in CH_3CN