Supporting information

Immobilization and electroactive switching of BSA/proteins on polypyrrole.

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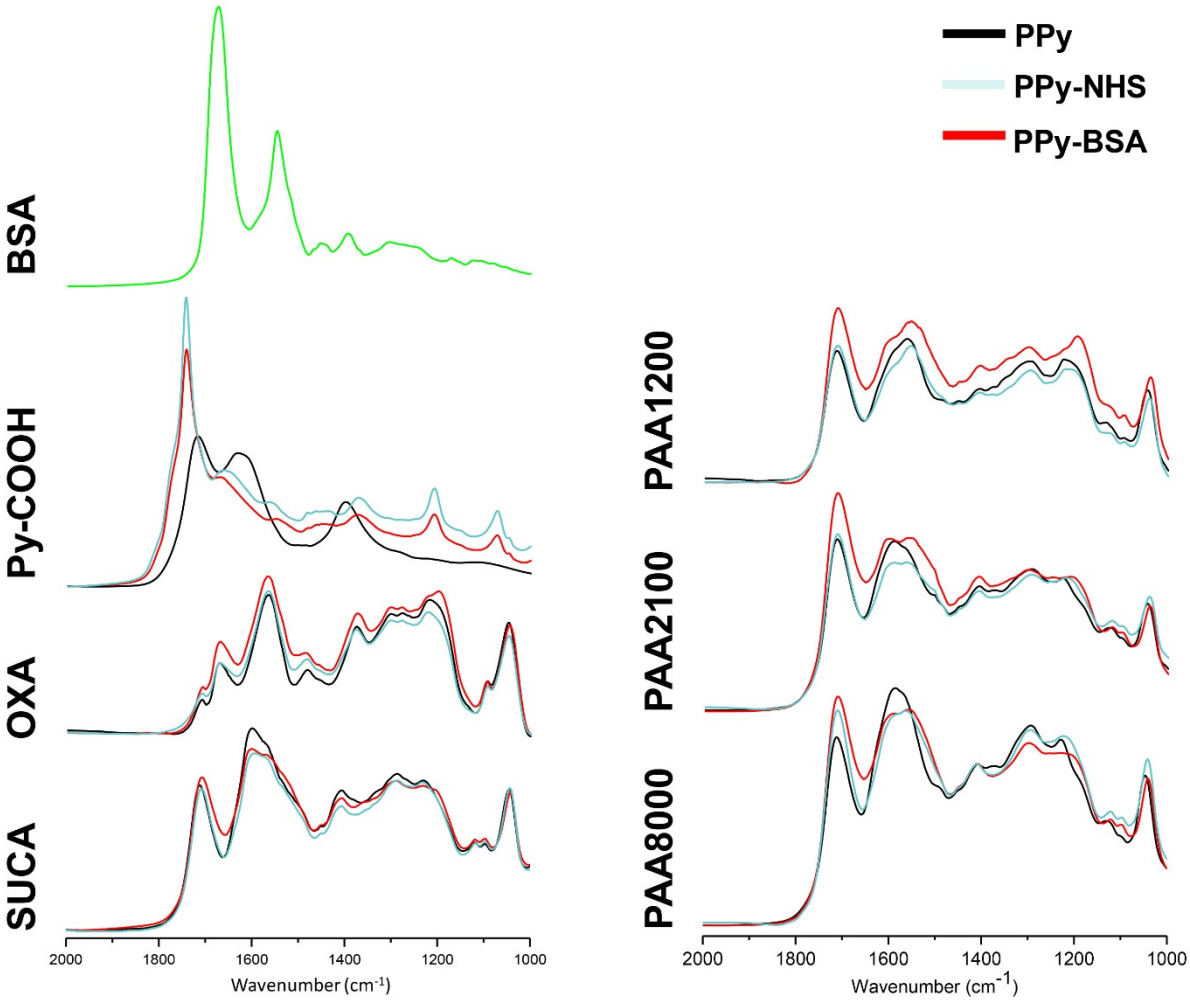

Figure S1. FTIR-IRAS results of different dopant of PPy, PPy-NHS and PPy-BSA.

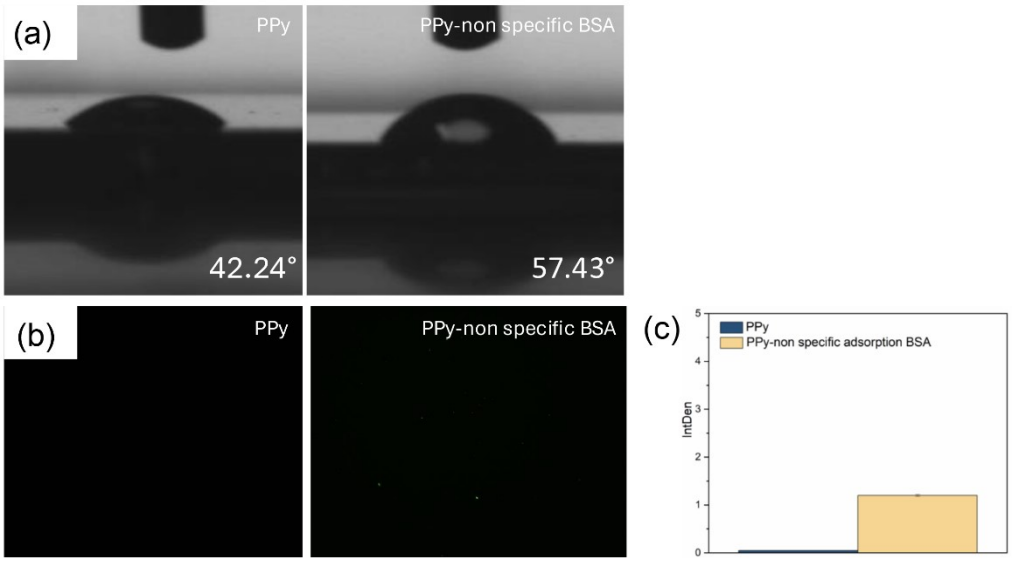

Figure S2 Characterisation on non-specific adsorption. Water contact angle measurements on PPy(PAA1200) (a) before and (b) after non-specific adsorption. Fluorescence images of PPy(PAA1200) (c) before and (d) after non-specific adsorption and (e) the measured intensity was calculated by Image J (Ver. 1.4.3.67, USA).

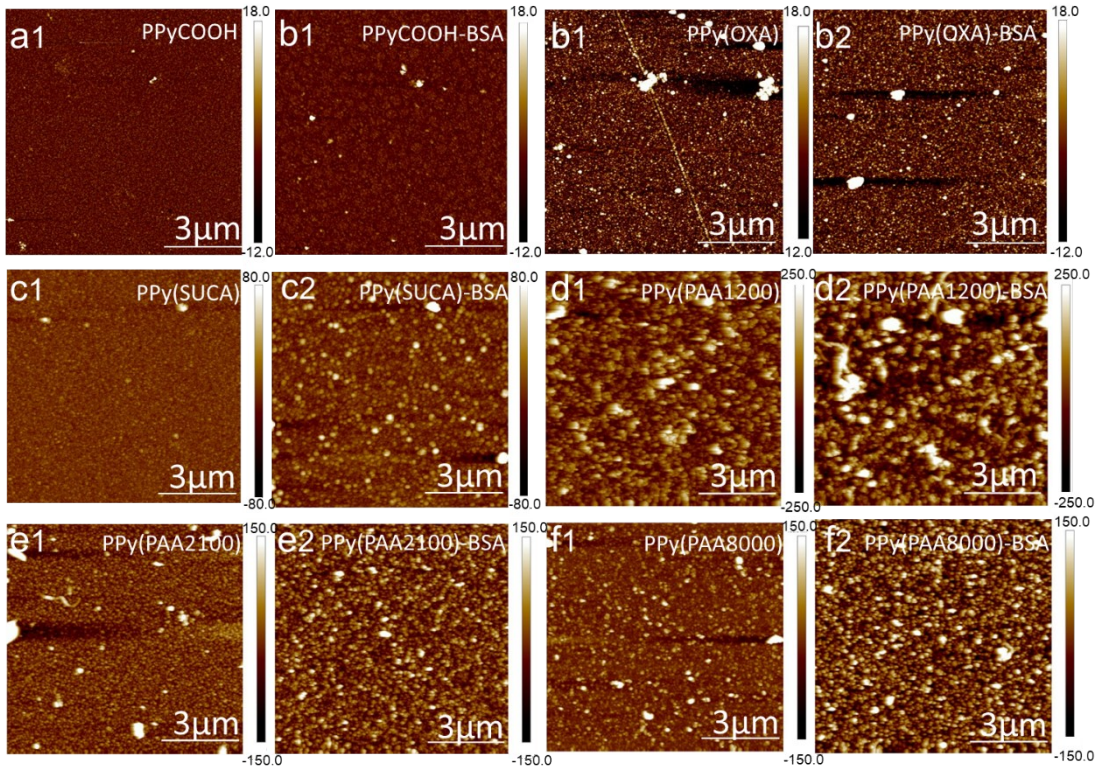

Figure S3. AFM results of PPyCOOH and PPyCOOH-BSA, different dopant of PPy and PPy-BSA. (a1) PPyCOOH, (a2) PPyCOOH-BSA, (b1) PPy(OXA), (b2) PPy(OXA)-BSA, (c1) PPy(SUCA), (c2) PPy(SUCA)-BSA, (d1) PPy(PAA1200), (d2)PPy(PAA1200)-BSA, (e1)PPy(PAA2100), (e2)PPy(PAA2100)-BSA, (f1)PPy(PAA8000), (f2)PPy(PAA8000)-BSA.

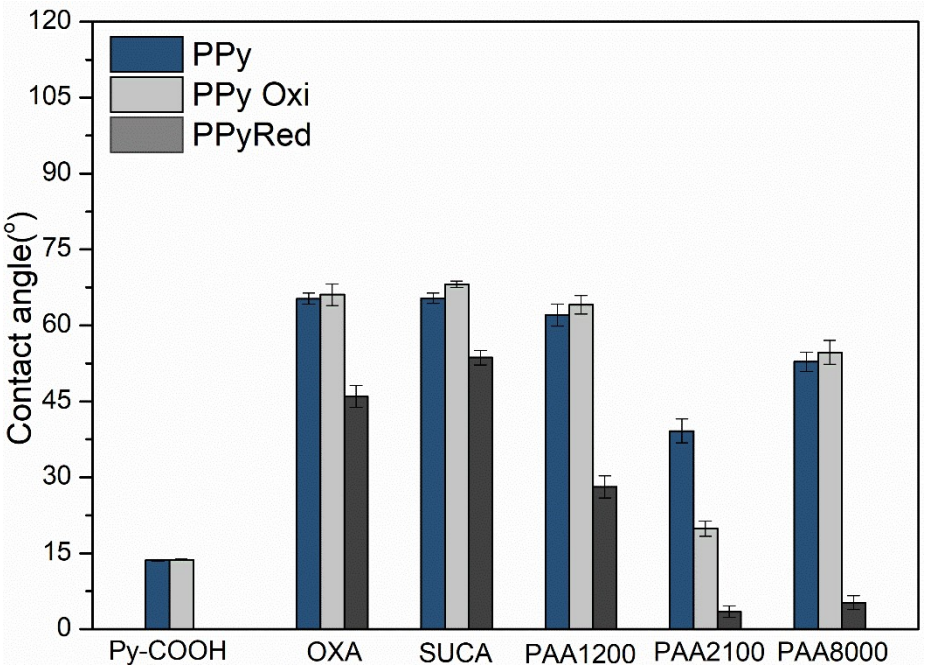

Figure S4. The WCA value of PPyCOOH and unsubstituted PPy at different redox states.

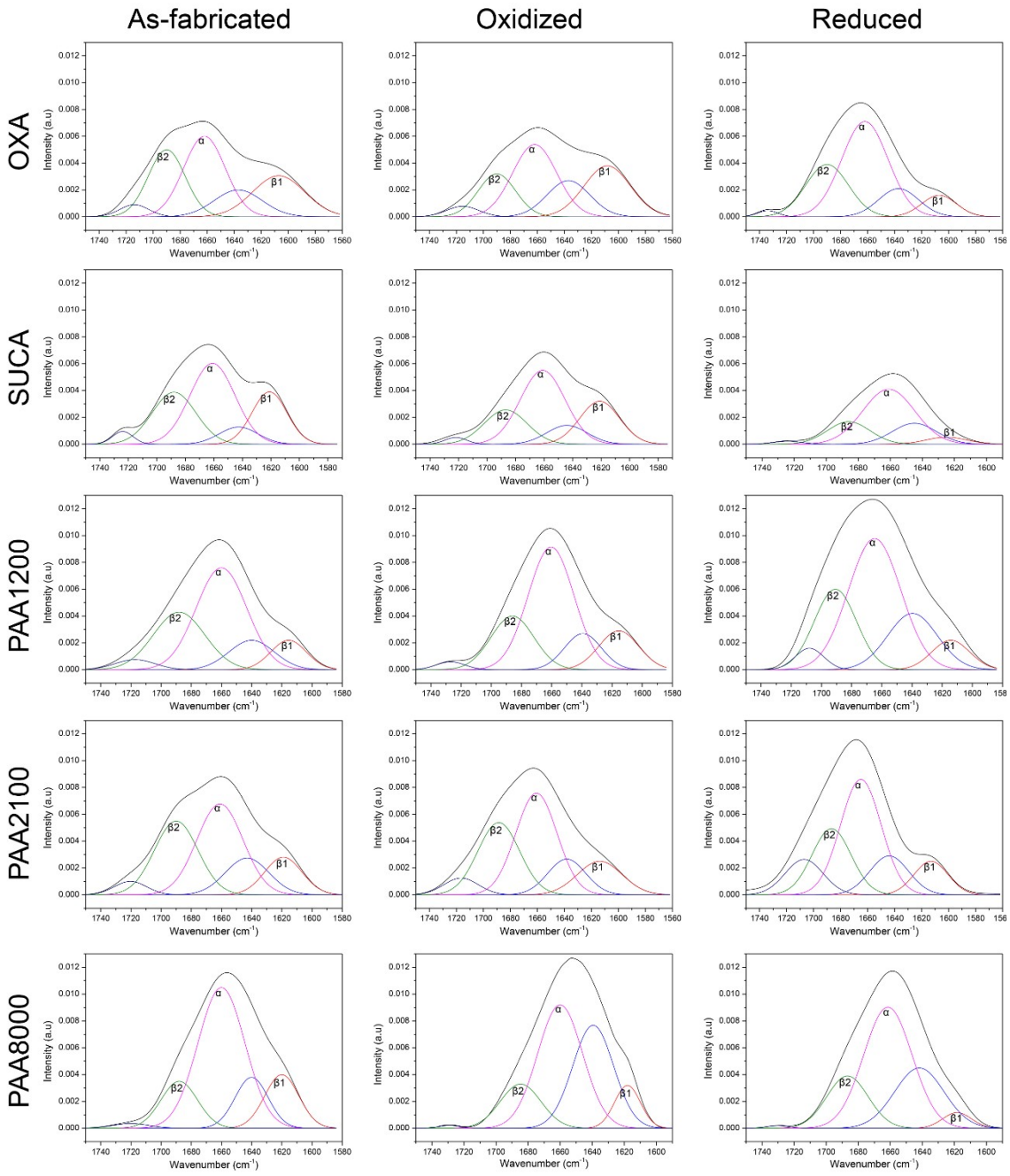

Figure S5. Fitting of the amide I band in the FTIR spectra of PPy-BSA samples at different redox states.