

## SUPPLEMENTARY DATA FOR:

### **Fabrication of dual anti-corrosive polyaniline microcapsules via Pickering emulsion for active corrosion protection of steel**

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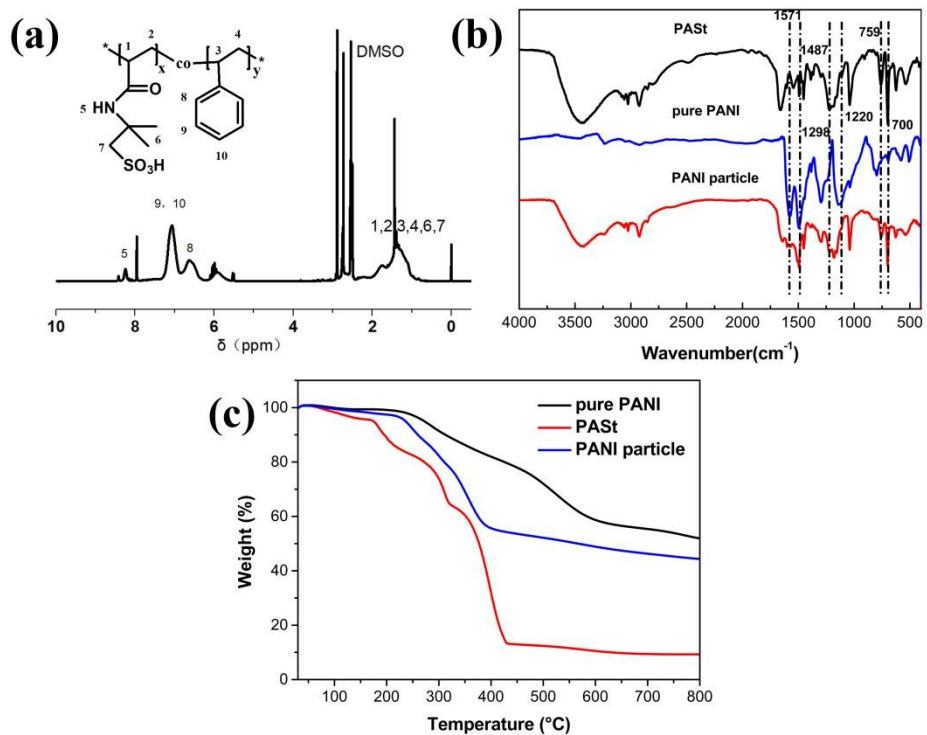
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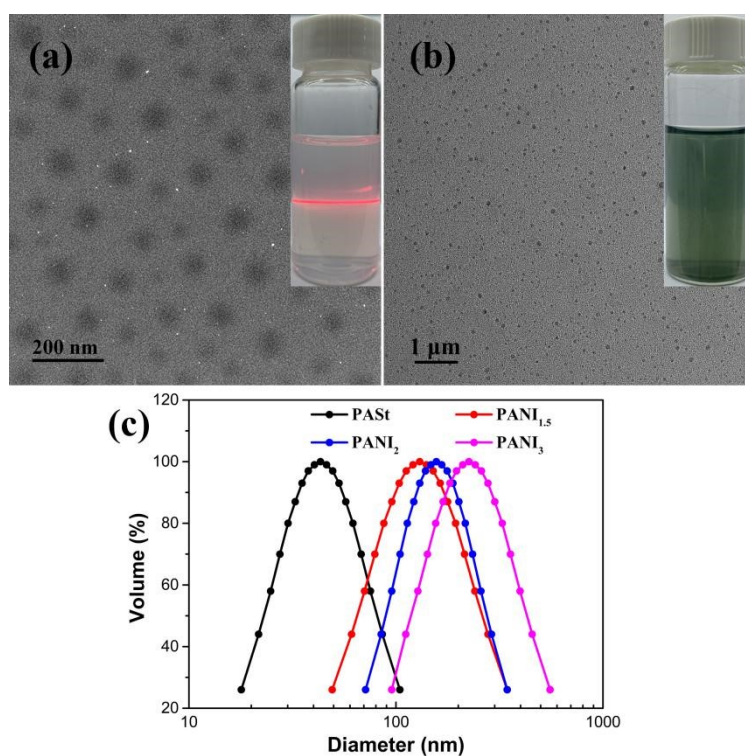
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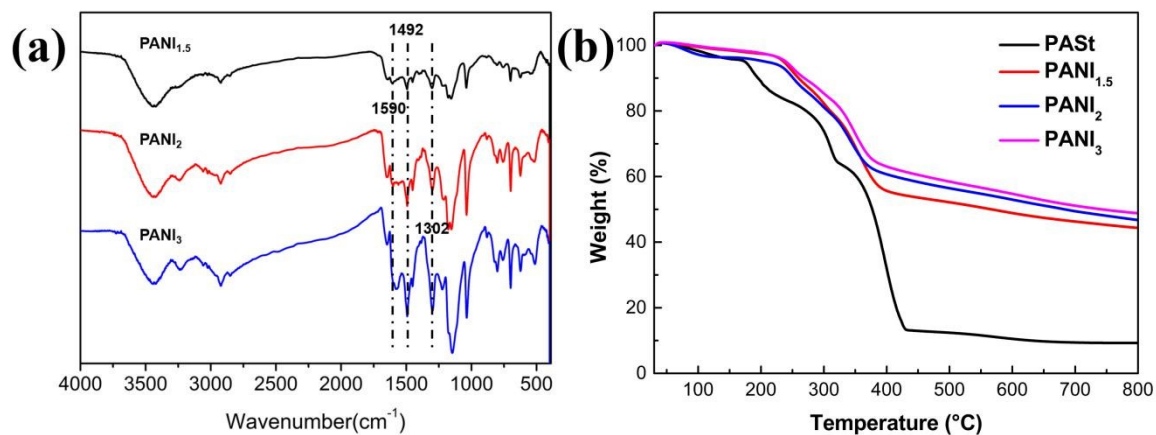
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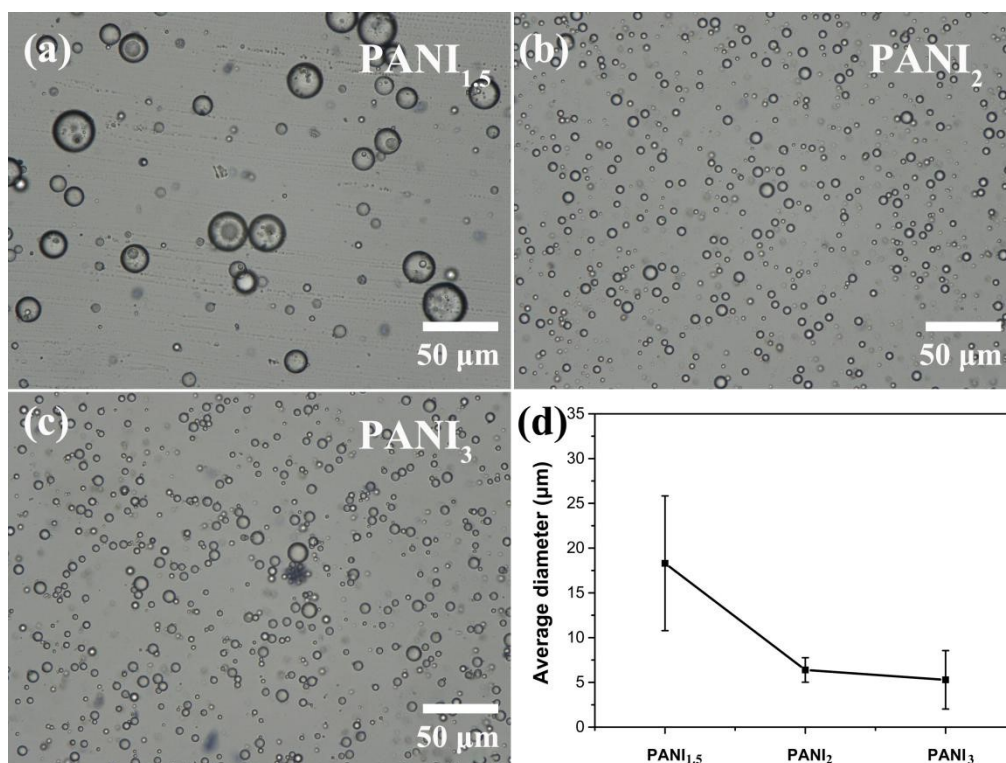
**Figure S1.** (a)  $^1\text{H}$  NMR spectrum of PAST copolymer. (b) FTIR spectra and (c) TGA curves of PAST copolymer, pure PANI and PANI particles.



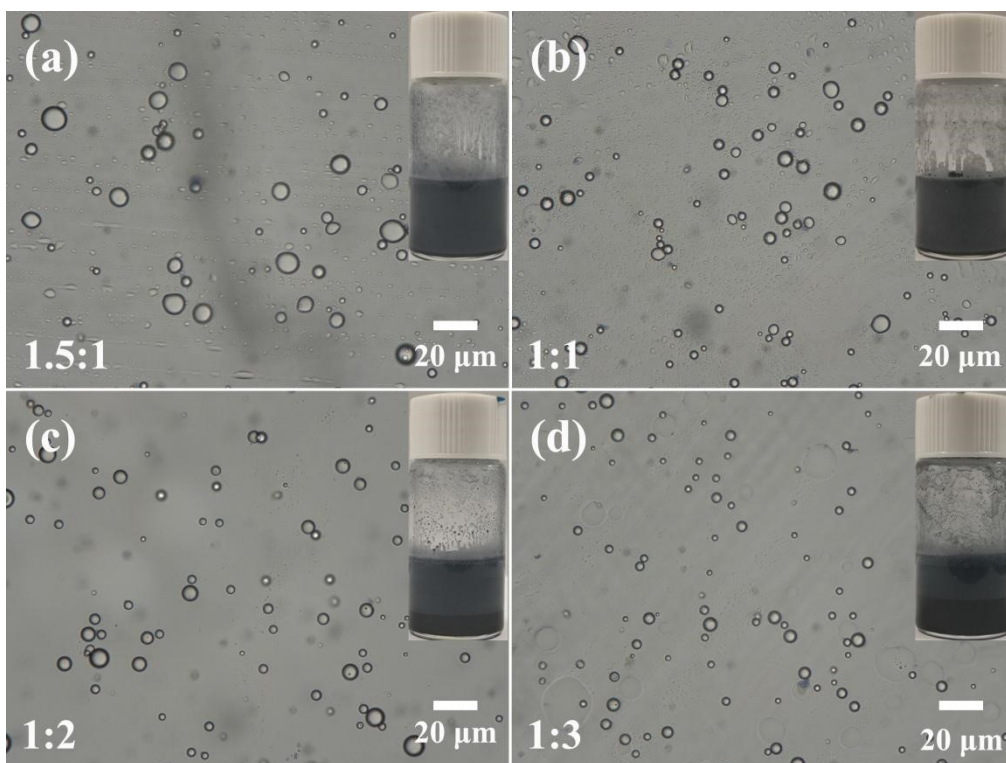
**Figure S2.** TEM images and digital photos of PAST micelle (a), PANI particles (b). Size distribution of PAST micelle and PANI particles (c).



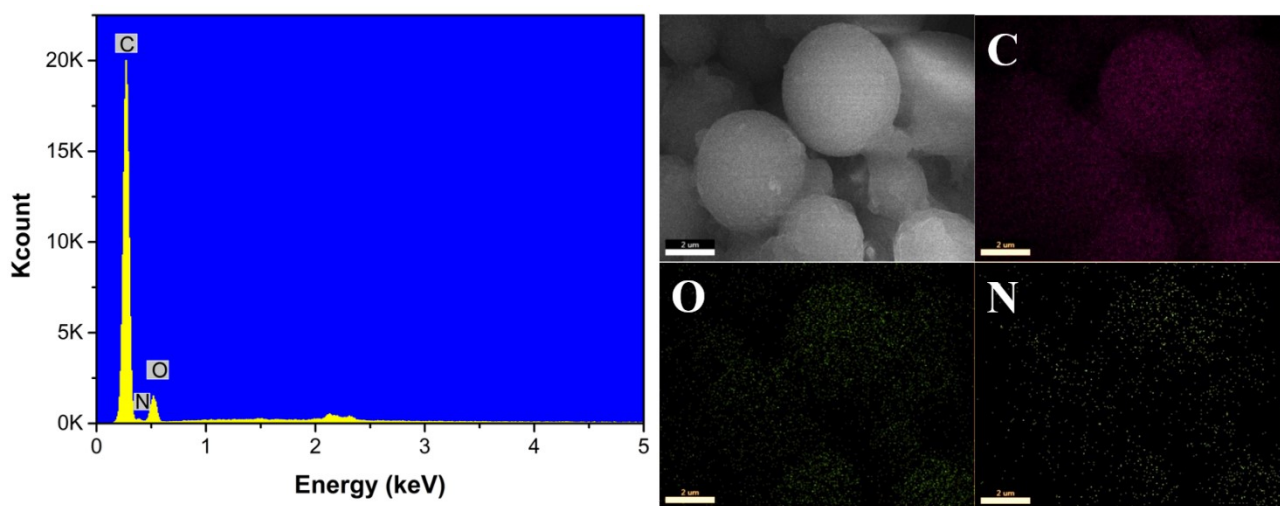
**Figure S3.** FTIR spectra (a) and TGA curves (b) of PANI particles.



**Figure S4.** OM images of Pickering emulsion obtained with different PANI particles as Pickering emulsifiers. (a) PANI<sub>1.5</sub>, (b) PANI<sub>2</sub>, (c) PANI<sub>3</sub>, (d) the average droplet diameter of different PANI particles.



**Figure S5.** OM images of Pickering emulsion obtained with different oil-water ratios. (a) 1.5:1; (b) 1:1; (c) 1:2; (d) 1:3. (the concentration of the PANI emulsifier was 15 mg/mL)



**Figure S6.** EDS spectrum and corresponding element distribution map of PANI microcapsules.

