

## Supporting Information

### **Enhanced thermoelectric properties of polyaniline/polypyrrole/carbon nanotube ternary composites by treatment with a secondary dopant using ferric chloride**

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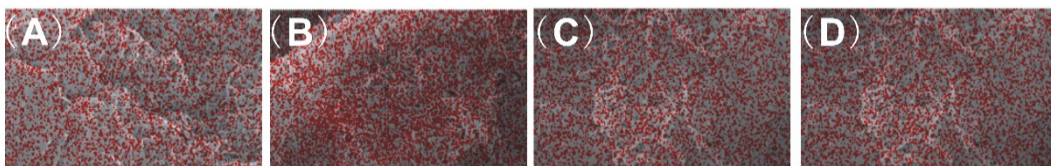


Figure S1 The EDX graphs of the dispersion of Fe element in the composite after  $\text{FeCl}_3$  doping:

An3Py0CT3 (A), An2Py1CT3 (B), An1.5Py1.5CT3 (C), and An1Py2CT3 (D).

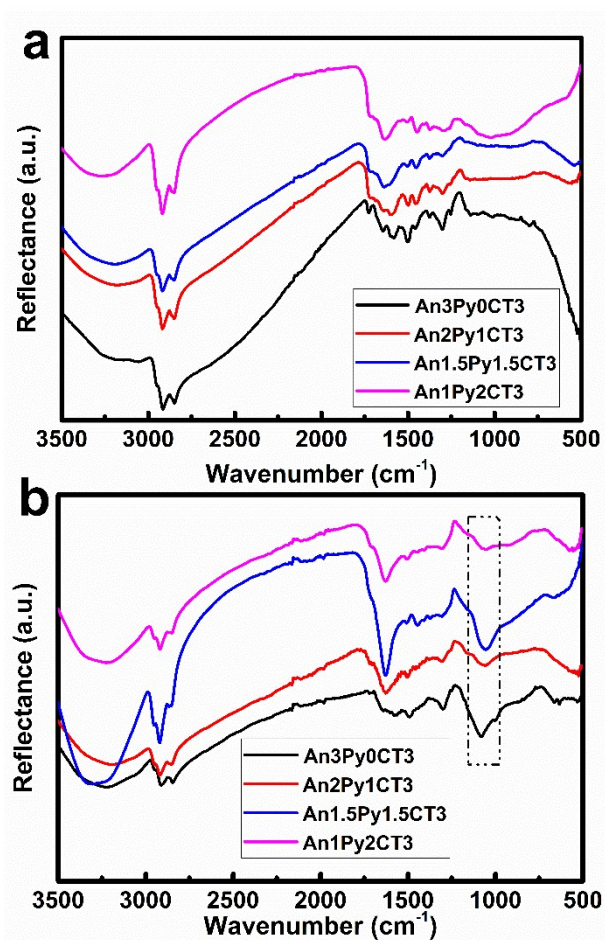


Figure S2 The original FTIR spectra of PANi/PPy/SWCNT ternary composites: before

$\text{FeCl}_3$  doping and after doped by 0.1 M  $\text{FeCl}_3$  solution in acetonitrile.

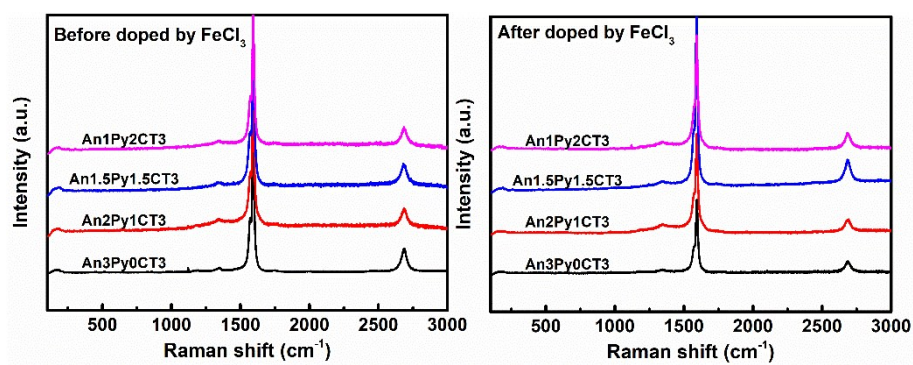


Figure S3 Raman spectra of PANi/PPy/SWCNT ternary composites: before FeCl<sub>3</sub> doping (a) and after doping with a 0.1 M FeCl<sub>3</sub> solution (b).