

## Supporting Information

### Polypyrrole Nanostructures and Their Thermoelectric Performance

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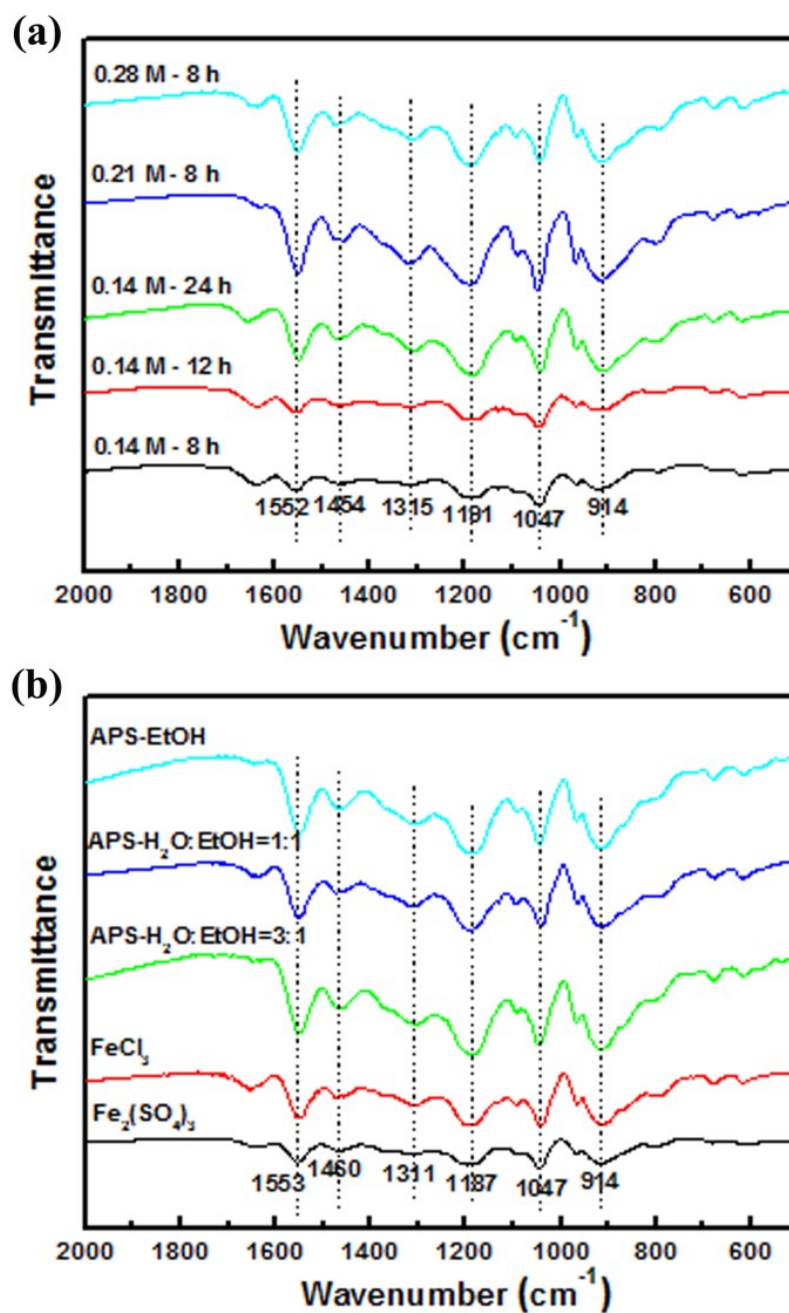
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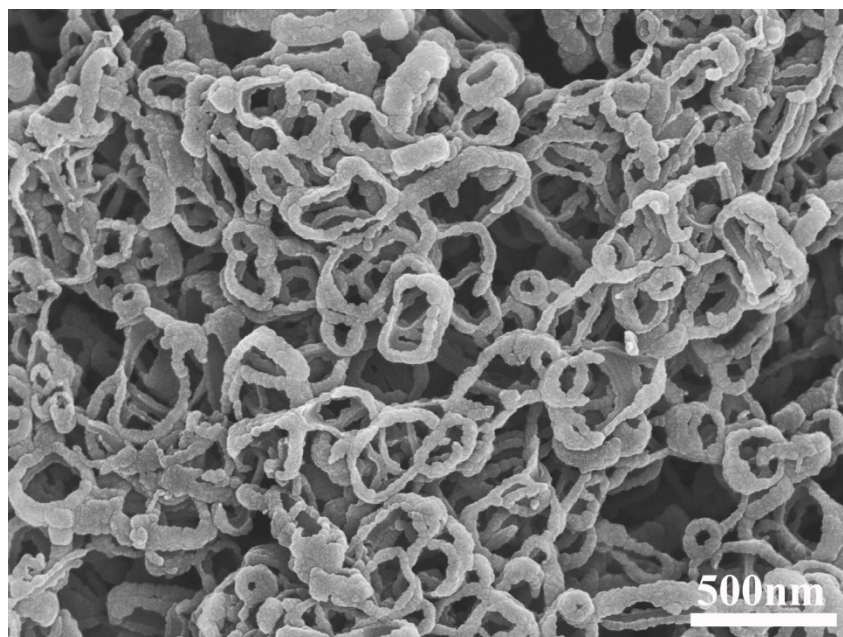
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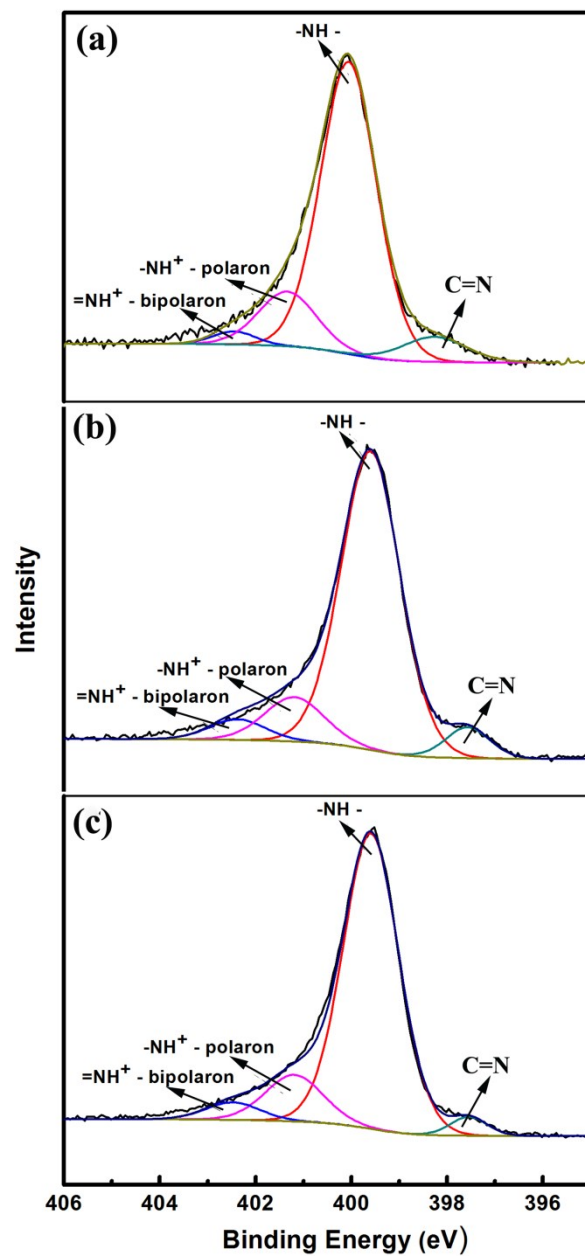
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**Figure S1** FTIR spectra of the PPy samples synthesized in (a) different oxidant concentration and reaction time with APS as oxidant, and in (b) different reaction medium with the oxidant of  $\text{Fe}_2(\text{SO}_4)_3$ ,  $\text{FeCl}_3$  or APS.



**Figure S2.** FESEM image of the curly PPy nanowires synthesized using  $0.21 \text{ mol L}^{-1}$  APS aqueous solution as oxidant, and the polymerization time is 4 h.



**Figure S3.** XPS spectra of the PPy samples prepared in (a) water, (b) water/ethanol mixture with the volume ratio of 3 : 1, (c) water/ethanol mixture with the volume ratio of 1 : 1.