

# Haoyu Fu

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## **Novel Pyrrole Based Polymer Organic Semiconductor for Sensor, Transistor and Solar Cell Application**

Polypyrroles, built on the electron rich pyrrole units, is a high efficient conductive polymer but has a low solubility, which makes it difficult to be applied in printable organic semiconductor device. In this project, by doing side chain engineering, we plan to make novel pyrrole based polymers which is printable and at the same time keep the excellent conductive properties of it. Besides, semiconductor devices ,such as sensor, transistor and solar cell are planed to make based on the new pyrrole based polymer we designed.