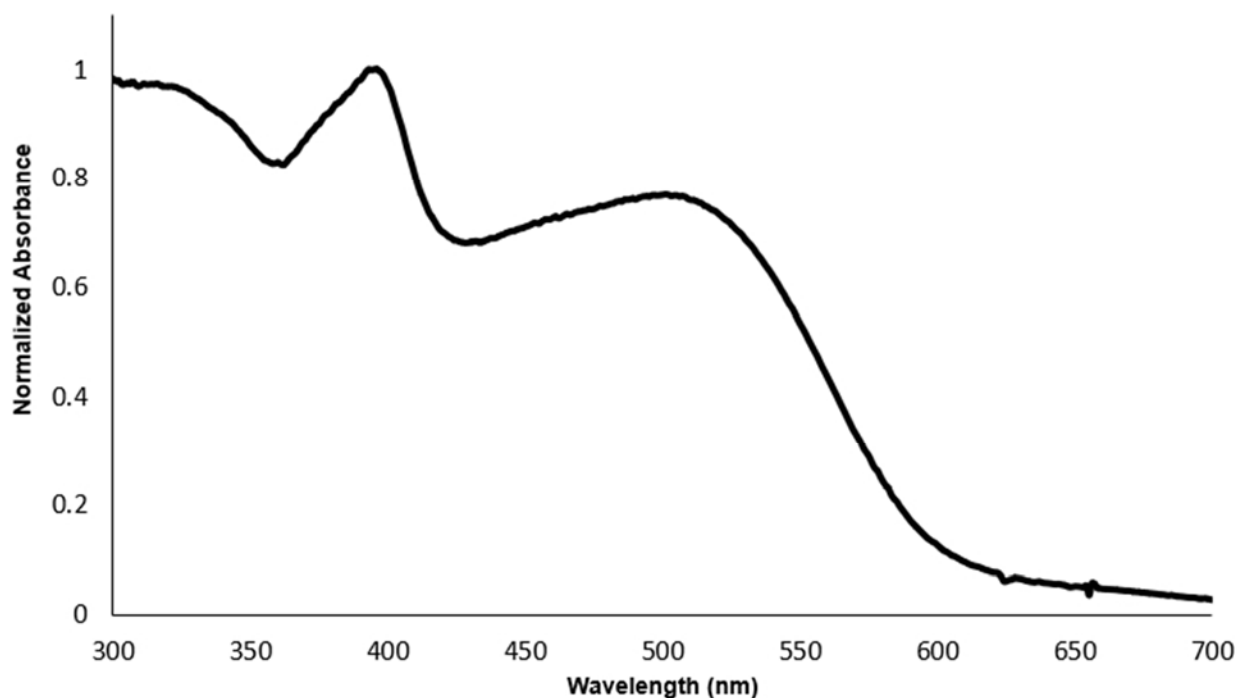


Synthesizing a water-soluble π -conjugated polyelectrolyte from a hydrophobic insulating precursor polymer under mild conditions and in high yield

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We report a new synthetic strategy for conjugated polymers in which a novel water-soluble π -conjugated polyelectrolyte is made from a hydrophobic insulating precursor polymer under mild conditions and in high yield. This synthetic strategy allows for a wide variety of side chain functionality and some show minimal cytotoxicity. Conductive hydrogels made with this polymer have been shown to be useful for neural regenerative medicine applications. Due to its reversible oxidation and reduction at low bias, we believe this polymer will be an attractive polymer for many applications from redox batteries to organic electrochemical transistors. Additionally, we hope that this precursor synthetic strategy, due to its ease and high efficiency, will be widely used to create a panel of not-yet-explored π -conjugated polymers.

UV-Vis absorbance of our new conjugated polymer in water



UV-Vis absorbance spectrum of our new conjugated polymer dissolved in water. Chemical structure of our new polymer not yet disclosed.