We deposited a multilayer of PSI on the RGO using a simple drop casting method. When light shines through the RGO electrode (left), electrons flow from the mediator solution to the PSI-RGO electrode.

**Objective**

- Develop a transparent, conductive RGO electrode
- Deposit PSI on the RGO electrode and determine the current densities produced in various mediator solutions

**RGO Film Preparation**

- Spin coat GO onto functionalized glass
- Vapor Reduction: 1 mL hydrazine, 30°C, 3 hrs
- Characterize film using Raman, UV-Vis, and electrochemical techniques

**Photochronoamperometry is used to determine current density of our half cell (above).**

**Current Density Results**

The current density varies depending on the mediator solution utilized (above).

Our PSI-RGO electrode demonstrates current densities comparable to a PSI-Gold electrode and significantly higher than a PSI-Graphene electrode.

**Conclusion**

We developed a transparent, conductive RGO electrode on which we deposited PSI. The resulting photoelectrode demonstrated significant photoactivity in a variety of mediator solutions. The relatively large photocurrents produced by integrating PSI with RGO and using an organic mediator can be applied to the production of more economic, easily produced, and completely organic solar cells.

**References and Acknowledgements**


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