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For my research this summer, I have been working with a polymer called polypyrrole. The purpose of my work with this polymer is to make it into a film and explore the three major syntheses of polypyrrole. The goal adapted, as the summer went on, to allow the formation of polypyrrole as a film using the photosynthetic method.

While I did not achieve the stated goal, I believe that I did make substantial progress. I explored all of the syntheses: chemical, photochemical, and electrochemical. I also made many models to try and allow easier use and better function of the analytical and synthesis tools. I redesigned the original four point probe that Michael Augugliaro made, and also designed a board dedicated to allowing portability and a more clean appearance. The end of the research focused more on allowing the formation of a thin film on a quartz microscope slide. For this to occur, I designed a dish that allows the necessary light to transmit from the bottom through the slide into the solution.

This project has helped me gain necessary experience in my preferred field. I believe that it will give me an edge up on applications to graduate schools as well. I do also have plans to present my research at Elkin Isaac. This research helped me become more independent and allowed me to hone my critical thinking. Working without a group also meant that I had to make sure that I kept myself focused and on task, which I believe that I did throughout the length of the research. On a social standpoint, it was also great to make more friends with the same interests as me throughout the summer. It was always interesting hearing about their research and telling them about my own. Before I end this report, I would be remiss to not thank the Anna and Carl Weiskittel Endowed Chemistry Fellowship for their generous support of this research, Thank you!