

Many thanks to the Imperial College Stevenson Fund, it gives me an opportunity to complete a three-month exchange research project at the University of Pennsylvania under the supervision of Professor Karen Goldberg. The project focus on the selective oxidation of methane to methanol using late transition metal catalysts, which is closely related to my PhD research at Imperial College London. In particular, I worked on the kinetic studies of the dioxygen insertion into cationic platinum(II) methyl and palladium(II) methyl complexes. During my research in the US, a couple of novel cationic platinum(II) and palladium(II) alkyl complexes were successfully synthesised and the reactivity of these complexes with dioxygen was examined in the presence of a radical initiator under heat. Methanol and possibly formaldehyde were released during the reaction, which could be used as an alternative energy source or precursor to other bulk chemicals. The kinetic studies were monitored by NMR spectroscopy to obtain the rate of reaction. I really enjoy working on this project and it helps me to strengthen my skills and knowledge.

My supervisor at the University of Pennsylvania, Professor Karen Goldberg, has been very supportive throughout my research project. I had regular meetings with her to discuss about my project and she always shared her insights to help me with my work. Moreover, the research group had two group meetings every week, which included literature and project presentations. I learned a lot from my colleagues during their presentations and it gave me many new ideas to apply to my research project. I also did a few presentations in the group. I received a lot of good feedback and suggestions on my project, which was particularly useful. The Postdoc and postgraduate students in Goldberg's group are very smart and supportive. I fully enjoy working with them and having open discussions about different field of scientific research. We sometimes gathered around after work and had dinner together. Furthermore, the department of chemistry at the University of Pennsylvania often organised different talks and events. They invited presenters from different companies to share their work experiences, which gave me insights about the working industries and environment in the US.

I like living in Philadelphia, it is very convenient. During my spare time, I went to museums, zoo and food markets. I lived in a student accommodation, where I met a lot of fantastic people. They came from different backgrounds and it was great listening to their experiences. I would like to take this opportunity to thank Imperial College Stevenson Fund for giving me this award. It was a privilege to work at Professor Karen Goldberg's research group in the US. I have learnt and improved a lot throughout this research experience, which is crucial for the development of my PhD research. I would recommend anyone who is interested to undertake an international research placement to apply for the Imperial College Stevenson Fund.

