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Project 10 - Advanced Thin Silicon High Efficiency Device Integrations
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To prepare for the events of May 15th to May 20th I was asked to think of three questions that would be of relevance to my education and training in the Photovoltaics Innovation Network. Through the course of the week's events I was to seek answers to these questions. My first question was: What is the future of PV in Ontario? I did not obtain a definitive answers but the PV Workshop helped to deepen my understanding. I learned about the successes and failures of the Feed-in Tariff (FIT) program. It seems to be viewed as a success but with some bumps in the execution. There has been a learning curve and the program will be adjusted when it is set to come under review. I have also learned that the FIT program is by no means guaranteed to stay and thus, the future is uncertain. The provincial conservative leader has said that he would get rid of it. This would be devastating to the PV economy in Ontario and I hope it does not happen.

My second question was just as broad: In what area of PV is the Canadian research community focusing most strongly? I learned some surprising things during the conference. There is a larger research effort than I had previously thought behind organic solar cells. I attended a day's worth of talks on organic PV and, contrary to what is sometimes said, there is progress being made. It seems that part of the diverse interest in organics is that so many compounds are possible and this leaves a lot of room for many researchers to work in the field. Die-sensitized cells are also popular. I was especially surprised to find that concentrated PV (CPV) is being tested in Canada. I had previously thought it was a forgone conclusion that CPV would never be successful in Canada. It seems that Canadian researchers are tackling the problem of high-efficiency low-cost PV from many angles and no single area is the obvious forerunner.

My last question was not so much a question as a general goal, namely, to learn about new research that is directly relevant to my research project. I am working on thin single-crystalline-Silicon (sc-Si) and I did learn some new things via discussion with other researchers. Without going into too much detail, I learned about new texture processes, I learned about the incorporation of good electrical and optical properties in a single rear-surface structure and I also learned about low-temperature double layer passivation. These are all either directly or indirectly related to my research. Overall, the week was very useful and I feel lucky to have had the privilege of attending.