

Rachel Savidge

Project 08 - Third Generation Spectral Engineering for Increased Solar Cell Efficiencies

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The Annual General meeting of the NSERC Photovoltaic Innovation Network (PVIN) introduced me to a number of Canadian researchers who are working on a broad range of topics in the PV field. Subjects spanning single and multijunction cells, organic and dye-sensitized, cell design optimization, and even energy policy were all included, and it was a privilege to sit down and speak with a number of the project leaders. I now have a better understanding of the goals of the network and of the opportunities for collaboration between research groups.

Photonics North followed the next day – my first academic conference – and over three days of presentations I learnt how much information is typically included by speakers as background information, the types of questions to expect, and the necessity for time constraints. The conference also served as a venue for establishing the HQP Education and Training Committee, a committee composed entirely of the ‘highly qualified personnel’ (HQP) of the PVIN, including graduate students and postdoctoral fellows. Agenda items included increased communication amongst the committee members (via a website forum and LinkedIn), along with the more ambitious goal to offer technical training workshops for the HQP.

The final two days of my week in Ottawa were spent at the Fourth Annual PV Industry Workshop, which highlighted the concerns of the fledgling Ontario PV industry, particularly in relation to the looming provincial election and expected changes to the provincial feed-in tariff. Presenters were unanimously optimistic that PV was not only the ‘energy of the future,’ but that it also has a strong role to play in the present Canadian energy infrastructure and economy. The trip was capped-off with a tour of the University of Ottawa SUNlab, where my collaborators at the University of Ottawa explained their research goals and resources, and we determined how my eventual upconversion results could be used by the group to optimize multijunction cell design.