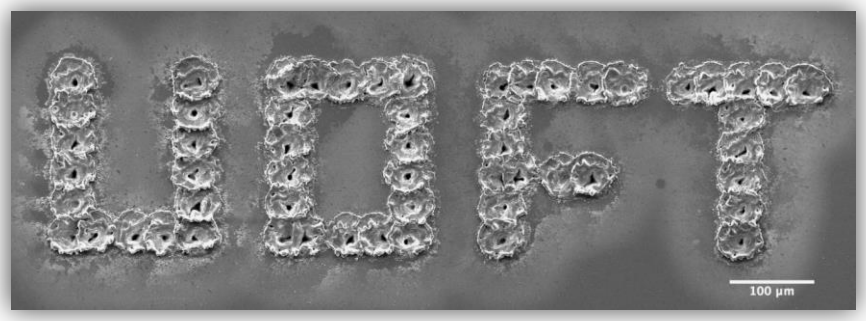
Master Thesis University of Toronto

Nanosecond Laser-Induced Forward-Transfer of Aluminium in air and argon

My 8 months stay in Toronto just came to an end and it left me with great memories. I really enjoyed this experience a lot. It helped me open my horizon to new cultures and other ways of life. Toronto is a gigantic city regrouping cultures from all over the globe, creating a very interesting melting pot of people. I had to adapt myself to this life style and I thing that it represented a very important step for both, my professional carrier and personal values.

jeremy.chamillot@stud.unibas.ch

As shown in the Figure below, my project was about a process that transfers thin film metal layer onto silicon using laser pulses. This method has numerous advantages compared to other metallization processes used for example in solar cell fabrication and will help a future towards low cost and low thermal budget production.



More specifically, I had to investigate the effect of oxidation on the transferred material and to develop an inert gas processing chamber that allowed an oxygen-free transfer. The project was based on practical work in the lab and scientific analysis of the results which I really enjoyed doing.

Lastly, I want to thank the Swiss Nanoscience Institute for their SNI Grant that helped me to carry out this project.

jeremy.chamillot@stud.unibas.ch