

Report on research projects under the IDEA League Student Grant

Personal information			
Full Name:		Vogel, Vinzenz Immanuel Kevin	
Field of study:		Physics	
Degree pursued:		Master	Current year of studies: 6
Home University:		ETH Zurich	
Sponsoring professor at home university	Name:	Prof. Andreas Wallraff	
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Information about the research stay			
Host University:		Chalmers tekniska högskola (Chalmers University of Technology) - Göteborg	
Sponsoring professor at host university	Name:	<i>Asst.</i> Prof. Jonas Bylander	
	Email address:	jonas.bylander@chalmers.se	
Dates of research stay		from: 05.04.2016	to: 04.10.2016

Summary of the research project (200 words max.)

The overall purpose of the project is to research material properties of high kinetic inductance thin films. The project dealt with the fabrication and characterization of NbN based SIN junctions and Hall bars. For that, a fabrication process was developed. In addition a fridge was rebuilt to characterize the devices, several material properties such as the energy gap, the coherence length and the electron mean free path were measured.

Experience report

Please tell us about your experience at the host university and give us an evaluation of the benefits of the research stay for the course of your studies

My time at Chalmers was very intensive and I learned a lot. Working in such a good equipped cleanroom was a unique experience, which was not possible at ETH for a Master student. I was trained to use a variety of machines, sputterer, evaporator, wire bonder, mask aligner etc. Furthermore I learned a lot about DC measurements and cryogenics, the latter during rebuilding a cryostat.

On the personal side I was always encouraged by my supervisors. They also gave me very helpful feedback on my report and my presentation. Also the group and the cleanroom staff were very nice and helpful.

Picture

Please provide a picture of you at the guest university



The report should be signed by both professors involved. (The signatures will be deleted when the template is published on the IDEA League web page.)