

Project name: SolVoltaics

Beamtime Report

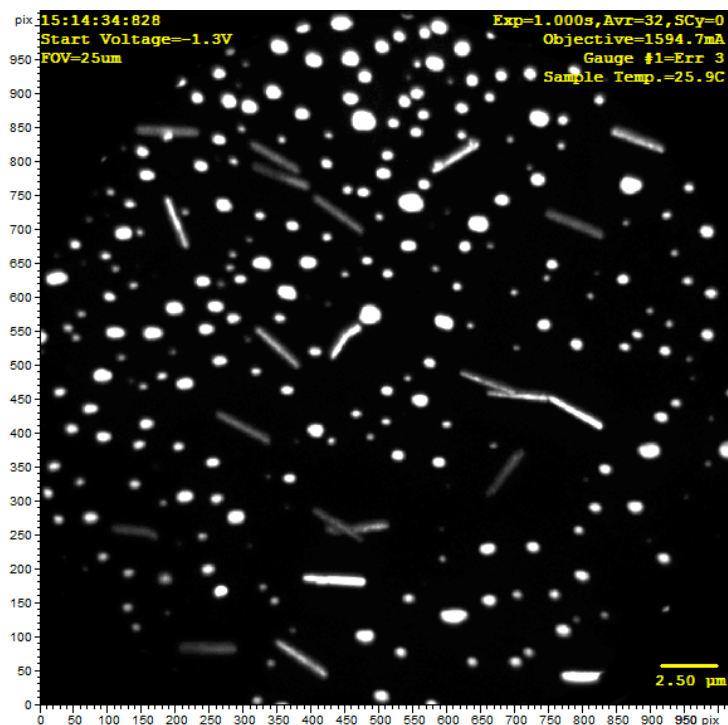
17.12.2013 (Date of the report to be added)

General information

Name of the rapporteur	Name of the rapporteur's organisation
Mikael Björl	Solvoltaics
Type of research (nanotechnology/health care/chemistry etc.)	Name of the research facility
Nanotechnology	MaxLab
Date of the measurement, duration	Location of the event
30/10, 12/12 2012 and 13/2 2013	Lund, Sweden
Facility personnel participating in the measurement	
<i>Andreas Lassesson</i>	

Description of the project

Research description (short summary as written in the application)
<p>Solvoltaics AB is an exciting, nanomaterials company in Lund, Sweden, that is commercializing its first product, Solink™, a nanowire ink that will boost solar energy conversion efficiency of solar PV modules. The company uses Aerotaxy™, a novel approach to producing GaAs nanowires which breaks the high cost paradigm of existing epitaxial processes. High efficiency, low cost PV modules with Solink™, dramatically improve the cost of clean energy.</p> <p>Funding from the Science Link program has been used to investigate the feasibility of performing nanowire surface analysis using synchrotron research facilities.</p>
Summary of activities (experiments performed, beamtime used, preliminary overview of results, next steps and other relevant information)
<p>Understanding and control of the surface chemistry of nanowires are critical in allowing the Sol Voltaics researchers to manipulate and use them as solar cell elements. In collaboration with MaxLab, the nanowire surface composition has been actively investigated after various treatment processes.</p> <p>The objective of the study has been to obtain spatially resolved chemical information with a resolution below 100 nm. Initial analyses have been performed with the PEEM instrument at beamline I311. These results have provided ideas for improving nanowire surface treatments which will lead to a better solar cell.</p>



Overview PEEM image of nanowires.

How would you describe cooperation and assistance from industrial liaison officers and national contact points while preparing and carrying out the research at large scale facilities?

Both the Scientists and the Liaison Personnel between MaxLab and Industry were not only helpful in getting the project started but very understanding of our needs as a small business. They provided enough background information on the particular technique and gave us a chance to do a trial run to see if we could get useful results on our samples. Even though the facility is heavily booked, we were able to find beam time for our experiments. Overall, our experience has been very positive. We would hope that more funding can be made available through Science link especially for small businesses.

Other personal remarks

--

Annexes

Annexes (list of annexes; meeting minutes, graphical illustrations, tables and other supplementary data)