

Preliminary Program “Silicon for the Chemical and Solar Industry, 2014” as of March 8

Monday June 24

1900 Reception and Dinner

Tuesday June 25

0830 – 0845 Opening

Silicon Production

0845 – 0910 Jacob Steinmo, *Finnfjord AS*, “Energy Efficient Production of Silicon Based Alloys”

0910 – 0935 Eli Ringdalen, *SINTEF*, “Quartz Properties in the Silicon Production”

0935 – 1000 Merete Tangstad, Michael Ksaizek, *NTNU*, “Zones and Materials in the Silicon Furnace”

1000 – 1020 Coffee Break

1020 – 1045 Ida Kero, *NTNU*, “Refining Kinetics of Selected Elements in Silicon”

1045 – 1110 Willem van Noorth, *NEM & Sunrise Industries*, “How to Prevent Dust Explosions in Silicon Grinding”

1110 – 1135 John Fenger, Håkon Bjørson, *Thorsil*, “A New Age in Silicon Production”

1135 – 1200 Frank Weber and Lou Parous, *Viridis iQ GmbH*, “Revisiting Silicon Atomization: Potential Cost Savings for the Photovoltaic Industry”

1200 – 1225 Rolf Degel SMS – Siemag, “Latest Development and Trends for Efficient Si –metal Production”

1300 – 1830 Excursion with boat. Lunch will be served on board.

1930 Dinner

Wednesday June 26

0830 – 0855 Andre Alexandrino Lotto, Joao Batista Ferreira Neto, *IPT*, “Boron Removal from Silicon by Metallurgical Grade Silicon Refining”

0855 – 0920 Javier Bullon, *Ferroatlantica*, “The Vacuum Application in the FerroSolar Project”

0920 – 0945 K. Morita, Wang Yee, *University of Tokyo*, “Boron Removal from Molten Silicon by the CaO – SiO₂ – CaCl₂ Slag Treatment”

0945 - 1010 Jan-Philipp Mai, *JPM Silicon GmbH*, “High-purity Silicon from the Microwave Furnace Using High-purity Pellets”

1010 – 1030 Coffee Break

Silicon Characterization

1030 – 1055 Eloi Kewes, *Ecole Central de Lyon*, "Multi-scale Chemical Characterization of a Ground Metallurgical Grade Silicon Powder"

1055 – 1120 Patrick Galler, Andrea Raab, Sabine Freitag, Kjell Blandhol, Joerg Feldmann, *Elkem AS*, "Improved Method for Analyzing Boron in Metallurgical Silicon"

Silane Chemistry

1120 – 1145 Larry Coleman, *Consultant*, "Best Practices for Fluidized Bed Reactors in the Hydro Chlorination Process"

1145 - 1210 Alba Ramos, *Universidad Politecnica de Madrid*, "Quantifying Heat Losses by Radiation, Convection and Conduction in a CVD Reactor for Polysilicon Production"

1210 - 1235 Sverre Sørensen, Josef Filtvedt, Hallgeir Klette and Werner O. Filtvedt, *IFE*, "Novel Low Cost Production through Centrifuge Chemical Vapor Deposition"

1235 – 1300 Larry Coleman, Paul-M. Pellny, *Consultant, Dow Chemical Company*, "Catalyzed Disproportionation of Chlorosilanes"

1300 - 1415 Lunch

Solar Silicon

1415 - 1440 Sefa Yilmaz, Tony Thompson, Stein Julsrud, Matt Miller, *REC Silicon*, "A Qualitative Comparison of Silane and TCS Based FBRs for Producing Granular Si as Solar Si Feedstock"

1440 – 1505 Brian S. Holsclaw, *Hemlock Semiconductor Co.* (No title)

1505 - 1530 J. Acker, J. Ducke, A. Rietig, W. Løser, T. Muller, *Hochschule Lausitz*, "Segregation, Grain Boundary, Milling and Chemical Leaching for the Refinement of Metallurgical Grade Silicon for Photovoltaic Application"

1530 - 1615 Bob Skogley, *GT Advanced Technologies*, "Trends in Production of High Purity Silicon"

Poster Session (5 minutes oral presentation)

1615 - 1700 Mari Næss, *SINTEF*, "Diffuse Emissions in Silicon Refining – From small scale to large scale experiments"

Berndt Witgens, *SINTEF*, "Industrial Measurements of Diffuse Emissions"

Maria Førde Møll, Halvard Tveit, Kjell Håkon Berget, *Elkem Silicon Materials*, "Solidification of Metallurgical Grade Silicon"

Norbert Auner and coworkers, *Goethe Universitat, Frankfurt*, "Fundamental Silicon - Chlorine, Polysilane, Perchlorated Chemistry"

Jan-Philipp Mai, *JPM Silicon GmbH*, "Recycling Silicon Fines by Microwave Heating"

Dimitriy Slizovski, Halvard Tveit Elkem Silicon Materials, "Reduction of NO_x Emissions"

Steffen Mueller, *SiTec* "New Developments in Production of High Quality Polysilicon"

1900 -2000 Poster Session and Reception

2000 Course Dinner

Thursday June 27

Solar Silicon

0830 – 0855 Gabriella Tranell, *NTNU*, "Comparison of Methodes for Silicon Refining"

0855 – 0920 Mansor Barati, *University of Toronto*, "Combined Electrolysis and Solvent Refining, for Purification of Silicon"

0920 – 0955 Anne Karin Søliland, Marit Dolmen, Gunnar Halvorsen, Ragnar Tronstad, *Elkem Silicon Materials*, "Simplified Value Chain for SoG-Si Show Promising Results at Elkem Solar"

0955 – 1020 Matthias Heuer, Alain Turenne, Martin Kas, Fritz Kirscht, Terry Jester, *Calisolar GmbH*, "Solar Silicon Purification using a Al-Si Solvent Growth Process"

1020 – 1040 Coffee Break

Silicon Application

1040 – 1055 Werner Filtvedt, Hallgeir Klette, Arve Holt, *IFE*, "Production of Tailored Silicon Nano Particles"

1055 – 1120 Hiroki Sakaguchi, *Tottori University*, "Silicon-based Anodes for Next Generation Lithium Ion Battery"

1120 – 1145 Prof. T.Sakai, *Research Institute for Ubiquitous Energy Development*, "Safe and Long Life Li-ion Batteries for Vehicles and Energy Storage"

Silicon Market

1145 - 1210 Jørn de Linde, *CRU*, "Silicon - Next Five Years"

1210 - 1245 Lunch

1300 Departure