

2nd Workshop on Metallization for Crystalline Silicon Solar Cells
April 14th - 15th, 2010
Constance, Germany

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2nd Workshop on
Metallization for Crystalline Silicon Solar Cells

- Status, trends and new directions -
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Program

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2nd Workshop on Metallization for Crystalline Silicon Solar Cells
 Wednesday, April 14th, 2010
 Konzil, Constance, Germany

9:00 - 9:10 Opening

9:10 - 10:40 Session I: Contact Formation I

Matthias Hörteis (invited)	ISE	Fundamental reactions during the formation of fired silver contacts and cell results
Stefanie Riegel	UKON	On the metallization of boron back surface fields
Felix Haase	ISFH	Effects of metallization in the semiconductor part – insights from experiments and device modeling
Maria Recaman	IMEC	Screen-Printing on high sheet resistance epitaxial emitters

10:40 - 11:00 Coffee break

11:00 - 12:10 Session II: Contact Formation II

Elias Urrejola	ISC	Al-Si alloy formation in narrow p-Si contact areas
Luca Gauteo	ISE	Characterisation of local Al BSF formation for PERC solar cell structures
Agnes Mewe	ECN	Metallization pattern optimization for open rear side cells

12:10 - 13:10 Lunch break

13:10 - 14:40 Session III: Paste Development

Aba Ebong (invited)	GIT	Understanding and implementing high quality contacts to advanced emitters for high efficiency solar cells
Rene Hönig	ISE	Paste development for screen printed mc-Si MWT solar cells exceeding 17% efficiency
Harald Kerp	Ferro	Front silver and aluminium back surface field metallizations for achieving high performance crystalline silicon solar cells
Giovanna Laudisio	DuPont	A view of the design challenges involved in the development of advanced n-type contacts using lead-free chemistries

14:40 - 15:00 Coffee break

15:00 - 16:30 Session IV: Printing

Jaap Hoorstra (invited)	ECN	Thick film printing: towards fine line high aspect ratio
Marco Galliazzo	Applied Materials Baccini	Reliable double printing of Ag contacts for c-Si cell manufacturing
Frank Kleine Jäger	BASF	BASF's CyptoSolTM metallization inks for newly developed Laser Transfer Printing (LTP) technology
Tom Falcon	DEK	Development of a 'Print on Print' process to create high aspect ratio front side conductors on silicon solar cells.

16:30 - 16:50 Coffee break

16:50 - 18:00 Session V: Jetting

Armin Richter	ISE	Aerosol jet printed contact formation for highly doped boron emitters of n-type solar cells with front side junction
Maikel van Hest	NREL	Direct write approaches for metallization
Sebastian Binder	ISE	Metallization - what an ideal metallization ink should look like

19:00 Dinner

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9:00 - 10:30 Session VI: Plating

Jose Luis Hernandez (invited)	IMEC	Front side metallization of silicon solar cells by Copper-plating
Jonas Bartsch	ISE	Copper as conducting layer in the front side metallization of crystalline silicon solar cells – Processes, challenges and characterization
Caroline Boulord	INES	Characterization and optimization of electroless nickel plating for front side silicon solar cells metallization
Andrew Mondon	ISE	Advanced front side metallization for crystalline silicon solar cells based on a nickel-silicon contact

10:30 - 10:50 Coffee break

10:50 - 12:00 Session VII: Technology

Frank Heinemeyer	ISFH	Inline-high-rate thermal evaporation of aluminium for novel industrial solar cell metallization
Jan Nekarda	ISE	Industrial inline PVD metallization for highly efficient crystalline silicon solar cells
Willem-Jan de Wijs	Philips AppTech	New technological approach to sintering and contact formation

12:00 - 13:00 Lunch break

13:00 - 14:30 Session VIII: Metallization & Modules

Harry Wirth (invited)	ISE	Solder joint formation and testing on cell busbars
Paul Grunow (invited)	pi Berlin	Soldering of crystalline silicon modules: Losses, reliability and improvements
Marc Köntges (invited)	ISFH	Requirements on metallization schemes on solar cells with focus on photovoltaic modules
Ian Bennett (invited)	ECN	Module integration of back-contact cells: compatibility and durability

14:30 - 15:00 Closing

15:00 - 15:30 Coffee break