Advancing PV: from passivation to contacts

– A passivating contact workshop

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Wednesday 31 January 2018 – Eindhoven, the Netherlands
Welcome to Eindhoven...
... and Eindhoven University of Technology!

Department of Applied Physics and Electrical Engineering
Plasma and Materials Processing group

Group expertise
- Plasma processing
- Thin film deposition
- Nanomaterials
- Variety of applications
  - nanoelectronics
  - solar cells (c-Si, perovskite, CIGS)
  - solid-state batteries
  - ...

c-Si research focus @ TU/e
- Passivating layers & contacts
- Material development by atomic layer deposition
Why this workshop? ➔ bring more focus on fundamentals
Why this workshop? → bring more focus on fundamentals

- Passivating contacts is a hot topic
- Provide a platform to learn more about passivating contacts
- Enable in-depth discussion on underlying physics and materials science
- Understand merits and challenges of passivating contact materials
- Obtain an overview of status and prospects of passivating contacts

How to realize this?
Good turnout: 88 participants from 11 countries

Participants + (young) speakers + funding → interesting discussions!
Workshop program – morning session

Historical perspective: PV technology from classical to novel materials

• Prof. dr. Wim Sinke (ECN / UvA) (9:10 – 9:30)
  “Silicon PV technology development in new perspective”

• Dr. Lars Korte (HZB) (9:30 – 10:15)
  “Introduction to passivating contacts”

Break (10:15 – 10:45)

• Dr. Frank Feldmann (F-ISE) (10:45 – 11:45)
  “Passivating contacts based on poly-Si”

• Dr. Mathieu Boccard (EPFL) (11:45 – 12:45)
  “Passivating contacts based on thin-film silicon and alloys”
Workshop discussion moderators

First part of program (9:10 – 11:45)

Dr. Bram Hoex (UNSW)  
Dr. Bart Geerligs (ECN)

Second part of program (11:45 – 12:45 & 14:30 – 17:00)

Dr. Paula Bronsveld (ECN)  
Dr. Bart Macco (TU/e)

Time planning per speaker: 2/3 presentation + 1/3 discussion

→ your active participation is appreciated!
Workshop program – afternoon session

Lunch with poster session + group picture (12:45 – 14:30) (just outside lecture room)

- Dr. Martin Bivour (F-ISE) (14:30 – 15:30)
  “Passivating contacts based on metal oxides”

Break (15:30 – 16:00)

- Dr. Thomas Allen (KAUST) (16:00 – 17:00)
  “Electron-selective contacts for crystalline silicon solar cells”

Closing

Drinks @ faculty pub “de Salon” (6th floor)

(WiFi available though “eduroam” or “TUe-guest” networks)
Advancing PV: from passivation to contacts (on LinkedIn)

Goals
- Enable easier access to latest developments in surface passivation and passivating contacts
- Information sharing for PV researchers & professionals
- Build a community

You are welcome to join!

Special gift for the first 3 new posts 😊
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Workshop main findings will be available online shortly

Dr. Ingrid Romijn (ECN)

Dr. Jimmy Melskens (TU/e)