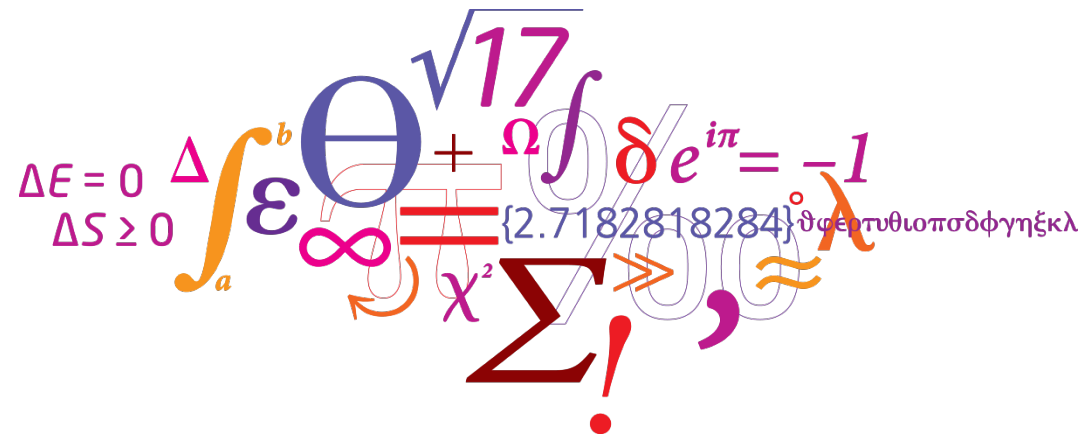


PLAST SOLCELLER – polymer solar cells/organic solar cells/OPV

En videnskabelig kuriositet eller en løsning på verdens energi udfordring

Hanne Lauritzen, hael@dtu.dk

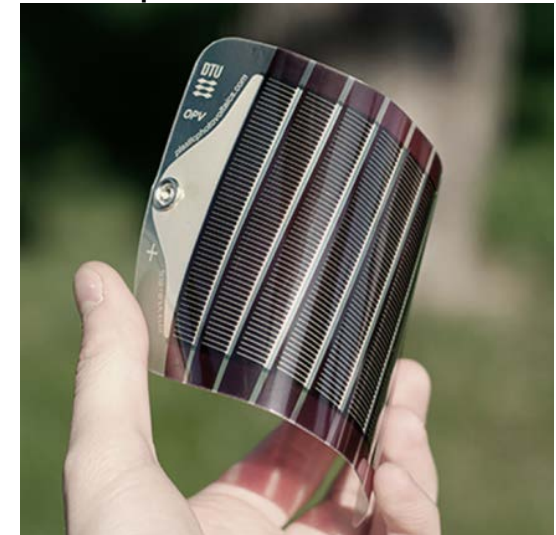
Special adviser

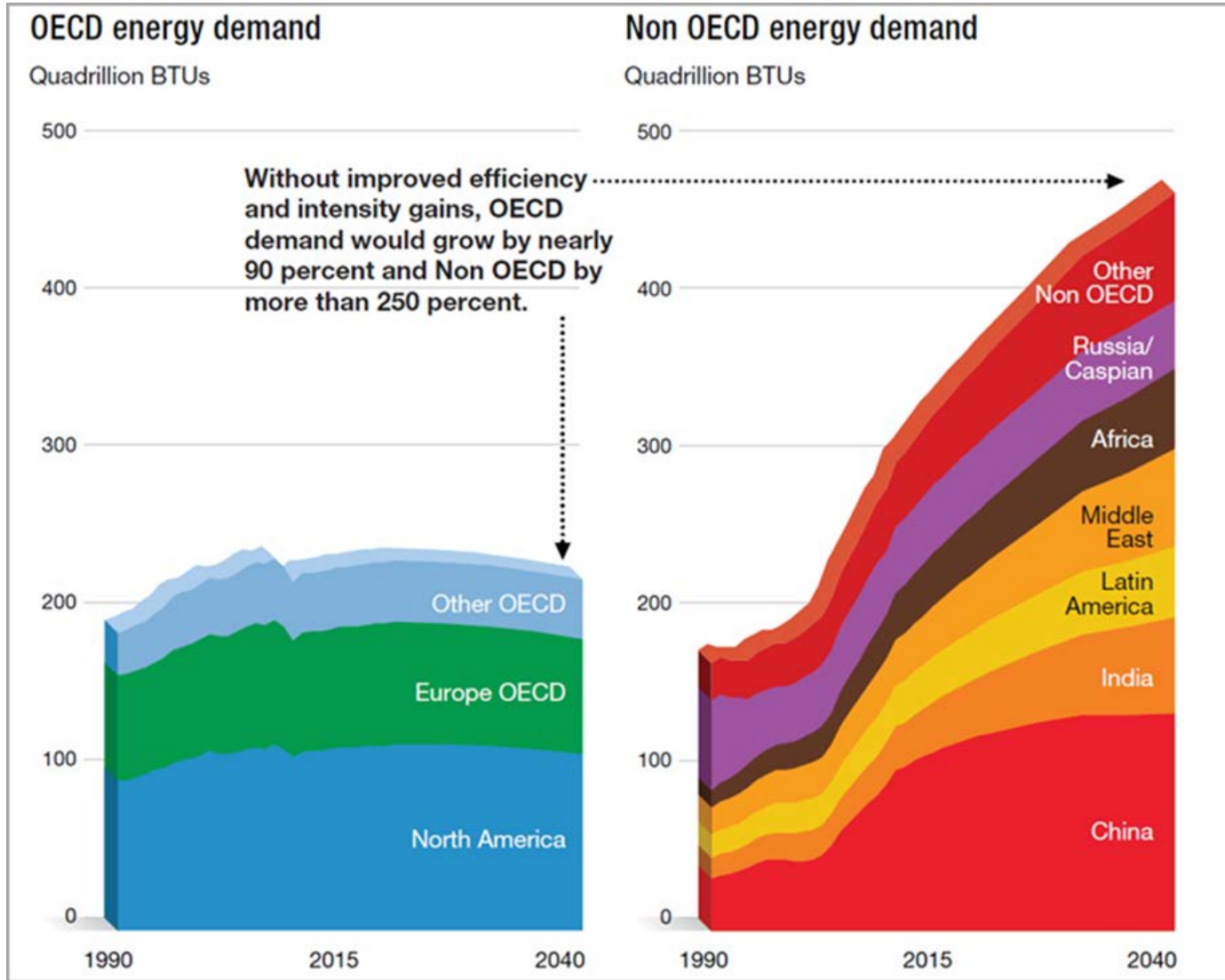


Rulle-til-rulle fremstilling af plast solceller på DTU:

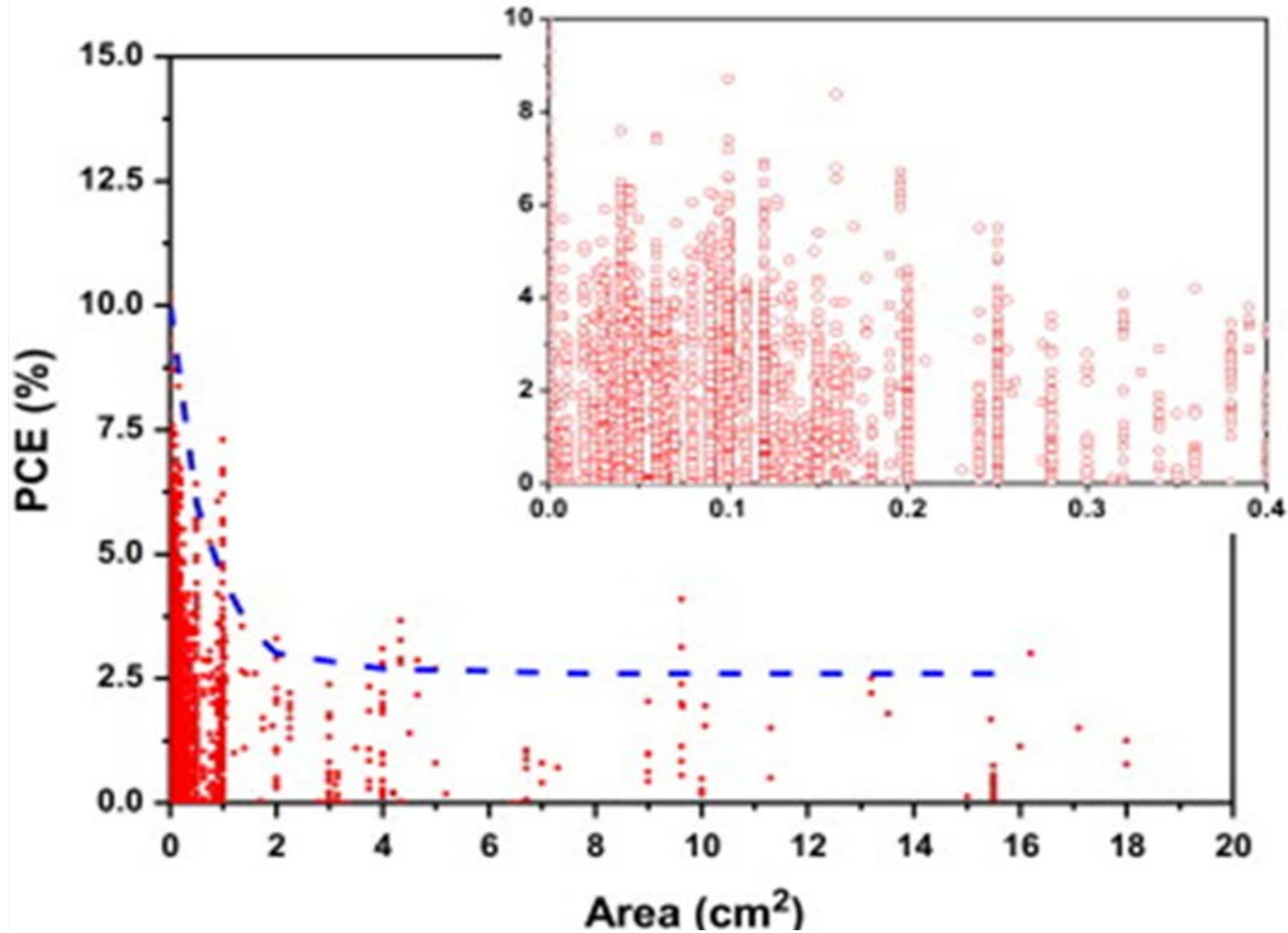


Total procestid: 1 sekund





OPV - Organic Photovoltaics – peer reviewed literature < 2012

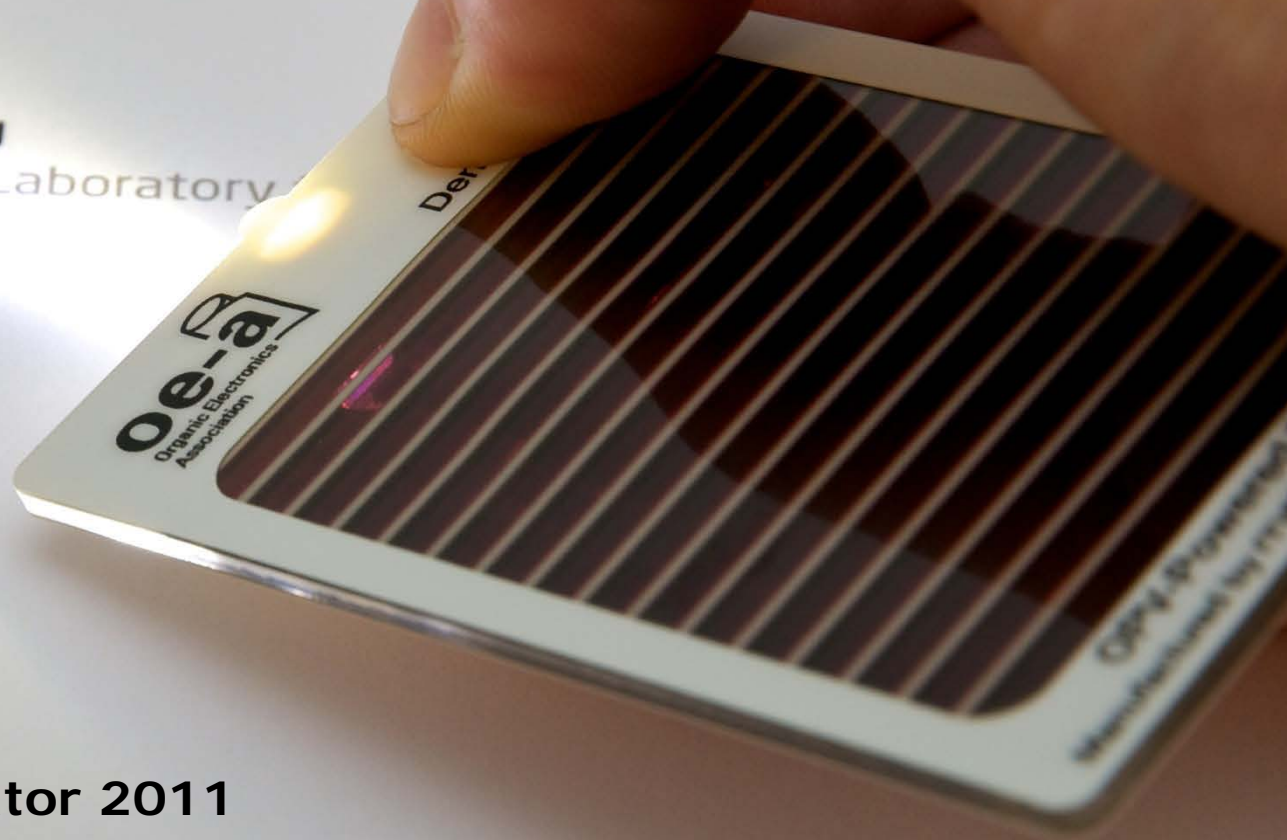


The state of organic solar cells—A meta analysis
Solar Energy Materials and Solar Cells, Volume 119, 2013, 84 – 93
<http://dx.doi.org/10.1016/j.solmat.2013.05.034>

 **Risø DTU**
National Laboratory

oe-a
Organic Electronics
Association

Dem



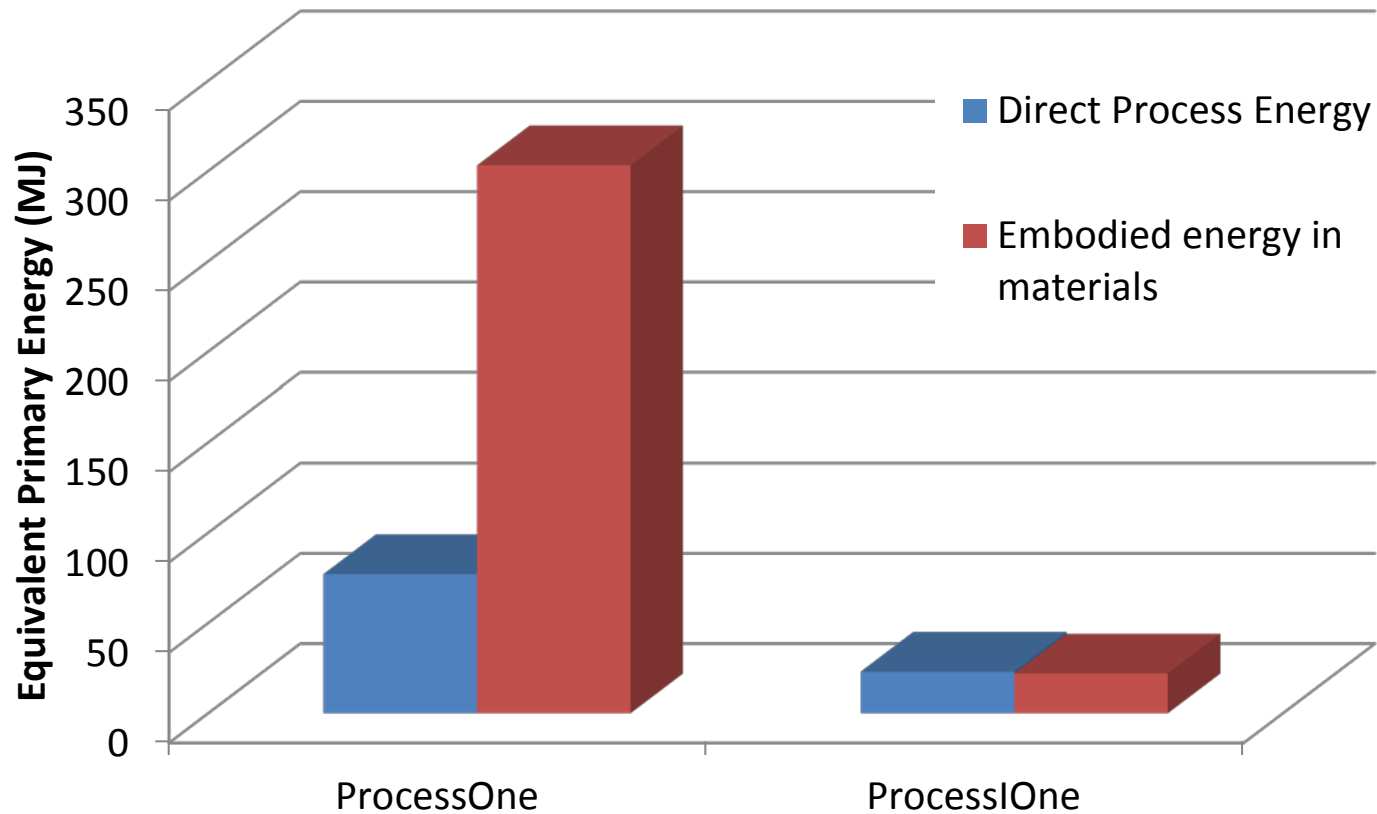
The oea demonstrator 2011

10.000 enheder produceret



0.3 GW, Plataforma Solar de Almería (ES)

LCA: indlejret energi



EPBT ~ 500 dage @ 3%

EPBT ~ 100 dage @ 3%

1 DAG!

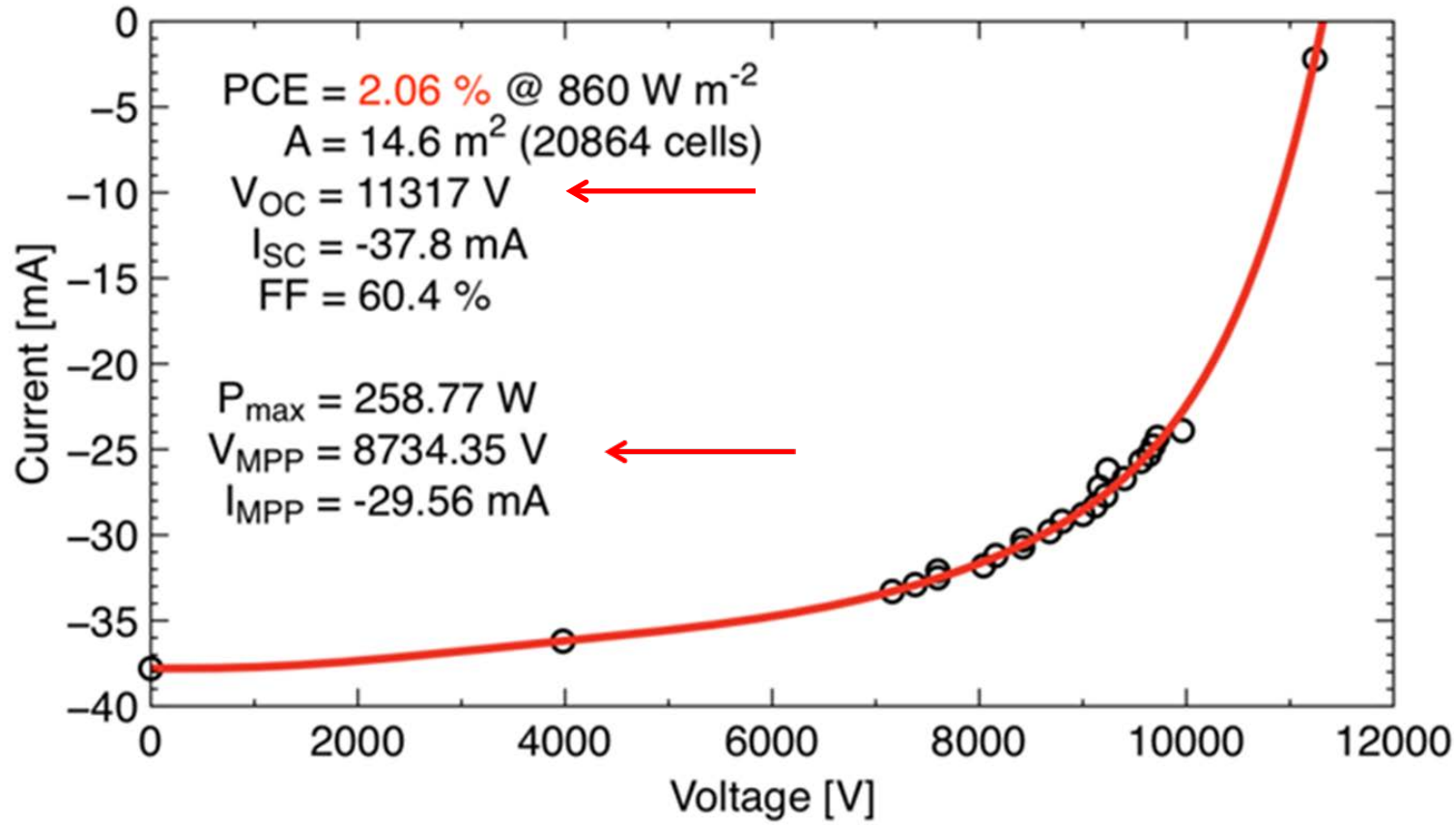
INFINITY handler om energi- og omkostningseffektiv installation, drift og delkommisionering af store anlæg



[video](#)

Den *udskiftelige solcelle folie* monteres på en permanent trækonstruktion i en automatiserbar proces



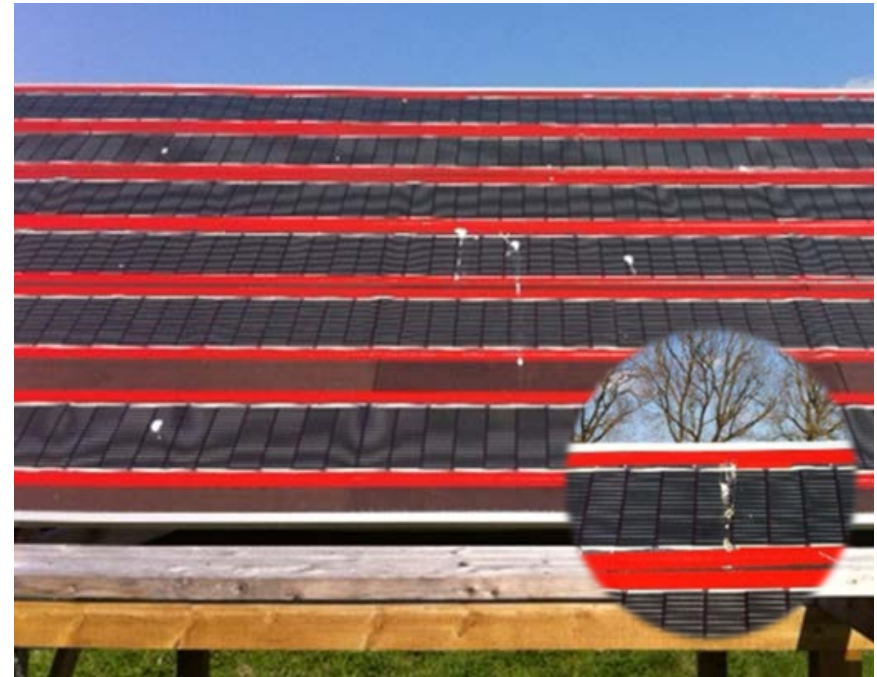


Kun for fagfolk!

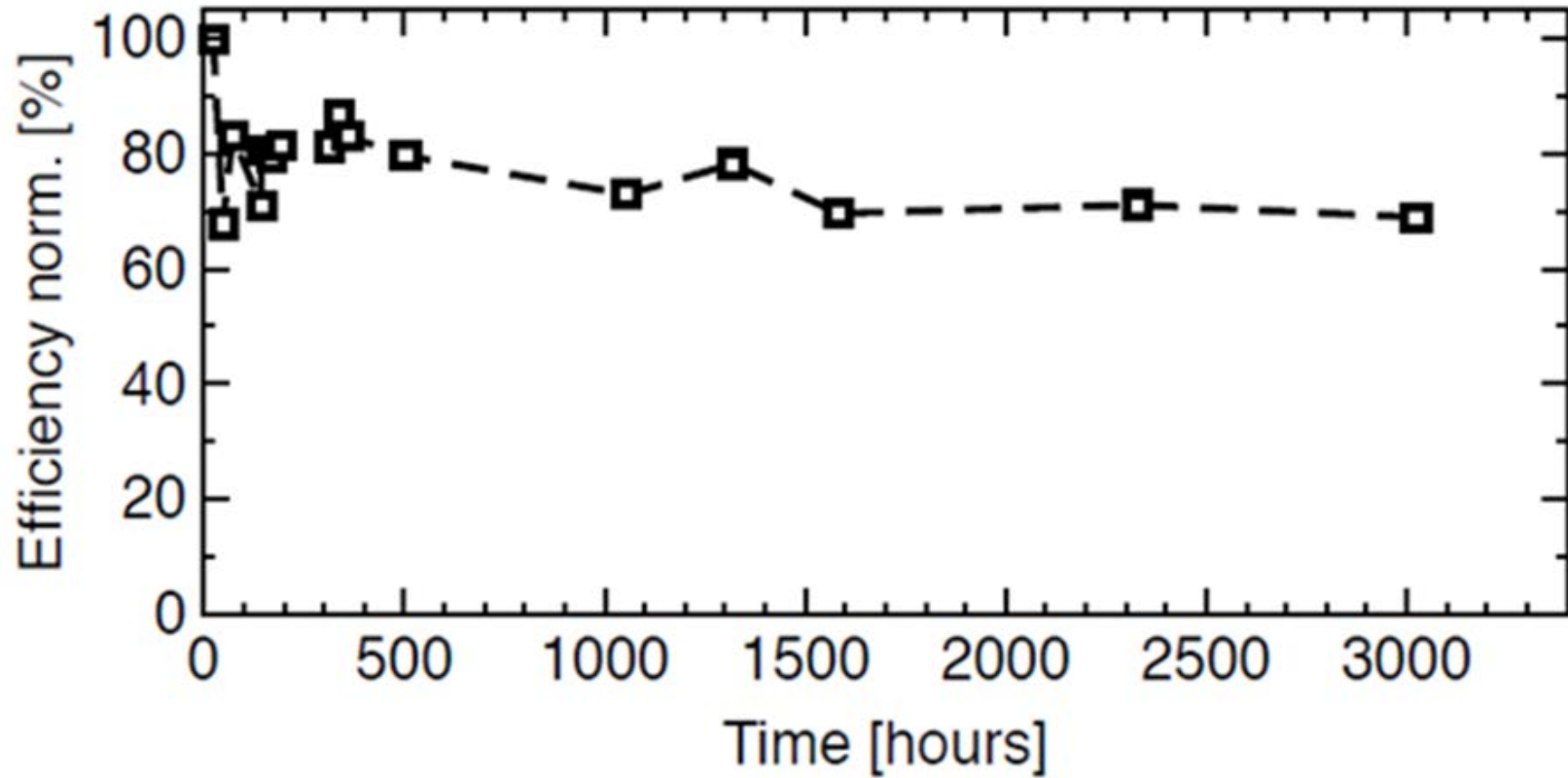


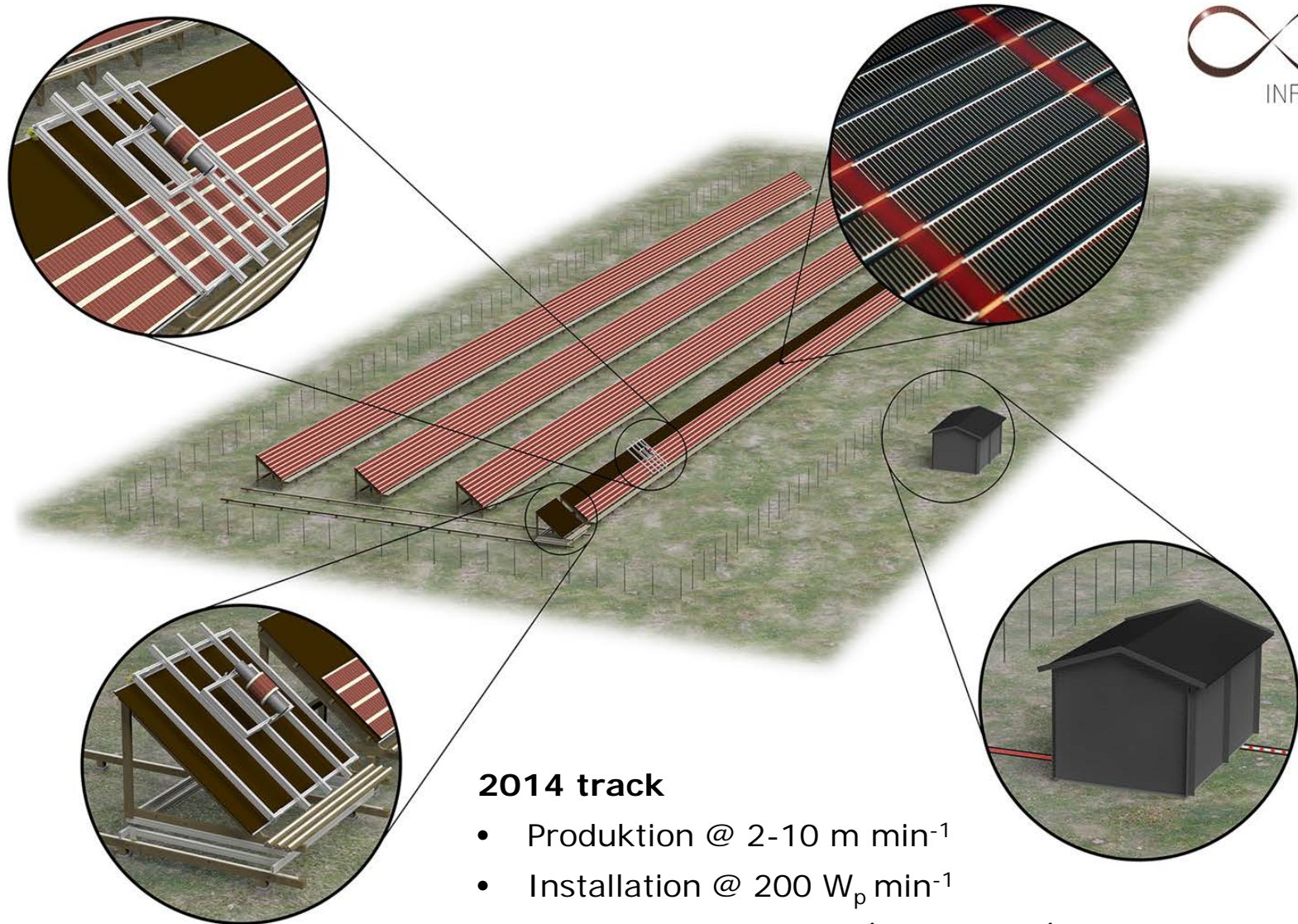
Serial forbindelse af ~20.000 celler

Høj tolerance overfor skygger



Praksis bekræfter vore teoretiske modeller

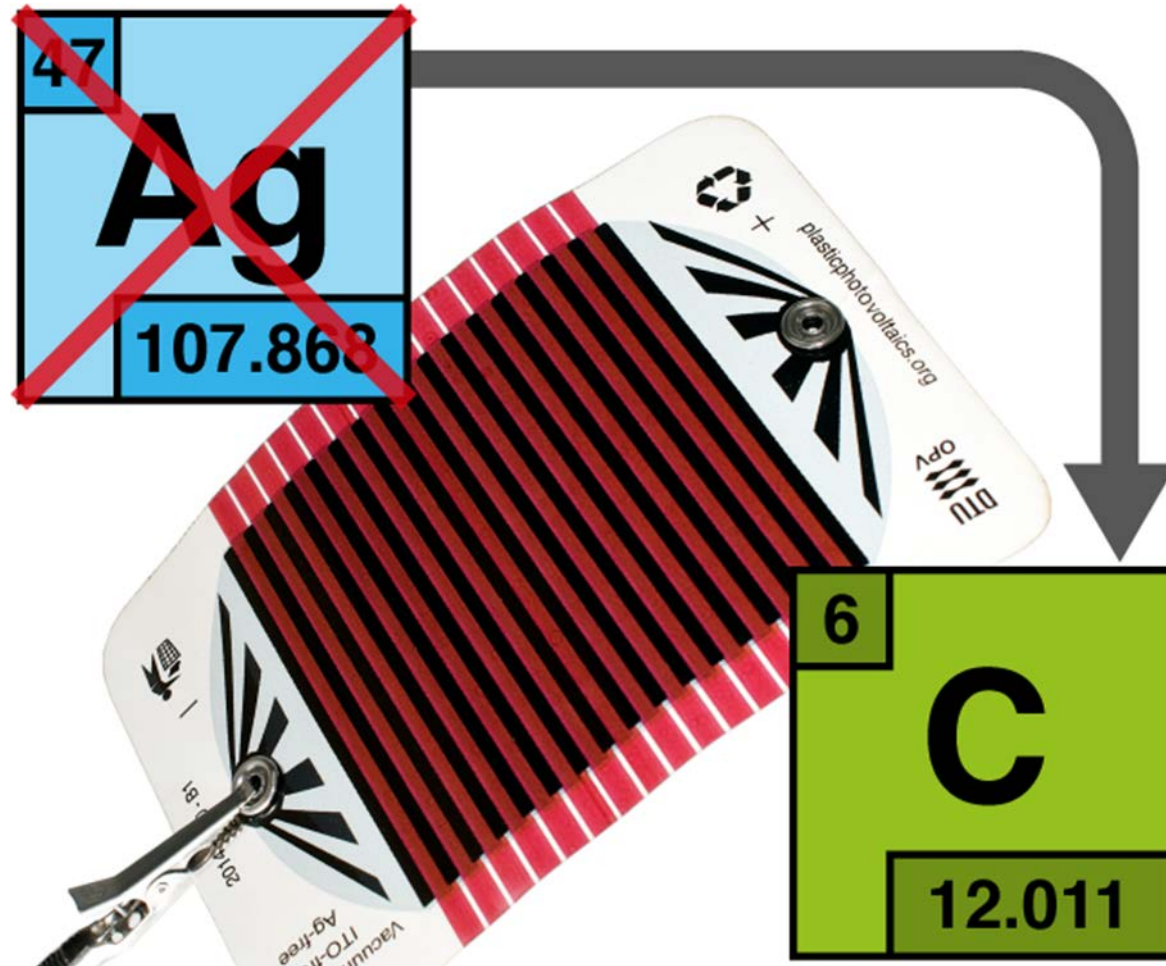




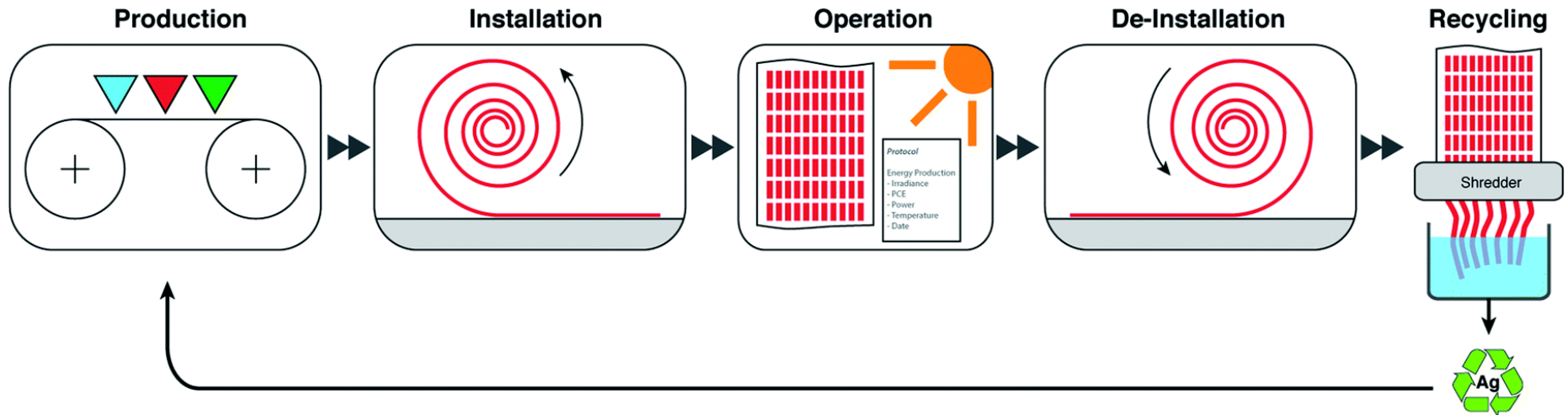
2014 track

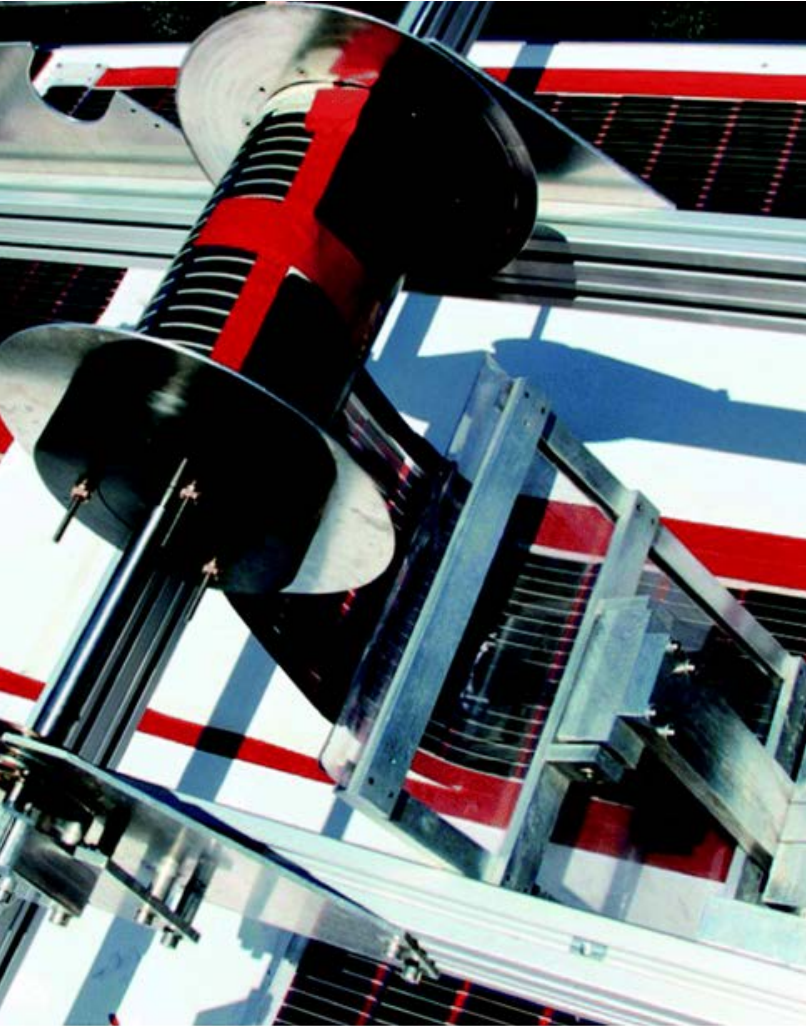
- Produktion @ 2-10 m min⁻¹
- Installation @ 200 W_p min⁻¹
- EPBT_{foil} ~ 4 måneder (syd Europe)
- EPBT_{entire installation} ~ 10 måneder (sydEurope)

Sølv: begrænset ressource, human toksicitet

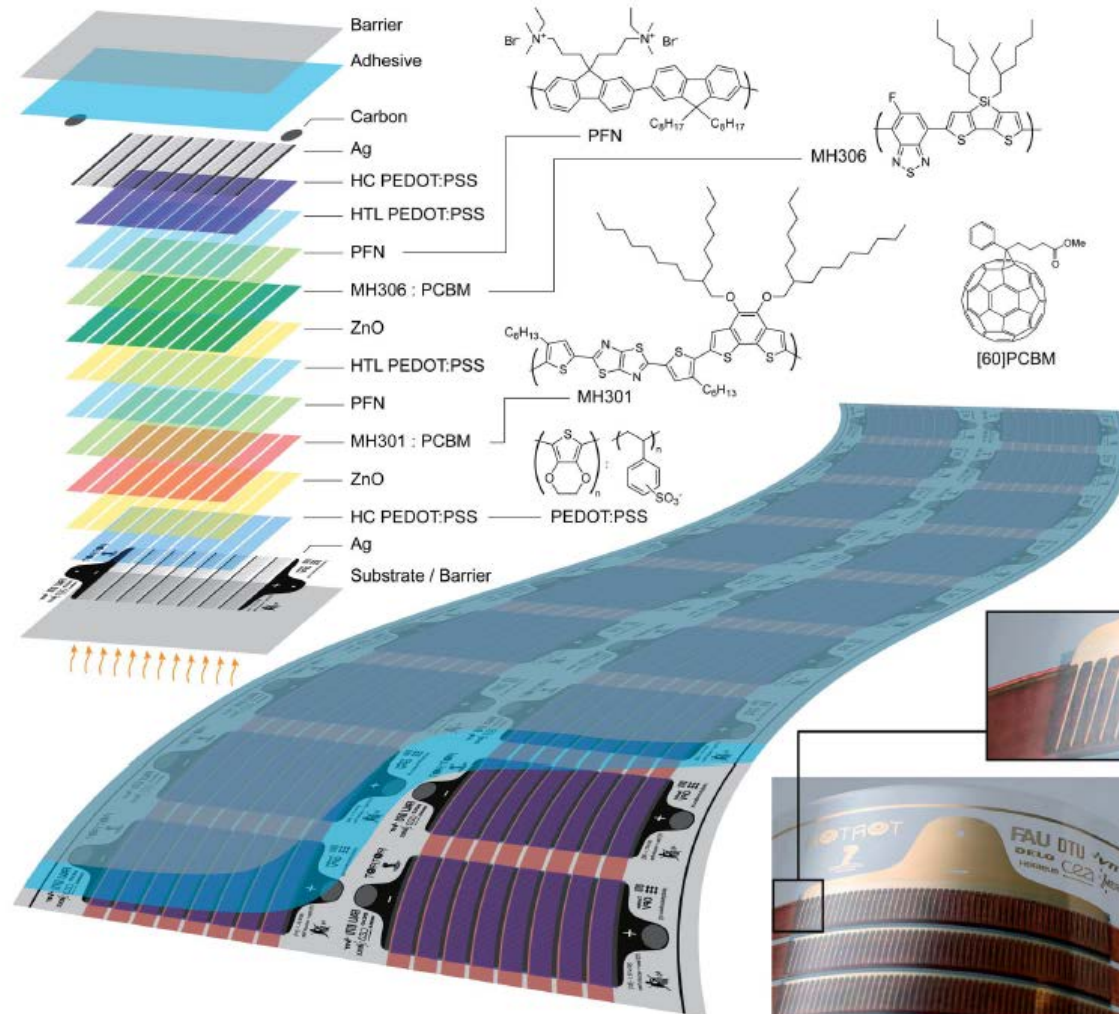


Recirkulering af sølv med 97% udbytte:

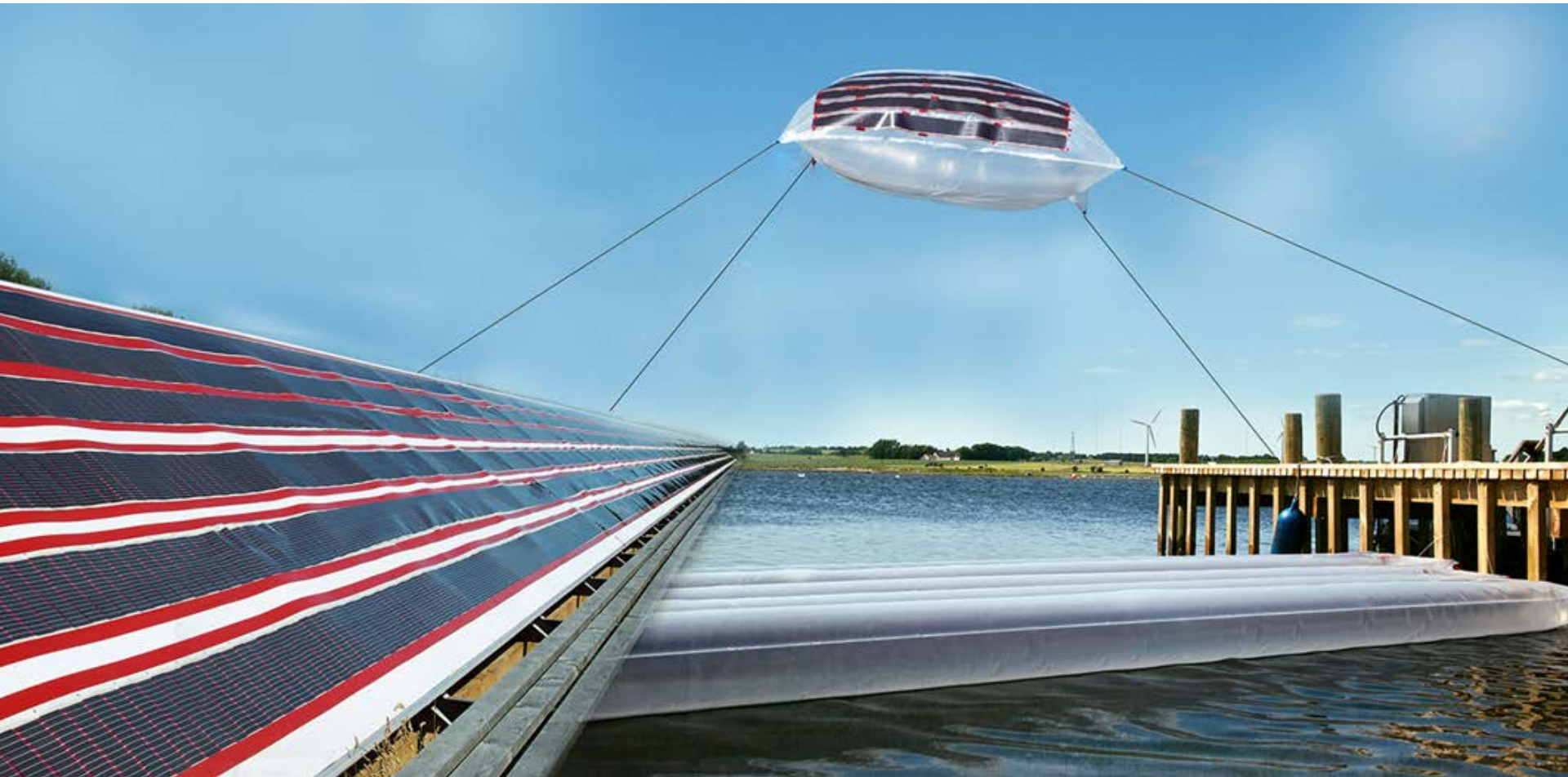




TANDEM celler en mulig løsning på areal udfordringen



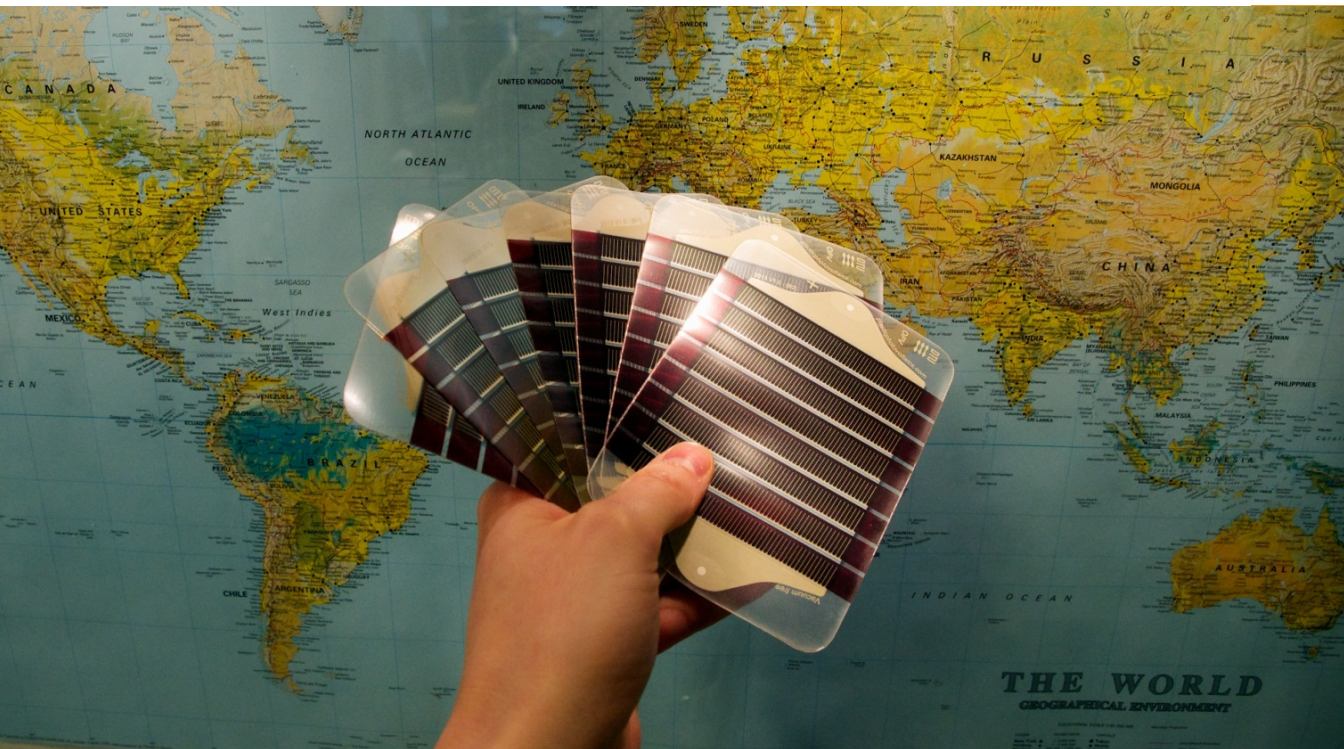
På land, til vands eller i luften



En ganske almindelig dag i laboratoriet.....



freeOPV



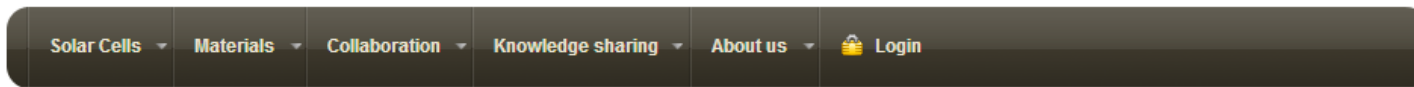
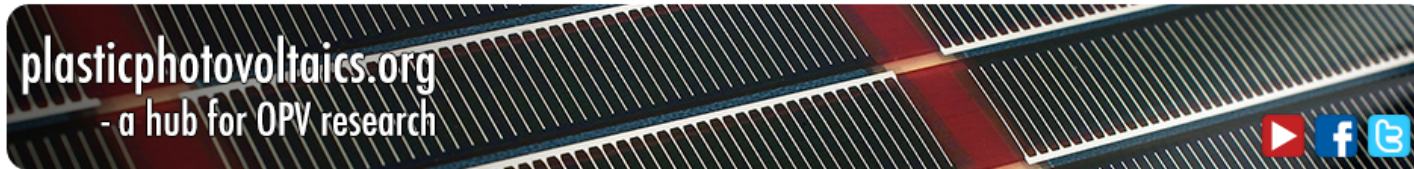
<http://www.plasticphotovoltaics.org/free-opv.html>

The Sun Cinema

showing films in a pool of daylight, <http://www.suncinema.info/>
Imperial Festival, May 2013 in London



For more information: www.plasticphotovoltaics.org



Welcome

On this webpage you will find key news from our research in organic photovoltaics (OPV) and printed organic and polymer solar cells. The webpage also serves as a forum where you can comment and discuss not only our work but also general trends and progress within OPV.

We strive to present our news in a short and accessible manner. If you want to learn more about the topics presented, please refer to our scientific publications where you will find comprehensive scientific descriptions. You will find a list of our recent publications [here](#).

The website is made and maintained by [DTU Energy Conversion](#) at the Technical University of Denmark as a research tool for sharing knowledge about OPV technology, and to serve as a hub for organic solar cell research.

While you are here be sure to order your own [freeOPV module](#) for free ([FAQ](#)) and visit the Characterization Laboratory for Organic Photovoltaics [CLOP](#).

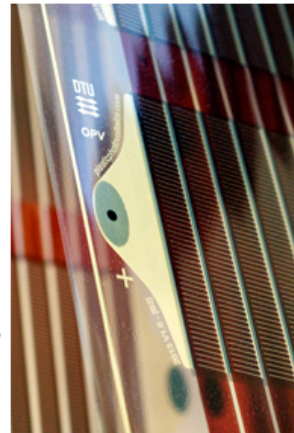
NEW

[coursera](#)

Join our free Coursera course on [Organic Solar Cells - Theory and Practice](#).

Best regards

The OPV team @ DTU Energy Conversion



Social

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Current weather

Temperature: 23.95 °C
 Sample temp: 45.04 °C
 Irradiance: 472.2 W/m²
 Humidity: 61.85 %Rh
 Last update: Fri, 18 Jul 2014
 10:39:46 +0200 - [details](#)

News feed

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Order your free solar cell today. Please go to this link and order your freeOPV module today. [Read more](#)

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55°41'45''N
12°06'17''Ø



Forsknings- og
Innovationsstyrelsen
Ministeriet for Videnskab
Teknologi og Udvikling



Danmarks
Grundforskningsfond
Danish National
Research Foundation



Tak for opmærksomheden!

DTU Energikonvertering og -lagring, Danmarks Tekniske Univer

