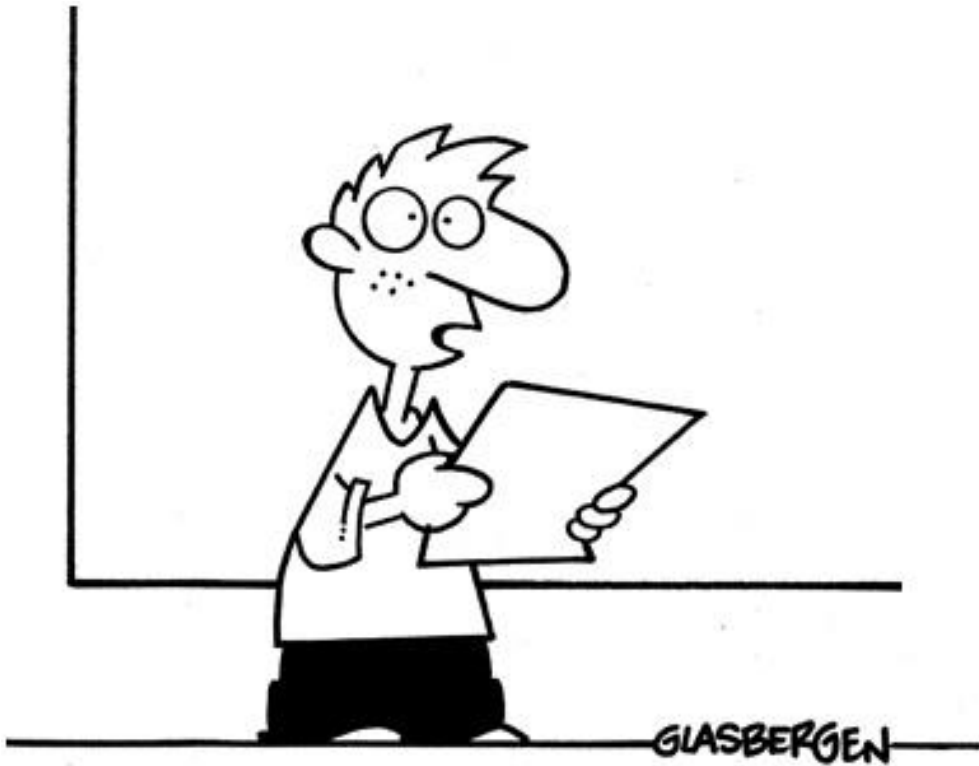


ADVANCED TOPICS



Advanced topics

- Text with **10pp** (max)
- Presentation **10** + 5' (slides in english)
- Groups with **3** people (different from PL groups!)
- Free **topic**

Advanced topics | possible topics 1

FUNDAMENTALS

Theoretical limit for efficiency of silicon solar cells

Theoretical limit for efficiency of n junctions

Up- and down-conversion of photons

Luminescent concentration

Advanced topics | possible topics 2

MATERIALS FOR SOLAR CELLS

N-type silicon

Ribbon silicon

Epitaxial silicon

Upgraded metallurgic silicon

Graphene

Transparent conductors

Advanced topics | possible topics 3

SOLAR CELL TECHNOLOGIES

DSSC solar cells

Organic solar cells

Perovskite solar cells

Silver-less solar cells

Texturing solar cells

Inkjet contact printing

CZTS solar cells

Multijunction solar cells

Spectral splitting solar cells

Bifacial solar cells

Coloured solar cells

Advanced topics | possible topics 4

SYSTEMS AND APPLICATIONS

Cleaning of PV systems

Batteries for PV

Smart grids with PV generation

Recycling

Pico solar

PV impact on the electricity grid

Crowd funding for PV deployment

PV as climate change response strategy

Advanced topics | possible topics 4

SYSTEMS AND APPLICATIONS

Solar rover in the Antarctic

PV & utilities?

PV adopters

PV in Portugal

BIPV products

PV forecasting

PV assisted cars

Solar communities

Solar textiles

floatvoltaics

Agrophotovoltaics

PV paint