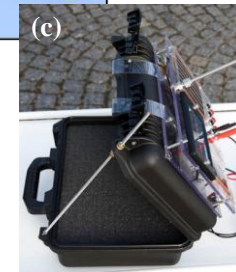
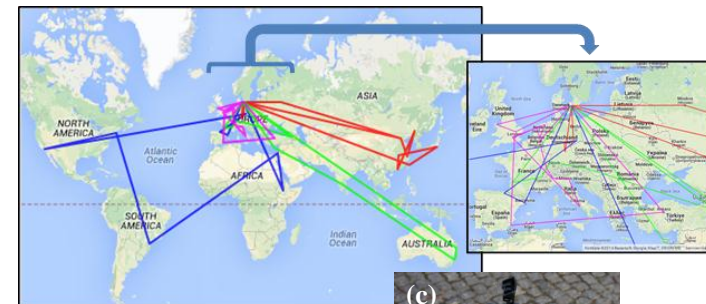
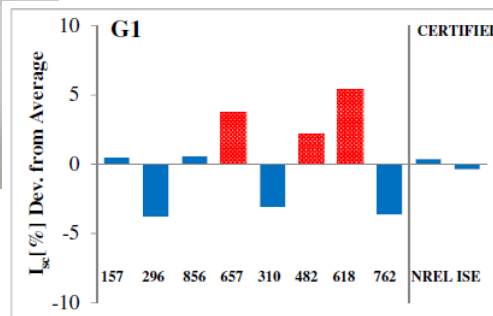
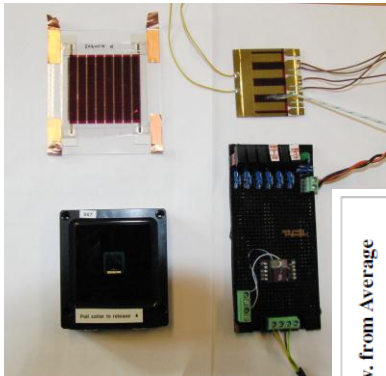


- Establishing data for developing material screening protocols and aging models:
 - Sample production
 - Protocol development
 - Round robin testing

- Improving characterisation/prediction methods and procedures for OPV performance and lifetime studies and clarifying the relations between material properties and performance:
 - Sample production
 - Round robin IV testing
 - Interlaboratory lifetime testing

Partners involved: IMEC, TECNALIA, VTT, CEA-INES, ENEA, JRC, DTU (and EERA)

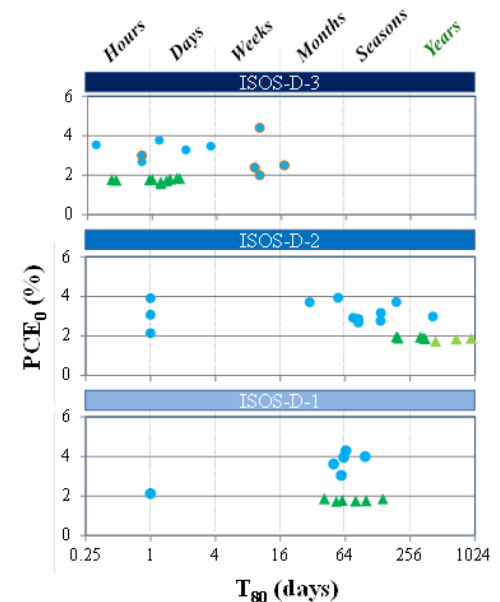
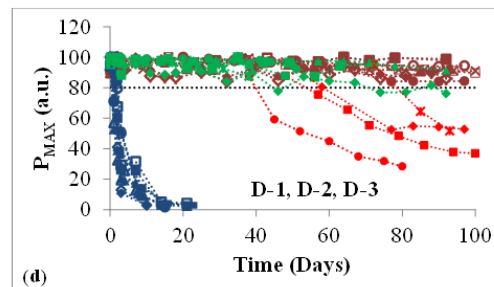
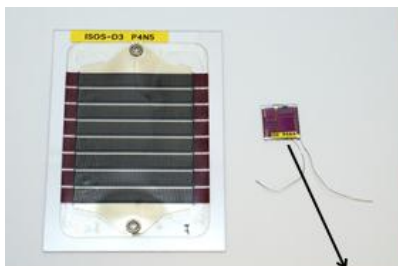
- ✓ **Indoor round robin performance characterization of OPV samples** –
Developed new guidelines, equipment calibration, harmonized measurements, improved device design
- ✓ **Outdoor round robin performance characterization of OPV samples** –
New method of outdoor testing, harmonized outdoor measurements, worldwide dissemination



Renewable Energy 63 (2014) 376–387

Solar Energy Materials & Solar Cells 130 (2014) 281–290

- ✓ **Interlaboratory lifetime testing of OPV samples** – approved existing ISOS guidelines, developed lifetime prediction diagram, harmonized measurements, improved device encapsulation
- ✓ **Barrier material performance vs active material performance vs device lifetime (Ongoing)** – linking properties of device components to device lifetime performance



Polymer Degradation and Stability 109 (2014) 162 – 170

- Round robins resulted in:
 - Harmonized test procedures
 - Improved equipment
 - Improved device designs
- Interlaboratory lifetime tests generated data for creating prediction tools
- Awareness of challenges and issues
- **SOPHIA contributed in bringing OPV one step closer to industrialization**



- Further support of interlaboratory testing (international committee?)
- Lack of equipment for accurate characterization
- **Global online database/platform for data collection, performance modeling and prediction**
- Further support of teaching webinars and workshops on OPV characterization (on academic and industrial levels)

