

Materials List for:

***In Situ* Monitoring of the Accelerated Performance Degradation of Solar Cells and Modules: A Case Study for Cu(In,Ga)Se₂ Solar Cells**

Mirjam Theelen¹, Klaas Bakker¹, Henk Steijvers¹, Stefan Roest², Peter Hielkema³, Nicolas Barreau⁴, Erik Haverkamp^{5,6}

¹TNO Solliance, Thin Film Technology

²Eternal Sun

³Hielkema Testequipment

⁴Institut des Matériaux Jean Rouxel (IMN)-UMR 6502, Université de Nantes, CNRS

⁵ReRa Solutions BV

⁶Institute of Molecules and Materials, Radboud University

Correspondence to: Mirjam Theelen at mirjam.theelen@tno.nl

URL: <https://www.jove.com/video/55897>

DOI: [doi:10.3791/55897](https://doi.org/10.3791/55897)

Materials

Name	Company	Catalog Number	Comments
Hybrid degradation setup	Eternal Sun	Climate Chamber Solar Simulator	More information can be found here: http://www.eternalsun.com/products/climate-chamber/
Sample holders	ReRa Solutions		More information can be found here: https://www.rerasolutions.com/
Sample rack	Demo Delft		More information can be found here: http://www.demo.tudelft.nl/
Gold deposition tool	Polaron Equipment LTD	SEM coating unit E5100	Tool for Au deposition for SEM measurements
Tracer IV software	ReRa Solutions		More information can be found here: https://www.rerasolutions.com/product/tracer-iv-software/
Solar cells	Solliance		More information can be found here: http://www.solliance.eu . Solar cells and modules can also be obtained from many other universities, research institutes and companies
PL mapping setup	GreatEyes	LumiSolarCell	
ILIT mapping setup	Infratec	ImageIR camera and Sunfilm IR lens	
Optical microscopy	Leica	Wild M400	coupled with a Leica DFC 320 camera and Leica Application Suite software, version 4.3.0
IV tester	OAI	OAI TriSol Solar Simulator	coupled with a Keithley SourceMeter 2400 and controlled using IV runner software, version 1.4.0.6.
EQE tester	Homemade		