



**THIRD
GENERATION
PHOTOVOLTAICS:
COLLABORATIVE NETWORKING WORKSHOP**



Room 2.02, Postgraduate Centre, Heriot-Watt University, Riccarton, Edinburgh, EH14 4AS

Programme Day 1: 9am – 6:30pm (then dinner) Thursday 27th May 2010

9.00 a.m.	Welcome Prof. Alan Miller, Deputy Principal: Research & Knowledge Transfer	Heriot-Watt Univ., U.K.
9.10 a.m.	Introduction and Agenda Prof. Bryce Richards	Heriot-Watt Univ., U.K.
Intermediate Band Solar Cells		
9.20 a.m.	Keynote: Quick Guide to Intermediate Band Solar Cells Prof. Antonio Marti	Univ. Politécnica de Madrid Spain
10:00 a.m.	Can Quantum Well Solar Cells break the Shockley-Queisser Limit? Dr. Nicholas Ekins-Daukes	Imperial College London, U.K.
10.30 a.m.	Intermediate Band Solar Cell based on InAs Quantum Dots Prof. Colin Stanley	Univ. Glasgow, U.K.
11.00 – 11.30 a.m.	Morning Tea	
Organic Dyes for Spectral Conversion		
11.30 a.m.	Photoactive Molecules for Harvesting & Converting Light Dr. Neil Robertson	Univ. Edinburgh, U.K.
12.00 p.m.	Organic-Complexes and Nanoparticles to Improve Solar Cell Efficiency Prof. Stefano Polizzi	Univ. Ca'Foscari di Venezia, Italy
12.30 p.m.	Mitigating Fluorescent Dye Performance Limitations in Luminescent Solar Concentrators Dr. Michael Debije	TU Eindhoven, Netherlands
1.00 – 2.00 pm	Lunch	
Nano-engineering for Photovoltaics		
2.00 p.m.	Nanophotonics for Photovoltaics Prof. Darren Bagnall	Southampton Univ., U.K.
2.30 p.m.	Theory and Simulation of Quantum Photovoltaic Devices Dr. Urs Aeberhard	FZ Jülich Germany
3.00 p.m.	Solution Processed Nanoparticle Solar Cells Dr. Andrew Watt	Oxford Univ., U.K.
3:30 p.m.	Self Assembled Photonic Crystals for Photovoltaics Dr. Gudrun Kocher	Heriot-Watt Univ., U.K.
4.00 – 4.30 p.m.	Break	
4.30 – 6.30 p.m.	Inaugural Lecture: Solar Enlightenment – Bringing Photovoltaic Power To Where We Need It Most Prof Bryce Richards (Main Auditorium of Postgraduate Centre)	Heriot-Watt Univ., U.K.
8.00	Dinner – Prestonfield House	

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Programme **Day 2:** 9:30am – 5:00pm Friday 28th May 2010

Up- and Down-Conversion		
9.30 a.m.	Keynote: Photon Conversion with Lanthanides: Up and Down They Go Prof. Andries Meijerink	Univ. Utrecht, Netherlands
10.15 a.m.	Up-Conversion in Rare-Earth Fluorides Dr. Karl Krämer	Univ. Bern, Switzerland
10.45–11.15 a.m. Morning Tea		
Luminescent Solar Concentrators and Characterisation		
11.15 a.m.	Luminescent Solar Concentrators: A Bright Idea for Solar Energy Conversion?" Dr. Amanda Chatten	Imperial College London, U.K
11.45 a.m.	Photonmanagement with Luminescent Materials - Latest Progress in Upconversion and Fluorescent Concentrators Dr. Jan Christoph Goldschmidt	Fraunhofer ISE, Germany
12.15 p.m.	Characterisation of Novel Devices - are Current Characterisation Tools Sufficient for a Successful Market Introduction? Dr. Ralph Gottschalg	Loughborough Univ., U.K.
12.45 – 1.45 p.m. Lunch		
Industrial Approaches		
1.45 p.m.	Photovoltaics R&D at Sharp Laboratories of Europe Dr. Ian Sellers	Sharp Electronic Labs, U.K.
2.15 p.m.	Developements in PV System Technology Mr. Marcus Zettl	GE Global Research, Germany
2.45 p.m.	Optimising Phosphors and Filters for Luminescent Solar Concentrators Dr. Dick de Boer	Philips Research, Netherlands
2..45 p.m. Afternoon Tea – together with...		
2.45 – 5:00 p.m.	Panel Discussion and Collaborative Networking: Panel members: Prof. Bryce Richards, Dr. Neil Robertson, Prof. Darren Bagnall, Dr. Ralph Gottschalg, Dr. Jan Goldschmidt, Dr. Nicholas Ekins-Daukes	
5.00 p.m. Farewell		

Workshop Sponsors



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List of Attendees

UNITED KINGDOM

Prof. Darren Bagnall	Southampton University
Dr. Nicholas Ekins-Daukes	Imperial College London
Dr. Amanda Chatten	Imperial College London
Dr. Ralph Gottschalg	Loughborough University
Dr. Neil Robertson	University of Edinburgh
Dr. Anita Jones	University of Edinburgh
Ms Martina Congiu	University of Edinburgh
Dr. Lucy Moorcraft	University of Edinburgh
Dr. Gudrun Kocher	Heriot-Watt University
Dr. Serena Ciorba	Heriot-Watt University
Prof. John Wilson	Heriot-Watt University
Dr. Tapas Mallick	Heriot-Watt University
Prof. Martin McCoustra	Heriot-Watt University
Prof. Bryce Richards	Heriot-Watt University
Dr. Andrew Watt	Oxford University
Prof. Colin Stanley	University of Glasgow
Dr. Matt Steer	University of Glasgow
Dr. Ian Sellers	Sharp Electronic Labs
Mr. Thimios Klampaftis	Heriot-Watt University
Mr. Sean MacDougall	Heriot-Watt University
Dr. Sam Porro	Heriot-Watt University
Mr. Nabin Sarmah	Heriot-Watt University
Ms. Dorothy Hardy	Heriot-Watt University
Mr. Dave Ross	Heriot-Watt University
Dr. Andy Liken	Heriot-Watt University
Dr. Pascal Lignier	Sasol Technology

ITALY

Prof. Stefano Polizzi	Univ. Ca'Foscari di Venezia
Dr. Luca Bellotto	Univ. Ca'Foscari di Venezia
Dr. Isidora Freris	Univ. Ca'Foscari di Venezia

GERMANY

Dr. Jan Christoph Goldschmidt	Fraunhofer ISE (Freiburg)
Dr. Urs Aeberhard	Forschungszentrum Jülich
Mr. Marcus Zettl	GE Global Research

NETHERLANDS

Dr. Michael Debije	Technical Univ. Eindhoven
Prof. Andries Meijerink	University of Utrecht
Dr. Dick de Boer	Philips Research

SWITZERLAND

Dr. Karl Krämer	University of Bern
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SPAIN

Prof. Antonio Marti	Univ. Politécnica de Madrid
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NEW ZEALAND

Mr. Stefan Meyer	Victoria University of Wellington
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