Project Number: 763977

Project Acronym: PERTPV

Project title: Perovskite Thin-Film Photovoltaics

D6.4

Scientific publications & conference presentations during the first period of the PerTPV project

Lead beneficiary: UOXF

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Delivery date: 30/09/2018

Dissemination level: Public

Revision History

Author Name, Partner short name	Description	Date
Clare Moloney, UOXF	Draft deliverable	25/09/2018
Henry Snaith	Revision 1	27/09/2018
Henry Snaith	Final version	28/09/2018

1. Overview

PerTPV is a highly innovative project which aims to develop very high efficiency thin film solar cells. The “results” of PerTPV are in broad terms, record efficiency solar cells, breakthroughs in long term stability, an understood route to manufacture perovskite cells and a full understanding of the lifecycle impact and means to deploy and recycle perovskite PV modules. To enable these results, innovations are expected throughout the PV value chain, ranging from novel materials, device and module architectures, processes, encapsulation materials and methods, special production tools.

Dissemination of all of this valuable research is planned via a range of means which include publication of papers in journals and talks at conferences.

- **Publication of papers** in high calibre scientific journals via Open Access (Green route). By M12, 4 papers are predicted, 11 before M18 and 24 before M36.

Even at this early stage M6, there have already been 3 published papers, as listed online and below.

1. Zhiping Wang, Qianqian Lin, Bernard Wenger, M. Greyson Christoforo, Yen-Hung Lin, Matthew T. Klug, Michael B. Johnston, Laura M. Herz & Henry J. Snaith.
   High irradiance performance of metal halide perovskites for concentrator photovoltaics. Nature Energy (2018). doi.org/10.1038/s41560-018-0220-2

2. Magomedov, A. Al-Ashouri, E. Kasparavičius, S. Strazdaite, G. Niaura, M. Jošt, T. Malinauskas, S. Albrecht, V. Getautis
   Self-Assembled Hole Transporting Monolayer for Highly Efficient Perovskite Solar Cells. *Adv. Energy Mater.* doi:10.1002/aenm.201801892

3. D. Vaitukaityte, Z. Wang, T. Malinauskas, A. Magomedov, G. Bubniene, V. Jankauskas, V. Getautis, H. J. Snaith
   Efficient and Stable Perovskite Solar Cells Using Low-Cost Aniline-Based Enamine Hole-Transporting Materials. *Adv. Mater.* 2018, doi:10.1002/adma.201803735

- **Talks at conferences.** At least 5 presentations are expected each year from partners at a variety of well respected, high impact events such as the EMRS, European Materials Research Society, MRS Materials Research Society (Fall and Spring, USA), PSCO Perovskite Solar Cell and Optoelectronics Conference, HOPV Europe and HOPV Asia to name a few. Please see list attached which detail some of the presentations given on behalf of PerTPV to date.

1	Participation to a conference	Vytautas Getautis (Invited speaker)	Molecular Engineering of Small Molecule Hole Transporting Materials for Photovoltaic Application	International Conference on Organic Synthesis Balticum Organicum Syntheticum BOS 2018	July 1-4, 2018	Tallinn, Estonia.	Scientific community – higher education, research, industry	200
2	Participation to a conference	Artiom Magomedov (first author) Vytautas Getautis (main leader)	Pyridination of Hole Transporting Material in Perovskite Solar Cells (poster)	International Conference on Organic Synthesis Balticum Organicum Syntheticum BOS 2018	July 1-4, 2018	Tallinn, Estonia.	Scientific community – higher education, research, industry	200
3	Participation to a conference	Artiom Magomedov (oral presentation	Carbazole-based hole transporting materials for perovskite solar cells: synthesis, stability and further	The 2018 E-MRS Fall Meeting and Exhibit,	September 17-20, 2018	Warsaw University of Techn	Scientific community – higher education,	1230

		)	development			ology, Warsaw, Poland	research, industry	
4	Participation to a conference	Taisuke Matsui (first author) Mohammad Khaja Nazeeruddin ,Vytautas Getautis (main leaders) (poster)	Additive-free triphenylamine derivative polymeric hole transport materials for stable perovskite solar cells	EMRS	September 17-20, 2018	Warsaw University of Technology, Warsaw, Poland	Scientific community – higher education, research, industry	1230
5	Participation to a conference	Sarune Daskeviciute (first author) Henry Snaith, Vytautas Getautis (main	Amorphous, Fluorene-Based Hole Transporting Materials for Efficient and Stable Perovskite Solar Cells	International Conference on Hybrid and Organic Photovoltaics (HOPV18)	May 28 - 31, 2018	Benidorm, Spain	Scientific community – higher education, research, industry	300

		leaders) (poster)						
6	Participation to a conference	Artiom Magomedov (first author) Mohammad Khaja Nazeeruddin, Vytautas Getautis (main leaders) (poster)	Pyridination of Hole Transporting Materials in Perovskite Solar Cells	International Conference on Hybrid and Organic Photovoltaics (HOPV18)	May 28 - 31, 2018	Benidorm, Spain	Scientific community – higher education, research, industry	300
7	Participation to a conference	Ernestas Kasparavičius (first author) Vytautas Getautis (main leader) (poster)	Stability investigation of oxidized hole-transporting materials	Advanced materials and technologies: 20th international conference - school	August 27-31, 2018	Palanga, Lithuania	Scientific community – higher education, research, industry	137

8	**Participation to a conference**	**Zhiping Wang** **Oral presentation**	**Enabling efficient and long-term stable perovskite solar cells**	**EMRS**	**September 16-21, 2018**	**Warsaw, Poland**	**Scientific community – higher education, research, industry**	1230