

CURRICULUM VITAE

Maria Vasilopoulou

PHD, Researcher B'

Leader of the Organic and Perovskite Electronics group

Institute of Nanoscience and Nanotechnology (INN)

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PERSONAL DATA

Date of birth: January 25, 1971

City and Country of birth: Munich, Germany

Marital status: Married, two children 15 and 22 years of age.

EDUCATION

2002 Ph.D. in Materials and Processes for Photolithography, School of Chemical Engineering, National Technical University of Athens (NTUA), Athens, Greece-PhD Thesis entitled: "Novel Materials and Processes for High Resolution Photolithography"

1997 Post-Graduate Study Program (equivalent to Master Degree) in Experimental Condensed Matter and Materials Physics (NCSR D, NTUA).

1995 B.Sc. in Physics, Department of Physics, National and Kapodistrian University of Athens.

WORK EXPERIENCE

2017-today Senior Researcher (B'), Institute of Nanoscience and Nanotechnology (INN), NCSR D.

2006 – 2016 Scientific Staff, Institute of Nanoscience and Nanotechnology (INN), NCSR D.

2002 – 2013 Adjunct Assistant Professor on contract, Technological and Educational Institute (TEI) of Piraeus, Athens, Greece.

2002–2006 Collaborating Postdoctoral Researcher, Institute of Nanoscience and Nanotechnology (INN), NCSR D. Research in Molecular Semiconducting Electronic Materials and Plastic Devices.

TEACHING ACTIVITIES

2018-today Applied Spectroscopy" and "Introduction to Organic and Perovskite Optoelectronics"/Inter-Institutional Master between INN/DEMOKRITOS and Department of Materials Science/University of Patras/Informatics, National and Kapodistrian University of Athens, Greece.

2010-2019 Organic Electronics, Inter-Institutional Master between INN and Department of Informatics, National and Kapodistrian University of Athens, Greece.

2002-2006 Optoelectronics, Department of Electronics, Technological Institute of Piraeus, Greece.

2002-2010 Condensed Matter and Materials Physics, Department of Electronics, Technological Institute of Piraeus, Greece

SCHOLARSHIPS – HONORS

December 2017 The manuscript "Hydrogen and nitrogen codoping of anatase TiO₂ for efficiency enhancement in organic solar cells, Maria Vasilopoulou, Nikolaos Kelaidis, Ermioni Polydorou, Anastasia Soultati, Dimitris Davazoglou, Panagiotis Argitis, Giorgos Papadimitropoulos, Dimitris Tsikritzis, Stella Kennou, Florian Auras, Dimitra G. Georgiadou, Stavros-Richard G. Christopoulos & Alexander Chroneos, *Scientific Reports* 7, 17839 (doi:10.1038/s41598-017-18051-0), 2017" was included by the Publisher (Nature group) in the highlights of the month (<https://www.nature.com/subjects/electrocatalysis>).

2016 The manuscript "Highly conductive, optically transparent, low work-function hydrogen-doped boron-doped ZnO electrodes for efficient ITO-free polymer solar cells, Ermioni Polydorou, Anastasia Soultati and Maria Vasilopoulou, *Journal of Materials Chemistry C*, 691, 2016" was selected by the Publisher (Royal Society of Chemistry) as Hot Article 2016 (<http://pubs.rsc.org/en/content/articlelanding/2016/tc/c5tc04001a#!divAbstract>).

September 2015 Best Poster Award at XXXI Panhellenic Conference on Solid State Physics and Materials Science, 16-19 September 2015, Thessaloniki, Greece for the poster entitled "Hydrogenated Zinc and Titanium Oxide Cathode Interlayers For Efficient and Stable Inverted Organic Solar Cells".

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2015 Candidate for the annual ENI price in Energy (Nominated from the Organization Comitee).

May 2012 Best Poster Award at the EMRS 2012 Spring Meeting, 14-18 May 2012, Strasbourg, France for the poster entitled "Water-soluble porphyrin thin films as nanostructured electron extraction layers in organic photovoltaic cells".

May 2010 Our work was highlighted by Electronic Business Journal Vertical News, Electronics, (about our work related to application of molecular oxides in OLEDs <http://www.verticalnews.com/newsletters/Electronics-Newsweekly/2010-05-26/60695ELE.html>).

1996-2001 PhD Research Scholarship, Institute of Microelectronics, NCSR-D.

INVITED TALKS AND SEMINARS

2022 Invited talk at 2022 DISPLAY WEEK INTERNATIONAL SYMPOSIUM, San Jose McEnergy Convention Center San Jose, California, US, May 10-13, 2022, M. Vasilopoulou, "Quantum-dot-in perovskite NIR LEDs"

2022 Solid-State Lighting Workshop, Department of Energy (DOE), US, 31 January-3 February 2022, On-line event, "Blue OLEDs with below bandgap electroluminescence"

2016 Invited talk at Energy Materials Nanotechnology (EMN) Beijing Meeting (Beijing, April 21-25, 2016): *Molecular Oxides as Novel Charge Transport Layers in Organic Photovoltaics*

2016 Invited talk at Energy Materials Nanotechnology (EMN) Meeting on Titanium-Oxides (Hawaii, March 27-31, 2016): *Passivation of TiO₂ layers for high efficiency organic photovoltaics*.

2015 Invited talk at Energy Materials Nanotechnology (EMN) Meeting on Optoelectronics 2015 (Beijing, April 24-27, 2015): *Efficient passivation methods of titanium oxide surface traps for application in optoelectronic devices*.

2015 Invited talk at Energy Materials Nanotechnology (EMN) Meeting on Polymers 2015 (Orlando, Florida, January 7-10, 2015): *Enhanced Structural Order of Polymer Photovoltaic Devices Deposited on Hydrogenated Metal Oxide Surfaces*.

2014 Invited Seminar at the 49th Summer School of the National Center for Scientific Research Demokritos Athens, Greece, July 2014: *Organic Optoelectronics for a Brighter Future*.

2014 Invited Seminar at the Department of Materials Science of the University of Patras, Greece, June 2014: *Organic Light Emitting Diodes and Applications*.

2014 Invited Seminar at the Department of Chemistry of the University of Athens, Greece, March 2014: *Organic Optoelectronics*.

2014 Invited Seminar at the Department of Physics of the University of Patras, Greece, June 2014: *Organic Photovoltaics*.

2013 Invited talk at International Semiconductor Device Research Symposium (ISDRS) 2013, December 11-13, 2013, Washington: *Transition Metal Oxides as Hole/Electron Extraction Interfacial layers in Organic Photovoltaics*.

2013 Invited presentation, Department of Electrical Engineering, University of Maryland, Washington DC, USA, December 12, 2013: *Application of transition metal oxides in organic optoelectronics*.

2011 Invited talk at 10th International Conference on Nanosciences & Nanotechnologies (NN11), July 9-12 2011, Thessaloniki, Greece: *Solution-processed materials for successful interface engineering in bulk heterojunction organic photovoltaics*.

2011 Invited talk at 8th International Conference on Nanosciences & Nanotechnologies (NN11), July 12-15 2011, Thessaloniki, Greece: *Interface engineering in organic optoelectronic devices using polyoxometallate electron transport layers*.

2011 Invited talk at 1st International Conference on Bioinspired Materials for Solar Energy Utilization "BIOSOL2011" Chania, Crete, Greece, 12 -17 September 2011: *Interface engineering in organic optoelectronic devices using porphyrin transport layers*.

2011 Invited Seminar at the 46th Summer School of the National Center for Scientific Research Demokritos Athens, Greece, July 2011: *Organic/Plastic Electronics*.

2010 Invited Seminar at the 45th Summer School of the National Center for Scientific Research Demokritos Athens, Greece, July 2010: *Organic LEDs: towards cost effective solid state lighting*.

ORGANISATION OF CONFERENCES/SCIENTIFIC MEETINGS

2016 International Advisory Committee of Energy Materials Nanotechnology (EMN) Beijing Meeting 2016 (Beijing, April 21-25, 2016)

2015 International Advisory Committee and Workshop Chair of Energy Materials Nanotechnology (EMN) Meeting on Optoelectronics 2015 (Beijing, April 24-27, 2015).

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

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Supervisor of 2 postdocs (Dr. Dimitra Georgiadou, Dr. Anastasia Soultati), 4 PhD students (Ermioni Polydorou, Marinos Tountas, Apostolis Verykios, Christina Scoulikidou), 10 master and more than 15 undergraduate students of NTUA, University of Athens, University of Patras and TEI of Piraeus.

RESEARCH PROJECT PARTICIPATION (as a key Researcher)

2013-2015. “Implementing advanced interfacial engineering strategies for highly efficient hybrid solar cells” within the framework of Research Grants ARISTEIA II, Budget: 300.000 Euros, Funding: Ministry of Education, Lifelong Learning and Religious Affairs, Greece, Role in project: Member of the Research Team.

2012-2015. “Plasma directed assembly of nanostructures and applications” (PlasmaNanoFactory) within the framework of Research Grants ARISTEIA, Budget: 370.000 Euros, Funding: Ministry of Education, Lifelong Learning and Religious Affairs, Greece, Role in project: Member of the Research Team.

2012-2015 “Polymeric photonic systems for application in information technologies” (PHOTOPOLIS) within the framework of Research Grants THALES, Budget: 600.000 Euros, Funding: Ministry of Education, Lifelong Learning and Religious Affairs, Greece, Role in project: Member of the Research Team.

2012-2014 “Novel and highly efficient Hybrid organic photovoltaic cells” (NH₂OPV) within the framework of Research Grants ARCHIMEDES - III, Budget: 100.000 Euros, Funding: Ministry of Education, Lifelong Learning and Religious Affairs, Greece, Role in project: Member of the Research Team.

2012-2014 “Novel low power consumption Hybrid OLEDs with improved operational characteristics” (NH₂OLED) within the framework of Research Grants ARCHIMEDES - III, Budget: 100.000 Euros, Funding: Ministry of Education, Lifelong Learning and Religious Affairs, Greece, Role in project: Member of the Research Team.

2007-2009 “Development of Technology for Colour Tuning of OLEDs” within the framework of Research Grants ARCHIMEDES-II, Budget: 50.000 Euros, Funding: Ministry of Education, Lifelong Learning and Religious Affairs, Greece, Role in project: Member of the Research Team.

2005-2007 EU ESPRIT, Open Long Term Research, «Microprotein», EU GROWTH, Budget: 300.000 Euros, Funding Agency: European Union, Role in project: postdoctoral researcher.

2002-2003 EU ESPRIT Long Term Research, «RESIST 193» (Resists for 193 nm lithography), Budget: 200.000 Euros, Funding Agency: European Union, Role in project: PHD student.

1998-2000 "NANCAR" (Nanofabrication with chemically amplified resists), Budget: 300.000 Euros, Funding Agency: European Union, Role in project: PHD student.

RESEARCH INTERESTS-PUBLICATIONS

The research interests of the PI focus on the improvement of the interfaces between the active component (e.g., organic semiconductor) and the electrode materials of organic photovoltaics (OPVs), organic light emitting diodes (OLEDs) and, recently, of perovskite solar cells in order to enhance the device efficiency and stability. The above can be achieved by modifying these interfaces with several compounds of different functionality like metal oxides of various stoichiometries, polyoxometalates, porphyrins etc, by altering the polarity of the interfaces and by surface passivation of thin films using atomic layer deposition. The main purpose of this work is to develop of an understanding of the main physical processes that influence devices efficiency and stability, which represents a major challenge in the field of green photovoltaic technologies, in general.

The PI has **95 publications** in scientific journals, the **48** of them during the last 5 years (the publication list of the last 5 years is presented below). The major contribution of the PI and her ability to guide research is evident from these publications as she is the first or the last author in most of them while she is the corresponding author in 45 papers. Her work has received about **1350 citations (h index=22)** (Source: Google Scholar, January 2018), 716 of which during the last 3 years. The high impact of her work can be concluded from the very high impact factor journals where she publishes such as Energy Environmental Science (IF: **29.518**), Advanced Energy Materials (IF: **16.721**), Journal of the American Chemical Society (IF: **13.858**), NanoEnergy (IF: **12.343**), Advanced Functional Materials (IF: **12.124**), Journal of Physical Chemistry Letters (IF: **9.353**), Journal Materials Chemistry A (IF: **8.857**), ACS Applied Materials Interfaces (IF: **7.504**) etc. From the published work it is also evident that the PI is talented in different experimental aspects of research which offers a great advantage in scientific problem solving. She also has more than 80 presentations in international conferences and is a holder of 3 patents.

GRANDED PATENTS: 3

1. P. Argitis, M. Vasilopoulou, E. Gogolides, E. Tegou, I. Raptis, "Microlithographic materials and processes based on poly (hydroxyalkyl acrylates)" Greek Patent, no 1003420/1.9.2000.

2. P. Argitis, E. Gogolides, E. Couladouros, V. Vidali, M. Vasilopoulou, G. Cordoyanis, "Polycarbocyclic derivatives for modification of resist optical and Etch resistance properties", International (PCT) Patent Application,

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PCT/EP/02/12284, 30-10-2002.

3.P. Argitis, G. Pistolis and M. Vasilopoulou, "Tuning the emitting color of single layer, patterned full color Organic Light Emitting Diodes" International (PCT) Patent Application 17-6-06.

INVITED BOOK CHAPTER: 1

"Printable Mesoscopic Perovskite Solar Cells" by Maria Vasilopoulou and Mohammad Khaja Nazeeruddin to be published by Wiley Interscience

"Semi-Conducting Organic Molecules" by M. Vasilopoulou in Encyclopedia of Physical Organic Chemistry (editor prof. Zerong Daniel Wang) which was published in 2016 from Wiley Interscience.

CAREER BREAKS

1999-2000 (one year): Birth of my first child

2006-2007 (one year): Birth of my second child

REFeree IN JOURNALS

Energy & Environmental Science, Journal of the American Chemical Society, Chemistry of Materials, Advanced Materials, Advanced Energy Materials, Advanced Functional Materials, ACS Applied Materials Interfaces, ACS Applied Energy Materials, NanoLetters, Journal of Physical Chemistry Letters, Journal of Materials Chemistry A, Journal of Materials Chemistry C, RSC Advances, Journal of Physical Chemistry, Chemical Physics Letters, Applied Physics Letters, Nature Communications, Scientific Reports, Applied Surface Science, Synthetic Metals, Thin Solid Films, Microelectronic Engineering, Journal of Materials Science, Journal of Physics D: Applied Physics, Journal of Applied Physics, Journal of Alloys and Compounds, Materials Letters, Materials Chemistry and Physics, Solid State Communications, Solar Energy Materials and Solar Cells, Organic Electronics, Polymer Degradation and Stability.

JOURNAL PUBLICATIONS OF THE LAST 5 YEARS (2013-2022)

- 1. M.Vasilopoulou**, S.Kennou, S.Ladas, S.N.Georga, M.Botzakaki, D.Skarlatos, C.A.Krontiras, N.A.Stathopoulos, P.Argitis, L.C.Palilis, *Organic Electronics*, Vol. 14, p. 312-319, 2013.
- L.C.Palilis, **M.Vasilopoulou**, A.M.Douvas, D.G.Georgiadou, S.Kennou, N.A.Stathopoulos, V.Constantoudis, P.Argitis, *Solar Energy Materials and Solar Cells*, Vol. 114, p. 205-213, 2013.
- D.G.Georgiadou, L.C.Palilis, **M.Vasilopoulou**, G.Pistolis, D.Dimitikali, P.Argitis, *Synthetic Metals*, Vol. 181, p. 37-44, 2013.
- D.G.Georgiadou, M.Vasilopoulou, L.C.Palilis, I.D.Petsalakis, G.Theodorakopoulos, V.Constantoudis, S.Kennou, A.Karantonis, D.Dimitikali, P.Argitis, *ACS Applied Materials and Interfaces*, Vol. 5, p. 12346-12354, 2013.
- M.Vasilopoulou**, D.Davazoglou, *Materials Science in Semiconductor Processing* Vol. 16, p. 1196-1216, 2013.
- I.Kostis, **M.Vasilopoulou**, A.Soultati, P.Argitis, N.Konofaos, A.M.Douvas, G.Papadimitropoulos, D.Davazoglou, *Microelectronic Engineering* Vol. 111, p. 149-153, 2013.
- I.Kostis, N.Vourdas, **M.Vasilopoulou**, A.Douvas, G.Papadimitropoulos, N.Konofaos, A.Iliadis, D.Davazoglou, *Thin Solid Films* Vol. 537, p. 124-130, 2013.
- M.Vasilopoulou**, P.Dimitrakis, D.G.Georgiadou, D.Velessiotis, G.Papadimitropoulos, D.Davazoglou, A.G.Coutsolelos, P.Argitis, *Applied Physics Letters* Vol. 103, Article number 022908, 2013.
- I.Kostis, N.Vourdas, G.Papadimitropoulos, A.Douvas, **M.Vasilopoulou**, N.Boukos, D.Davazoglou, *Journal of Physical Chemistry C*, Vol. 117, p. 18013-18020, 2013.
- I.Kostis, **M.Vasilopoulou**, G.Papadimitropoulos, N.Stathopoulos, S.Savaidis, D.Davazoglou, *Surface and Coatings Technology* Vol. 230, p. 51-58, 2013.
- M.Vasilopoulou**, I.Kostis, A.M.Douvas, D.G.Georgiadou, A.Soultati, G.Papadimitropoulos, N.A.Stathopoulos, S.S.Savaidis, P.Argitis, D.Davazoglou, *Surface and Coatings Technology* Vol. 230, p. 202-207, 2013.
- M.Vasilopoulou**, D.G.Georgiadou, A.M.Douvas, A.Soultati, V.Constantoudis, D.Davazoglou, S.Gardelis, L.C.Palilis, M.Fakis, S.Kennou, T.Lazarides, A.G.Coutsolelos, P.Argitis, *Journal of Materials Chemistry A*, Vol. 2, p. 182-192, 2014.
- M.Vasilopoulou**, A.Soultati, D.G.Georgiadou, T.Stergiopoulos, L.C.Palilis, S.Kennou, N.A.Stathopoulos, D.Davazoglou, P.Argitis, *Journal of Materials Chemistry A*, 2, 1738-1749, 2014.
- A.Soultati, D.G.Georgiadou, A.Douvas, P.Argitis, D.Alexandropoulos, N.A.Vainos, N.A.Stathopoulos, G.Papadimitropoulos, D.Davazoglou, **M.Vasilopoulou**, *Microelectronic Engineering*, Vol. 117, p. 13-17, 2014.
- M.Vasilopoulou**, A.M.Douvas, D.G.Georgiadou, V.Constantoudis, D.Davazoglou, S.Kennou, L.C.Palilis, T.Lazarides, A.G.Coutsolelos, P.Argitis. *Nano Research*, Vol. 7, p. 679-693, 2014.

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16. E. Polydorou, E. Makarona, A. Soultati, D. Georgiadou, T. Kyrasta, T. Speliotis, C. Tsamis, N. Papanikolaou, P. Argitis, I. Kostis, A. Kokkosis, D. Davazoglou and **M. Vasilopoulou**, *Microelectronic Engineering*, Vol.119, p.100-104, 2014.
17. I.D. Petsalakis, G. Theodorakopoulos, N.N. Lathiotakis, D.G. Georgiadou, **M. Vasilopoulou**, P. Argitis, *Chemical Physics Letters*, Vol. 601, p. 63-68, 2014.
18. **M. Vasilopoulou**, A. Soultati, P. Argitis, T. Stergiopoulos, D. Davazoglou, *Journal of Physical Chemistry Letters*, Vol. 5, p. 1871-1879, 2014.
19. **M. Vasilopoulou**, N. Konofaos, D. Davazoglou, P. Argitis, N.A. Stathopoulos, S.P. Savaidis, A.A. Iliadis, *Solid-State Electronics*, Vol. 101, p. 50-56, 2014.
20. **M. Vasilopoulou**, D.G. Georgiadou, A. Soultati, G. Papadimitropoulos, P. Argitis, D. Alexandropoulos, N. Vainos, C.T. Politi, T. Kamalakis, D. Davazoglou, *International Conference on Transparent Optical Networks*, 6876661, 2014.
21. **M. Vasilopoulou**, *Nanoscale*, Vol. 6, p. 13726-13739, 2014.
22. A. Soultati, A.M. Douvas, D.G. Georgiadou, L.C. Palilis, T. Bein, J.M. Feckl, S. Gardelis, M. Fakis, S. Kennou, P. Falaras, T. Stergiopoulos, N.A. Stathopoulos, D. Davazoglou, P. Argitis, **M. Vasilopoulou**, *Advanced Energy Materials*, Vol. 4, 1300896, 2014.
23. **M. Vasilopoulou**, I. Kostis, N. Vourdas, G. Papadimitropoulos, A. Douvas, N. Boukos, S. Kennou, D. Davazoglou, *Journal of Physical Chemistry C*, Vol. 118, p. 12632-12641, 2014.
24. **M. Vasilopoulou**, D.G. Georgiadou, A. Soultati, N. Boukos, S. Gardelis, L.C. Palilis, M. Fakis, G. Skoulatakis, S. Kennou, M. Botzakaki, S. Georga, C.A. Krontiras, F. Auras, D. Fattakhova-Rohlfing, T. Bein, T.A. Papadopoulos, D. Davazoglou, P. Argitis, *Advanced Energy Materials*, 1400214, 2014.
25. A.M. Douvas, **M. Vasilopoulou**, D.G. Georgiadou, A. Soultati, D. Davazoglou, N. Vourdas, K.P. Giannakopoulos, A.G. Kontos, S. Kennou, P. Argitis, *Journal of Materials Chemistry C*, Vol. 2, p. 6290-6300, 2014.
26. **M. Vasilopoulou**, D.G. Georgiadou, A. Soultati, A.M. Douvas, G. Papadimitropoulos, D. Davazoglou, G. Pistolis, N.A. Stathopoulos, T. Kamalakis, D. Alexandropoulos, N. Vainos, C.T. Politi, L.C. Palilis, S. Couris, A.G. Coutsolelos, P. Argitis, *Microelectronic Engineering*, Vol. 145, p. 21-28, 2015.
27. N. A. Stathopoulos, S. P. Savaidis, A. Botsialas, Z. C. Ioannidis, D. G. Georgiadou, **M. Vasilopoulou**, and G. Pagiatakis *Appl. Optics*/ Vol. 54, No. 6 / 20 February 2015.
28. **M Vasilopoulou**, NA Stathopoulos, SA Savaidis, I, Kostis, G Papadimitropoulos, D Davazoglou, *Applied Surface Science*, 350, 25-30, 2015.
29. Giorgia Dapei, Georgios Papadimitropoulos, Dimitrios, Varvitsiotis, Georgios Koustas, **Maria Vasilopoulou**, Dimitrios Davazoglou, *Phys. Stat. Solidi a*, DOI: 10.1002/pssa.201431872, 212, 2816, 2015.
30. **Maria Vasilopoulou**, Ermioni Polydorou, Antonios M. Douvas, Leonidas C. Palilis, Stella Kennou, Panagiotis Argitis, *Energy Environmental Science*, 8, 2448-246, 2015.
31. Dimitrios N Kouvatsos, George Papadimitropoulos , Thanassis Spiliotis , **Maria Vasilopoulou**, Davide Barreca, Alberto Gasparotto, Dimitris Davazoglou, *Phys. Stat. Solidi c*, DOI: 10.1002/pssc.201510025, 12, 975, 2015.
32. Georgios Papadimitropoulos, Ioannis Kostis, Stelios Trantalidis, Athanasios Tsiatouras, **Maria Vasilopoulou**, Dimitris Davazoglou, *Phys. Stat. Solidi c*, DOI:10.1002/pssc.201510029, 12, 964, 2015.
33. Georgios Papadimitropoulos, Nikolaos Vourdas, A. Kontos, **Maria Vasilopoulou**, Dimitrios N. Kouvatsos, Nicolas Boukos, Alberto Gasparotto, Davide Barreca, Dimitrios Davazoglou, *Physica Status Solidi c*, DOI:10.1002/pssc.201510031, 12, 969, 2015.
34. **Maria Vasilopoulou**, Antonios M Douvas, Leonidas C. Palilis, Stella Kennou , Panagiotis Argitis , *Journal of the American Chemical Society*, 137 (21), 6844, 2015.
35. Ermioni Polydorou, Anastasia Soultati and **Maria Vasilopoulou**, *Journal of Materials Chemistry C*, 691, 2016.
36. Vasilis Papamakarios, Ermioni Polydorou, Anastasia Soultatii, Nikolaos Droseros, Dimitris Tsikritzis, Antonios Douvas, Leonidas Palilis, Mihalís Fakis, Stella Kennou, Panagiotis Argitis and **Maria Vasilopoulou**, *ACS Appl. Mater. Interfaces*, 8, 194, 2016.
37. Marinos Tountas, Yasemin Topal, Mahmut Kus, Mustafa Ersöz, Mihalís Fakis, **Maria Vasilopoulou** , *Adv. Funct. Mater.*, 10.1002/adfm.201504832, 2016.
38. Omotayo Akande, Alexander Chroneos, **Maria Vasilopoulou**, Stella Kennou, Udo Schwingenschlögl, *Journal of Materials Chemistry C*, 4, 9526-9531, 2016.
39. Ermioni Polydorou, Angelos Zeniou, Dimitris Tsikritzis, Anastasia Soultati, Ilias Sakellis, Spyros Gardelis, Theodoros A Papadopoulos, Joe Briscoe, Leonidas C Palilis, Stella Kennou, Evangelos Gogolides, Panagiotis Argitis, Dimitris Davazoglou, **Maria Vasilopoulou**, *J. Mater. Chem. A*, 4, 11844-11858, 2016.
40. Anastasia Soultati, Ioannis Kostis, Panagiotis Argitis, Dimitra Dimotikali, Stella Kennou, Spyros Gardelis, Thanassis Speliotis, Athanassios G Kontos, Dimitris Davazoglou, Maria Vasilopoulou, *J. Mater. Chem. C*, 4, 7683-7694, 2016.

41. Polydorou, E., Botzakaki, M.A., Sakellis, I., Soultati, A., Kaltzoglou, A., Papadopoulos, T.A., Briscoe, J., Drivas, C., Seintis, K., Fakis, M., Palilis, L.C., Georga, S.N., Krontiras, C.A., Kennou, S., Falaras, P., Boukos, N., Davazoglou, D., Argitis, P., **Vasilopoulou, M.** *Advanced Materials Interfaces*, 4 (18), art. no. 1700231, 2017.
42. Tountas, M., Topal, Y., Polydorou, E., Soultati, A., Verykios, A., Kaltzoglou, A., Papadopoulos, T.A., Auras, F., Seintis, K., Fakis, M., Palilis, L.C., Tsikritzis, D., Kennou, S., Koutsourelis, M., Papaioannou, G., Ersöz, M., Kus, M., Falaras, P., Davazoglou, D., Argitis, P., **Vasilopoulou, M.** *ACS Appl. Mater. Interfaces* 9 (27), pp. 22773-22787, 2017.
43. Polydorou, E., Sakellis, I., Soultati, A., Kaltzoglou, A., Papadopoulos, T.A., Briscoe, J., Tsikritzis, D., Fakis, M., Palilis, L.C., Kennou, S., Argitis, P., Falaras, P., Davazoglou, D., **Vasilopoulou, M.**, *Nano Energy*, 34, pp. 500-514, 2017.
44. Zhu, J., **Vasilopoulou, M.**, Davazoglou, D., Kennou, S., Chroneos, A., Schwingenschlögl, U. *Scientific Reports*, 7, art. no. 40882, 2017.
45. **Vasilopoulou, M.**, Georgiadou, D.G., Davazoglou, D., Savaidis, S.P., Stathopoulos, N.A., *Physica Status Solidi (C) Current Topics in Solid State Physics*, 14 (1-2), art. no. 1600123, 2017.
46. Anastasia Soultati, Ioannis Kostis, Giorgos Papadimitropoulos, Angelos Zeniou, Evangelos Gogolides, Dimitris Alexandropoulos, Nikos Vainos, Dimitris Davazoglou, Thanassis Speliotis, Nikolaos A Stathopoulos, Panagiotis Argitis and **Maria Vasilopoulou**, *J. Phys. D: Appl. Phys.* 50, 505105, 2017.
47. A. Soultati, I. Kostis, G. Papadimitropoulos, A. Zeniou, E. Gogolides, D. Alexandropoulos, N. Vainos, D. Davazoglou, T. Speliotis, N. A. Stathopoulos, P. Argitis, **M. Vasilopoulou**, *J. Phys. D: Appl. Phys.* 50, 505105, 2017.
- 48 **Maria Vasilopoulou**, Nikolaos Kelaidis, Ermioni Polydorou, Anastasia Soultati, Dimitris Davazoglou, Panagiotis Argitis, Giorgos Papadimitropoulos, Dimitris Tsikritzis, Stella Kennou, Florian Auras, Dimitra G. Georgiadou, Stavros-Richard G. Christopoulos & Alexander Chroneos, *Scientific Reports* 7, 17839 (doi:10.1038/s41598-017-18051-0), 2017.
49. M. Tountas, Y. Topal, A. Verykios, A. Soultati, A. Kaltzoglou, T.A. Papadopoulos, F. Auras, K. Seintis, M. Fakis, L.C. Palilis, D. Tsikritzis, S. Kennou, A. Fakharudin, L. Schmidt-Mende, S. Gardelis, M. Kus, P. Falaras, D. Davazoglou, P. Argitis, **M. Vasilopoulou**, "A silanol-functionalized polyoxometalate with excellent electron transfer mediating behavior to ZnO and TiO₂ cathode interlayers for highly efficient and extremely stable polymer solar cells", *Journal of Materials Chemistry C*, Vol. 6, p.1459-1469, 2018.28.
50. E. Polydorou, M. Botzakaki, C. Drivas, K. Seintis, I. Sakellis, A. Soultati, A. Kaltzoglou, T. Speliotis, M. Fakis, L.C. Palilis, S. Kennou, A. Fakharuddin, L. Schmidt –Mende, D. Davazoglou, P. Falaras, P. Argitis, C.A. Krontiras, S.N. Georga, **M. Vasilopoulou**, "Insights into the passivation effect of atomic layer deposited hafnium oxide for efficiency and stability enhancement in organic solar cells», *Journal of Materials Chemistry C*, Vol. 6, p. 8051-8059, 2018.29.
51. M. Tountas, D.G. Georgiadou, A. Zeniou, K. Seintis, A. Soultati, E. Polydorou, S. Gardelis, A.M. Douvas, T. Speliotis, D. Tsikritzis, S. Kennou, M. Fakis, E. Gogolides, D. Tsoukalas, P. Argitis, **M. Vasilopoulou**, "Plasma induced degradation and surface electronic structure modification of Poly(3-hexylthiophene) films", *Polymer Degradation and Stability*, Vol. 149, p.162-172, 2018.30.
52. M. Tountas, A. Verykios, E. Polydorou, A. Kaltzoglou, A. Soultati, N. Balis, P.A. Angaridis, M. Papadakis, V. Nikolaou, F. Auras, L.C. Palilis, D. Tsikritzis, E.K. Evangelou, S. Gardelis, M. Koutsourelis, G. Papaioannou, I.D. Petsalakis, S. Kennou, D. Davazoglou, P. Argitis, P. Falaras, A.G. Coutsolelos, **M. Vasilopoulou**, "Engineering of Porphyrin Molecules for Use as Effective Cathode Interfacial Modifiers in Organic Solar Cells of Enhanced Efficiency and Stability», *ACS Applied Materials & Interfaces*, Vol. 10, p. 20728-20739, 2018.31.
53. A. Verykios, M. Papadakis, A. Soultati, M.-C. Skoulidikou, G. Papaioannou, S. Gardelis, I.D. Petsalakis, G. Theodorakopoulos, V. Petropoulos, L.C. Palilis, M. Fakis, N.A. Vainos, D. Alexandropoulos, D. Davazoglou, G. Pistolis, P. Argitis, A.G. Coutsolelos, **M. Vasilopoulou**, "Functionalized Zinc Porphyrins with Various Peripheral Groups for Interfacial Electron Injection Barrier Control in Organic Light Emitting Diodes", *ACS Omega*, Vol. 3, p. 10008-10018, 2018.32.
54. "Multi-electron reduction of Wells–Dawson polyoxometalate films onto metallic, semiconducting and dielectric substrates", A. M. Douvas, D. Tsikritzis, C. Tselios, A. Haider, A. S. Mougharbel, U. Kortz, A. Hiskia, A. G. Coutsolelos, L. C. Palilis, **M. Vasilopoulou**, S. Kennou, P. Argitis, *Phys. Chem. Chem. Phys.*, 21, 427–437, 2019.
55. "312 MAX Phases: Elastic properties and lithiation", P. P. Filippatos, M. A. Hadi, S.-R. G. Christopoulos, A. Kordatos, N. Kelaidis, M. E. Fitzpatrick, **M. Vasilopoulou**, A. Chroneos, *Materials*, 12 (24), 4098.
56. "Lithium doping of ZnO for high efficiency and stability fullerene and non-fullerene organic solar cells", A. Soultati, A. Fakharuddin, E. Polydorou, C. Drivas, A. Kaltzoglou, M. I. Haider, F. Kournoutas, M. Fakis, L. C. Palilis, S. Kennou, D. Davazoglou, P. Falaras, P. Argitis, S. Gardelis, A. Kordatos, A. Chroneos, L. Schmidt-Mende, **M. Vasilopoulou**, *ACS Appl. Energy Mater.*, 2 (3), 1663–1675, 2019.
57. "Organic solar cells of enhanced efficiency and stability using zinc oxide:zinc tungstate nanocomposite as electron extraction layer", A. Soultati, A. Verykios, T. Speliotis, M. Fakis, I. Sakellis, H. Jaouani, D. Davazoglou, P. Argitis, **M. Vasilopoulou**, *Org. Electron.*, 71, 227–237, 2019.

58. “Enhanced Organic and Perovskite Solar Cell Performance through Modification of the Electron-Selective Contact with a Bodipy–Porphyrin Dyad”, Konstantina Gkini, Apostolis Verykios, Nikolaos Balis, A. Kaltzoglou, M. Papadakis, K. S. Adamis, K.-K. Armadorou, A. Soultati, C. Drivas, S. Gardelis, I. D. Petsalakis, L. C. Palilis, A. Fakharuddin, M. I. Haider, X. Bao, S. Kennou, P. Argitis, L. Schmidt-Mende, A. G. Coutsolelos, P. Falaras, **M. Vasilopoulou**, *ACS Appl. Mater. Interfaces*, 12, 1120–1131, 2019.
59. “Defect processes in F and Cl doped anatase TiO₂”, P.-P. Filippatos, N. Kelaidis, **M. Vasilopoulou**, D. Davazoglou, N. N. Lathiotakis, A. Chroneos, *Sci. Rep.*, 9, 19970, 2019.
60. “Investigating the role of reduced graphene oxide as a universal additive in planar perovskite solar cells”, N. Balis, A. A. Zaky, C. Athanasekou, A. M. T. Silva, E. Sakellis, **M. Vasilopoulou**, T. Stergiopoulos, A. G. Kontos, P. Falaras, *J. Photochem. Photobiol., A*, 386, 112141, 2020.
61. “Efficient colloidal quantum dot light-emitting diodes operating in the second near-infrared biological window”, **M. Vasilopoulou**, H. P. Kim, B. S. Kim, M. Papadakis, A. E. X. Gavim, A. G. Macedo, W. Jose da Silva, F. K. Schneider, M. A. M. Teridi,
62. “A hysteresis-free perovskite transistor with exceptional stability through molecular cross-linking and amine-based surface passivation”, H. P. Kim, **M. Vasilopoulou**, H. Ullah, S. Bibi, A. E. X. Gavim, A. G. Macedo, W. Jose da Silva, F. K. Schneider, A. A. Tahir, M. A. M. Teridi, Peng Gao, A. R. b. M. Yusoff, M. K. Nazeeruddin, *Nanoscale*, 12 (14), 7641–7650, 2020.
63. “Molecular materials as interfacial layers and additives in perovskite solar cells”, **M. Vasilopoulou**, A. Fakharuddin, A. G. Coutsolelos, P. Falaras, P. Argitis, A. R. b. M. Yusoff, M. K. Nazeeruddin, *Chem. Soc. Rev.*, 49 (13), 4496-4526, 2020.
64. “A carbon-doped tantalum dioxyfluoride as a superior electron transport material for high performance organic optoelectronics”, **M. Vasilopoulou**, N. Kuganathan, X. Bao, A. Verykios, E. Polydorou, K.-K. Armadorou, A. Soultati, G. Papadimitropoulos, M. I. Haider, A. Fakharuddin, L. C. Palilis, S. Kennou, A. Chroneos, P. Argitis, D. Davazoglou, *Nano Energy*, 70, 104508, 2020.
65. “Interfacial engineering for organic and perovskite solar cells using molecular materials”, A. Soultati, A. Verykios, K.-K. Armadorou, M. Tountas, V. P. Vidali, K. Ladomenou, L. Palilis, D. Davazoglou, A. G. Coutsolelos, P. Argitis, **M. Vasilopoulou**, *J. Phys. D: Appl. Phys.*, 53 (26), 263001, 2020. “Suppressing the Photocatalytic Activity of Zinc Oxide Electron-Transport Layer in Nonfullerene Organic Solar Cells with a Pyrene-Bodipy Interlayer”, A. Soultati, A. Verykios, S. Panagiotakis, K.-K. Armadorou, M. I. Haider, A. Kaltzoglou, C. Drivas, A. Fakharuddin, X. Bao, C. Yang, A. R. b. M. Yusoff, E. K. Evangelou, I. Petsalakis, S. Kennou, P. Falaras, K. Yannakopoulou, G. Pistoris, P. Argitis, **M. Vasilopoulou**, *ACS Appl. Mater. Interfaces*, 12 (19), 21961–21973, 2020.
66. “Perovskite flash memory with a single-layer nanofloating gate”, **M. Vasilopoulou**, B. S. Kim, H. P. Kim, W. Jose da Silva, F. K. Schneider, M. A. M. Teridi, P. Gao, A. R. b. M. Yusoff, M. K. Nazeeruddin, *Nano Lett.*, 20 (7), 5081–5089, 2020.
67. “Inorganic and hybrid interfacial materials for organic and perovskite solar cells”, L. C. Palilis, **M. Vasilopoulou**, A. Verykios, A. Soultati, E. Polydorou, P. Argitis, D. Davazoglou, A. R. b. M. Yusoff, M. K. Nazeeruddin, *Adv. Energy Mater.*, 10 (27), 2000910, 2020.
68. “Manganese Porphyrin Interface Engineering in Perovskite Solar Cells”, K. Gkini, N. Balis, M. Papadakis, A. Verykios, M.-C. Skoulikidou, C. Drivas, S. Kennou, M. Golomb, A. Walsh, A. G. Coutsolelos, **M. Vasilopoulou**, P. Falaras, *ACS Appl. Energy Mater.*, 3 (8), 7353–7363, 2020.
69. “Atomic structure and electronic properties of hydrogenated X (=C, Si, Ge, and Sn) doped TiO₂: A theoretical perspective”, P.-P. Filippatos, N. Kelaidis, **M. Vasilopoulou**, D. Davazoglou, A. Chroneos, *AIP Adv.*, 10 (11), 115316, 2020.
70. “Robust inorganic hole transport materials for organic and perovskite solar cells: insights into materials electronic properties and device performance”, A. Fakharuddin, **M. Vasilopoulou**, A. Soultati, M. I. Haider, J. Briscoe, V. Fotopoulos, D. Di Girolamo, D. Davazoglou, A. Chroneos, A. R. b. M. Yusoff, A. Abate, L. Schmidt-Mende, M. K. Nazeeruddin, *Sol. RRL*, 5, 2000555, 2020.
71. “Defect Processes in Halogen Doped SnO₂”, P.-P. Filippatos, N. Kelaidis, **M. Vasilopoulou**, D. Davazoglou, A. Chroneos, *App. Sci.*, 11 (2), 551, 2021.
72. “Structural, Electronic, and Optical Properties of Group 6 Doped Anatase TiO₂: A Theoretical Approach”, P.-P. Filippatos, N. Kelaidis, **M. Vasilopoulou**, D. Davazoglou, A. Chroneos, *App. Sci.*, 11 (4), 1657, 2021.
73. “Passivation and process engineering approaches of halide perovskite films for high efficiency and stability perovskite solar cells”, A. R. b. M. Yusoff, **M. Vasilopoulou**, D. G. Georgiadou, L. C. Palilis, A. Abate, M. K. Nazeeruddin, *Energy Environ. Sci.*, 14, 2906–2953, 2021.
74. “Controlling PbI₂ Stoichiometry during Synthesis to Improve the Performance of Perovskite Photovoltaics”, K. Tsevas, J. A. Smith, V. Kumar, C. Rodenburg, M. Fakis, A. R. b. M. Yusoff, **M. Vasilopoulou**, D. G. Lidzey, M. K. Nazeeruddin, A. D. F. Dunbar, *Chem. Mater.*, 33 (2), 554–566, 2021.
75. “Observation of large Rashba spin–orbit coupling at room temperature in compositionally engineered perovskite single crystals and application in high performance photodetectors”, A. R. b. M. Yusoff, A. Mahata, **M.**

Vasilopoulou, H. Ullah, B. Hu, W. Jose da Silva, F. K. Schneider, P. Gao, A. V. Ievlev, Y. Liu, O. S. Ovchinnikova, F. De Angelis, M. K. Nazeeruddin, *Mater. Today*, 2021. In Press, Corrected Proof.

76. “Preparation of hydrogen, fluorine and chlorine doped and co-doped titanium dioxide photocatalysts: a theoretical and experimental approach”, P.-P. Filippatos, A. Soultati, N. Kelaidis, C. Petaroudis, A.-A. Alivisatou, C. Drivas, S. Kennou, E. Agapaki, G. Charalampidis, A. R. b. M. Yusoff, N. N. Lathiotakis, A. G. Coutsolelos, D. Davazoglou, **M. Vasilopoulou**, Al. Chroneos, *Sci. Rep.*, 11, 5700, 2021.

77. “PEDOT: PSS: sulfonium salt composite hole injection layers for efficient organic light emitting diodes”, A. Verykios, G. Pistolis, L. Bizas, C. Tselios, D. Tsikritzis, S. Kennou, C. L. Chochos, D. E. Mouzakis, P. N. Skandamis, L. C. Palilis, P. Argitis, **M. Vasilopoulou**, A. Soultati, *Org. Electron.*, 93, 106155, 2021.

78. «Advances in solution-processed near-infrared light-emitting diodes», **M. Vasilopoulou**, A. Fakharuddin, F. P. García de Arquer, D. G. Georgiadou, H. Kim, A. R. bin Mohd Yusoff, F. Gao, M. Khaja Nazeeruddin, H. J. Bolink, E. H. Sargent, *Nature Photonics*, **15**, 656–669, 2021.

79. “High efficiency blue organic light-emitting diodes with below-bandgap electroluminescence”. **Vasilopoulou**, M., Mohd Yusoff, A.R.b., Daboczi, M. *et al. Nat Commun* **12**, 4868, 2021. “Roadmap on organic–inorganic hybrid perovskite semiconductors and devices”, Lukas Schmidt-Mende et al., *APL Mater.* 9, 109202, 2021.

80. “Fiber shape electronic devices”, A. Fakharuddin, H. Li, F. Di Giacomo, T.i Zhang, N. Gasparini, A. Y Elezzabi, A. Mohanty, A. Ramadoss, J. Ling, A. Soultati, M. Tountas, L. Schmidt- Mende, P. Argitis, R. Jose, M. K. Nazeeruddin, A. R. B. M. Yusoff, **M.Vasilopoulou**, *Adv. Energy Mater.* 11, 2101443, 2021.

81. “Influence of thermal cycling on the optical and the electrical properties of atmospheric pressure chemical vapor deposited tin oxide films grown using water and methanol vapors”, C. Petaroudis, I. Kostis, P.-P. Filippatos, A. Chroneos, A. Soultati, **M. Vasilopoulou**, D.Davazoglou, *Thin Solid Films* 734, 138841, 2021.

82. “Probing the electronic structure of fine and large-grained SnO₂ layers by spectroscopic ellipsometry and current-voltage measurements”, C. Petaroudis, I. Kostis, Petros-Panagis Filippatos, A. Chroneos, A. Soultati, **M. Vasilopoulou**, D. Davazoglou, *Thin Solid Films* 741 139039, 2022. <https://doi.org/10.1016/j.tsf.2021.139039>.

83. “Commercially available chromophores as low-cost efficient electron injection layers for organic light emitting diodes”, A. Verykios, A. Soultati, K. Turlouki, C. Katsogridakis, D. Alexandropoulos, V. Vidali, S. Panagiotakis, K. Yanakopoulou, D. Dimotikali, M. Fakis, L. Palilis, N. Stathopoulos, G. Pistolis, P. Skandamis, P. Argitis, **M. Vasilopoulou**. *J. Phys. D: Appl. Phys.* 55, 215106, 2022. <https://doi.org/10.1088/1361-6463/ac55c3>.

84. "Perovskite light-emitting diodes", A. Fakharuddin, **M. Vasilopoulou**, H. Bolink, NATELECTRON-20032617C, 2022, JUST ACCEPTED.