

SHORT CURRICULUM VITAE of ELIAS STATHATOS

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Professor Elias Stathatos was born in 1968 in Patras, Greece. He obtained his first degree in Physics from the University of Patras and then, his Ph.D. from Engineering Science Dept. also at the University of Patras. Prof. Stathatos was a postdoctoral research fellow at the University of Cincinnati, USA, at the Civil & Environmental Engineering Dept. In the period 2008-2010, he was Department Head of the Electrical Engineering Dept. in the Technological-Educational Institute of Patras. Today, he is a professor in the Electrical and Computer Engineering Dept. at the University of Peloponnese and Head of the Nanotechnology and Advanced Materials Laboratory (N&AML). He has more than 150 publications in peer review journals and six chapters in books that are recognized with more than 7100 citations (h -index=41). He is Principal/Co-Principal Investigator in 30 funded proposals, while he is a Co-Investigator in five patents related to solar energy conversion and solar cells. He has participated in more than 60 conferences, giving several plenary and invited lectures. He is a reviewer in numerous International Journals (>40) and an editorial board member of the Journal of Advanced Oxidation Technologies, Materials Science for Semiconductor Processing, International Journal of Photoenergy and Section Editor in Chief of "Optoelectronics" of the Journal "Electronics". His research interests are focused on third-generation solar cells and their characterization. In particular, Prof. Stathatos is interested in the conversion of solar energy to electricity using dye-sensitized, quantum dot and perovskite solar cells employing nanostructured materials. Furthermore, Prof. Stathatos is also interested in electrochromic nanocomposite materials for smart windows and solar concentrators for enhanced photovoltaic performance after spectral shift.

EMPLOYMENT: 2004, 2005: Research Associate University of Cincinnati, Environmental Engineering Dept.

2006-2012: Associate Professor at Electrical Engineering Dept. at Technological-Educational Institute of Western Greece.

2012-2019: Professor at Electrical Engineering Dept. at Technological-Educational Institute of Western Greece.

2019-today: Professor at Electrical and Computer Engineering Dept. at the University of the Peloponnese.

EXPERTISE

Nanostructured semiconductors, organic photovoltaics, dye sensitized solar cells, quantum dot sensitized solar cells, perovskite solar cells, materials for third generation photovoltaics, electrochromic materials, smart windows, materials for agriculture.

PROFESSIONAL SOCIETY AFFILIATIONS (MEMBER):

- American Chemical Society (ACS),
- American Nano Society ([http:// members.nanosociety.us/E.Stathatos](http://members.nanosociety.us/E.Stathatos))
- Materials Research Society (MRS)

AWARDS AND HONORS

- *Who's Who in Engineering 2004/2005/2006/2007/2008/2009/2010* The Marquis Who's Who Publication Board.
- *Who's Who in Science 2009/2010* The Marquis Who's Who Publication Board.
- *KΑΡΑΘΕΟΔΩΡΗΣ Best Post-Doctoral Award*, University of Patras, 2001-2003.
- Presence in Most Cited author list "Data for updated science-wide author databases of standardized citation indicators" 2020/2021 (Stanford University)

SCIENTIFIC PUBLICATIONS

BOOKS/BOOKS CHAPTERS

- 1. Book title:** Molecular Materials and Functional Polymers. **Chapter title:** "Studies on Hybrid Organic/Inorganic Nanocomposite Gels using photoluminescence techniques" **Authors:** V.Bekiari, E.Stathatos, P.Lianos, U.Stangar, B.Orel, P.Judeinstein. Springer-Verlag 2000: ISBN 3-211-83597-0
- 2. Book title:** "Sustainability Science and Engineering: Sustainable Water Recycling Versus Desalination Contribution Chapter 10: TiO₂-Based Advanced Oxidation Nanotechnologies for Water Purification and Reuse". **Authors:** H. Choi, S. Al-Abed, D.D. Dionysiou, E.Stathatos, P.Lianos
- 3. Book title:** Solar Cells / Book 2 (ISBN 978-953-307-1342-1) InTech publications. **Chapter title:** Dye Sensitized Solar Cells as an Alternative Approach to the Conventional Photovoltaic Technology Based on Silicon. Recent Developments in the Field and Large Scale Applications. **Author:** Elias Stathatos
- 4. Book title:** Advanced Oxidation Technologies – Sustainable solutions for environmental treatments. Editors: M. Litter, R. Candal & J.M. Meichtry, CRC publications, 350. pp. 313-325 **Chapter title:** Stabilized TiO₂ nanoparticles on clay minerals for air and water treatment. **Authors:** E. Stathatos, D.Papoulis, D. Panagiotaras (2014). ISBN: 9781138001275.
- 5. Book title:** Editor: Narayan Chakrabarty, CRC Press, Taylor & Francis, publishers. **Chapter title:** Geochemistry of Arsenic and Toxicity response. **Authors:** D. Panagiotaras, D. Papoulis, E. Stathatos Chapter 4 (2015). ISBN: 9781482241969.
- 6. Book Title:** Printable Solar Cells EDITOR: NURDAN DEMİRCİ SANKİR AND MEHMET SANKİR **Chapter Title:** Inkjet Printable Processes For Dye Sensitized And Perovskite Solar Cells And Modules Based On Advanced Nanocomposite Materials. **Authors:** Theodoros Makris, Argyroula Mourtzikou, Andreas Rapsomanikis and Elias Stathatos. WILEY-Scrivener, USA chapter 11, 363-379.

REFEREED JOURNAL ARTICLES

1. Molecular Diffusion and Fluorescence Energy-Transfer Studies in Thin Surfactant Films Papoutsi,D., Bekiari,V., Stathatos,E., Lianos,P., Langmuir 11(1995)4355.
2. Nanocrystallite Titanium Dioxide Films Made by the Sol-Gel Method using Reverse Micelles. Stathatos,E., Lianos,P., Del Monte,F. Levy,D., Tsiourvas,D. Journal of Sol-Gel Science and Technology 10, (1997)83-89.
3. Photophysical Properties of an Amphiphilic Cationic Hemicyanine Dye in Solution and Adsorbed on a TiO₂ Mesoporous Film. E.Stathatos P,Lianos, A. Laschewsky , Langmuir, 13, (1997),259-263.
4. Formation of TiO₂ nanoparticles in reverse micelles and their deposition as thin films on glass substrates. E.Stathatos, P.Lianos, F.D.Monte, D.Levy, D.Tsiourvas. Langmuir, 13, (1997),4295-4300.
5. Spectral narrowing in the emission of Rhodamine 6G incorporated in Thin surfactant films. E.Stathatos, S.Couris and P.Lianos S.P.I.E .-The International Society for Optical Engineering vol.3423 (1998) p.224.
6. Fluorescence Probing of Composite Organic/Inorganic Transparent Matrices V.Bekiari, M.Ferrer, E.Stathatos and P.Lianos. Journal of Sol-Gel Science and Technology 13, (1998),96-98.

7. Titanium dioxide films made from reverse micelles and their use for the photocatalytic degradation of adsorbed dyes. E.Stathatos, D.Tsiourvas, and P.Lianos. *Colloids and Surfaces A* 149, (1999) 49-56.
8. Spectral narrowing in a Rhodamine doped Layered TiO₂/surfactant thin film. E.Stathatos, P.Lianos, S.Couris *Applied Physics Letters*, vol.75, No3, p.319 (1999).
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11. Structural Study of Hybrid Organic/Inorganic Polymer Gels by using Time-Resolving Fluorescence Probing. Elias Stathatos , Panagiotis Lianos. *Urska Lavrenciz, Boris Orel and Patrick Judeinstein. Langmuir* 16,(2000),8672.
12. Studies on Hybrid Organic/Inorganic Nanocomposite Gels using photoluminescence techniques. V.Bekiari, E.Stathatos, P.Lianos, U.Stangar, B.Orel, P.Judeinstein. *MONATSHFTE FUR CHEMIE* 132, (2001), 97-102.
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18. Study of Laser Action of Coumarine-153 incorporated in Sol-gel made silica/poly(propylene oxide) nanocomposite gels. Elias Stathatos, Panagiotis Lianos, Urska Lavrencic Stangar and Boris Orel. *Chemical Physics Letters* 345, (2001) ,381-385.
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74. A time resolved fluorescence and quantum chemical study of the solar cell sensitizer D149 M. Fakis, P. Hrobarik, E. Stathatos, V. Giannetas, P. Persephonis *Dyes and Pigments* 96, 2013, pp.304-312.
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- Hsin Chou, Yung-Sheng Yen, Jiann T'suen Lin *Journal of Photochemistry and Photobiology A: Chemistry*, Volume 251, 2013, pp.18-24
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- [34] An overview on the template-assisted Degussa P25 TiO₂ powder modified sol-gel methods for the synthesis of porous photocatalytic films with good structural integrity. Yongjun Chen, Yongchen Song, Elias Stathatos Dionysios D. Dionysiou 14th International Conference on TiO₂ Photocatalysis: Fundamentals and Applications Niagara Falls New York USA 5- 9 October 2009. Keynote lecture
- [35] Comparative studies on Dye Sensitized Solar Cells with nanostructured TiO₂ films prepared in room or in high temperature. Elias Stathatos and Dionysios D. Dionysiou. International Conference for Renewable Energies Damascus Syria 4-8 April 2010. Invited.
- [36] Synthesis and characterization of mononuclear Eu(III) complexes with 1,2,4-triazine derivatives-Enhanced of luminescence properties. N.B. Arampatzis, E. Stathatos, P. Lianos, A.D. Keramidas. 1st International Conference on BioInspired Materials for Solar Energy Utilization. September 12-17, 2011 Chania, Crete, Greece.
- [37] Ageing and Thermal Stability of Quasi-Solid Composite Electrolyte Samples for Grätzel-Type Solar Cells (DDSC) by TG and Coupled Methods of Evolved Gas Analysis (TG/DTA-MS and TG-FTIR). J. Madarász, V. Nagygyörgy, E. Stathatos, G. Pokol. International Congress on Thermal Analysis and Calorimetry, ICTAC15, September 20, 2012, Osaka, Japan.
- [38] Comparisons on Thermal Stability of Quasi-Solid Composite Electrolyte Samples for Grätzel-Type Solar Cells (DSSC) by TG and Coupled Methods of Evolved Gas Analysis (TG/DTA-MS and TG-FTIR) János Madarász, Viola Nagygyörgy, Elias Stathatos, György Pokol. MEDICTA-conference in Athens, June 12-15th, 2013.
- [39] Advanced workshop: New trends in nanophysics and solar energy conversion 23-25 September 2013, Magurele–Bucharest, Romania. Title of oral presentation: “Three dimensional semiconducting metal oxide nanoparticles for three generation photovoltaics: An overview to Dye and Quantum dot sensitized solar cells” Elias Stathatos Keynote lecture
- [40] World Renewable Energy Congress 13-WREC XIII 2014 (3-8 August 2014) Παρουσίαση της εργασίας “Transparent dye-sensitized solar modules for energy harvesting in possible installation at building glass facades.” Dimitra Sygkridou, Elias Stathatos
- [41] Conference for Sustainable Energy CSE 2014 (6-8 November 2014) Παρουσίαση της εργασίας “Improved Performance of Quasi-solid State Dye-Sensitized Solar Cells After Photoanode Surface Treatment with Novel Materials” Elias Stathatos. Keynote lecture
- [42] Synthesis, characterization and photocatalytic activities of Halloysite–TiO₂ nanocomposites. XV International Clay Conference. 07-11 July, Rio de Janeiro – Brazil. Dimitrios Papoulis, Sridhar Komarneni, Dionisios Panagiotaras, Elias Stathatos, Despina Toli, Huihui Li, Shu Yin, Tsugio Sato, Hiroaki Katsuki (2014).
- [43] Synthesis, characterization and photocatalytic activities of fly ash-TiO₂ nanocomposites in mineralization of azo dyes in water. Dimitrios Papoulis, Anastasia-Eleni (Eleana) Kordouli, Paraskeyi Lampropoulou, Andreas Rapsomanikis, Christos Kordulis, Dionisios Panagiotaras, Elias Stathatos, Sridhar Komarneni (2014). International Conference on Atmospheric Dust (DUST 2014). Castellanaeta Marina, (TA), 1-6 June, Italy, page 320.
- [44] Advanced workshop: New trends in nanophysics and solar energy conversion 23-25 September 2013, Magurele–Bucharest, Romania. Title of oral presentation: “Three dimensional semiconducting metal oxide nanoparticles for three generation photovoltaics: An overview to Dye and Quantum dot sensitized solar cells” Elias Stathatos Προσκεκλημένη ομιλία.
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- [49] Sol-gel prepared ZnO nanostructured films for dye sensitized solar cells: D. Karageorgopoulos, A. Apostolopoulou, E. Vitoratos, E. Stathatos 30th Panhellenic Conference on Solid-State Physics and Materials Science September 21-24, 2014 Heraklion, Crete
- [50] Advanced workshop: New trends in nanophysics and solar energy conversion 23-25 September 2013, Magurele–Bucharest, Romania. Title of oral presentation: “Three dimensional semiconducting metal oxide nanoparticles for three generation photovoltaics: An overview to Dye and Quantum dot sensitized solar cells” Elias Stathatos
- [51] World Renewable Energy Congress 13-WREC XIII 2014 (3-8 August 2014) Παρουσίαση της εργασίας “Transparent dye-sensitized solar modules for energy harvesting in possible installation at building glass facades.” Dimitra Sygkridou, Elias Stathatos
- [52] Conference for Sustainable Energy CSE 2014 (6-8 November 2014) “Improved Performance of Quasi-solid State Dye-Sensitized Solar Cells After Photoanode Surface Treatment with Novel Materials” Elias Stathatos
- [53] Highly transparent quasi-solid state dye-sensitized solar cells and modules made with advanced nanocomposite materials and inkjet printers. Elias Stathatos 1st International Conference on Organic Electronic Material Technologies (OEMT2015) March 25-28, 2015 Elazığ, TURKEY Elias Stathatos, Dimitra Sygkridou, Andreas Rapsomanikis.
- [54] 2nd International Conference on Energy and Environment Research (ICEER 2015), Lisbon, Portugal: “Zinc Oxide Nanostructured Films for Dye-Sensitized Solar Cells”, Andigoni Apostolopoulou, Dimitris Karageorgopoulos, Andreas Rapsomanikis, Elias Stathatos.
- [55] 15th International Conference on Nanotechnology, IEEE Nano 2015, Rome. “Quasi Solid-State Photoelectrochemical Cells combining Nanocomposite Semiconductors”, A. Apostolopoulou, E. Stathatos, V. Vitoratos, P. Lianos.
- [56] European Materials Research Society, Spring Meeting 2015, Lille. “Preparation and application of different quasi-solid state electrolytes for highly transparent TiO₂ dye-sensitized solar cells” D. Sygkridou, E. Stathatos.
- [57] Photovoltaic Technical Conference, from Advanced Materials and Processes to Innovative Applications, PVTC 2015, Aix en Provence “Highly transparent quasi-solid state dye-sensitized solar cells made with inkjet printed nanocomposite materials”, A. Margalias, D.Sygkridou, E.Stathatos.
- [58] D. Papoulis, E.Koutra, M. Kornaros, A. Rapsomanikis, D. Panagiotaras, E. Stathatos (2015). Antimicrobial activity of Ag-Treated clay-based nanocomposites. EuroClay International Scientific Conference, 5th - 10th July, Edinburgh, Scotland, U.K.
- [59] 17th International Conference on Renewable Energy Resources and Applications, ICRERA 2015, Paris. “Comparison of Transparent Nickel Doped Cobalt Sulfide and Platinum Counter Electrodes Used in Quasi-Solid State Dye Sensitized Solar Cells”, Dimitra Sygkridou, Dimitrios Karageorgopoulos, Elias Stathatos, Evangelos Vitoratos.
- [60] 15th International Conference on Nanotechnology, IEEE Nano 2015, Rome. “Highly Transparent Counter Electrodes for Dye-Sensitized Solar Cells Made with Advanced Nanocomposite Materials”, D. Sygkridou, E. Stathatos, E. Vitoratos.
- [61] XXXI Panhellenic Conference on Solid State Physics and Materials Science 2015, Thessaloniki “Electrical conduction mechanisms of ZnO sol-gel film”, T. Georgakopoulos, V. Lionas, D. Karageorgopoulos, A. Apostolopoulou, K. Pomoni, E.Stathatos.

- [62] 17th International Conference on Nanomaterials Science and Engineering, ICNSE 2015, Venice. “Up-scaling of Highly Transparent Quasi-Solid State Dye-Sensitized Solar Devices composed of nanocomposite materials.”, Dimitra Sygkridou, Andreas Rapsomanikis, Elias Stathatos, Polycarpos Falaras, Evangelos Vitoratos.
- [63] ICOE 2017: 19th International Conference on Organic Electronics, Innsbruck, Austria on January, 26-27, 2017. “High Efficiency Perovskite Solar Cells Fabricated Under Ambient Conditions with Mesoporous TiO₂/In₂O₃ Scaffold” A. Apostolopoulou, D. Sygkridou, A.N. Kalarakis, E. Stathatos.
- [64] Panagiota Tsigrou, Dimitrios Papoulis, Dionisios Panagiotaras, Konstantinos Christoforidis, Elias Stathatos (2017). Sepiolite- and halloysite-TiO₂ nanocomposites: synthesis, characterization and photocatalytic activities. 16th International Clay Conference - Clays from the Oceans to Space. Granada, Spain, 17-21 July.
- [65] Mavrokota P., Bekiari V., Stathatos E., Papoulis D., Panagopoulos G., Kalarakis A.N., Iliopoulos I., Kourkouta E. and Panagiotaras D., (2017). Use of Halloysite-TiO₂ Nanocomposites for the Decomposition of Tebuconazole Fungicide in Water. 15th International Conference on Environmental Science and Technology Rhodes, Greece, 31 August to 2 September, pages 4.
- [66] Iliopoulos I., Kourkouta E., Bekiari V., Stathatos E., Panagopoulos G. and Panagiotaras D., (2017). Olive Mill Wastewaters Total Organic Carbon Degradation using TiO₂ Nanoparticles. 15th International Conference on Environmental Science and Technology Rhodes, Greece, 31 August to 2 September, pages 5.
- [67] Towards establishing a manufacturing protocol for efficient mesostructured perovskite solar cells in ambient conditions D. Papadatos, A. Karavioti, D. Sygkridou, E. Stathatos. EMRS European Materials Research Society, Materials for Energy, Session B Emerging photovoltaics: strategies for more stable devices Nice 27-31 May 2019.
- [68] Exploring the case of mesoscopic carbon-based perovskite solar cells with promising stability in moisture and ambient air 8th International conference on materials science and nanotechnology for next generation (MSNG2021) July 14-16, 2021

PLENARY/KEYNOTE PRESENTATIONS AND INVITED LECTURES

1. Member of the International Scientific Committee, the IASTED International Conference on Solar Energy (SOE 2009/2010/2011).
2. Chair of Session VI and member of International committee: International Conference for Renewable Energies Damascus Syria 4-8 April 2010.
3. Chair of Session II: Solar-08 International conference on Molecular nano-photochemistry Photocatalysis and solar to energy conversion 24-28 February 2008
4. Advanced workshop: New trends in nanophysics and solar energy conversion 23-25 September 2013, Magurele–Bucharest, Romania. Title of oral presentation: “Three dimensional semiconducting metal oxide nanoparticles for three generation photovoltaics: An overview to Dye and Quantum dot sensitized solar cells” Elias Stathatos
5. Conference for Sustainable Energy CSE 2014 (6-8 November 2014) “Improved Performance of Quasi-solid State Dye-Sensitized Solar Cells After Photoanode Surface Treatment with Novel Materials” Elias Stathatos
6. Highly transparent quasi-solid state dye-sensitized solar cells and modules made with advanced nanocomposite materials and inkjet printers. Elias Stathatos 1st International Conference on Organic Electronic Material Technologies (OEMT2015) March 25-28, 2015 Elazığ, TURKEY Elias Stathatos, Dimitra Sygkridou, Andreas Rapsomanikis.
7. Exploring the case of mesoscopic carbon-based perovskite solar cells with promising stability in moisture and ambient air 8th International conference on materials science and nanotechnology for next generation (MSNG2021) July 14-16, 2021

PATENTS

1. **“Photoelectrochemical solid-state cell used for the photovoltaic conversion of solar energy”** E. Stathatos, P. Lianos, B. Orel, U. Lavrencic-Stangar, N. Grosej, Greece, No. 1003816, International Classification: H01G 9/20
2. **«Solar photoelectrochemical cell made of composite organic/inorganic nanostructured materials »** E. Stathatos, and P. Lianos Greece, No.1004545, International Classification: C01G 23/053.
3. **Photoelectrochemical Solar Cell made from nanocomposite organic/inorganic materials.** E. Stathatos, P. Lianos, International patent P273/PCT/GR2004/0000 23/16.4.2004.
4. **Quasi-solid-state Photoelectrochemical Solar Cell formed using inkjet printing and nanocomposite organic/inorganic materials.** E. Stathatos, P. Lianos CONFIRMATION NUMBER: 5826, EFS ID: 9183871, Application No: US20110986181, Application Date: 20110107, Publication No: US2011203644 AA, Publication Date: 20110825
5. **A Scalable solar module production line based on Ink-jet printing and thermal curing** Inventors: Elias Stathatos Ph.D, Nick Kanopoulos Ph.D, Panagiotis Lianos Ph.D, Yiannis Katsagounos, Theodore Makris. CONFIRMATION NUMBER: 7330, EFS ID: 14775043, Application No: US20130748393, Application Date: 20130123, Publication No: US2013139887 AA, Publication Date: 20130606.
6. **A Scalable solar module production line based on Ink-jet printing and thermal curing** Inventors: Elias Stathatos Ph.D, Nick Kanopoulos Ph.D, Panagiotis Lianos Ph.D, Yiannis Katsagounos, Theodore Makris. CONFIRMATION NUMBER: 500081829, Reference Number: P31548NL00/RWT, Application Number: NL20132010468, Application Date: 20130318, Publication No: NL2010468 AI, Publication Date: 20140724 (filed in Netherlands)
7. **A Scalable solar module production line based on Ink-jet printing and thermal curing** Inventors: Elias Stathatos Ph.D, Nick Kanopoulos Ph.D, Panagiotis Lianos Ph.D, Yiannis Katsagounos, Theodore Makris. 1310232 CN / **201310148003.5**, Application No: CN201310148003, Application Date: 20130425, Publication No: CN103943367 B, Publication Date: 20180102 (filed in China)
8. **Fabrication of Electrochromic Panes with Gel Electrolytes and Nanocomposite Oxides Formed with Inkjet Printing.** Inventors: Elias Stathatos, Theodoros Makris, Giannis Katsagounos, Argyroula Mourtzikou, Nick Kanopoulos December 16, 2015 accepted in China. Ref. 1510333CN
9. **An Electrochromic Safety Glass System with Fast Switching Properties.** Inventors: Elias Stathatos, Theodoros Makris, Andreas Rapsomanikis, Argyroula 5 Mourtzikou, Giannis Katsagounos, Ardenis Fejzj, Nick Kanopoulos. 1810479CN / Notice of Acceptance: 201810461714.0 (filed in China).
10. **All inkjet printed perovskite solar cells and modules under fully ambient air atmosphere.** Inventors: Dimitris A. Chalkias, Argyroula Mourtzikou, Giannis Katsagounos, Elias Stathatos, Nick Kanopoulos. (filed in Netherlands)

Representative FUNDED RESEARCH

Principal / Co-Principal Investigator in:

1. Molecular Materials and Functional Polymers for Advanced Devices (COST Engineering Action 518, DG XII, 1997-2000) **co-Principal Investigator**
2. Chemical synthesis, deposition and study of thin transition metal oxides for environmental and energy applications (Greece-Slovenia R&T Cooperation Program 1999-2000) **co-Principal Investigator**
3. Photocatalytic management of water wastes from shipyards and electric material producing factories (Industrial Wastes Management Program, ΓΓΕΤ-ΕΠΕΤ II, 1999-2001) **co-Principal Investigator**
4. New materials for photovoltaic applications (Human Networks Program, ΓΓΕΤ-ΕΠΕΤ II, 1999-2001) **co-Principal Investigator**
5. Solid state photoelectrochemical cells (Greece-Slovenia R&T Cooperation Program 2001-2002) **co-Principal Investigator**

6. Network for the study of new materials for photovoltaic applications (Greece-Cyprus R&T Cooperation Program 2001-2002) **co-Principal Investigator**
7. Solid state photoelectrochemical cells (Basic Research Program “Κ.ΚΑΡΑΘΕΟΔΩΡΗΣ” of the University of Patras, 2001-2003) **co-Principal Investigator**
8. Study of nanostructured organic inorganic ionic conductors and their applications to Photoelectrochemical Solar Cells and Electrochromic Cells (Greece-Slovenia R&T Cooperation Program 2003-2004) **co-Principal Investigator**
9. Feasibility study for the exploitation of a Solid-state Photoelectrochemical Cell (Program ΠΡΑΞΕ 81 2003) **Principal Investigator**
10. Enhancement of the efficiency of photovoltaic cells with molecular light concentrators (Greece-Cyprus R&T Cooperation Program 2004-2005) **co-Principal Investigator**
11. Synthesis of Visible-Light Functional $\text{TiO}_{2-x}\text{N}_x$ Nanoparticles and Films and their Application for the Decomposition of Carbamide and Organophosphate-based Pesticides in Water. Greece-USA R&T Cooperation Program 2006-2007 -ΓΓΕΤ 05-NON-EU-521. **Principal Investigator**
12. New materials as luminescent solar concentrators for improved performance of silicon solar cells Cyprus-Greece R&T Cooperation Program 2008-2009. **Principal Investigator**
13. Phase II, Corallia Clusters Initiative in Microelectronics “Development of transparent photovoltaic panels-program acronym *Solar Window*” 2009-2012, **co-Principal Investigator**
14. GSRT, co-funded by EU and Greece «Energy autonomous smart greenhouse» **«SYNERGASIA 2011-2015 co-Principal Investigator.**
15. GSRT, co-funded by EU and Greece ARCHIMEDES PROPOSAL 2012-2015: DESIGN, FABRICATION AND OPTIMIZATION OF LARGE SCALE THIRD GENERATION PHOTOVOLTAIC CELLS, 2011-2014 **Principal Investigator.**
16. GSRT, co-funded by EU and Greece THALES PROPOSAL 2012-2015: INNOVATIVE MATERIALS FOR NANOCRYSTALLINE SOLAR CELLS **co-Principal Investigator.**
17. Efficient wastewater treatment with nanocrystalline transition metal oxides modified with noble metals and nonmetals (Greece-Romania R&T Cooperation Program 2012-2014) **co-Principal Investigator.**
18. New materials for enhanced performance of third generation photovoltaics. Thermoanalytic and spectroscopic studies on potential precursors and fabrication steps, leading to advanced materials. (Greece-Hungary R&T Cooperation Program 2012-2014) **Principal Investigator.**
19. Development and manufacturing of a new innovative nanotechnology-based decontaminant construction material for indoor building. FP7, LEAD-ERA 2012-2014 **Principal Investigator.**
20. Printed Perovskite Modules for Building Integrated Photovoltaics (Greece-Germany R&T Cooperation Program 2018-2021) **Principal Investigator**
21. Region of Western Greece: «ΕΝΙΣΧΥΣΗ ΣΧΕΔΙΩΝ ΕΡΕΥΝΑΣ ΑΝΑΠΤΥΞΗΣ & ΚΑΙΝΟΤΟΜΙΑΣ ΣΕ ΤΟΜΕΙΣ ΠΡΟΤΕΡΑΙΟΤΗΤΑΣ ΤΗΣ RIS3 ΜΙΚΡΟΗΛΕΚΤΡΟΝΙΚΗ ΚΑΙ ΠΡΟΗΓΜΕΝΑ ΥΛΙΚΑ» 2018-2020, Research and development of low cost PV glass pane panels **co-Principal Investigator.**
22. Collaboration of enterprises with research groups, «ΕΡΕΥΝΩ – ΔΗΜΙΟΥΡΓΩ – ΚΑΙΝΟΤΟΜΩ» 2018-2021 title: «Low cost inkjet printable perovskite solar glass panes» **Principal Investigator.**
23. 2nd Call for H.F.R.I.'s Research Projects to Support Faculty Members & Researchers «Enhanced and Long-lasting electricity generation under dim lighting and dark using emerging photovoltaic technologies» **Principal Investigator.**

PROFESSIONAL SERVICE

Editorial Activity (International/National)

1. Associate Editor of Journal of Advanced Oxidation Technologies (ISSN 1203-8407)
2. Associate Editor of Journal of ISRN Spectroscopy (doi:10.5402/SPECTROSCOPY)
3. Editorial Advisory Board: Materials Science in Semiconductor Processing (Elsevier)
4. Associate Editor of International Journal of Photoenergy

5. Editorial Board: Heliyon (Elsevier)
6. Leading Guest Editor in International Journal of Photoenergy: Special Issue on Recent developments in solid state electrolytes for dye sensitized solar cells
7. Guest Editor in International Journal of Photoenergy: Special Issue on Progress and Perspectives in Visible Light Driven Photocatalysis

Reviewer

Peer-Reviewed Journals (International)

Peer-Reviewed Journals: more than 35 international scientific journals, most in the fields of environmental engineering and science, environmental catalysis, environmental chemistry, materials chemistry, materials synthesis, nanotechnology, physical chemistry and solar energy. e.g. Solar Energy, Chemosphere, Colloids and Surfaces A, Langmuir, Applied Catalysis B: Environmental, Photonics and Nanostructures-Fundamentals and Applications, Materials Chemistry and Physics, International Journal of Modern Physics B., Termochimica Acta, Journal of Hazardous materials, Journal of Physical Chemistry, Solar energy materials and solar cells, Thin solid films, Electrochimica Acta, Journal of Chemical Engineering, Dyes and Pigments, Journal of Advanced Oxidation Technologies, Journal of Materials Processing Technology, International Journal of Photoenergy, Journal of Environmental Management, Journal of Solar energy Engineering, Chemical Engineering Communication, Journal of Fluorescence, Journal of Photochemistry and Photobiology, Synthetic Metals, Materials Science and Engineering B, Journal of Materials Science, Environmental Engineering Science, Organic Electronics, Materials Science in Semiconductor Processing, Recent Patents in Nanomedicine, ACS, Industrial & Engineering Chemistry Research, Journal of Nanomaterials, Surface and Coatings Technology, ACS, Applied Materials & Interfaces, Journal of Photonics for Energy, Journal of Environmental Management, Advanced Materials, Applied Surface Science, Renewable energy. Journal of Hydrogen energy, Applied Physics A, Applied Clay Science, Chemical Communications, ACS Applied Materials & Interfaces.

IMPACT OF PUBLISHED WORKS

My published work has been cited in international scientific literature. As of April 2022, Science Citation Index lists about 7100 citations, *h*-factor 41 (source: Google scholar)