

PERSONAL INFORMATION

Efthymis D. Serpetzoglou



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🔗 Google Scholar: https://scholar.google.gr/citations?user=fd_toQUAAAAJ&hl=en

🔗 Research Gate: https://www.researchgate.net/profile/Efthymis_Serpetzoglou

🔗 LinkedIn: <https://www.linkedin.com/in/efthymis-serpetzoglou/>

🔗 Skype: [efthymis_serpetzoglou](https://www.skype.com/people/efthymis_serpetzoglou)

📅 Date of birth 02/07/1988 | 🇬🇷 Nationality Greek

Work Experience

09/02/2015 – Present

PhD Candidate

Foundation for Research and Technology, Hellas (FORTH), Heraklion (Greece)

Ultrafast Transient Absorption Spectroscopy (Time Resolved Spectroscopy)

Laser processing and study of Perovskite Solar Cells

Ultrafast Laser Micro- and Nano- processing

Conjugated Polymers Characterisation

- Assistant in Undergraduate Laboratories
- Responsible for Transient Absorption Spectroscopy Measurements
- Spectroscopy in Organic Photovoltaics and Perovskite Solar Cells
- Laser Processing

03/2019-05/2019

Assistant Researcher

Teaching in Postgraduates Laboratories

- Ultrafast Transient Absorption Spectroscopy

02/2015–04/2017

Assistant Researcher

Teaching in Undergraduate Laboratories

- Electricity and Magnetism Laboratories
- Physics Advanced Laboratories
- Laboratories in Laser and Modern Optics (ELMO)

09/2014–02/2015

Researcher

National Technical University of Athens

09/2006–02/2015

Personal Tutor

- Physics
- Mathematics
- Chemistry
- Biology

10/2011–12/2011

Trainee

Air Traffic Safety Electronic Engineer at Civil Aviation Authority of Greece, Athens, Athens (Greece)

Tasks:

- Solving problems in Air Traffic Controllers.
- Replacing damaged hardware in Servers and any computers, generally.
- Export charges.
- Installing Linux and UNIX in new Hard disk.
- Business or sector Phased Automation of Hellenic ATC Radar System

09/2013-02/2015

Assistant Coach

In Academy of Football team

Education and Training

09/02/2015–Present

PhD Candidate

Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology – Hellas, University of Crete, Physics Department

2012 – 2014

Master of Science «Microsystems and Nanodevices»

National Technical University of Athens, Athens (Greece)

Master Degree: **8.2/10**

Master Thesis: « Fabrication of Bio-sensors for Food Analysis with Laser

Participation in Projects: "BIOFOS: Micro-ring resonator based photonic system for food analysis", coordinator Dr. Ioanna Zergioti. (EU FP7 project)

2006 – 2012

Diploma (5 years. – 300 ECTS) “Integrated Master”

Applied Mathematics and Physical Sciences, National Technical University of Athens (NTUA)

Diploma Degree: **7.37/10**

Diploma Thesis: « Fabrication and Characterisation Of Organic Solar Cells with Laser »

2000-2006

High School (18.8/20)

Sxoli Xenopoulou, Athens

Personal Skills

Mother Tongue(s)

Greek

Other language(s)

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Listening	Reading

English

C1	C1	C1	C1	B2
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**International English Language Testing System (IELTS)
First Certificate of English, Cambridge**

Communication skills

- Excellent communication skills

Organizational / managerial skills

- Leadership (Currently responsible for undergraduate students for experiments in laboratories)
- Leadership in semi-professional football team
- Excellent managerial skills (Coach in football team)

Job-related skills

- Mentoring skill (as PhD Candidate, I was responsible for undergraduate diploma thesis)

Digital competence

SELF-ASSESSMENT

Information processing	Communication	Content creation	Safety	Problem solving
PROFICIENT USER	PROFICIENT USER	PROFICIENT USER	INDEPENDENT USER	INDEPENDENT USER

- Advanced knowledge use of computers: Microsoft Office (Word, Excel, Access, PowerPoint and Internet Explorer), ECDL Core Diploma, iOS, Windows XP, Windows Vista, Windows 7, Windows 8, Windows 10, Ubuntu, Origin and Image J, Prolith, etc.
- Programming in: Java, Emacs, FORTRAN, HTML, LabView, Matlab and Mathematica.
- Proficient in English and Greek word processing

Other Information

Research Interests

- Ultrafast Transient Absorption Spectroscopy
- Perovskite Solar Cells and Organic Photovoltaics
- Optics and Quantum Optics
- Applications of Laser
- Nanoelectronics

Publications

- “In-Situ Monitoring of the Charge Carrier Dynamics of CH₃NH₃PbI₃ Perovskite Crystallization Process” E. Serpetzoglou, I. Konidakis, T. Maksudov, A. Panagiotopoulos, E. Kymakis, E. Stratakis
Journal of Materials Chemistry C, **2019**, DOI: 10.1039/C9TC04335G
- “Limitations of polymer-based hole transporting layer for application in planar inverted perovskite solar cells” M. Petrović, T. Maksudov, A. Panagiotopoulos, E. Serpetzoglou, I. Konidakis, M. M. Stylianakis, E. Stratakis, E. Kymakis
Nanoscale Advances, **2019**, DOI: 10.1039/C9NA00246D
- “Erasable and rewritable laser-induced gratings on silver phosphate glass” I. Konidakis, E. Skoulas, A. Papadopoulos, E. Serpetzoglou, E. Margariti, E. Stratakis
Applied Physics A, **2018**, 124:839
- “Improved Charge Carrier Dynamics of CH₃NH₃PbI₃ Perovskite Films Synthesized by Means of Laser-Assisted Crystallization” I. Konidakis, T. Maksudov, E. Serpetzoglou, G. Kakavelakis, E. Kymakis, E. Stratakis
ACS Applied Energy Materials, **2018**, 1, 5101–5111
- “Enhancement of the Power-Conversion Efficiency of Organic Solar Cells via Unveiling an Appropriate Rational Design Strategy in Indacenodithiophene-alt-quinoxaline π -Conjugated Polymers” C. L. Chochos, R. Singh, V. G. Gregoriou, M. Kim, A. Katsouras, E. Serpetzoglou, I. Konidakis, E. Stratakis, K. Cho, A. Avgeropoulos
ACS Applied Materials and Interfaces, **2018**, 10, 10236–10245
- “ α,β -Unsubstituted *meso*-positioning thienyl BODIPY: a promising electron deficient building block for the development of near infrared (NIR) p-type donor–acceptor (D–A) conjugated polymers” B. M. Squeo, V. G. Gregoriou, Y. Han, A. Palma-Cando, S. Allard, E. Serpetzoglou, I. Konidakis, E. Stratakis, A. Avgeropoulos, T. D. Anthopoulos, M. Heeney, U. Scherf, C. L. Chochos
RSC Journal of Materials Chemistry C, **2018**, 6, 4030–4040.
- “Improved Carrier Transport in Perovskite Solar Cells Probed by Femtosecond Transient Absorption Spectroscopy” E. Serpetzoglou, I. Konidakis, G. Kakavelakis, T. Maksudov, E. Kymakis, E. Stratakis
ACS Applied Materials and Interfaces, **2017**, 9, 43910–43919.
- “The role of chemical structure in indacenodithienothiophene-alt-benzothiadiazole copolymers for high performance organic solar cells with improved photo-stability through minimization of burn-in loss” C. L. Chochos, Nicolas Leclerc, N. Gasparini, N. Zimmerman, E. Tasi, A. Katsouras, D. Moschovas, E. Serpetzoglou, I. Konidakis, S. Fall, P. Le ve`que, T. Heiser, M. Spanos, V. G. Gregoriou, E. Stratakis, T. Ameri, C. J. Brabec, A. Avgeropoulos
Journal of Material Chemistry A, **2017**, 5, 25064–25076.
- “Laser –Induced forward transfer of silver nanoparticle ink: Time-resolved imaging of the jetting dynamics and correlation with the printing quality” C. Boutopoulos, I. Kalpyris, E. Serpetzoglou, I. Zergioti
Microfluidics and Nanofluidics, **2014**, 16, 3493–500.

Conference Publications

- Ultrafast Time-Resolved Absorption Spectroscopy in Perovskite Solar Cells (Poster Presentation Award)
2nd Intensive Course in Laser Spectroscopy and Safety (2019)
- Charge carrier transport dynamics in perovskite solar cells probed by transient absorption spectroscopy (Oral Presentation Award)
7th International Symposium on Transparent Conductive Materials & 4th EMRS & MRS-J Bilateral Symposium on Advanced Oxides and Wide Bandgap Semiconductors (2018) (Oral Presentation)
- Improved Charge Carrier Dynamics of $\text{CH}_3\text{NH}_3\text{PbI}_3$ Perovskite Films Probed by Femtosecond Transient Absorption Spectroscopy
1st International Conference on Nanotechnologies and Bionanoscience (2018) (Oral Presentation)
- Online Monitoring the Crystallization Process of $\text{CH}_3\text{NH}_3\text{PbI}_3$ Probed by Femtosecond Transient Absorption Spectroscopy
1st International Conference on Nanotechnologies and Bionanoscience (2018) (Poster Presentation)
- Transport Carrier Dynamics in Perovskite Solar Cells Probed by Ultrafast Transient Absorption Spectroscopy (Poster Presentation Award)
2nd NFFA-Europe Summer School, Nanoscience Foundries and Fine Analysis (NFFA), available instruments and techniques (Poster Presentation) July 9-13, 2018, Basovizza, Trieste (Italy)
- Charge Carrier Dynamics in Perovskite Solar Cells Probed by Femtosecond Transient Absorption Spectroscopy
11th International Symposium on Flexible Organic Electronics (ISFOE18) (Poster Presentation)
- **Participation with Full Grant**
International School on Light Science and Technologies
Core: Light in Energy and Environment
June 19-23, 2017, Santander (Spain)
- Advanced photonic techniques for organic photovoltaic applications
2nd Israel-Greece Joint Meeting on Nanotechnology and Bionanoscience (2016) (Poster Presentation)
- A polyphenol biosensor realized by Laser printing technology
Cost TD1102 Phototech: Biosensors & Biochips (2013) (Oral Presentation)
- Laser Printing of Semiconducting Polymer Materials for Organic Solar Cells
5th International Symposium of Flexible Organic Electronics (ISFOE12) (Oral Presentation)

Awards

- **Best Poster Presentation**
Ultrafast Time-Resolved Absorption Spectroscopy in Perovskite Solar Cells
2nd Intensive Course in Laser Spectroscopy and Safety (2019)
- **Best Oral Presentation**
Charge carrier transport dynamics in perovskite solar cells probed by transient absorption spectroscopy
7th International Symposium on Transparent Conductive Materials & 4th EMRS & MRS-J Bilateral Symposium on Advanced Oxides and Wide Bandgap Semiconductors (2018)
- **Best Poster Award**
Transport Carrier Dynamics in Perovskite Solar Cells Probed by Ultrafast Transient Absorption Spectroscopy
2nd NFFA-Europe Summer School, Nanoscience Foundries and Fine Analysis (NFFA), available instruments and techniques (2018)

Hobby

- Semi-professional Football player
- Member of the NTUA Football Team
- Member of the FORTH Football Team
- Basketball, Table Tennis
- Travelling, Socializing

Referees

- Dr. Emmanuel Stratakis
Researcher Director of the Ultrafast Laser Micro- and Nano- Processing Group
Institute of Electronic Structure and Lasers (IESL)
Foundation for Research and Technology Hellas (FORTH)
Tel: +30-2810-391274
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- Prof. Emmanuel Kymakis
Head of the Nanomaterials & Advanced Electronics Group
University of Applied Sciences Crete (TEI of Crete)
Electrical Engineering Department
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