

i. Curriculum Vitae: Panagiotis A. Loukakos

Personal details:

Name: Dr. Panagiotis A. Loukakos
Place of birth: Chania, Greece, 1972
Nationality: Greek
Marital status: Married
Gender: Male
Current position: Principal Researcher, FORTH-IESL
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Language skills: Greek (fluent), English (conversational), German (survivor)

Job experience:

November 2014 - Principal Researcher, FORTH - IESL
April 2011- October 2014 Assistant researcher, FORTH-IESL
October 2008-March 2011 Junior Researcher, FORTH-IESL
April 2007 – Sept. 2008: Postdoctoral research, FORTH-IESL.
Oct. 2002 – Jan. 2007: Postdoctoral research, Freie Universität Berlin, AG. Prof. Dr. M. Wolf.
May 2002 – Sept. 2002: Postdoctoral research FORTH-IESL.

Teaching experience:

Spr. 2020 - Teaching, Student 2nd year Educational Laboratory course, “Electricity”.
Autumn 2003-2006: Teaching assistance, Experimental Physics III (course), and Student physics laboratories, Physics dept., Freie Universität Berlin.
Aut. 1992 – Aut. 2002: Teaching assistance in 2nd- 3rd- and 4th-year student physics laboratories, Physics dept., University of Crete.

Education:

Oct. 1998 – Apr. 2002: Ph.D thesis, “The influence of structure on ultrafast electron dynamics in non-stoichiometric III-V semiconductors and metallic nano-composites” Physics dept., University of Crete, and FORTH-IESL. Thesis supervisor Prof. C. Fotakis.
Oct. 1996 - Sept. 1998: Postgraduate studies (M.Sc.) in General Physics, Physics dept., University of Crete.
Oct. 1995 - Sept. 1996: Research trainee, FORTH-IESL.
Oct. 1990 - Sept. 1996: Undergraduate studies (B.Sc.), Physics dept., University of Crete.

Reviewer in: journals published by the American Physical Society, Springer, Elsevier & OSA.

Deputy PI, Ultrafast Laser Facility of FORTH (ULF-FORTH), member of Laserlab-Europe AISBL
Technical manager, ULF facility of FORTH, member of Laserlab Europe and trial member of CERIC-ERIC.

Theses supervision:

- Diploma thesis, E. Magoulakis, "Ultrafast dynamics on ZnO/Si micro-cones", University of Crete, 2009.
- PhD thesis, M. Barberoglou, co-advisor, "Femtosecond laser micro/nano structuring of solid surfaces: Fundamentals and applications", University of Crete, awarded in 2012.
- MSc thesis, G. Arvanitakis, University of Crete, awarded 2014.
- Bachelor's Thesis, F. Fraggelakis, "Formation of nanostructures on semiconductors and dielectric surfaces using ultrashort laser pulses", University of Crete, awarded 2014.
- Master's Thesis, F. Fraggelakis, "Formation of nanostructures on semiconductors and dielectric surfaces using ultrashort laser pulses", University of Crete, awarded 2014.
- PhD thesis, N. Liaros-Un. Of Patras, co-supervision, awarded 2014.
- Masters thesis, M. Karalaki, University of Crete, awarded 2015.
- Master's Thesis, K. Mouratis, Technical Educational Institute of Crete, awarded 2017.
- Master's Thesis, P. Ch. Psycharakis, "Absorption and Fluorescence Spectroscopy of Biological Tissues using Intense Laser Pulses and Optical Arrangements Aiming at Discrimination Between Cancerous and Healthy Tissues" University of Crete, Medical School, awarded 2017.
- PhD Thesis, D. Karanikolopoulos, "Ultrafast Dynamics of Strongly Correlated Systems Using Ultrafast Laser Pulses", in progress.
- Master's Thesis, M. Polychronaki, "Ultrafast Time resolved Spectroscopy for Analysis of Flavins FMN and FAD, Cofactors of Cytochrome P450 Oxidoreductase", University of Crete, Chemistry Department, awarded 2019.
- Master's Thesis, M. Pigiaki, "Ultrafast laser-induced charge transfer dynamics in metallo-porphyrins", University of Crete, Chem. Dept. awarded 2021.
- Diploma Thesis, N. Papakosta, "Ultrafast laser-assisted processing of surfaces for Battery Cathodes", in progress.
- Diploma Thesis, M. D. Tsanakas, "Ultrafast laser-assisted processing of surfaces for Hydrogen Fuel Cells", University of Crete, Physics Dept. awarded 2021.
- PhD Thesis, M. Polychronaki, "Ultrafast time-resolved laser spectroscopy for the study of Oxidoreductase of Cytochrome P450", in progress.
- PhD Thesis, M. Pigiaki, "Ultrafast time-resolved laser spectroscopy in porphyrins"
- Master's Thesis, N. Papakosta, "Laser-induced nanostructures for energy applications", Material Science Department, University of Crete, in progress (2021-now).
- BSc Thesis, G. Zembilis, "Laser-induced surface nanostructures for enhanced Hydrogen Production", Physics Department, University of Crete, in progress (2021-now).

Research career summary:

I obtained my B.Sc. degree, M.Sc. degree and Ph.D in Physics from the Physics Department of the University of Crete (1996, 1998 and 2002). My Ph.D thesis, supervised by Prof. C. Fotakis, dealt with the investigation of ultrafast electron and lattice dynamics in semiconductors, metals and their nanostructures following excitation by ultrashort laser pulses. Part of my Ph.D thesis work was carried out in the Laboratory of Applied Optics in the Ecole Polytechnique in Paris, France under the supervision of Dr. Fabrice Vallee. This part dealt with the ultrafast opto-electronic properties of metallic nanoparticles. From Oct/2002 till Jan/2007 I was a postdoctoral fellow at the research group of Prof. Dr. Martin Wolf, currently the Director of Physical Chemistry at the Fritz Haber Institute of the Max Planck Society. My research involved experiments on surfaces and interfaces utilizing ultrafast, time-resolved photoemission spectroscopy. At the focus of my study was the ultrafast dynamics of electronic and lattice interactions and the energy transfer and exchanges that occur in metallic surfaces and interfaces following ultrashort laser pulse excitation. Since 2007 I am back in Greece and since 2008 I am elected researcher in FORTH-IESL to perform studies of ultrafast phenomena in condensed matter using ultrashort laser pulses.

My laboratory in FORTH-IESL operates since March 2009 and is equipped with a workstation for ultrafast time resolved measurements using ultrashort laser pulses and a workstation for surface processing of condensed phase materials using ultrashort laser pulses.

The experiments are performed using a 1 kHz laser amplifier with center wavelength at 800 nm and ~0.8 mJ energy per pulse. Nonlinear optical techniques are employed to generate a wide spectrum of frequencies needed to excite specific resonances imposed by the system under study.

- Ultrafast dynamics in condensed-phase materials.
In this experimental research activity ultrafast time-resolved optical spectroscopy is employed to study the ultrafast processes that occur in condensed phase materials following intense optical excitation by ultrashort laser pulses. Ultrafast electronic, lattice and magnetic interactions taking place in solids in the femtosecond and the picosecond temporal regime are investigated. Novel bulk and nanostructured photonic materials with potential in modern applications such as nanocircuits, ultrafast nonlinear optical switches, high efficiency devices, energy, nanocatalysts, spintronics etc have high priority in our research. The physics of semiconductors metals and dielectrics in confined geometries and nanostructures that exhibit novel combined optoelectronic and magnetic properties, hybrid and nanostructured materials with applications in environmental-friendly photonic devices are investigated. Study of the ultrafast dynamics of energy deposition, charge transfer and relaxation processes in systems of (bio-)chemical interest are a new addition to our research endeavors.
- Study and tailoring of ultrafast laser-induced structural transitions in solids.
At high intensities the irradiated material undergoes structural transitions in the form of processing, melting, evaporation, and generally ablation. The understanding of the evolution of the material from the moment of excitation until the final state is very challenging due to the high number and the complexity of the physical and chemical processes that occur (laser-matter energy transfer, phase transition/explosion, material re-solidification etc.). We pursue the understanding of the microscopic processes and the control of the macroscopic properties of the irradiated materials to achieve novel functionalities that can enhance their performance in state-of-the art applications, relative to the green transition towards energy with minimal environmental footprint.

Laboratory Description

The FLASS (Femtosecond Laser Spectroscopy in Solid State) laboratory is a unique laboratory for the Greek research community based on an amplified laser source which delivers pulses of laser light at a repetition rate of 1 kHz, central wavelength at 785 nm, with maximum energy per pulse 0.8 mJ and minimum pulse duration of 25 fs. Secondary optical sources include non-collinear optical parametric amplifiers which can provide a broad range of selectable wavelengths spanning the region from the near UV to the near IR (~250nm-1500nm). Additionally a Spatial Light Modulator in a 4f optical configuration is used to modulate the temporal shape of the laser pulses in a temporal window extending to 14 ps. Together with a pump-probe workstation and the proper analysis instruments (spectrometer, monochromator, CCD imaging camera, lock-in amplifier etc.) we can perform state-of-the art pump-probe time-resolved all-optical spectroscopy at a variety of condensed matter systems such as metals, (wide band gap-) semiconductors, quantum wells, thin films nanocrystals and reduced dimensionality systems. Also, the laboratory employs an additional dual-purpose workstation consisting of: 1) direct laser-surface writing for microstructure and nanostructure formation on metal, semiconductor and dielectric surfaces and 2) LIFT (Laser-Induced Forward Transfer) workstation for micro-confined deposition of thin films onto selected surfaces and substrates.

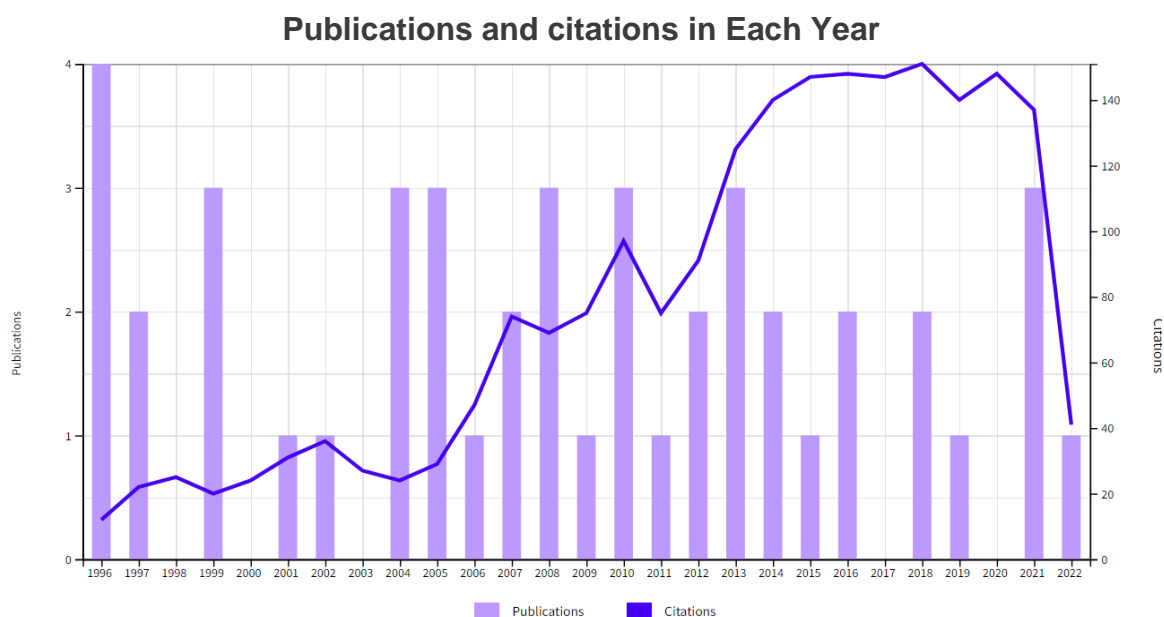
International access provider through the Ultrafast Laser Facility (ULF-FORTH) partner of Laserlab Europe and ERIC-CERIC

ii. Bibliometric data (as of May 31st 2022)

51 publications in peer-reviewed international scientific journals, proceedings and 2 book chapters.

2102 citations (2044 non self).

h-index: 18 (ISI-Web of Knowledge)



List of publications (journals, proceedings & book chapters)

1. I. Poimenidis, S. D. Moustazis, N. Papakosta, M. D. Tsanakas, A. Klini, P. A. Loukakos. "Electrodeposition of Ni particles on laser nanostructured electrodes for enhanced hydrogen evolution reaction", *Materials Today: Proceedings*, **xxx**, xxx (2022), <https://doi.org/10.1016/j.matpr.2022.04.652>
2. I. Poimenidis, N. Papakosta, A. Manousaki, A. Klini, M. Farsari, S. D. Moustazis, P. A. Loukakos. "Electrodeposited laser-nanostructured electrodes for increased hydrogen production", *Int. J. Hydrog. Energy*, **46**, 9527 (2022), <https://doi.org/10.1016/j.ijhydene.2022.01.062>
3. I. Poimenidis, M. D. Tsanakas, N. Papakosta, A. Klini, M. Farsari, S. D. Moustazis, P. A. Loukakos. "Enhanced Hydrogen production through alkaline electrolysis using laser-nanostructured Nickel electrodes", *Int. J. Hydrog. Energy*, **46**, 37162 (2021), <https://doi.org/10.1016/j.ijhydene.2021.09.010>
4. D. Karanikolopoulos, E. Gagaoudakis, S. Droulias, D. Louloudakis, K. Mouratis, M. Polychronaki, E. Aperathitis, D. Vernardou, V. Binas, C. Kalpouzos, G. Kiriakidis, E. Koudoumas, A. Lappas, P. A. Loukakos. "Influence of Mg doping on the ultrafast electron dynamics of VO₂ films", *Appl. Phys. A* **127**, 751 (2021), <https://doi.org/10.1007/s00339-021-04886-y>
5. E. Nikoloudakis, M. Pigiaki, M. Polychronaki, A. Margaritopoulou, G. Charalambidis, E. Serpetzoglou, A. Mitraki, P. A. Loukakos, A. G. Coutsolelos. "Self-assembly of porphyrin dipeptide conjugates towards hydrogen production", *ACS Sustain. Chem. Eng.*, **9**, 7781 (2021), <https://doi.org/10.1021/acssuschemeng.1c00978>
6. I. Sakellari, E. Kabouraki, D. Karanikolopoulos, S. Droulias, M. Farsari, P. Loukakos, M. Vamvakaki, D. Gray. "Quantum Dot Based 3D Printed Woodpile Photonic Crystals Tuned For The Visible", *Nanoscale Advances* **1**, 3413 (2019), <https://doi.org/10.1039/C9NA00357F>
7. M. Bakarezos, E. Tzianaki, S. Petrakis, G. Tsibidis, P. A. Loukakos, V. Dimitriou, C. Kosmidis, M. Tatarakis, N. A. Papadogiannis. "Ultrafast laser pulse chirp effects on laser-generated nanoacoustic strains in Silicon", *Ultrasonics* **86**, 14 (2018). <https://doi.org/10.1016/j.ultras.2018.01.008>
8. F. Fraggelakis, E. Stratakis, P. A. Loukakos. "Control of periodic surface structures on Silicon by combined temporal and polarization shaping of femtosecond laser pulses", *Appl. Surf. Sci.* **444**, 154 (2018), <https://doi.org/10.1016/j.apsusc.2018.02.258>
9. P. A. Loukakos, G. D. Tsibidis, E. Stratakis, chapter "Ultrafast Processes on Semiconductor Surfaces Initiated by Temporally Shaped Femtosecond Laser Pulses" in "Pulsed Laser Ablation: Advances and Applications in Nanoparticles and Nanostructuring Thin Films" Edt by Ion. N. Mihailescu and Anna Paola

- Caricato, Pan Stanford Publishing Pte. Ltd. 2018, ISBN 978-981-4774-23-9 (Hardcover), 978-1-315-18523-1 (eBook).
10. E. Tzianaki, M. Bakarezos, G. D. Tsibidis, S. Petrakis, P. A. Loukakos, C. Kosmidis, M. Tatarakis, and N. A. Papadogiannis, “Controlling nanoscale acoustic strains in silicon using chirped femtosecond laser pulses”, *Appl. Phys. Lett.* **108**, 254102 (2016). <https://doi.org/10.1063/1.4954636>
 11. N. Liaros, S. Couris, E. Koudoumas, P. A. Loukakos, “Ultrafast Processes in Graphene Oxide during Femtosecond Laser Excitation”, *J. Phys. Chem. C*, **120**, 4104 (2016). [10.1021/acs.jpcc.5b11943](https://doi.org/10.1021/acs.jpcc.5b11943)
 12. E. Tzianaki, M. Bakarezos, G. D. Tsibidis, Y. Orphanos, P. A. Loukakos, C. Kosmidis, P. Patsalas, M. Tatarakis, and N. A. Papadogiannis, “High acoustic strains in Si through ultrafast laser excitation of Ti thin-film transducers”, *Opt. Express* **23**, 17191 (2015). <https://doi.org/10.1364/OE.23.017191>
 13. E. V. Barmina, C. Fotakis, P. A. Loukakos, E. Stratakis, and G. A. Shafeev, “Laser-assisted nanostructuring of Silicon in liquid environment”, *Appl. Phys. A*, **117**, 359 (2014). <https://doi.org/10.1007/s00339-014-8437-9>
 14. G. D. Tsibidis, E. Stratakis, P. A. Loukakos, and C. Fotakis, “Controlled ultrashort pulse laser induced ripple formation on semiconductors” **invited article** *Appl. Phys. A* **114**, 57 (2014). <https://doi.org/10.1007/s00339-013-8113-5>
 15. M. Barberoglou, G. D. Tsibidis, D. Gray, E. Magoulakis, C. Fotakis, E. Stratakis, and P. A. Loukakos, “The influence of ultra-fast temporal energy regulation on the morphology of Si surfaces through femtosecond double pulse irradiation”, *Appl. Phys. A* **113**, 273 (2013). <https://doi.org/10.1007/s00339-013-7893-y>
 16. M. Barberoglou, D. Gray, E. Magoulakis, C. Fotakis, P. A. Loukakos, and E. Stratakis, “Controlling ripples’ periodicity using temporally delayed femtosecond laser double pulses”, *Opt. Express* **21**, 18501 (2013). [10.1364/OE.21.018501](https://doi.org/10.1364/OE.21.018501)
 17. E. Magoulakis, A. Kostopoulou, G. N. Arvanitakis, A. G. Kanaras, A. N. Andriotis, A. Lappas, and P. A. Loukakos, “Porosity-moderated ultrafast electron transport in Au nanowire networks”, *Appl. Phys. A* **111**, 711 (2013). <https://doi.org/10.1007/s00339-013-7647-x>
 18. E. Stratakis, E. V. Barmina, P. A. Loukakos, G. A. Shaffev, and C. Fotakis, chapter “Ultrafast Laser-Assisted Surface Micro- and Nanostructuring” In “Ultrafast Laser Processing: From Micro- to Nanoscale” Edt by K. Sugioka and Y. Cheng, Panstanford Publishing Pte. Ltd. 2013, ISBN 978-981-4267-33-5. DOI: 10.4032/9789814303699.
 19. G. D. Tsibidis, M. Barberoglou, P. A. Loukakos, E. Stratakis, and C. Fotakis, “Dynamics of ripple formation on silicon surfaces by ultrashort laser pulses in subablation conditions”, *Phys. Rev. B* **86**, 115316 (2012). <https://doi.org/10.1103/PhysRevB.86.115316>
 20. A. Foehlich, S. Vijayalakshmi, A. Pietzsch, M. Nagasono, W. Wurth, P. S. Kirchmann, P. A. Loukakos, U. Bovensiepen, M. Wolf, M. Tchapyguine, F. Hennies, “Charge transfer dynamics in molecular solids and adsorbates driven by local and non-local excitations”, *Surf. Sci.* **606**, 881 (2012). <https://doi.org/10.1016/j.susc.2011.12.014>
 21. A. A. Serafetinides, M. Makropoulou, E. Spyratou, C. Bacharis, M. Barberoglou, A. Englezis, C. Kalpouzos, P. Loukakos, P. Pouli, “Femtosecond And Picosecond Laser Ablation Of Intraocular Lenses: An Advanced Technique For Their Surface Modification”, *AIP Conf. Proc.* **1380** 12-17 (2011). <https://doi.org/10.1063/1.3631803>
 22. J. M. Manceau, P. A. Loukakos and S. Tzortzakis, “Direct acoustic phonon excitation by intense and ultrashort THz pulses”, *Appl. Phys. Lett.* **97**, 251904 (2010). <https://doi.org/10.1063/1.3529466>
 23. E. L. Papadopoulou, E. Axente, E. Magoulakis, C. Fotakis, and P. A. Loukakos, “Laser induced forward transfer of metal oxides using femtosecond double pulses”, *Appl. Surf. Sci.* **257**, 508 (2010). <https://doi.org/10.1016/j.apsusc.2010.07.022>
 24. E. Magoulakis, E. L. Papadopoulou, E. Stratakis, C. Fotakis, and P. A. Loukakos, “Ultrafast electron dynamics in ZnO/Si micro-cones”, *Appl. Phys. A* **98**, 701 (2010). <https://doi.org/10.1007/s00339-010-5558-7>
 25. J. M. Manceau, P. A. Loukakos, and S. Tzortzakis, “Direct phonon excitation in semiconductors by ultrashort intense THz radiation”, *Conference proceedings CLEO/QELS (2009)*, Art. No. 5225658. <https://doi.org/10.1364/IQEC.2009.IThC2>
 26. U. Bovensiepen, S. Declair, M. Lisowski, P. A. Loukakos, A. Hotzel, M. Richter, , A. Knorr, and M. Wolf, “Ultrafast electron dynamics in metals: Real-time analysis of a reflected light field using photoelectrons”, *Phys. Rev. B* **79**, 045415 (2009). <https://doi.org/10.1103/PhysRevB.79.045415>

27. A. Averchi, D. Faccio, E. Rubino, H. Valtna Lukner, P. Panagiotopoulos, P. A. Loukakos, S. Tzortzakis, A. Couairon, and P. Di Trapani, “*Linear X-wave generation by means of cross-phase modulation in Kerr media*”, *Opt. Lett.* **33**, 3028 (2008). <https://doi.org/10.1364/OL.33.003028>
28. A. Klini, P. A. Loukakos, D. Gray, A. Manousaki, and C. Fotakis, “*Laser Induced Forward Transfer of metals by temporally shaped femtosecond laser pulses*”, *Opt. Express* **16**, 11300 (2008). <https://doi.org/10.1364/OE.16.011300>
29. L. Perfetti, P. A. Loukakos, M. Lisowski, U. Bovensiepen, M. Wolf, H. Berger, S. Biermann and A. Georges, “*Femtosecond dynamics of electronic states in the Mott insulator 1T-TaS₂ by time resolved photoelectron spectroscopy*”, *New J. Phys.* **10**, 053019 (2008). <https://doi.org/10.1088/1367-2630/10/5/053019>
30. L. Perfetti, P. A. Loukakos, M. Lisowski, U. Bovensiepen, and M. Wolf, “*Time resolved photoemission of Bi₂Sr₂CaCu₂O_{2+δ}*”, *Conf. Quant. El. Laser Sci (QELS) 2008*, Art. No. 4553095. DOI: 10.1109/QELS.2008.4553095
31. L. Perfetti, P. A. Loukakos, M. Lisowski, U. Bovensiepen, H. Eisaki, and M. Wolf, “*Ultrafast Electron Relaxation in Superconducting Bi₂Sr₂CaCu₂O_{8+δ} by Time-Resolved Photoelectron Spectroscopy*”, *Phys. Rev. Lett.* **99**, 197001 (2007). <https://doi.org/10.1103/PhysRevLett.99.197001>
32. L. Perfetti, P. Loukakos, M. Lisowski, U. Bovensiepen, and M. Wolf, “*Time Resolved Photoemission of an Insulator-Metal Transition*”, in *Ultrafast Phenomena XV, Proceedings of the 15th International Conference, Pacific Grove/CA, USA, July 30-August 4, 2006*; Eds.: P. Corkum, D. Jonas, R. J. D. Miller, A. M. Weiner; Publ.: Springer Berlin-Heidelberg; ISBN: 978-3-540-68779-5, Springer Series in Chemical Physics **88**, 749 (2007). https://doi.org/10.1007/978-3-540-68781-8_239
33. P. S. Kirchmann, P. Loukakos, U. Bovensiepen, M. Wolf, S. Vijayalakshmi, F. Hennies, A. Pietzsch, M. Nagasono, A. Foehlich, and W. Wurth, “*Ultrafast Electron Dynamics in C₆F₆/Cu(111) after Localized or Delocalized Excitation*”, in *Ultrafast Phenomena XV, Proceedings of the 15th International Conference, Pacific Grove/CA, USA, July 30-August 4, 2006*; Eds.: P. Corkum, D. Jonas, R. J. D. Miller, A. M. Weiner; Publ.: Springer Berlin-Heidelberg; ISBN: 978-3-540-68779-5, Springer Series in Chemical Physics **88**, 276 (2007). https://doi.org/10.1007/978-3-540-68781-8_89
34. P. A. Loukakos, M. Lisowski, G. Bihlmayer, S. Blügel, M. Wolf, and U. Bovensiepen, “*Dynamics of the self-energy of the Gd(0001) surface probed by femtosecond photoemission spectroscopy*” *Phys. Rev. Lett.* **98**, 097401 (2007). <https://doi.org/10.1103/PhysRevLett.98.097401>
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39. M. Lisowski, P. A. Loukakos, U. Bovensiepen, and M. Wolf, “*Femtosecond dynamics and transport of optically excited electrons in epitaxial Cu films on Si(111)-7×7*”, *Appl. Phys. A* **79** 739 (2004). <https://doi.org/10.1007/s00339-004-2591-4>
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41. M. Lisowski, P. A. Loukakos, U. Bovensiepen, J. Stähler, C. Gahl, and M. Wolf, “*Ultrafast dynamics of electron thermalization, cooling and transport effects in Ru (001)*”, *Appl. Phys. A* **78**, 165 (2004). <https://doi.org/10.1007/s00339-003-2301-7>
42. P. A. Loukakos, C. Kalpouzos, I. E. Perakis, Z. Chatzopoulos, M. Sfendourakis, G. Konstantinidis, and C. Fotakis, “*The role of As precipitates on ultrafast electron trapping in low-temperature-grown GaAs and AlGaAs alloys*”, *J. Appl. Phys.* **91**, 9863 (2002). <https://doi.org/10.1063/1.1477614>

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Selected oral and invited contributions in international conferences and workshops:

1. **Invited Talk**, “Ultrafast laser-induced processes on semiconductor surfaces irradiated by temporally shaped fs laser pulses: Tuning & controlling surface micro/nano-structures”, in International Conference on Photoexcited Processes and Applications, Brasov, Romania, August 29th – September 2nd. (2016)
2. **Plenary Talk**, “Ultrafast processes on semiconductor surfaces irradiated by temporally shaped fs laser pulses: Tuning & controlling surface micro/nano-structures”, in 5th conference on Modern Trends in Physics Research, MTPR, Cairo & Luxor, Egypt, December 15-19, 2014.
3. **Invited talk**, “Ultrafast processes during irradiation of semiconductors with temporally shaped femtosecond laser pulses: formation of periodic surface micro & nano-structures”, in EMN-East meeting, Beijing China, 12-15 May 2014.
4. **Invited talk**, “Ultrafast laser-induced processes and processing on surfaces at the micro/nano-scale by temporally shaped fs laser pulses”, in High-Power Laser Ablation conference HPLA '14 held in Santa Fe NM, 21-26 April, 2014.
5. **Invited talk**, “Ultrafast Laser-Induced Processes in Solid State”, in Combined Laser Nanotechnology (CLaN) workshop meeting, October 14th 2013, University of Potenza, Italy.
6. **Oral talk**, “Surface micro/nano-structures by temporally shaped fs laser pulses: Controlled ripple patterning on Si & ZnO”, Conference on Laser Ablation (COLA) October 6-11 2013, Ischia, Italy.
7. **Invited talk**, “Ultrafast processes in solids at the nanoscale”, 17th International School on Quantum Electronics: Laser Physics and Applications, 24-28 September 2012, Nessebar, Bulgaria.
8. **Invited talk**, “Ultrafast processes in condensed matter”, in Combined Laser Nanotechnology (CLaN) kick-off meeting, July 12th, 2012, Potenza, Italy.
9. **Invited talk** “Ultrafast dynamics in nanostructures and nanostructured materials”, in the 2nd international workshop on “Nonlinear Nanostructures for Ultrafast Laser Applications”, Berlin, May 19-20, 2011.
10. **Plenary talk**, "Ultrafast processes in condensed matter", in the 4th conference on Modern Trends in Physics Research held in Cairo, Egypt, December 12-16, 2010.
11. **Plenary talk** "Studies of ultrafast processes in condensed matter with ultrashort laser pulses", in the 3rd workshop on Ultrafast Lasers Technology and Applications held in Cairo, Egypt, April 16-19, 2010.
12. **Oral presentation** "Direct phonon excitation with intense, ultrashort THz pulses", in Conference on Laser Ablation (COLA 09) in Singapore 2009.
13. **Invited talk** "Ultrafast lasers and applications: from fundamental processes to material's processing", in the 2nd workshop on Ultrafast Lasers Technology and Applications held in Cairo, Egypt, April 1-3, 2009.
14. **Oral presentation** "Ultrafast dynamics on the Gd(001) surface studied with time-resolved photoelectron spectroscopy", in the DPG spring meeting, Dresden 2006.

Conferences, meetings and workshops organized:

- Co-organizer, 3rd workshop on German–Greek Research, Berlin Germany, 13-14 October 2005
- Co-organizer, 17th Conference on Laser Ablation, Crete, Greece, October 2024.

Funded research projects

- IKYDA 2002 Programme for the promotion of the exchange and scientific cooperation between Greece and Germany, “Synthesis and Dynamics of Alternative Photosensitizers based on Biocompatible Chromophores” (20 k€) (PI)
- FORTH Synergy Grants, Project Ultrafast Electron Dynamics in Catalysis (ULEDYCA), ΕΣΩ146, 2021 (80 k€) (PI)
- Marie Curie Intra-European Individual fellowship 2002-2004, Contract No. MEIF-CT-2003-501826. (as Principal Investigator and beneficiary).
- LaserLAB Europe Large Scale Installation. (Facility Technical Manager)