

Dr Nikolaos Kalfagiannis

Curriculum Vitae

University of Ioannina, Dept. of Materials Science Engineering Email: nkalf@uoi.gr
Ioannina, 45110, Greece ORCID: [0000-0002-4030-5525](https://orcid.org/0000-0002-4030-5525)
Phone: +30 693 6691 623 | +30 26510 07206 Google Scholar: [scholar.google.com/nkalfagi](https://scholar.google.com/citations?user=nkalfagi)
Nationality: Greek, British Home Address: Thanasi Vagia 11A, Ioannina, 45221

EDUCATION

2006 – 2009 **PhD in Nanotechnology**, Department of Physics, Aristotle University of Thessaloniki, Greece
Development of nanostructures and multilayer coatings for mechanical, biomedical and decorative applications (in collaboration with BIC Violex S.A.)

2003 – 2005 **MSc in Nanosciences & Nanotechnologies**, Department of Physics, Aristotle University of Thessaloniki, Greece
Growth of TiN and CrN Thin Films with PVD techniques: in situ & real-time study of optical and structural properties.

1997 – 2003 **MEng in Chemical Engineering**, Faculty of Engineering, Aristotle University of Thessaloniki, Greece

PROFESSIONAL APPOINTMENTS

2023 – Present **Assistant Professor** in Micro-Nano Manufacturing Technology of Optoelectronic Materials and Devices

Department of Materials Science Engineering, University of Ioannina, Greece

2023 – Present **Visiting Professor**, Department of Physics and Mathematics, Nottingham Trent University, UK

Nottingham Trent University, UK — *Department of Physics and Mathematics*

2022 – 2023 **Associate Professor** (promoted from Senior Lecturer)

2021 – 2022 **Senior Lecturer** (promoted from Senior Independent Research Fellow)

2019 – 2021 **Senior Independent Research Fellow**

2016 – 2019 **Independent Research Fellow**

2015 – 2016 **Physics Lecturer** (fixed-term)

2013 – 2015 **Marie Curie Fellow** (PIEF-GA-2012-330444)

2012 – 2013 **Postdoctoral Research Associate**, Texas A&M University at Qatar

2010 – 2011 **Postdoctoral Research Associate**, Department of Physics, Aristotle University of Thessaloniki, Greece

SUMMARY OF KEY QUALIFICATIONS

-
- Fifteen years** of internationally recognised research experience in the **design, development, and controlled processing of thin films and nanostructures** for optoelectronic applications, spanning deposition techniques (magnetron sputtering, atomic layer deposition, e-beam evaporation, sol-gel), thermal and photonic processing (rapid thermal annealing, laser annealing), and patterning (laser nanostructuring, optical lithography). Demonstrated expertise in the systematic tuning of structural, electronic, and optical material properties.
 - Sustained and internationally leading expertise** in alternative plasmonic materials (transition metal nitrides, oxides, 2D materials) and **spectroscopic ellipsometry** across a broad spectral range (0.19–40 μm), including *in situ* process monitoring and dielectric-function modelling of complex systems.
 - Established track record** in the integration of materials into devices: thin-film transistors, photodetectors, metasurfaces, plasmonic architectures, and energy-harvesting structures — bridging fundamental materials science with technological deployment.

- **55 peer-reviewed journal articles** (including 4 invited review articles and 1 invited book chapter); **h-index 23** (Scopus), **i10-index 42**, **2,530 total citations**; 40% of publications in the top 25% most cited documents worldwide; 79.4% in top 25% journals by CiteScore. Holder of **3 patents** (2 granted, 1 filed 2026). Work selected for the UK National Research Excellence Framework 2021 submission of Nottingham Trent University.
- **€6.1M** in competitive research funding attracted since 2012, as Primary Investigator, Fellow, or Co-Investigator. Additional proposals currently under evaluation at National and European level, reflecting a continuous and systematic effort to expand the research funding portfolio.
- **Cleanroom facility management:** full operational responsibility for the Nanotechnology Research Facility, Dept. of Materials Science Engineering, University of Ioannina — equipment commissioning, fault diagnosis, vendor coordination, safety and quality-assurance compliance.
- **Research leadership and supervision:** six doctoral candidates supervised to completion (five as Director of Studies); current supervision of one PhD student and two postdoctoral researchers (ΕΛΙΔΕΚ/MIRAGE). External examiner for seven doctoral theses internationally.
- **Over ten years of teaching experience** at undergraduate and postgraduate level (UK and Greece), with student evaluation scores consistently and significantly above departmental averages; formal pedagogical training (Fellow of the Higher Education Academy, UK).

COMMERCIALISATION & EXPLOITATION

1. Razor Blade Coating — US20180215056, US10442098, EP3175014, WO2016015771, WO2016016359

Razor blade with profiled blade-edge geometry covered by a strengthening coating comprising a titanium- and boron-containing material.

Inventors: S. Logothetidis, N. Kalfagiannis, C. Mavroidis, V. Papachristos and M. Karoussis.

2. Method of Creating a Surface Plasmon Resonance — WO2022165504

A method of creating a security product by depositing a discontinuous layer of electrically conducting material on a substrate and laser-annealing it to generate nanoparticles exhibiting surface plasmon resonance.

Inventors: G. W. Mudd, D. C. Koutsogeorgis, N. Kalfagiannis, R. Renton and P. Dunn.

3. Compact Broadband Graphene-Based Interferometric Optical Spectrum Decomposition Devices — Patent

Application No. 20260100352 (filed 06 April 2026)

Dynamic control and direct electrical readout of compact broadband graphene-based interferometric spectrum decomposition devices.

Inventors: E. Lidorikis, N. Kalfagiannis, A. Mourkas, I. Vangelidis, S. Doukas, A. Polymerakis, G. Tsekouras.

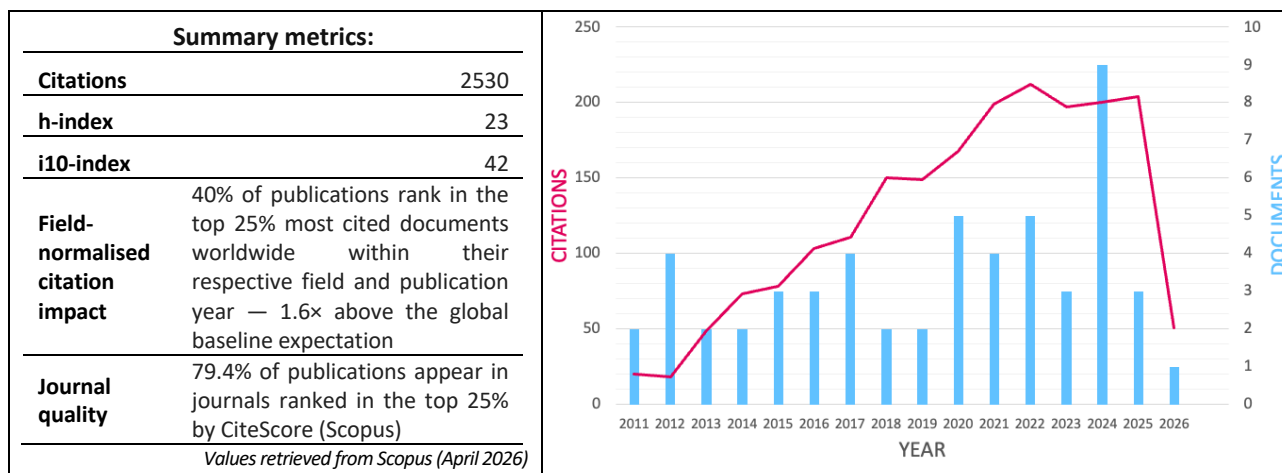
RESEARCH GRANTS & CONTRACTS

- 2025 – 2027** **Trust Your Stars.** Budget: €244K. Role: PI (Approved for funding; awaiting formal budget allocation).
- 2025 – 2029** **MIRAGE** — 3rd Call for H.F.R.I. Research Projects (Project No. 25266). Budget: €300K. Role: PI
- 2025 – 2029** **National Centre for Semiconductors — High-tech Competence Centers Consortium (HCCC)** (GA: 101217803). Total budget: €3.6M; Uol budget: €110K. Role: Co-I
- 2021 – 2024** **Large-Scale Electronics Manufactured by Light (OSR-2020-CRG9-4347)**, KAUST Competitive Research Grants Programme. Budget: £1.3M. Role: Institutional PI
- 2023** **Industry Service Contract:** Spectroscopic Ellipsometry measurements and analysis for Teledyne Technologies. Budget: £7.5K
- 2020** **Training Course Delivery** on Imaging Matter (Optical and Atomic Force Microscopy), OpSec Security Ltd, Leicester, UK. Budget: £2K
- 2017 – 2020** **Knowledge Transfer Partnership — KTP010745**, Innovate UK, in collaboration with OpSec Security Ltd. Budget: £219K. Role: Co-I
- 2018** **Visiting Research Scholarship**, University of Poitiers. Budget: £1.5K. Role: Research Scholar.
- 2015 – 2016** **LAFLEXEL** — Laser Annealing for Improved Flexible Electronics, EPSRC Pathfinder Large Area Manufacturing. Budget: £62K. Role: PI
- 2013 – 2015** **LASER-PLASMON** — Laser manipulation of plasmonic nanostructures, FP7 Marie Curie Intra-European Fellowship (PIEF-GA-2012-330444). Budget: £186K. Role: Marie Curie Fellow

- 2012** Investigation of ferrite nanoparticle fluids for wettability alteration in carbonate reservoirs, Qatar National Research Fund. Budget: £35K. Role: Co-I
- 2011 – 2013** Plasmonic Architectures for Solar Energy Harvesting, Greek National Research Funds (ARISTEIA II, Project No. 3049). Budget: €180K. Role: Co-I

PUBLICATIONS

A full list of publications is provided in the Appendix.



INVITED LECTURES & SEMINARS

- 2022** Light-probed nanotechnology methodologies. University of Ioannina, Dept. of Materials Science Engineering, Greece.
- 2022** How can lasers probe matter transformation. University of Helsinki, Helsinki Accelerator Laboratory, Finland.
- 2021** Spectroscopic Ellipsometry: a sophisticated, non-destructive tool for the investigation of opto-electronic properties of materials. University of Southampton, UK.
- 2021** Laser Annealing as a platform for optimising transparent conductors. Hellenic Mediterranean University / ATHENA Alliance, Greece.
- 2019** My Research, My Life, My Story. Invited talk for Doctoral Candidates, NTU.
- 2019** Plasmonics: Promise, Roadblocks and Future. University of Nottingham, UK.
- 2018** Laser Annealing as a platform for optimising material properties. Institut Pprime, Université de Poitiers–CNRS–ENSMA, France.
- 2016** An Overview of Plasmonics. Institute of Physics, Workington, UK.

FELLOWSHIPS & VISITING APPOINTMENTS

- 2022 – Present** **Visiting Professor**, Department of Physics and Mathematics, Nottingham Trent University, UK
- 2019** **Fellow of the Higher Education Academy**, United Kingdom (ref. PR170200)
- 2018** **Visiting Research Scholar**, University of Poitiers, France
- 2017 – 2021** **Visiting Researcher**, University of Ioannina, Greece
- 2013 – 2015** **Individual Marie Curie Fellowship (IEF)**, FP7 People Programme, European Commission

PHD SUPERVISION

Current

- 2025 –** **Romina Giannou**, "Growth, characterisation, and application of metal oxide perovskites in IR technologies." Role: Director of Studies

Completed

- 2025** **Matthew Spink**, "Monolithic Metal Oxide Thin-Film Transistors (TFTs) via Photonic Processing of Sol-gel Precursors." Role: Director of Studies

- 2025 **Joshua Barkby**, "Laser engineered defect centres in nanomaterials for quantum technologies." Role: Director of Studies
- 2024 **Jodie West**, "Laser annealing of ZnO to produce an ultraviolet light emitting diode." Role: Director of Studies
- 2024 **Joshua Parker**, "Electrical control and manipulation of liquids by dielectrophoresis forces." Role: Director of Studies
- 2023 **Christina Koutsiaki**, "Photonic conversion of sol-gel organometallic precursors into inorganic thin films." Role: Director of Studies
- 2021 **James Hillier**, "Transparent Conductive Oxides as alternative materials for infrared plasmonics: implications of laser annealing to their opto-electronic properties." Role: Director of Studies

PhD Erasmus+ Programme

Erasmus+ visiting PhD student: **Despoina Tselekidou** (Aristotle University of Thessaloniki, Greece).

PhD Examining (External/Internal)

- 2026 **Konstantinos Kaklamanis** (Main supervisor: Prof. D. Papageorgiou, UoI) — Multiscale computational modelling of dielectric response and change in organic optoelectronic materials.
- 2026 **Arsenios Gkouras** (Main supervisor: Prof. L. Gergidis, UoI) — Modelling adsorption and diffusion in porous materials using molecular simulations and ANNs.
- 2024 **Christos Kapnopoulos** (Main supervisor: Em. Prof. S. Logothetidis, AUTH) — Nanomaterials for electronic devices via printing and laser processing.
- 2024 **Alva Dagkli** (Main supervisor: Prof. E. Lidorikis, UoI) — Enhanced light–matter interactions based on graphene and 2D materials.
- 2023 **Cristina Mancarella** (Main supervisor: Prof. A. Li Bassi, Politecnico di Milano, Italy) — TiOxNy nanostructured thin films for plasmonic/ENZ applications.
- 2021 **Lizz Dye** (Main supervisor: Prof. R. Morris, NTU) — Novel delivery and sample mixing for synchrotron diffraction using acoustic levitation.
- 2020 **Daniel Oliver** (Main supervisor: Prof. C. Perry, NTU) — Abiotic–biotic interactions for novel biocomposite materials.
- 2020 **Amelia Suzuki** (Main supervisor: Prof. H. Liang, NTU) — Independent Assessor.

ACADEMIC ROLES & SERVICE

University of Ioannina (2023 – Present)

- Departmental Coordinator for the ARTEMIS and HCCC programmes
- Member of the Departmental Internal Evaluation Committee (OMEA) — contributing to reaccreditation of the undergraduate programme
- Member of the Erasmus+ Departmental Committee

Nottingham Trent University (2015 – 2023)

- PhD Coordinator, Imaging, Materials and Engineering Research Centre (IMEC) — selection processes, doctoral data oversight, PGR student welfare
- Year 2 Personal Tutor — pastoral and academic support, employability programme
- Member of the Advanced Materials Steering Committee — budget, research strategy, and project management advisory role

CONFERENCE ACTIVITY

Invited Talks

- 2022 Photo-engineered optoelectronic properties of ITO via reactive laser annealing. TCM-TOEO 2022, Hersonissos, Crete, Greece.
- 2021 Unlocking the far-IR potential in plasmonics with metal oxide perovskites. META 2020/11th Int. Conf. on Metamaterials, Photonic Crystals and Plasmonics, Warsaw, Poland.

- 2021** How, Why and When Spectroscopic Ellipsometry works best. 18th Int. Conf. on Nanosciences & Nanotechnologies, Thessaloniki, Greece.
- 2015** Laser Annealing as a platform for plasmonic nano-structuring. 12th Int. Conf. on Nanosciences & Nanotechnologies, Thessaloniki, Greece.
- 2014** Subsurface Plasmonic Nano-Structuring by Laser Induced Self-Assembly. 11th Int. Conf. on Nanosciences & Nanotechnologies, Thessaloniki, Greece.
- 2013** Laser manipulation of plasmonic nanostructures. 10th Int. Conf. on Nanosciences & Nanotechnologies, Thessaloniki, Greece.
- 2012** A comprehensive study on the performance of plasmonic organic photovoltaics. Int. Symposium on Flexible Organic Electronics, Thessaloniki, Greece.

Contributed Presentations

35 contributed oral presentations and 27 poster presentations at leading international conferences including the MRS Fall Meeting (Boston, USA), E-MRS Spring Meeting (Europe), International Symposium on Transparent Conductive Materials (Crete), and the International Conference on Nanosciences & Nanotechnologies (Thessaloniki). Full details in Appendix.

ACADEMIC TEACHING

University of Ioannina, Dept. of Materials Science Engineering (2023 – Present)

- 2023 –** **Semiconductors and Dielectric Materials (ETY702)**, Undergraduate Year 4. Role: Module Leader
- 2023 –** **Nanostructured Materials and Micromachines (ETE706)**, Undergraduate Year 4. Role: Module Leader
- 2023 –** **Nanotechnology (ETE806)**, Undergraduate Year 5. Role: Module Leader
- 2023 –** **Growth, Structure and Properties of Optoelectronic and Magnetic Materials and Devices**, MSc. Role: Module Lecturer
- 2023 –** **Laboratory of Materials III — Electronic & Magnetic Materials (ETY701)**, Undergraduate Year 4. Role: Lab Demonstrator
- 2023 –** Supervision of 7 undergraduate final year projects and 1 MSc dissertation.

Nottingham Trent University, Dept. of Physics and Mathematics (2015 – 2023)

- 2021 – 2023** **Optics & Semiconductors (PHYS22224)**, BSc Year 2, 20 CP. Role: Module Leader
- 2020 – 2023** **Imaging Matter (PHYS42534)**, MSc Year 4, 20 CP. Role: Module Leader
- 2019 – 2023** **Current Topics in Physics (PHYS42112)**, MSc Year 4, 20 CP. Role: Lecturer
- 2018 – 2023** **The Professional Physicist (PHYS42612)**, MSc Year 4, 20 CP. Role: Module Leader
- 2015 – 2023** **Condensed Matter Physics (PHYS32134)**, BSc Year 3, 20 CP. Role: Lecturer
- 2015 – 2023** **Project and Professional Skills (PHYS34622)**, BSc Final Year Project, 40 CP. Role: Supervisor & Personal Tutor
- 2015 – 2023** **MSci Research Project (PHYS36611)**, MSc Final Year Project, 60 CP. Role: Supervisor & Personal Tutor
- 2015 – 2017** **Advanced Experimental Techniques (PHYS32221)**, BSc Year 3, 20 CP. Role: Lecturer (2015–2017), Lab Supervisor (2017–2023)
- 2015 – 2016** **Forensic Image Processing (PHYS12721)**, BSc Year 1, 20 CP. Role: Lab Demonstrator

Aristotle University of Thessaloniki, Postgraduate Programme in Nanosciences & Nanotechnologies (2010 – 2012)

- 2010 – 2012** Micro- and Nano-Fabrication Techniques. Role: Main Lecturer
- 2010 – 2012** Nano Synthesis and Nano Processes. Role: Main Lecturer

PROFESSIONAL ACTIVITY

Reviewing — Scientific Journals

Applied Surface Science · ACS Applied Nano Materials · Surface and Coatings Technology · Journal of Applied Physics ·

Editorial Roles

Guest Editor: Nanomaterials — Special Issue: Progress of Nanoscale Materials in Plasmonics and Photonics, Vols. 14–15, 2024–2025

Grant Proposal Review

- Proposal reviewer, Agence Nationale de la Recherche (ANR), République Française
- Evaluator, Phase I of the Czech Academy of Sciences Research Evaluation (2020–2024)

Scientific & Organising Committees

- 2024 — Main Organiser, 38th Panhellenic Conference on Solid State Physics & Materials Science, University of Ioannina (15–18 September 2024)
- 2021 – Present — Member of Organising Committee, Workshop on Nanoelectronics, Photonics, Plasmonics & Nanoenergy, Int. Conf. on Nanosciences & Nanotechnologies
- 2021 – 2022 — Symposium Organiser, E-MRS 2021: 'Nanoengineered Coatings and Thin Films: from design to applications'
- 2021 – 2022 — Organiser, CompleteEase Ellipsometry Workshop (5-day), in collaboration with JA Woollam and Quantum Design UK
- 2010 – 2011 — Member of Organising Committee, International Symposium on Flexible Organic Electronics (IS-FOE)

MEMBERSHIPS

- Fellow of the UK Higher Education Academy (2019 – Present)
- Marie Curie Alumni Society (2015 – Present)
- Materials Research Society (MRS) (2013 – Present)
- Laser Safety Forum UK / PHE (2013 – Present)
- Technical Chamber of Greece (2009 – 2016)

APPENDIX — LIST OF PUBLICATIONS

A.1 Invited Book Chapters (Peer Reviewed)

1. Laser Annealing as a Platform for Plasmonic Nanostructuring. N. Kalfagiannis, D. C. Koutsogeorgis, E. Lidorikis and P. Patsalas. In: *Nanoplasmonics — Fundamentals and Applications*, 2017 (ISBN 978-953-51-3278-3).

A.2 Invited Review Articles (Peer Reviewed)

1. Optical Properties and Plasmonic Performance of Titanium Nitride. P. Patsalas, N. Kalfagiannis, S. Kassavetis. *Materials*, 2015, 8, 3128–3154.
2. Conductive Nitrides: Growth Principles, Optical and Electronic Properties, and Their Perspectives in Photonics and Plasmonics. P. Patsalas, N. Kalfagiannis, S. Kassavetis, G. Abadias, D. V. Bellas, C. Lekka, E. Lidorikis. *Mater. Sci. Eng. R Reports*, 2018, 123, 1–55.
3. Recent Progress in Photonic Processing of Metal Oxide Transistors. E. Yarali, C. Koutsiaki, H. Faber, K. Tetzner, E. Yengel, P. Patsalas, N. Kalfagiannis, D. C. Koutsogeorgis and T. D. Anthopoulos. *Adv. Funct. Mater.*, 2020, 30, 1906022.
4. Short Review and Prospective: Chalcogenide Glass Mid-Infrared Fibre Lasers. A. B. Seddon, M. Farries, J. J. Nunes, B. Xiao, D. Furniss, E. Barney, S. Phang, N. Kalfagiannis, Ł. Sojka, S. Sujecki. *European Physical Journal, Special Issue 'The magic of glass'*, Accepted 2023.

A.3 Journal Articles (Peer Reviewed)

1. Spectral Selectivity Enhancement in Solar Absorber Multilayers through Titanium Oxynitride Thin Film Modulation. C. P. Hallqvist, C. Mancarella, M. Agozzino, S. Lucchese, L. Mascaretti, I. Richter, A. Lamperti, D. C. Koutsogeorgis, N. Kalfagiannis, A. Li Bassi. *Adv. Opt. Mater.* (Accepted March 2026)
2. Defect Engineering and Dopant Activation of Room Temperature Grown Aluminium-doped Zinc Oxide Thin Films. S. O. Elhamali, N. Pliatsikas, J. A. Hillier, W. M. Cranton, X. Hou, N. Kalfagiannis, P. Patsalas, D. C. Koutsogeorgis. *Appl. Surf. Sci. Adv.*, 2025, 100879.
3. Advanced Solar cells with Thermal, Radiation, And Light management (ASTRAL) for Space-Based Solar Power. E. Camarillo Abad, K. Sun, A. Barthel, O. Trojak, N. Kalfagiannis, D. C. Koutsogeorgis, N. Vaidya, O. L. Muskens, L. C. Hirst. *Solar RRL*, 2025, 9:e2500016.
4. Ferrocene Derivatives Enable Ultrasensitive Perovskite Photodetectors with Enhanced Reverse Bias Stability. E. Hong, W. D. J. Tremlett, L. Hart, B. Hu, Z. Qiao, P. Sukpoornprom, S. Fearn, E. Angela, M. Brunetta, D. C. Koutsogeorgis, N. Kalfagiannis, D. Nodari, M. A. McLachlan, P. R. F. Barnes, A. A. Bakulin, N. J. Long, N. Gasparini, *Advanced Functional Materials*, 2025, 2424556.
5. Local Tuning of the Epsilon-Near-Zero Condition in Hybrid Silicon Waveguides Using Reactive Laser Annealing. J. Navarro-Arenas, T. M. Howe, J. Parra, D. C. Koutsogeorgis, J. A. Hillier, N. Kalfagiannis, and P. Sanchis, *Advanced Photonics Research*, 2025, 2400140.
6. Fabrication of nitrogen-hyperdoped silicon by high-pressure gas immersion excimer laser doping. J. W. Barkby, F. Moro, M. Perego, F. Taglietti, E. Lidorikis, N. Kalfagiannis, D. C. Koutsogeorgis, M. Fanciulli. *Sci. Reports*, 2024, 12: 19640.
7. L- to U-Band Wavelength Conversion of QPSK Signals Using Intermodal Four-Wave Mixing. V. Vitali, K. R. H. Bottrill, T. Dominguez Bucio, H. Liu, J. Luque-González, A. Ortega-Moñux, G. Churchill, J. C. Gates, J. A. Hillier, N. Kalfagiannis, D. Melati, J. H. Schmid, I. Cristiani, P. Cheben, J. Gonzalo Wangüemert-Perez, I. Molina-Fernandez, F. Gardes, C. Lacava, P. Petropoulos. *IEEE Photonics Technology Letters*, 2024, 36, 16, 1009-1012.
8. Fully-Integrated and Broadband Si-Rich Silicon Nitride Wavelength Converter Based on Bragg Scattering Intermodal Four-Wave Mixing. V. Vitali, T. Domínguez Bucio, H. Liu, J. Luque-González, F. Jurado-Romero, A. Ortega-Moñux, G. Churchill, J. Gates, J. A. Hillier, N. Kalfagiannis, D. Melati, J. Schmid, I. Cristiani, P. Cheben, J. Gonzalo Wangüemert-Pérez, I. Molina-Fernández, F. Gardes, C. Lacava, and P. Petropoulos. *Photonics Research*, 2024, 12, 3, A1-A10.
9. Physicochemical Analysis of Nanoscale Metal Oxide Thin Film Precursors via Infrared Spectroscopic Ellipsometry. C. Koutsiaki, D. C. Koutsogeorgis, and N. Kalfagiannis. *J. Phys. Chem. C*. 2023, 127, 32, 15876–15886.
10. Mid-infrared photoluminescence in Ce³⁺ doped selenide-chalcogenide glass and fiber. J. J. Nunes, R. W. Crane, Z. Tang, Ł. Sojka, N. Kalfagiannis, D. Furniss, M. C. Farries, T. M. Benson, S. Sujecki and A. B. Seddon. *Opt. Mater.* 2023 137, 113543.

11. Reactive laser annealing of indium tin oxide: implications to crystal structure, defect composition, and plasma energy. J. A. Hillier, P. Patsalas, D. Karfaridis, W. Cranton, A. V. Nabok, C. J. Mellor, D. C. Koutsogeorgis, N. Kalfagiannis. *Opt. Mater. Express*. 2022, 12, 11, 4310.
12. Room Temperature Phase Transition of W-doped VO₂ by Atomic Layer Deposition on 200 mm Si Wafers and Flexible Substrates. K. Sun, C. Wheeler, J. Hillier, S. Ye, I. Zeimpekis, A. Urbani, N. Kalfagiannis, O. L. Muskens, C.H. (Kees) de Groot. *Adv. Opt. Mater.* 2022, 10, 2201326.
13. Photo-engineered optoelectronic properties of indium tin oxide via reactive laser annealing. J. A. Hillier, P. Patsalas, D. Karfaridis, S. Camelio, W. Cranton, A. V. Nabok, C. J. Mellor, D. C. Koutsogeorgis, N. Kalfagiannis. *Sci. Rep.* 2022, 12, 14986.
14. Edge-engineered self-assembled hierarchical plasmonic SERS templates. N. Pliatsikas, N. Kalfagiannis, J. Arvanitidis, D. Christofilos, D. C. Koutsogeorgis, A. Kagkoura, K. Sefiane, V. Koutsos, P. Patsalas. *Appl. Surf. Sci. Adv.* 2021, 6, 100186.
15. Self-Assembled Dichroic Plasmonic Nitride Nanostructures with Broken Centrosymmetry for Second-Harmonic Generation. D. Babonneau, S. Camelio, G. Abadias, D. Christofilos, J. Arvanitidis, S. Psilodimitrakopoulos, GM Maragkakis, E. Stratakis, N. Kalfagiannis, P. Patsalas. *ACS Appl. Nano Mater.* 2021, 4, 9, 8789-8800.
16. Room temperature mid-infrared fiber lasing beyond 5 μm in chalcogenide glass small-core step index fiber. J. J. Nunes, L. Sojka, R. Crane, D. Furniss, Z. Q. Tang, D. Mabwa, B. Xiao, T. M. Benson, M. Farries, N. Kalfagiannis, E. Barney, S. Phang, A. B. Seddon, S. Sujecki. *Optics Letters* 2021, 46, (15) 3504-3507.
17. When Ellipsometry Works Best - A Case Study With Transparent Conductive Oxides. J. A. Hillier, S. Camelio, W. Cranton, A. V. Nabok, C. J. Mellor, D. C. Koutsogeorgis, N. Kalfagiannis. *ACS Photonics* 2020, 7, 10, 2692-2702.
18. Embedded Metal Oxide Plasmonics Using Local Plasma Oxidation of AZO for Planar Metasurfaces. K. Sun, W. Xiao, S. Ye, N. Kalfagiannis, K. Shen Kiang, C. H. (Kees) de Groot, O. L. Muskens. *Adv. Mater.* 2020, 32, 2001534.
19. 3D-to-2D Morphology Manipulation of Sputter-Deposited Nanoscale Silver Films on Weakly Interacting Substrates via Selective Nitrogen Deployment for Multifunctional Metal Contacts. A. Jamnig, N. Pliatsikas, M. Konpan, J. Lu, T. Kehagias, A. N. Kotanidis, N. Kalfagiannis, D. V. Bellas, E. Lidorikis, J. Kovac, G. Abadias, I. Petrov, J. E. Greene, K. Sarakinos. *ACS Appl. Nano Mater.* 2020, 3, 4728-4738.
20. Laser induced ultrafast combustion synthesis of solution-based AlO_x for thin film transistors. E. Carlos, S. Dellis, N. Kalfagiannis, L. Koutsokeras, D. C. Koutsogeorgis, R. Branquinho, R. Martins, E. Fortunato. *J. Mater. Chem. C* 2020, 8, 6176-6184.
21. Near-Zero Negative Real Permittivity in Far Ultraviolet: Extending Plasmonics and Photonics with B1-MoN_x. S. Kassavetis, B. D. Ozsdolay, N. Kalfagiannis, A. Habib, J-H Tortai, S. Kerdsonpanya, R. Sundararaman, M. Stchakovsky, D. V. Bellas, D. Gall, P. Patsalas. *J. Phys. Chem. C*, 2019, 123 (34), 21120-21129.
22. Mid- to Far- Infrared Sensing: SrTiO₃, a Novel Optical Material. N. Kalfagiannis, J. L. Stoner, J. Hillier, I. Vangelidis, E. Lidorikis. *J. Mater. Chem. C*, 2019, 7, 7851-7857.
23. Broadband luminescence in defect-engineered electrochemically produced porous Si/ZnO nanostructures. S. Dellis, N. Pliatsikas, N. Kalfagiannis, O. Lidor-Shalev, A. Papaderakis, G. Vourlias, S. Sotiropoulos, D. C. Koutsogeorgis, Y. Mastai, P. Patsalas. *Sci. Rep.*, 2018, 8, 6988.
24. Low temperature sputter-deposited ZnO films with enhanced Hall mobility using excimer laser post-processing. C. Tsakonas, V. L. Kuznetsov, W. M. Cranton, N. Kalfagiannis, K. M. Abusabee, D. C. Koutsogeorgis, N. Abeywickrama, P. P. Edwards. *J. Phys. D: Appl. Phys.*, 2017, 50, 485306.
25. Simulating the opto-thermal processes involved in laser induced self-assembly of surface and sub-surface plasmonic nano-structuring. D. V. Bellas, D. Toliopoulos, N. Kalfagiannis, A. Siozios, P. Nikolaou, P. C. Kelires, D. C. Koutsogeorgis, P. Patsalas, E. Lidorikis. *Thin Solid Films*, 2017, 630, 7-24.
26. Rapid laser-induced photochemical conversion of sol-gel precursors to In₂O₃ layers and their application in thin-film transistors. S. Dellis, I. Isakov, N. Kalfagiannis, K. Tetzner, T. D. Anthopoulos, D. C. Koutsogeorgis. *J. Mater. Chem. C*, 2017, 5, 3673-3677.
27. Photoluminescence enhancement of ZnO via coupling with surface plasmons on Al thin films. S. Dellis, N. Kalfagiannis, S. Kassavetis, C. Bazioti, G. P. Dimitrakopoulos, D. C. Koutsogeorgis, P. Patsalas. *J. Appl. Phys.*, 2017, 121, 103104.
28. Selective MODification of Nanoparticle Arrays by Laser-Induced Self Assembly (MONA-LISA): putting control into bottom-up plasmonic nanostructuring. N. Kalfagiannis, A. Siozios, D. V. Bellas, D. Toliopoulos, L. Bowen, N. Pliatsikas, W. M. Cranton, C. Kosmidis, D. C. Koutsogeorgis, E. Lidorikis, P. Patsalas. *Nanoscale*, 2016, 8, 8236-8244.

29. Enhanced electrical and optical properties of room temperature deposited Aluminum doped Zinc Oxide (AZO) thin films by excimer laser annealing. S. O. El hamali, W. M. Cranton, N. Kalfagiannis, X. Hou, R. Ranson, D. C. Koutsogeorgis. *Opt. Lasers Eng.*, 2016, 80, 45–51.
30. Laser annealing-driven structural modifications and diffusion phenomena of plasmonic AlN/Ag stratified films. E. Delli, C. Bazioti, N. Pliatsikas, N. Kalfagiannis, G. Vourlias, A. Siozios, G. P. Dimitrakopoulos, D. C. Koutsogeorgis, P. Patsalas. *Surf. Coatings Technol.*, 2016, 295, 46–53.
31. Self-assembled plasmonic templates produced by microwave annealing: Applications to surface-enhanced Raman scattering. N. T. Panagiotopoulos, N. Kalfagiannis, K. C. Vasilopoulos, N. Pliatsikas, S. Kassavetis, G. Vourlias, M. A. Karakassides, P. Patsalas. *Nanotechnology*, 2015, 26, 205603.
32. Sub-surface laser nanostructuring in stratified metal/dielectric media: a versatile platform towards flexible, durable and large-scale plasmonic writing. A. Siozios, N. Kalfagiannis, D. V Bellas, C. Bazioti, G. P. Dimitrakopoulos, G. Vourlias, W. M. Cranton, E. Lidorikis, D. C. Koutsogeorgis, P. Patsalas. *Nanotechnology*, 2015, 26, 155301.
33. High performance transistors based on the controlled growth of triisopropylsilylethynylpentacene crystals via non-isotropic solvent evaporation. C. Pitsalidis, N. Kalfagiannis, N. A. Hastas, P. G. Karagiannidis, C. Kapnopoulos, A. Ioakeimidis, S. Logothetidis. *RSC Adv.*, 2014, 4, 20804–20813.
34. Performance of hybrid buffer PEDOT:PSS layers doped with plasmonic silver nanoparticles. N. Kalfagiannis, P. G. Karagiannidis, C. Pitsalidis, N. Hastas, N. T. Panagiotopoulos, P. Patsalas, S. Logothetidis. *Thin Solid Films*, 2014, 560, 27–33.
35. In-line spectroscopic ellipsometry for the monitoring of the optical properties and quality of roll-to-roll printed nanolayers for organic photovoltaics. S. Logothetidis, D. Georgiou, A. Laskarakis, C. Koidis, N. Kalfagiannis. *Sol. Energy Mater. Sol. Cells*, 2013, 112, 144–156.
36. Novel nanostructured biomaterials: Implications for coronary stent thrombosis. S. Logothetidis, V. Karagkiozaki, P. G. Karagiannidis, N. Kalfagiannis, P. Patsalas, G. Georgiou, E. Kavatzikidou. *Int. J. Nanomedicine*, 2012, 7, 6063.
37. Effect of buffer layer properties and annealing process on bulk heterojunction morphology and organic solar cell performance. P. G. Karagiannidis, N. Kalfagiannis, D. Georgiou, A. Laskarakis, N. A. Hastas, C. Pitsalidis, S. Logothetidis. *J. Mater. Chem.*, 2012, 22, 14624.
38. Plasmonic silver nanoparticles for improved organic solar cells. N. Kalfagiannis, P. G. Karagiannidis, C. Pitsalidis, N. T. Panagiotopoulos, C. Gravalidis, S. Kassavetis, P. Patsalas and S. Logothetidis. *Sol. Energy Mater. Sol. Cells*, 2012, 104, 165–174.
39. Transparent and Air Stable Organic Field Effect Transistors with Ordered Layers of Dibenzodithiophene Obtained from Solution. T. Marszalek, M. Kucinska, I. Tsydel, C. Gravalidis, N. Kalfagiannis, S. Logothetidis, A. Yassar, L. Miozzo, A. Nosal, M. Gazicki-Lipman, J. Jung and J. Ulanski. *Opt. Mater. (Amst.)*, 2012, 34, 1660–1663.
40. Excess Boron in TiB₂ superhard thin films: a combined experimental and ab-initio study. N. Kalfagiannis, G. Volonakis, L. Tsetseris, S. Logothetidis. *J. Phys. D. Appl. Phys.*, 2011, 44, 385402.
41. Nanomechanical Characterization of Cement-based pastes enriched with SiO₂ nanoparticles. I. Zyganitidis, M. Stefanidou, N. Kalfagiannis, S. Logothetidis. *Mater. Sci. Eng. B*, 2011, 176, 1580–1584.
42. Ultra Sharp Berkovich Indenter Used For Nanoindentation Studies of TiB₂ Thin Films. I. Zyganitidis, N. Kalfagiannis, S. Logothetidis. *Mater. Sci. Eng. B*, 2009, 165, 198–201.
43. Optical and Surface Characterization of amorphous Boron Nitride Thin Films for use as blood compatible coatings. S. Lousinian, N. Kalfagiannis, S. Logothetidis. *Solid State Sci.*, 2009, 11, 1801–1805.
44. Atomic force microscopy probing platelet activation behaviour on titanium nitride nanocoatings for biomedical applications. V. Karagkiozaki, S. Logothetidis, N. Kalfagiannis, S. Lousinian, G. Giannoglou. *Nanomedicine Nanotechnology, Biol. Med.*, 2009, 5, 64–72.
45. Albumin and fibrinogen adsorption on boron nitride and carbon-based thin films. S. Lousinian, N. Kalfagiannis, S. Logothetidis. *Mater. Sci. Eng. B*, 2008, 152, 12–15.
46. Trapping and release of impurities in Titanium Nitride. L. Tsetseris, N. Kalfagiannis, S. Logothetidis, S. T. Pantelides, *Phys. Rev. B*, 2008, 78, 094111.
47. Role of N defects on thermally induced atomic-scale structural changes in transition-metal nitrides. L. Tsetseris, N. Kalfagiannis, S. Logothetidis, S. T. Pantelides. *Phys. Rev. Lett.*, 2007, 99, 125503.
48. Structure and interaction of point defects in transition-metal nitrides. L. Tsetseris, N. Kalfagiannis, S. Logothetidis, S. T. Pantelides. *Phys. Rev. B*, 2007, 76, 224107.

49. Color Dependency on Optical and Electronic Properties of TiN_x Thin Films. N. Kalfagiannis, S. Logothetidis. Rev. Adv. Mater. Sci., 2007, 15, 167-172.
50. Investigation of bilayer period and individual layer thickness of CrN/TiN superlattices by ellipsometry and X-Ray techniques. S. Logothetidis, N. Kalfagiannis, K. Sarakinos, P. Patsalas. Surf. Coatings Technol., 2006, 200, 6176–6180.

A.4 Contributed oral presentations in international conferences

1. “Process-Dependent Crystallization and Optical Tuning in SrTiO₃ Perovskite Thin Films for Dielectric and Photonic Applications”, R. Giannou, A. Mourkas, I. Vangelidis, C. Prouskas, K. Maitianos, M. Pervolaraki, R. Klini, E. Lidorikis, N. Kalfagiannis, 23rd International Conference on Nanosciences & Nanotechnologies, Thessaloniki, Greece (July 7-10, 2026).
2. “Broadband Wavelength Conversion on-Chip Based on Intermodal Four-Wave Mixing”, Valerio Vitali, Thalía Domínguez Bucio, Hao Liu, Anna Pennoni, Kyle R. H. Bottrill, José Manuel Luque González, Alejandro Ortega-Moñux, Glenn Churchill, James C. Gates, James Hillier, Nikolaos Kalfagiannis, Daniele Melati, Jens H. Schmid, Pavel Cheben, J. Gonzalo Wangüemert-Pérez, Íñigo Molina-Fernández, Frederic Gardes, Ilaria Cristiani, Periklis Petropoulos, and Cosimo Lacava, PIERS 2025, Chiba, Japan, 5-9 November 2025.
3. “Broadband wavelength conversion in Si-rich silicon nitride waveguides based on intermodal four-wave mixing”, Vitali, Valerio; Domínguez Bucio, Thalía; Liu, Hao; Bottrill, Kyle R. H.; Luque González, José Manuel; Ortega-Moñux, Alejandro; Churchill, Glenn; Gates, James C.; Hillier, James; Kalfagiannis, Nikolaos; Melati, Daniele; Schmid, Jens H.; Cristiani, Ilaria; Cheben, Pavel; Wangüemert-Pérez, J. EOSAM 2024, Naples, Italy, -13 September 2024.
4. “Laser Annealing as a platform for optimising materials properties”, N. Kalfagiannis, 37th Panhellenic conference on Solid State Physics and Materials Science, Thessaloniki, Greece, 17-20 September 2023.
5. “How, Why and When Ellipsometry Works best”, James A. Hillier, Sophie Camelio, Wayne Cranton, Alexei V. Nabok, Christopher J. Mellor, Demosthenes C. Koutsogeorgis and Nikolaos Kalfagiannis, EMRS Spring Meeting, Virtual Conference (May 31 – June 4, 2021)
6. “Metal Oxide Perovskites – A viable platform for Mid- to Far- Infrared Nanophotonics”, I. Vangelidis, J. Hillier, E. Lidorikis, N. Kalfagiannis, MRS Fall Meeting, Boston, USA (December 1-6, 2019).
7. “Exploring surface phonon polaritons in polar crystals: The case of SrTiO₃”, N. Kalfagiannis, J. Stoner, J. Hillier, I. Vangelidis, E. Lidorikis, E-MRS Spring Meeting, Nice, France (May 27-June 1, 2019).
8. “Solution Combustion Synthesis: Applications in Oxide Electronics”, R. Branquinho, E. Carlos, A. Santa, D. Salgueiro, S. Dellis, N. Kalfagiannis, A. Kiazadeh, P. Barquinha, D. C. Koutsogeorgis, R. Martins, E. Fortunato, E-MRS Spring Meeting, Strasbourg, France (June 18-22, 2018).
9. “Fabrication of Titanium Nitride Plasmonic Surfaces”, S. Panos, D. Tselekidou, S. Kassavetis, N. Kalfagiannis, P. Patsalas, Herald Summit 2018, Braga, Portugal (September 25-28, 2018).
10. “Controlled Environment Excimer Laser Annealing (CEELA) – A novel strategy for low-loss materials engineering for IR plasmonics”, J. Hillier, D.C. Koutsogeorgis, S. Camelio, N. Kalfagiannis, 7th International Symposium on Transparent Conductive Materials, Crete, Greece (October 14-19, 2018).
11. “Conductive Nitrides—Growth Principles, Optical and Electronic Properties and Their Perspectives in Photonics and Plasmonics”, P. Patsalas, N. Kalfagiannis, S. Kassavetis, G. Abadias, D. V. Bellas, C. Lekka, E. Lidorikis, MRS Fall Meeting, Boston, USA (November 26-December 1, 2017).
12. “Rapid laser-induced photochemical conversion of sol-gel precursors to In₂O₃ layers and their application in thin-film transistors”, N. Kalfagiannis, S. Dellis, I. Isakov, K. Tetzner, T. D. Anthopoulos and D. C. Koutsogeorgis, MRS Fall Meeting, Boston, USA (November 26-December 1, 2017).
13. “Unconventional Plasmonic Materials: the case of PEDOT:PSS”, D. V. Bellas, E. Lidorikis, N. Kalfagiannis, 14th International Conference on Nanosciences & Nanotechnologies, Thessaloniki, Greece (July 3-8, 2017).
14. “White-light bright luminescence in electrochemically-produced porous Si/ZnO nanostructures”, S. Dellis, N. Pliatsikas, N. Kalfagiannis, O. Lidor, I. Fuchs, G. Vourlias, S. Sotiropoulos, D.C. Koutsogeorgis, Y. Mastai, and P. Patsalas, E-MRS Spring Meeting, Strasbourg, France (May 22-27, 2017).
15. “Flexible, durable and large scale plasmonic writing via sub-surface laser nanostructuring in stratified metal/dielectric media”, N. Kalfagiannis, D.V. Bellas, D. Toliopoulos, A. Siozios, P. Patsalas, E. Lidorikis, D.C. Koutsogeorgis, E-MRS Spring Meeting, Strasbourg, France (May 22-27, 2017).
16. “Synthesis of tunable plasmonic nanostructures by fast laser processing: application to surface enhanced Raman scattering”, N. Pliatsikas, J. Arvanitidis, D. Christofilos, N. Kalfagiannis, A. Kagkoura, K. Sefiane, V. Koutsos, E. Pavlidou, D. Koutsogeorgis, P. Patsalas, E-MRS Spring Meeting, Strasbourg, France (May 22-27, 2017).

17. "Angle-Dependant Broadband Reflectance of Direct Laser Fabricated Plasmonic Nanoparticle Templates", J. L. Spear, D. J. Fairhurst, N. Kalfagiannis, C. W. M. Castleton, C. V. Brown, D. C. Koutsogeorgis, E-MRS Spring Meeting, Lille, France (May 2-7, 2016).
18. "An auxetic micropatterned patch, with mechanically tunable and conductive properties for treating myocardial infarctions", M. Kapnisi, A. G. Guey, J. Puetzer, D. Mawad, C. Mansfield, F. Perbellini, E. J. Humphrey, C. Terracciano, S. Harding, N. Kalfagiannis, D. Koutsogeorgis, M. M. Stevens, BioEI2016 International Winter school on Bioelectronics, Austria (March 12-19, 2016),
19. "Laser Annealing of indium gallium zinc oxide: A platform towards flexible and large area processing of thin film transistors", S. El hamali, N. Kalfagiannis, P. Downs, C. Ramsdale, R. Price, D. Koutsogeorgis, Innovations in Large-Area Electronics Conference, UK (February 1-2, 2016).
20. "Plasmonic Compatibility of Conductive Transition Metal Nitrides via Laser Annealing", N. Kalfagiannis, S. Kassavetis, G. Abadias, D. Koutsogeorgis, P. Patsalas, MRS Fall Meeting, Boston, USA (November 29-December 4, 2015).
21. "Laser-driven, cold annealing of nanostructured plasmonic films: towards large-scale, flexible, durable optical encoding", P. Patsalas, D. C. Koutsogeorgis, N. Kalfagiannis, E. Lidorikis, A. Siozios, G. Bantsis, I. Varsano, G. Vourlias, MRS Spring Meeting, San Francisco, USA (April 6-10, 2015).
22. "Subsurface laser nano-structuring of plasmonic, stratified metal/dielectric media", N. Kalfagiannis, A. Siozos, D. Bellas, G. Vourlias, C. Bazioti, G.P. Dimitrakopoulos, W.M. Cranton, E. Lidorikis, P. Patsalas, D.C. Koutsogeorgis, E-MRS Spring Meeting, Lille, France (May 26-30, 2014).
23. "Single-Step measurement of elastic modulus and adhesion mapping of surface of carbonate reservoir rocks", N. Kalfagiannis, A. Gupta, 32nd ASME International Conference on Ocean, Offshore and Arctic Engineering, Nantes, France (June 9-14, 2013).
24. "Nanostructuring and plasmonic behaviour of silver nanoparticles formed by laser annealing", A. Siozios, N. Kalfagiannis, S. Kaziannis, C. Kosmidis, P. Patsalas, D.C. Koutsogeorgis, E-MRS Spring Meeting, Strasbourg, France (May 27-31, 2013).
25. "Nanofibrous scaffolds for Cartilage Regeneration: Scaffold Parameters at Nanoscale that affect Cell Function", P. Kavatzikidou, Th. Kotziapashi, V. Karagkiozaki, P. Karagiannidis, D. Georgiou, N. Kalfagiannis, E. Pavlidou, S. Logothetidis, E-MRS Spring Meeting, Strasbourg, France (May 27-31, 2013).
26. "Impact of thermal annealing on the morphology and interfacial composition of bulk heterojunction organic solar cells", P. G. Karagiannidis, N. Kalfagiannis, A. Laskarakis, D. Georgiou, C. Pitsalidis, S. Logothetidis, E-MRS Spring Meeting, Strasbourg, France (May 14-18, 2012).
27. "Effect of the growth conditions to the properties of nanostructured hydrogenated amorphous carbon thin films", S. Kassavetis, A. Laskarakis, N. Kalfagiannis, I. Tsiaoussis, S. Logothetidis, N. Frangis, 10th International Conference on Reactive Sputter Deposition (RSD 2011), Linköping, Sweden (December 8-9, 2011).
28. "Incorporation of B in TiB₂ thin films: Combined experimental and ab initio study", N. Kalfagiannis, G. Volonakis, L. Tsetseris, S. Logothetidis, E-MRS Spring Meeting, Nice, France (May 9-13, 2011).
29. "In-Line optical investigation of thickness and optical properties of r2r flexible substrates, electrodes & barrier materials", D. Georgiou, N. Kalfagiannis, C. Koidis, A. Laskarakis, M. Chatzidis, S. Logothetidis, International Symposium on Flexible Organic Electronics, Chalkidiki, Greece (July 6-9, 2010).
30. "Microstructural Characteristics and Nanomechanical Properties of Ti/TiB₂ Multilayered Composites", N. Kalfagiannis, I. Zyganitidis, S. Kassavetis, S. Logothetidis, N. Vouroutzis, Ch. B. Lioutas, E-MRS Spring Meeting, Strasbourg, France (June 8-12, 2009).
31. "Adsorption Mechanisms of Blood Plasma Proteins on Boron Based Thin Films: Effect of Surface properties", S. Lousinian, N. Kalfagiannis, P. Kavatzikidou, V. Karagkiozaki, S. Logothetidis, E-MRS Spring Meeting, Strasbourg, France (June 8-12, 2009).
32. "The effect of ion bombardment and rotation of the sample on the crystal structure, morphology and optical properties of TiB₂ thin films", N. Kalfagiannis, A. Laskarakis, M. Garganourakis, S. Logothetidis, 5th Int. Workshop on Nanosciences and Nanotechnologies, Thessaloniki, Greece (July 14-16, 2008).
33. "Optical and Surface Characterization of amorphous Boron Nitride Thin Films for Biomedical Coatings", S. Lousinian, N. Kalfagiannis, S. Logothetidis, E-MRS Spring Meeting, Strasbourg, France (May 26-30, 2008).
34. "Albumin and Fibrinogen adsorption on boron nitride and carbon based thin films", S. Lousinian, N. Kalfagiannis, S. Logothetidis, 4th Int. Workshop on Nanosciences and Nanotechnologies, Thessaloniki, Greece (July 16-18, 2007).

35. "Investigation of microstructural characteristics in CrN/TiN superlattice coatings", N. Kalfagiannis, S. Logothetidis, K. Sarakinos, P. Patsalas, E-MRS Spring Meeting, Strasbourg, France (May 31-June 3, 2005).

A.5 Contributed poster presentations in international conferences

1. "Excimer Laser Annealing of Sol-Gel Metal-Oxide Thin Films", C. Koutsaki, N. Kalfagiannis, C. Mellor, D. C. Koutsogeorgis, MRS Fall Meeting, Boston USA (December 1-6, 2019).
2. "Soft matter plasmonics: Accessing the IR window with PEDOT:PSS – A computational approach", D. V. Bellas, E. Lidorikis, N. Kalfagiannis, MRS Fall Meeting, Boston, USA (November 26-December 1, 2017).
3. "Self-assembled, dichroic, plasmonic, nanostructured titanium nitride", S. Camelio, D. Babonneau, F. Pailloux, G. Abadias, N. Pliatsikas, N. Kalfagiannis, P. Patsalas, MRS Fall Meeting, Boston, USA (November 26-December 1, 2017).
4. "Laser fabricated nanocrystals for memory devices", L. Kastanis, J. L. Spear, A. Angelou, N. Kalfagiannis, Ch. Sargentis, D.C. Koutsogeorgis, E. K. Evangleou, D. Tsakmakis, MRS Fall Meeting, Boston, USA (November 29-December 4, 2015).
5. "Specular and diffuse angular characterisation of plasmonic nanoparticle templates", J. L. Spear, D. J. Fairhurst, N. Kalfagiannis, C. W. M. Castleton, C. V. Brown, D.C. Koutsogeorgis, MRS Fall Meeting, Boston, USA (November 29-December 4, 2015).
6. "Enhanced photocatalytic activity of composite semiconducting/plasmonic materials: towards withholding of heavy metal ions from aqueous solutions", N. Pliatsikas, K. Symeonidis, G. Vourlias, M. Mitrakas, D. Koutsogeorgis, K. Sarakinos, P. Patsalas, N. Kalfagiannis, MRS Fall Meeting, Boston, USA (November 29-December 4, 2015).
7. "Material deposition and excimer laser annealing of indium gallium zinc oxide for thin film transistors fabrication at low thermal budget", S. O. El hamali, P. Downs, N. Kalfagiannis, W. Cranton, C. Ramsdale, R. Price, R. Ranson, D.C. Koutsogeorgis, MRS Fall Meeting, Boston, USA (November 29-December 4, 2015).
8. "Manipulation of the luminescence of ZnO thin film via coupling with plasmonic metal nanoparticles", S. Dellis, N. Kalfagiannis, A. Khairi, P. Patsalas, D.C. Koutsogeorgis, E-MRS Spring Meeting, Lille, France (May 11-15, 2015).
9. "Vertically-aligned ZnO nanowires by electrochemical methods: microstructure and photoluminescence", S. Dellis, N. Pliatsikas, N. Kalfagiannis, G. Vourlias, D.C. Koutsogeorgis, P. Patsalas, E-MRS Spring Meeting, Lille, France (May 11-15, 2015).
10. "Enhanced photocatalytic activity of composite semiconducting/plasmonic materials: towards withholding of heavy metal ions from aqueous solutions", N. Pliatsikas, K. Symeonidis, G. Vourlias, M. Mitrakas, D. Koutsogeorgis, K. Sarakinos, P. Patsalas, N. Kalfagiannis, E-MRS Spring Meeting, Lille, France (May 11-15, 2015).
11. "Structural and optical modifications of AlN/Ag multilayer stacks by various annealing methods", E. Delli, C. Bazioti, N. Kalfagiannis, G. Vourlias, A. Siozios, G.P. Dimitrakopoulos, D.C. Koutsogeorgis, P. Patsalas, E-MRS Spring Meeting, Lille, France (May 11-15, 2015).
12. "Comparison of Silver Nanoparticles from LASER annealing and polyol synthesis embedded in PEDOT:PSS matrix for light harvesting", E. Chatzigeorgiou, A. Papamichail, N. Kalfagiannis, C. Gravalidis, L. Tzounis, D. Koutsogeorgis, S. Logothetidis, E-MRS Spring Meeting, Lille, France (May 11-15, 2015).
13. "Optical, hydrophobic and plasmonic properties of pure and Ag-decorated Si nanowires arrays of bimodal size distribution", N. Pliatsikas, D. Kalamakis, S. Kassavetis, N. Kalfagiannis, G. Vourlias, E. Pavlidou, D. C. Koutsogeorgis, P. Patsalas, MRS Spring Meeting, San Francisco, USA (April 6-10, 2015).
14. "Opto-thermal stimulation of plasmonic thin films: new route to design surface and sub-surface nanoparticle arrangements", N. Kalfagiannis, A. Siozios, D. Toliopoulos, D. Bellas, L. Bowen, N. Pliatsikas, W. Cranton, C. Kosmidis, D.C. Koutsogeorgis, E. Lidorikis, P. Patsalas, MRS Fall Meeting, Boston, USA (November 30-December 5, 2014).
15. "Tailored Localized Surface Plasmon Resonance of noble metal thin films by single pulse Laser Annealing under a pressurized inert environment", N. Kalfagiannis, L. Bowen, W.M. Cranton, P. Patsalas and D.C. Koutsogeorgis, E-MRS Spring Meeting, Lille, France (May 26-30, 2014).
16. "Laser nano-structuring of plasmonic, stratified metal/dielectric media", A. Siozios, N. Kalfagiannis, D. C. Koutsogeorgis, G. Vourlias, C. Bazioti, G. Dimitrakopoulos, W. Cranton, P. Patsalas, MRS Fall Meeting, Boston, USA (December 1-6, 2013).
17. "Single pulse Laser Annealing for the Surface Nanostructuring of Noble Metal Thin Films with Tailored Localized Surface Plasmon Resonance", N. Kalfagiannis, A. Siozios, D. Toliopoulos, W. Cranton, E. Lidorikis, P. Patsalas, D. C. Koutsogeorgis, MRS Fall Meeting, Boston, USA (December 1-6, 2013).

18. "Simulating the opto-thermal processes involved in laser induced self-assembly of plasmonic metal nanoparticles on a Si substrate", D. Toliopoulos, D.V. Bellas, A. Siozios, N. Kalfagiannis, D.C. Koutsogeorgis, W.M. Cranton, A. Gupta, P. Patsalas, E. Lidorikis, MRS Fall Meeting, Boston, USA (December 1-6, 2013).
19. "Performance of hybrid buffer PEDOT:PSS layers doped with plasmonic silver nanoparticles", N. Kalfagiannis, P. G. Karagiannidis, C. Pitsalidis, N. Hastas, N. T. Panagiotopoulos, P. Patsalas, S. Logothetidis, E-MRS Spring Meeting, Strasbourg, France (May 27-31, 2013).
20. "Investigation of phase separation in P3HT:PCBM photovoltaic devices by Atomic Force Microscopy and Spectroscopic Ellipsometry", P. G. Karagiannidis, N. Kalfagiannis, D. Georgiou, C. Pitsalidis and S. Logothetidis, 1st International Conference on BioInspired Materials for Solar Energy Utilization (BIOSOL2011), Crete, Greece (September 12-17, 2011).
21. "Plasmonic enhancement on the performance of P3HT:PCBM based organic solar cells", N. Kalfagiannis, P. G. Karagiannidis, C. Pitsalidis, S. Logothetidis, International Symposium on Flexible Organic Electronics, Thessaloniki, Greece (July 10-13, 2011).
22. "Fabrication of TIPS-Pentacene organic thin film transistors using PMMA as a buffer layer on SiO₂ gate dielectric", C. Pitsalidis, N. Kalfagiannis, S. Kassavetis, P. Karagiannidis, N. Hastas and S. Logothetidis, International Symposium on Flexible Organic Electronics, Thessaloniki, Greece (July 10-13, 2011).
23. "Optimization of structure of anisotropic crystalline layers of new n-type semiconductors", I. Tsydel, P. Gawrys, T. Marszalek, J. Jung, C. Gravalidis, N. Kalfagiannis, S. Logothetidis, M. Zagorska, J. Ulanski, International Symposium on Flexible Organic Electronics, Thessaloniki, Greece (July 10-13, 2011).
24. "Influence of the crystals organization on the electrical performance of soluble pentacene thin film transistors", C. Pitsalidis, N. Kalfagiannis, N. Hastas and S. Logothetidis, E-MRS Spring Meeting, Nice, France (May 9-13, 2011).
25. Real-time monitoring of plasma electrical properties the bonding structure and properties of Carbon and BN thin films", M. Garganourakis, N. Kalfagiannis, S. Logothetidis, E-MRS Spring Meeting, Strasbourg, France (May 30-June 3, 2007).
26. "Evaluation of haemocompatibility of titanium nitride thin films: An in-vitro study of platelets adhesion by Atomic Force Microscope", V. Karagkiozaki, S. Logothetidis, N. Kalfagiannis, E-MRS Spring Meeting, Strasbourg, France (May 30-June 3, 2007).
27. "Decorative Coatings: Color dependency on optical and electronic properties of TiN", N. Kalfagiannis, S. Logothetidis, 3rd Workshop on Nanosciences and Nanotechnologies, Thessaloniki, Greece (July 10-12, 2006).