ΠΑΝΕΠΙΣΤΗΜΙΟ ΚΡΗΤΗΣ

Τμήμα Επιστήμης και Τεχνολογίας Υλικών

ΠΡΟΓΡΑΜΜΑΤΑ και ΔΗΜΟΣΙΕΥΣΕΙΣ 2011-2019

ΑΠΡΙΛΙΟΣ 2020

1. ΕΡΕΥΝΗΤΙΚΑ ΠΡΟΓΡΑΜΜΑΤΑ

Ν. ΠΕΛΕΚΑΝΟΣ

-Coordination of EDBM103 project entitled *"Nanophotonic semiconductor sources of single and entangled photons",* funded by the Greek government (2020-2021). Budget 37,000 €.

-Supervision of Doctoral Fellowship of E. Amargianitakis funded by the Stavros Niarhos Foundation, entitled "*Entangled photons in GaN Polariton Lasers*" (2019-2020). Budget 9,000 €.

-Coordination of RIS3Crete project "NANOTANDEM" funded by the Region of Crete, on *"High performance Perovskite/III-V semiconductor Nanostructure Tandem Solar Cells"* (2019-2022). Budget 212,500 €.

-Participation in Infrastructures project "INNOVATION-EL", co-financed by Greece and the European Regional Development Fund (2018-2021). Budget 13,500 €.

-Supervision of Doctoral Fellowship of G. Thyris funded by the Stavros Niarhos Foundation, entitled "*High temperature single photon emitters based on InAs piezoelectric quantum dots*" (2018-2019). Budget 11,500 €.

-Participation in KRHPIS II project "AENAO", co-financed by Greece and the European Regional Development Fund on "Materials and Processes for Energy and Environment Applications" (2017-2020). Budget 16,000 €.

-Supervision of Doctoral Fellowship of E. Amargianitakis funded by the Hellenic Foundation for Research and Innovation, entitled "*Nitride Polariton Lasers*" (2017-2019). Budget 23,400 €.

-Coordination of LANEF Chair of Excellence 2014 project, funded by the French government, entitled "*Nanowire Innovative Solar Cells"* (2014-2017). Total budget ~300,000 €.

-Coordination of ARISTEIA II project "NILES" funded by the Greek government, on *"Nanowire Innovative Light Emitting devices and Solar cells"* (2014-2015). Total budget 245,000 €.

-Coordination of THALES project "NANOPHOS" funded by the Greek government, on *"Nanophotonic Semiconductor Devices"* (2012-2015). Total budget 540,000 €.

-Coordination of Solar Innovation 2010 Award project funded by the French government on "*III-V Nanowires for Next-generation Photovoltaics"* (2011-2013). Total budget ~250,000 €.

-Coordination of HRAKLEITOS II project funded by the Greek government, on *"Photonic Devices of Piezoelectric Quantum Dots"* (2010-2014). Total budget 45,000 €.

-Participation in European contract entitled CLERMONT 4, FP7-PEOPLE-ITN-235114, "*Exciton–Polaritons in microcavities: physics and devices"* (2009-2013). FORTH budget 314,570 €.

-Participation in European contract entitled ICARUS, FP7-PEOPLE-ITN-237900, "*Hybrid organic-inorganic nanostructures for photonics and optoelectronics"* (2009-2013). FORTH budget ~410,000€.

Σ. ΤΖΩΡΤΖΑΚΗΣ

- Responsive Research Seed Grants TAMUQ 2019: Advanced laser-engineered polymeric membranes ($160k, LPI, 2020-2021)

- NPRP (NPRP11S-1128-170042): Advanced 3D-sculptured materials for catalysis ($584k, LPI, 2019-2021)

- H2020-FET: Mid- and far-IR optoelectronic devices based on Bose-Einstein condensation (MIR-BOSE) (454k€, PI, 2017-2020)

- NPRP (9 - 383 - 1 - 083): Engineered light for biomedical and energy harvesting applications ($720k, LPI, 2016-2019)

- NPRP (9 - 329 - 1 - 067): Split-ring resonator based nonlinear metamaterials: from few to many, theory and experiments ($765k, PI, 2016-2019)

- H2020: LaserLab Europe IV (434k€, co-PI, 2015-2019)

- H2020: Nanoscience Foundries and Fine Analysis - Europe (NFFA-Europe) (770k€, co-PI, 2015-2019)

- H2020: Integrated Platform for the European Research Infrastructure ON Cultural Heritage (IPERION CH) (340k€, co-PI, 2015-2019)

- NPRP (6 - 465 - 1 - 091): Remote Measurements of Hydrocarbon and Greenhouse Gases in Fluids Carrying Them ($1M, co-LPI, 2014-2017)

- FP7: Graphene Flagship - Multi-layered sandwich graphene devices (MILESAGE) (30k€, co-PI, 2014-2016)

- GSRT Aristeia II Grant, "*Resonant photonic-phononic nanostructures for enhanced acoustooptic interaction: photonic device realization*" (300k€, co-PI, 2013-2015)

- GSRT Aristeia Grant, "*Frontier terahertz radiation fields: applications in cross-disciplinary science*" (435k€, LPI, 2012-2015)

- GSRT Thales project "ANEMOS" (35k€, co-PI, 2012-2015)

- FP7- I3: LASERLAB III JRA "INREX" (376k€, co-PI, 2012-2015)

- FP7, NMP: ENSEMBLE "*ENgineered SElf-organised Multi-component structures with novel controllaBLe Electromagnetic functionalities*" (660k€, co-PI, 2008-2012)

Π. ΣΑΒΒΙΔΗΣ

- Greek Ministry of Education, Quantum Tech. PI, Polariton Simulator, PI (2017-2019) 500 k €

- Greek Ministry of Education, ΕΔΒΜ 34, Young Researcher Support Grant, PI (2017-2018) 56k €

- FP7- ERC starting Grant, "POLAFLOW", Collaborating partner (2012-2017) 126k €

- Greek Ministry of Education, ARISTEIA, APPOLO, Principal investigator, (2012–2015) 316k €

- FP7-PEOPLE-2011-IRSES, Polaritonic TeraHertz Devices, POLATER (2011-2015) 70k €

- FP7- Initial Training Network, "INDEX", Principal investigator (2011-2015) 350k €

- FP7- Initial Training Network, "ICARUS", Principal investigator (2009-2013) 410k €

- FP7- Initial Training Network, "CLERMONT4", Principal investigator (2009-2013) 350k €

- Greek Ministry of Education, Thalis, Principal investigator, partner (2012–2015) 120k €

- Greek Ministry of Education, Herakleitos II, Principal investigator (2011–2014) 45k €

M. BAMBAKAKH

- "Modern polymer-based catalysts and microflow conditions as key elements of innovations in fine chemical synthesis" FP7-NMP-2009-LARGE-3 Reference Number: CP-IP 246095-2 (POLYCAT). Duration: September 2010 – August 2013

- "Responsive Polymer Brushes for the Development of Smart Surface for Biomedical Applications" Iraklitos II: Programme for the Improvement of Human Potential (Ministry of Education, Greece) Duration: July 2011 – June 2014

- "Development of Environmental-friendly Core-shell Particle Dispersions for Coating Applications" National Programme, Cooperation I Duration: January 2011 – December 2013

- "Polymer Nanostructures based on light-responsive polymers: use in light-controlled drug delivery applications" University of Crete, The Secretariat of the Research Committee Duration: September 2011 – August 2013

- "Development of Novel Functional Copolymers and Surfaces with Permanent and/or Controlled released biocidal species" Thalis: Programme for the Improvement of Human Potential (Ministry of Education, Greece) Duration: January 2012 – December 2014

- "Self-assembly and dynamics in metatsable states. From melocular and supramolecular to mesoscopic systems" Thalis: Programme for the Improvement of Human Potential (Ministry of Education, Greece) Duration: September 2011 – August 2014

- "Glycopolymer Surfaces for Tissue Engineering Applications" University of Crete, The Secretariat of the Research Committee Duration: July 2014-July 2015

- *"Nanowire Innovative Light Emitting Devices and Solar Cells"* ΑΡΙΣΤΕΙΑ II Action, 4217-NILES, Ministry of Education & Religious Affairs, Culture & Sports, Greece Duration: March 2014 – July 2015

- *"In vitro assessment of OSTEOinductive BIOMIMEtic and polymeric compoSIte biomaterial Scaffolds for bone tissue repair"* ΑΡΙΣΤΕΙΑ II Action, 3438-OSTEOBIOMIMESIS, Ministry of Education & Religious Affairs, Culture & Sports, Greece Duration: February 2014 – October 2015

- *"Packed bed reactors with polymer coated particles for calcium sulfate inhibition in seawater desalination"* "Greece-Israel" Research and Developement Bilateral Programme, Ministry of Education & Religious Affairs, Culture & Sports, Greece Duration: July 2014 – September 2015

- *"Directed Colloidal Structure at the Meso-Scale"* EU Horizon 2020, Marie Skłodowska-Curie Innovative Training Network (ITN) Grant Agreement No: 641839 (Distruc) Duration: January 2015 – December 2018

- *"Ultrasensitive chiral detection by signal-reversing cavity polarimetry: applications to in-situ proteomics, single-molecule chirality, HPLC analysis, medical diagnostics, and atmospheric*

studies" EU Horizon 2020, FETOPEN-1-2016-2017 Grant Agreement No: 737071 (Ultrachiral) Duration: January 2017 – December 2020

- *"Functional nanomaterials for the isolation of high-added value polyphenols from olive mill wastes"* KRHPIS II, Ministry of Economics and Development, Greece Grant No: 5002358 Duration: March 2018 – December 2018

- *"Novel biostatic surfaces with self-renewal properteis and sensing of their activity"* EDBM34, Ministry of Economics and Development, Greece Grant No: 5006044 Duration: April 2018 – June 2019

- Member of the Management Committee of COST Action CA18132 'Functional Glyconanomaterials for the Development of Diagnostics and Targeted Therapeutic Probes'

- *"Soft Biocompatible Polymeric NANOstructures: A Toolbox for Novel Generation of NanoPharmaceuticals in OphthaLmology"* EU Horizon 2020, MSCA-RISE-2018 Grant Agreement No: 823883 (NanoPol) Duration: March 2019 – February 2022

- "Innovative polymer greenhouse films via application of functional coatings" EPANEK 2014-2020, Ereyno-Kainotomo-Dhmiourgo Grant Agreement No: T1EΔK-01499-5030174 (INGRECO) Duration: June 2018 – June 2021

- "Active Flexible Packaging with Antimicrobial Properties for Shelf-life Extension of Selected Greek Cheeses" EPANEK 2014-2020, Ereyno-Kainotomo-Dhmiourgo Grant Agreement No: T1EΔK-04052-5033642 (EYZHN) Duration: October 2018 – October 2021

- "Innovative Nanomedicine for Personalized Breast Cancer Therapy Utilizing Superparamagnetically Guided (NY2Ps) Ribonucleoproteins" EPANEK 2014-2020, Ereyno-Kainotomo-Dhmiourgo Grant Agreement No: T1EΔK-02775-5031837 (NY2P) Duration: October 2018 – October 2021

- "Functional surface treatments using ultra-short pulse laser system FemtoSurf" EU Horizon 2020, ICT-04-201 Grant Agreement No: 825512 (FemtoSurf) Duration: January 2019 – December 2021

Μ. ΧΑΤΖΗΝΙΚΟΛΑΙΔΟΥ

- Principal Investigator of a highly competitive research project from the Hellenic Foundation for Research and Innovation (ELIDEK DEP) entitled: 'Development of tissue-engineered vascularized bone grafts, V-BONE' Budged funded: 189,981 Eur0 Project duration: 36 months

- Member of the Management Committee of COST Action CA18132 'Functional Glyconanomaterials for the Development of Diagnostics and Targeted Therapeutic Probes'

- Principal Investigator of a highly competitive European Commission Research and Innovation Action project in the Work programme topic 'Osteoarticular tissues regeneration' GA 814410 entitled: 'Active aGeIng and Osteoporosis: The next challenge for smarT nanobiOmaterials and 3D technologies; GIOTTO', http://www.giottoproject.eu Budget funded: 5,660,096.25 Euro Project duration: 50 months (January 2019 - February 2023) Coordinator: Prof. Chiara Vitale-Brovarone

- Principal Investigator (host collaborator) of a competitive Greek Diaspora Fellowship Program (The Institute of International Education, Fulbright Foundation in Greece) on 'Collaborative Research in Vascular Tissue Engineering' (http://www.iie.org/Programs/Greek-Diaspora-Fellowship-

Program/Selected-Projects#.WFfMcUuM7vF), Scholar Applicant: Prof. Stavroula Sofou, Rutgers University, USA

- Principal Investigator of a competitive DAAD-IKY grant entitled "Decorating calcium nanoparticles with DNA plasmid encoding hVEGF" Budget funded: 10000 Euro Number of participating groups: 2 [Corresponding Principal Investigator in Germany: Prof. Dr. M. Epple] Project duration: 12 months (Jan. 2015 - Dec. 2015)

- Principal Investigator of a competitive Special Account for Research Funds of University of Crete grant entitled: "Osteoinductive polymeric composite biomaterial-scaffolds for bone tissue engineering" Budget funded: 10000 Euro Number of participating groups: 1 Project duration: 24 months (March 2014 - Feb. 2016)

- Coordinator of a competitive research GSRT grant 'Excellence' "Aristeia II" MIS 525089 entitled: "In vitro assessment of OSTEOinductive BIOMIMEtic and polymeric compoSIte biomaterial Scaffolds for bone tissue repair; OSTEOBIOMIMESIS 3438" Budget funded: 220000 Euro Number of participating groups: 3 Project duration: 17 months (Feb. 2014 - July 2015)

- Principal Investigator of a Special Account for Research Funds of University of Crete grant entitled: "Biocompatibility assessment of hybrid materials using bone marrow derived mesenchymal stem cells" Budget funded: 1000 Euro Number of participating groups: 1 Project duration: 12 months (Jan - Dec. 2013)

- Principal Investigator of a competitive DAAD-IKY grant entitled "Decorating calcium nanoparticles with DNA plasmid encoding hBMP-7" Budget funded: 16000 Euro Number of participating groups: 2 [Corresponding Principal Investigator in Germany: Prof. Dr. M. Epple] Project duration: 24 months (Jan. 2013 - Dec. 2014)

- Principal Investigator of a competitive GSRT grant 'Thales' MIS 380278 entitled "3D structures for tissue engineering; 3DSET" Budget funded: 540000 Euro Number of participating groups: 3 Project duration: 36 months (Mar. 2012 - Feb. 2015) Coordinator: Dr. Maria Farsari

- National representative of the COST Action MP1005 NAMABIO (http://www.namabio.eu/the-project) in work group 4 on 'Stem cell biology in bone and dental tissue regeneration

- Partner of a European Commission TransPOT project at the School of Medicine, University of Crete entitled "GMP facility for stem cells in tissue engineering and regenerative medicine" Budget funded: 3000000 Euro Number of participating groups: 25 Project duration: 36 months (Jan. 2012 - Dec. 2014) Coordinator: Prof. A. Eliopoulos

Ν. ΧΡΟΝΗΣ

- Bodosaki Foundation, 'A human-powered, Self-sterilizing, Artificial Skin' (40,000 Euros)

- ERC Proof of Concept Grant, 'A lab-on-chip platform for blood cell counting and identification at the point-of-care' (150,000 Euros).

Α. ΛΥΜΠΕΡΑΤΟΣ

- Technical coordinator, Hitachi Global Storage Technologies (HGST) Joint Study Agreement on project titled 'Curie Temperature writing in thermally assisted magnetic recording', 2010-2014 Budget: 120000 US dollars.

- Principal investigator, Hitachi Global Storage Technologies, Western Digital Company Joint Study Agreement on project titled 'Curie Temperature writing in thermally assisted magnetic recording', 2015-2016 Budget : 30000 US dollars.

- Principal investigator, Western Digital Joint Study Agreement on project titled 'Ballistic-diffusive thermal transport in FePt thin films' (2017-2019), Budget: 60000 US dollars

Κ. ΒΕΛΩΝΙΑ

- Operational Program Competitiveness, Entrepreneurship and Innovation, under the call RESEARCH–CREATE – INNOVATE (project code: T1EDK-02746) / Ενιαία Δράση Κρατικών Ενισχύσεων Έρευνας, Τεχνολογικής Ανάπτυξης & Καινοτομίας "ΕΡΕΥΝΩ – ΔΗΜΙΟΥΡΓΩ – ΚΑΙΝΟΤΟΜΩ", "B2B (Biowaste to Bioplastic) Ανάπτυξη, Αξιολόγηση και Βελτιστοποίηση Ολοκληρωμένης Διαδικασίας Ανάκτησης Βιο-αποβλήτων Υψηλής Καθαρότητας για την Παραγωγή Κομποστοποιήσιμων Βιο-πλαστικών" (Project Coordinator: Enviroplan A.E., Total Budget: 982.475,85 €, Velonia Laboratory Budget: 272.575,32 €, Partner).

- URBAN Innovative Actions/European Regional Development Fund "A2UFood Avoidable and Unavoidable Food Wastes: A Holistic Managing Approach for Urban Environments" (Project Coordinator: Municipality of Heraklion, Total Budget: 3.912.948,75 €, Velonia Laboratory Budget: 240.152,50 €, Partner).

- Program of Internal Funding, University of Crete Research Committee ELKE|ΕΛΚΕ, "*Responsive Giant Amphiphile Nanostructures: Design, Synthesis and Application*" (10.000 €, Coordinator).

- Program of Internal Funding, University of Crete Research Committee ELKE|ΕΛΚΕ, Conference presentation on biocompatible Giant Amphiphiles (1.000 €, Principal Investigator).

- Program of Internal Funding, University of Crete Research Committee ELKE|ΕΛΚΕ, Conference presentation on *Adaptive Giant Amphiphiles" σε Διεθνές Επιστημονικό Συνέδριο,* (2.250 €, Principal Investigator).

- Operational program for lifelong learning "Materials and advanced technologies" ΠΕΓΑ|ΕΣΠΑ funding, (93.436,01 €, Coordinator).

- Program of Internal Funding, University of Crete Research Committee ELKE|ΕΛΚΕ, *"Characterization of protein-polymer bioconjugates and complex multi-enzyme nanoreactors*" (1.500 €, Coordinator).

- Program of Internal Funding, University of Crete Research Committee ELKE|ΕΛΚΕ, "*A green approach to the synthesis of protein-polymer bioconjugates*" (1.500 €, Coordinator).

- Program of Internal Funding, University of Crete Research Committee ELKE|ΕΛΚΕ, *Novel self-constructing and self-degrading biocompatible nanoassemblies*" (10.000 €, Principal Investigator).

Μ. ΚΑΦΕΣΑΚΗ

- 2008-2012: *Engineered Self-Organized Multicomponent Structures with Novel Controllable Electromagnetic Functionalities (ENSEMBLE)*. FP7 EU-NMP Programme. *Coordinator:* Institute of Electronic Materials Technology (ITME), Warsaw, Poland. *Role:* Prime Investigator.

- 2008-2011: *Electromagnetic Characterization of Nanostructured Materials (ECONAM)*. FP7 EU-NMPCA Programme. *Coordinator:* Helsinki University of Technology, Finland. *Role:* Prime Investigator.

- 2009-2012: *Large Area Fabrication of 3D Negative Index Materials by Nanoimprint Lithography (NIMNIL)*. FP7 EU-NMP Programme. *Coordinator:* Profactor GmbH, Austria. *Role:* Researcher.

- 2007-2012: COST Action MP0702, *Towards Functional Sub-Wavelength Photonic Structures*. *Role:* Member.

- 2007-2012: COST Action MP0803, *Plasmonic Components and Devices*. *Role:* Member of the management board.

- 2010-2013: *Belarus in ERA Widening (By-Nanoera)*. FP7 INCO Programme. *Coordinator:* Belarusian State University. *Role:* Prime investigator.

- 2012-2015: *Extending Electromagnetism Through Novel Artificial Materials (EXEL)*. ERC-02, GSRT programme. *Coordinator:* FORTH (C. M. Soukoulis). *Role:* Associated Researcher.

- 2013-2018: *Photonic Metamaterials (PHOTOMETA)*. ERC-EU. *Coordinator:* FORTH (C. M. Soukoulis). *Role:* Associated Researcher.

- 2014-2015: *Nanostructured plasmonic reflectors for efficient thin film solar cells (SolarNano)*, Bilateral Greek-German Collaboration. *Role:* Prime Investigator.
- 2014-2018: Graphene flagship project *Graphene-Based Revolutions in ICT And Beyond (Graphene)*. Sub-project *Multi-layered sandwich graphene devices (Milesage). Role:* Prime Investigator.

- 2016-2018: *Selective express tumor diagnostic with narrow band nanophotonic structures (EXODIAGNOS)*, ERA.Net RUS Plus project, under the EU FP7 Grant Agreement no 609556.

- 2016-2019: *Engineered light for biomedical and energy harvesting applications.* Qatar National Research Fund (QNRF) project. ID: NPRP9-383-1-083. *Role*: Prime Investigator.

- 2017-2020: *A Hardware Platform for Software-driven Functional Metasurfaces (Visorsurf).* H2020 FET-OPEN project. *Role:* Assistant to Coordinator.

- 2017-2020: *Ultrasensitive chiral detection by signal-reversing cavity polarimetry: applications to insituproteomics, single-molecule chirality, HPLC analysis, medical diagnostics, and atmospheric studies appearance (Ultrachiral).* H2020-FET-OPEN project. *Role*: Participant.

- 2019-2021: *Artificial permittivity and permeability engineering for future generation sub wavelength analogue integrated circuits and systems* (NANOPOLY). H2020-FET-OPEN project. *Role*: Participant.

Δ. ΠΑΠΑΖΟΓΛΟΥ

- Supervision of Doctoral Fellowship of Michael Mylonakis funded by the Hellenic Foundation for Research and Innovation, entitled "*Wavefront Shaping for Microscopic Imaging of Biological Samples"*, *ongoing, (6/2018-), Budget 32.400€* [*] *(co-supervised with Dr. Giannis Zacharakis, IESL-FORTH)*

- Supervision of Doctoral Fellowship of Dimitrios Mansur funded by the Hellenic Foundation for Research and Innovation, entitled *"Design and engineering of optical wave packets with application in materials science"*, *(11/2016-), Budget 27.000€*

- Supervision of Doctoral Fellowship of Ioannis Drougkakis funded by the Hellenic Foundation for Research and Innovation, entitled "*Wavefront Shaping for Microscopic Imaging of Biological Samples"*, *ongoing, (11/2016-), Budget 25.200€ *(co-supervised with Dr. Wolf von Klitzing, IESL-FORTH)*

- *"Wireless optical telecommunications beyond the horizon"* John S. Latsis Public Benefit Foundation, Scientific Studies 2013, *Budget 12.000€*

- CEMIC *"Cavity-Enhanced Microscopy*", Horizon 2020 ATTRACT, (2019-2020), *Budget 100.000€, (UoC Contact Person, PI Dr. Wolf von Klitzing, IESL-FORTH)*

- OBST2 *"Optical Breadboard Technologies for Complex Space Missions"*, European Space Agency (ESA), 2019-2020. *Budget 200.000€* (*WP leader, PI: Dr. Wolf von Klitzing, IESL/FORTH*)

- PULSE *«High-Power Ultrafast LaSErs using Tapered Double-Clad Fibre», H2020-ICT-2018-2, 2019-2022, FORTH Budget: 256.000€* (*Researcher, Local PI: Dr. Maria Farsari, IESL/FORTH*)

- OBST *"Optical Breadboard Technologies for Complex Space Missions"*, Contract No. 4000112744/14/NL/PA European Space Agency (ESA), 2015-2016. *FORTH Budget: 250.000€* (*WP leader, PI: Dr. Wolf von Klitzing, IESL/FORTH*).

Ι. ΡΕΜΕΔΙΑΚΗΣ

- Thiol-protected Au nanoparticles: a multi-scale simulation Επιστημονικά Υπεύθυνος: ΡΕΜΕΔΙΑΚΗΣ ΙΩΑΝΝΗΣ ΝΙΚ. Ημ. Έναρξης: 08/06/2012, Ημ. Λήξης: 07/06/2013 Συνολικές καταθέσεις: 2.000,00

- Metal Nanoparticles for Advanced Materials: From theory to practice Επιστημονικά Υπεύθυνος: ΡΕΜΕΔΙΑΚΗΣ ΙΩΑΝΝΗΣ ΝΙΚ. Ημ. Έναρξης: 01/10/2012, Ημ. Λήξης: 31/12/2013, Συνολικές καταθέσεις: 800,00 €

- Μελέτη νανοδομών MoS2 με υπολογισμούς πρώτων αρχών. Επιστημονικά Υπεύθυνος: ΡΕΜΕΔΙΑΚΗΣ ΙΩΑΝΝΗΣ ΝΙΚ. Ημ. Έναρξης: 28/02/2014, Ημ. Λήξης: 27/02/2015 Συνολικές καταθέσεις: 1.500,00 €

- Μελέτη μονοδιάστατου MOS2 με υπολογισμούς πρώτων αρχών Επιστημονικά Υπεύθυνος: ΡΕΜΕΔΙΑΚΗΣ ΙΩΑΝΝΗΣ ΝΙΚ. Ημ. Έναρξης: 18/07/2014, Ημ. Λήξης: 18/07/2015 Συνολικές καταθέσεις: 1.000,00 €

- Συνέδριο έναρξης του προγράμματος COST - MULTICOMP Επιστημονικά Υπεύθυνος: ΡΕΜΕΔΙΑΚΗΣ ΙΩΑΝΝΗΣ ΝΙΚ. Ημ. Έναρξης: 14/10/2016, Ημ. Λήξης: 31/12/2016 Συνολικές καταθέσεις: 3.620,00 €

- Θεωρητική Μελέτη Διχαλκογενιδίων Μεταβατικών Μετάλλων σε Χαμηλές Διαστάσεις κωδ. ΓΓΕΤ 905 Επιστημονικά Υπεύθυνος: ΡΕΜΕΔΙΑΚΗΣ ΙΩΑΝΝΗΣ ΝΙΚ. Ημ. Έναρξης: 01/08/2017, Ημ. Λήξης: 31/05/2019, Συνολικές καταθέσεις: 24.300,00 €

- Προσομοιώσεις μεταλλικών νανοσωματιδίων Επιστημονικά Υπεύθυνος: ΡΕΜΕΔΙΑΚΗΣ ΙΩΑΝΝΗΣ ΝΙΚ. Ημ. Έναρξης: 22/12/2017, Ημ. Λήξης: 31/07/2019 Συνολικές καταθέσεις: 1.500,00 €

- Effect of alloying on the properties of nanomaterials: a first-principles study Επιστημονικά Υπεύθυνος: ΡΕΜΕΔΙΑΚΗΣ ΙΩΑΝΝΗΣ ΝΙΚ. Ημ. Έναρξης: 01/11/2018, Ημ. Λήξης: 01/11/2020 Προϋπολογισμός: 10.000,00 €

- Εκτυπώσιμοι Αισθητήρες για Περιβαλλοντικές Εφαρμογές Επιστημονικά Υπεύθυνος: ΡΕΜΕΔΙΑΚΗΣ ΙΩΑΝΝΗΣ ΝΙΚ. Ημ. Έναρξης: 14/10/2019, Ημ. Λήξης: 21/10/2022 Προϋπολογισμός: 32.400,00 €

- Multi-scale simulations for gold nanoparticles: structure-property relationships for catalysis and energy Επιστημονικά Υπεύθυνος: ΡΕΜΕΔΙΑΚΗΣ ΙΩΑΝΝΗΣ ΝΙΚ. Ημ. Έναρξης: 2020, Ημ. Λήξης: 2023 Προϋπολογισμός: 189.811,90

- 10582 - Σχεδίαση Δισδιάστατων Νανοδομών για Εφαρμογές σε Οπτοηλεκτρονική και Κατάλυση Επιστημονικά Υπεύθυνος: ΚΟΠΙΔΑΚΗΣ ΓΕΩΡΓΙΟΣ ΝΙΚ. Ημ. Έναρξης: 01/03/2020, Ημ. Λήξης: 30/06/2021 Προϋπολογισμός: 45.545,50 €

Α. ΜΗΤΡΑΚΗ

- "SOLEMAT: Solenoid-based protein materials", IKYDA 2011 Greek-German collaboration, 2011-2013, 6.480 Euros (Greek side)

- "AngioMatTrain" "Development of biomaterial-based delivery systems for ischemic conditions- An integrated Pan-European approach", Marie Curie Industry –Initial Training Network (ITN), call FP7-PEOPLE-2012-ITN, start date: February 2013- end date: February 2017, 473.623 Euros (Partner) www.angiomattrain.eu

- "ProGreeC" "Attaching Functions to Protein Scaffolds: Development of Artificial Enzymes for Green Chemistry", Greek Secretariat for Research and Technology, SYNERGASIA II, 2013-2015, 110.000 Euros (Partner)

- "PHOTOPEPMAT" Design, production and Laser PHOTO structuring of self-assembling PEPtides and proteins destined for bioMATerials applications" Greek Secretariat for Research and Technology, ARISTEIA II Excellence grant, 2014-2015, 220.000 Euros (PI)

- "EPHESIAN" "Encapsulation of chromophores by self-assembled hydrogels with biomedical applications" Greek Secretariat for Research and Technology, «ΕΡΕΥΝΩ-ΔΗΜΙΟΥΡΓΩ-ΚΑΙΝΟΤΟΜΩ» grant, 2018-2021, 128.000 Euros (Partner)

Γ. ΑΡΜΑΤΑΣ

- Mar 2020 – Feb 2023: First Call for H.F.R.I. Research Projects to Support Faculty members and Researchers and the Procurement of High-cost Research Equipment Grant (PI: G.S. Armatas) *University of Crete, Dept. of Materials Science and Technology, Heraklion, Crete, Greece.* Title: "Porous Mesoscopic Assemblies of Non-Oxide Nanoparticles for Photoelectrocatalytic Energy Conversion Applications" (Financial Support: Hellenic Foundation for Research and Innovation – H.F.R.I., 170.000 EUR)

- Sep 2018 – Aug 2019: Special Account for Research-University of Crete (PI: G.S. Armatas) *University of Crete, Dept. of Materials Science and Technology, Heraklion, Crete, Greece.* Title: "Mesoporous Nanoparticle-Organic Cross-Linked Frameworks for Photocatalytic Aerobic Oxidation of Organic Compounds" (Financial Support: Special Account for Research Funds – UoC, KA 10138, 10.000 EUR)

- Sep 2018 – Aug 2019: Special Account for Research-University of Crete (PI: G.S. Armatas) *University of Crete, Dept. of Materials Science and Technology, Heraklion, Crete, Greece.* Title: "Mesoporous Networks of p–n β-$Ni(OH)_2$/CdS Nanojunctions for Photocatalytic Water Splitting Towards Hydrogen Production" (Financial Support: Special Account for Research Funds – UoC, KA 10121, 2.500 EUR)

- Dec 2016 – Dec 2017: Special Account for Research-University of Crete (PI: G.S. Armatas) *University of Crete, Dept. of Materials Science and Technology, Heraklion, Crete, Greece.* Title: "Study of the Photochemical Activity of Nanostructured Materials Towards Hydrogen Production from Water Splitting under UV-visible Irradiation" (Financial Support: Special Account for Research Funds – UoC, KA 4674, 1.200 EUR

- Apr 2016 – Apr 2017: Special Account for Research-University of Crete (PI: G.S. Armatas) *University of Crete, Dept. of Materials Science and Technology, Heraklion, Crete, Greece.* Title: "Synthesis of Mesoporous Composite Frameworks of Pt/CdS Nanoparticles for Photocatalytic Water Splitting Towards Hydrogen Production" (Financial Support: Special Account for Research Funds – UoC, KA 4547, 2.200 EUR)

- Jun 2015 – Jun 2016: Special Account for Research-University of Crete (PI: G.S. Armatas) *University of Crete, Dept. of Materials Science and Technology, Heraklion, Crete, Greece.* Title: "Ordered Mesoporous Networks of Transitional Metal Chalcogenides for Photocatalytic Applications" (Financial Support: Special Account for Research-ELKE, KA 4338, 2.500 EUR)

- Jul 2014 – Jul 2017: Special Account for Research-Technical Univ. of Crete (PI: G.S. Armatas) *University of Crete, Dept. of Materials Science and Technology, Heraklion, Crete, Greece.* Title: "Physicochemical Characterization of Metal Oxide Materials" (Financial Support: Special Account for Research-ELKE, KA 4121, 1.000 EUR)

- Sep 2012 – Oct 2015: ERC-2011 Ideas Starting Grants (PI: G.S. Armatas) Title: "Periodically Order Mesoporous Metal and Metal-Oxide Nanoparticle Assemblies for Catalytic and Gas Separation Applications (MESOPOROUS-NPs)" (Financial Support: co-financed by the Greek Ministry of Education (General Secretariat for Research and Technology - ΓΓΕΤ) and European Union, 817.200 EUR)

- Sep 2012 – Oct 2015: Operational Programme: Education and Lifelong Learning (PI: G.S. Armatas) Title: "Rational Design of Mesoporous Polynuclear Transition-Metal Organic Frameworks as Green Catalysts in Organic Chemistry (MESOPTMOFs)" (Financial Support: ΑΡΙΣΤΕΙΑ (Excellence) action, co-financed by the Greek Ministry of Education and European Union, 350.000 EUR)

- Dec 2011 – Dec 2013: Special Account for Research-University of Crete (PI: G.S. Armatas) *University of Crete, Dept. of Materials Science and Technology, Heraklion, Crete, Greece.* Title: "Nanoporous Heteropolyoxometalate-containing Organic-Inorganic Frameworks for Catalytic Oxidation of Hydrocarbons" (Financial Support: Special Account for Research-ELKE, KA 3475, 10.000 EUR)

- Oct 2011 – Mar 2015: Operational Programme: Education and Lifelong Learning (PI: S. Perlepes, Chemistry Department, University of Patras; Group Member: G.S. Armatas, University of Crete) Title: "POLYNUCLEAR TRANSITION METAL COMPLEXES: Development of Synthetic Strategies, Reactivity and Applications in Magnetic and Catalytic Materials (POLYMAGCAT)" (Financial Support: THALIS action, co-financed by the Greek Ministry of Education and European Union, 600.000 EUR)

- Oct 2011 – Sep 2015: Operational Programme: Education and Lifelong Learning (PI: P.J. Pomonis, Chemistry Department, University of Ioannina; Group Leader: G.S. Armatas, University of Crete) Title: "Materials of Advanced Nano-Architecture at Mesoscale for Energy and Environmental Applications Nanoporous (NANOMESO)" (Financial Support: THALIS action, co-financed by the Greek Ministry of Education and European Union, 600.000 EUR)

- Dec 2010 – Aug 2012: Matching funds for MESOPOMs project (PI: G.S. Armatas) *University of Crete, Dept. of Materials Science and Technology, Heraklion, Crete, Greece (Financial Support: General Secretariat for Research and Technology (GSRT), KA 3141, 4.930 EUR)*

- Sep 2008 – Aug 2012: Marie Curie – International Reintegration Grants (PI: G.S. Armatas) *University of Crete, Dept. of Materials Science and Technology, Heraklion, Crete, Greece.* Title: "Nanostructured Mesoporous Polyoxometalate and Transition Metal-substituted Polyoxometalate Materials (MESOPOMs): Applications in Heterogeneous Catalysis". (Financial support: MC-IRG project, No PIRG03-GA-2008-230868, supported by the EU, 100.000 EUR)

Γ. ΠΕΤΕΚΙΔΗΣ

- January 2011: FP7-Infrastructure (FP7–262348) "*European Soft Matter Infrastructure" ESMI* A 4-year European Union funding. *budget 940K Euro*
- Thales 2011: "*Complex Visco-elastic and Visco-plastic materials: From Microscopic Structure and Dynamics to Macroscopic Flow", "Covisco", total budget 540K Euro (Principal Investigator)* 4-year Greek funding program (2012-2015)
- Aristeia II, 2013: *"Relating the Microscopic structure and dynamics to the macroscopic flow of colloidal Soft matter"* "MicroSoft" *total budget 398K Euro (Principal Investigator)* 2-year Greek funding program (2014-2015)
- FP-7 SEC-2013: "Lightweight, flexible and smart protective clothing for law enforcement personnel", "SmartPro" *local budget 47K Euro (2014-2017)*
- Horizon 2020, Initial Training Network '*DiStruc' 'Directed Structure at the Meso-Scale Experiments, Theory and Simulations on Colloidal Rods' total budget 498K Euro (Local Principal Investigator) (2015-2018)*

Γ. ΚΙΟΣΕΟΓΛΟΥ

- 2020–2023: HETEROVALLEY (PI): *"Spin-valley polarization in 2D Materials and their van der Waals heterostructures",* HFR, Hellenic Foundation for Research and Innovation (ELIDEK)

- 2019–2021: SPIVAST (PI)*: "Spin-Valley polarization Studies in monolayer transition metal dichalcogenides under mechanical deformation",* FORTH-SYNERGY GRANTS

- 2020-2021: EDBM103 (Academic Advisor) "*Crystal quality control of 2D materials and their heterostructures via imaging of their non-linear optical properties*", in the framework of PA

(Partnership Agreement for the development Framework) 2014-2020 and European Structural and Investment Funds (ESIF)

- 2018-2020: GRAPH-EYE (co-PI); "*All optical, high resolution, non-invasive, quality control of crystalline GRMs via imaging of their non-linear optical properties*" in the framework of FLAG-ERA Joint Transnational Call (JTC) 2017 for the topic Graphene Applied and Research Innovation

- 2017-2018: NFFA- Nanoscience Foundries and Fine Analysis; NFFA – EUROPE, Call: H2020-INFRAIA-2014-2015 RIA, GA=654360, Funded under H2020-E.U.1.4.1.2.

- September 2017: I.K.Y. - State Scholarships Foundation - Ph.D. Fellowship awarded to my student Ioannis Paradisanos

- 2017-2019: ELIDEK - PhD Fellowship awarded to my student Antonios Papadopoulos (award period August 1st 2017 – November 30th 2019)

- 2017: Stavros Niarchos Foundation – FORTH, Ph.D. Fellowship (ARCHERS project) to my student Ioannis Paradisanos

- 2014 - 2015: ΕΣΠΑ – ΕΠΕΔΒΜ, κωδικός 85559, «Νανοσύνθετα Υλικά Υψηλών απαιτήσεων, Ενίσχυση πολυμερών με προηγμένες ανόργανες νανοδομές πυριτίας και άνθρακα», σε συνεργασία με το ΑΠΘ

- 2013–2016: CCQCN (G. Tsironis – PI) – Crete Center for Quantum Complexity and Nanotechnology, FP7-REGPOT-2012-2013-1, grant agreement 316165 (Sept 1st 2013 – Sept 30th 2016)

- 2007–2012: Naval Research Laboratory core programs and NRL Nanoscience Institute

2. ΔΗΜΟΣΙΕΥΣΕΙΣ

Ν. ΠΕΛΕΚΑΝΟΣ

1. *Absorption in ultrathin GaN-based membranes: The role of standing wave effects,* E. Amargianitakis, R. Jayaprakash, F. G. Kalaitzakis, E. Delamadeleine, E. Monroy, N. T. Pelekanos, J. Appl. Phys. 126, 083109 (2019).
2. *Improved GaN quantum well microcavities for robust room temperature polaritonics,* E. A. Amargianitakis, F. Miziou, M. Androulidaki, K. Tsagaraki, A. Kostopoulos, G. Konstantinidis, E. Delamadeleine, E. Monroy, N. T. Pelekanos, Phys. Status Solidi B 256, 1800716 (2019).
3. *Spatially Selective Reversible Charge Carrier Density Tuning in WS_2 Monolayers via Photochlorination,* I. Demeridou, I. Paradisanos, C. L. Yuanyue, N. Pliatsikas, P. Patsalas, S. Germanis, N. T. Pelekanos, W. Goddard, G. Kioseoglou, E. Stratakis, 2D Materials 6, 015003 (2019).
4. *3-D strain fields in low-dimensional III-V semiconductors: A combined finite elements and HRTEM approach,* N. Florini, G. P. Dimitrakopulos, J. Kioseoglou, N. T. Pelekanos, Th. Kehagias, Phys. Status Solidi A-Applications and Materials 215, 1700409 (2018).
5. *Ultra-low threshold polariton lasing at room temperature in a GaN membrane microcavity with a zero-dimensional trap,* R. Jayaprakash, F. G. Kalaitzakis, G. Christmann, K. Tsagaraki, M. Hocevar, B. Gayral, E. Monroy, N. T. Pelekanos, Scientific Reports 7, 5542 (2017).
6. *Highly Uniform Zinc Blende GaAs Nanowires on Si(111) Using a Controlled Chemical Oxide Template,* S. L. Tan, Y. Genuist, E. Bellet-Amalric, M. den Hertog, H. Mariette, N. T. Pelekanos, Nanotechnology 28, 255602 (2017).
7. *Room temperature observation of biexcitons in exfoliated WS_2 monolayers,* I. Paradisanos, S. Germanis, N. T. Pelekanos, C. Fotakis, E. Kymakis, G. Kioseoglou, E. Stratakis, Applied Physics Letters 110, 193102 (2017).
8. *Strain field determination in III–V heteroepitaxy coupling finite elements with experimental and theoretical techniques at the nanoscale,* N. Florini, G. P. Dimitrakopulos, J. Kioseoglou, N. T. Pelekanos, Th. Kehagias, Journal of the Mechanical Behavior of Materials 26, 1–8 (2017).
9. *Enhanced Stark tuning of single InAs (211) B quantum dots due to nonlinear piezoelectric effect in zinc-blende nanostructures*, S. Germanis, C. Katsidis, S. Tsintzos, A. Stavrinidis, G. Konstantinidis, N. Florini, J. Kioseoglou, G. P. Dimitrakopulos, Th. Kehagias, Z. Hatzopoulos, N.T. Pelekanos, Phys. Rev. Applied 6, 014004 (2016).
10. *Strained GaAs/InGaAs core-shell nanowires for photovoltaic applications,* K. Moratis, S.L. Tan, S. Germanis, C. Katsidis, M. Androulidaki, K. Tsagaraki, Z. Hatzopoulos, F. Donatini, J. Cibert, Y.-M. Niquet, H. Mariette, N.T. Pelekanos, Nanoscale Research Letters 11, 176 (2016).
11. *Structure, Strain and Composition Profiling of InAs/GaAs (211) B Quantum Dot Superlattices, N*. Florini, G. P. Dimitrakopulos, J. Kioseoglou, S. Germanis, C. Katsidis, Z. Hatzopoulos, N. T. Pelekanos, Th. Kehagias, J. of Appl. Phys. 119, 034304 (2016).
12. *Nanostructure and strain properties of core-shell GaAs/AlGaAs nanowires,* Th. Kehagias, N. Florini, J. Kioseoglou, Th. Pavloudis, Ph. Komninou, T. Walther, K. Moratis, Z. Hatzopoulos, N. T. Pelekanos, Semicond. Sci. Technol. 30, 114012-114022 (2015).
13. *Assembly of quantum dots on peptide nanostructures and their spectroscopic properties*, Emmanouil Kasotakis, Athanasia Kostopoulou, Miguel Spuch-Calvar, Maria Androulidaki, Nikos Pelekanos, Antonios G. Kanaras, Anna Mitraki, and Alexandros Lappas, Appl. Phys. A-Materials Science & Processing 116, 977-985 (2014).
14. *Extraction of absorption coefficients from as-grown GaN nanowires on opaque substrates using all-optical method,* R. Jayaprakash, D. Ajagunna, S. Germanis, M. Androulidaki, K. Tsagaraki, A. Georgakilas, N. T. Pelekanos, Optics Express 22, 19555 (2014).
15. *Ultra-smooth GaN membranes by photo-electrochemical etching for photonic applications,* R. Jayaprakash, F. Kalaitzakis, M. Kayambaki, K. Tsagaraki, E. Monroy, N.T. Pelekanos, Journal of Materials Science 49, 4018-4024 (2014).
16. *Recombination dynamics in piezoelectric (211) B InAs quantum dots,* S. Germanis, A. Beveratos, C. Gauthron, A. Stavrinidis, G. Konstantinidis, Z. Hatzopoulos, N.T. Pelekanos, Microelectronic Engineering 112, 179 (2013).

17. *Residual strain and piezoelectric effects in passivated GaAs.AlGaAs core-shell nanowires,* M. Hocevar, G. Le Thuy, R. Songmuang, M. den Hertog, J. Bleuse, L. Besombes, Y-M Niquet, N. T. Pelekanos, Appl. Phys. Lett. 102, 191103 (2013).
18. *All dielectric GaN microcavity: Strong coupling and lasing at room temperature,* K. Daskalakis, P. S. Eldridge, G. Christmann, E. Trichas, R. Murray, E. Iliopoulos, E. Monroy, N. T. Pelekanos, J. J. Baumberg, P. G. Savvidis, Appl. Phys. Lett. 102, 101113 (2013).
19. *Piezoelectric InAs/GaAs quantum dots with reduced fine-structure splitting for the generation of entangled photons,* S. Germanis, A. Beveratos, G. E. Dialynas, G. Deligeorgis, P. G. Savvidis, Z. Hatzopoulos, N. T. Pelekanos, Phys. Rev. B 86, 035323 (2012).
20. *Effect of boiling aqua regia on MOCVD and MBE p-type GaN surfaces and Cr/p-GaN interfaces,* F. G. Kalaitzakis, G. Konstantinidis, L. Sygellou, S. Kennou, S. Ladas, N. T. Pelekanos, Microelectronic Engineering 90, 115 (2012).
21. *Monolithic integration of nitride-based transistor with light emitting diode for sensing applications,* F. G. Kalaitzakis, E. Iliopoulos, G. Konstantinidis, N. T. Pelekanos, Microelectronic Engineering 90, 33 (2012).
22. *Bragg polariton luminescence from a GaN membrane embedded in all dielectric microcavity,* E. Trichas, N. T. Pelekanos, E. Iliopoulos, E. Monroy, K. Tsagaraki, A. Kostopoulos, P. G. Savvidis, Appl. Phys. Lett. 98, 221101 (2011).
23. *All-dielectric GaN microcavity: Strong coupling and lasing at room temperature*, KS Daskalakis, PS Eldridge, G Christmann, E Trichas, R Murray, E Iliopoulos, E Monroy, NT Pelekanos, JJ Baumberg and PG Savvidis, Appl. Phys. Lett. 102, 101113 (2013)
24. *Piezoelectric InAs/GaAs quantum dots with reduced fine-structure splitting for the generation of entangled photons*, S. Germanis, A. Beveratos, G.E. Dialynas, G. Deligeorgis, P.G. Savvidis, Z. Hatzopoulos, N.T. Pelekanos, Physical Review B 86, 035323 (2012)
25. *Polarization Resolved Single Dot Spectroscopy of (211) B InAs Quantum Dots*, S. Germanis, G.E. Dialynas, G. Deligeorgis, P.G. Savvidis, Z. Hatzopoulos, and N. T. Pelekanos, AIP Conf. Proc. 1399, 417 (2011)
26. *Bragg polariton luminescence from a GaN membrane embedded in all dielectric microcavity*, E. Trichas, N.T. Pelekanos, E. Iliopoulos, E. Monroy, K. Tsagaraki, A. Kostopoulos, P.G. Savvidis, *Appl. Phys. Lett. 98, 221101 (2011)*
27. *Assembly of quantum dots on peptide nanostructures and their spectroscopic properties.* Kasotakis, E. Kostopoulou, A., Spuch-Calvar, M., Androulidaki, M., Pelekanos, N., Kanaras, A. G., Mitraki, A., and Lappas, A. (2014) Appl. Phys. A., 116: 977-985
28. *Spatially selective reversible charge carrier density tuning in WS2 monolayers via photochlorination* I. Demeridou, I. Paradisanos, Y. Liu, N. Pliatsikas, P. Patsalas, S. Germanis, N.T. Pelekanos, W.A. Goddard III, G. Kioseoglou, E. Stratakis *2D Materials 6, 015003 (2019)*
29. *Room temperature observation of biexcitons in exfoliated WS2 monolayers* I. Paradisanos, S. Germanis, N.T. Pelekanos, C. Fotakis, E. Kymakis, G. Kioseoglou, E. Stratakis *Appl. Phys. Lett. 110, 193102 (2017)*

Σ. ΤΖΩΡΤΖΑΚΗΣ

30. A. D. Koulouklidis, C. Gollner, V. Shumakova, V. Fedorov, A. Pugzlys, A. Baltuska, and S. Tzortzakis *"Observation of extremely efficient terahertz generation from mid-infrared two-color laser filaments"* Nature Communication, 11, 292 (2020) *[Highlighted in Phys.org]*.
31. M. Manousidaki, D. G. Papazoglou, M. Farsari, and S. Tzortzakis *"3D holographic light shaping for advanced multiphoton polymerization"* Opt. Lett. 45, 85-88 (2020) *[Editors' Pick]*.
32. József András Fülöp, Stelios Tzortzakis, and Tobias Kampfrath *"Laser-Driven Strong-Field Terahertz Sources"* Adv. Opt. Mat., 1900681 (2019) *[Invited Review Paper]*.
33. D. E. Shipilo, I. A. Nikolaeva, V. Yu. Fedorov, S. Tzortzakis, A. Couairon, N. A. Panov, and O. G. Kosareva *"Tight focusing of electromagnetic fields by large aperture mirrors"* Physical Review E 100, 033316 (2019)
34. M. Chambonneau, L. Lavoute, D. Gaponov, V. Y. Fedorov, A. Hideur, S. Février, S. Tzortzakis, O. Utéza, and D. Grojo *"Competing Nonlinear Delocalization of Light for Laser Inscription Inside Silicon with a 2-um Picosecond Laser"* Physical Review Applied 12, 024009 (2019).

35. A. Tasolamprou, A. Koulouklidis, C. Daskalaki, C. Mavidis, G. Kenanakis, G. Deligiorgis, Z. Viskadourakis, P. Kuzhir, S. Tzortzakis, M. Kafesaki, E. Economou, C. Soukoulis *"Experimental demonstration of ultrafast THz modulation in a graphene-based thin film absorber through negative photoinduced conductivity"* ACS Photonics 6, 720-727 (2019) *[Journal's Cover page]*
36. V. Y. Fedorov, D. G. Papazoglou, and S. Tzortzakis *"Transformation of ring-Airy beams during efficient harmonic generation"* Opt. Lett. 44, 2974-2977 (2019)
37. M. Maria, D. G. Papazoglou, M. Farsari, and S. Tzortzakis *"Long-scale multiphoton polymerization voxel growth investigation using engineered Bessel beams"* Opt. Mater. Express 9, 2838-2845 (2019)
38. A. V. Shutov, D. V. Mokrousova, V. Y. Fedorov, L. V. Seleznev, G. E. Rizaev, A. V. Shalova, V. D. Zvorykin, S. Tzortzakis, and A. A. Ionin *"Influence of air humidity on 248-nm ultraviolet laser pulse filamentation"* Opt. Lett. 44, 2165-2168 (2019)
39. V. Y. Fedorov, and S. Tzortzakis *"Optimal wavelength for two-color filamentation-induced terahertz sources"* Opt. Express 26, 31150-31159 (2018)
40. V. Y. Fedorov, and S. Tzortzakis *"Extreme THz fields from two-color filamentation of midinfrared laser pulses"* Phys. Rev. A 97, 063842 (2018)
41. M. Manousidaki, V. Y. Fedorov, D. G. Papazoglou, M. Farsari, and S. Tzortzakis *"Ring-Airy beams at the wavelength limit"* Opt. Lett. 43, 1063-1066 (2018)
42. A. D. Koulouklidis, D. G. Papazoglou, V. Y. Fedorov, and S. Tzortzakis *"Phase Memory Preserving Harmonics from Abruptly Autofocusing Beams"* Phys. Rev. Lett. 119, 223901 (2017) *[Editors' Suggestion]*
43. I. Dey, K. Jana, V. Y. Fedorov, A. D. Koulouklidis, A. Mondal, M. Shaikh, D. Sarkar, A. D. Lad, S. Tzortzakis, A. Couairon, and G. R. Kumar *"Highly efficient broadband terahertz generation from ultrashort laser filamentation in liquids"* Nature Communications 8, 1184 (2017) *[Highlighted in Phys.org]*
44. M. Chanal, V. Y. Fedorov, M. Chambonneau, R. Clady, S. Tzortzakis, and D. Grojo *"Crossing the threshold of ultrafast laser writing in bulk silicon"* Nature Communications 8, 773 (2017) *[Highlighted in Phys.org]*
45. M. Bellec, C. Michel, H. Zhang, S. Tzortzakis, and P. Delplace *"Non-diffracting states in one-dimensional Floquet photonic topological insulators"* EPL 119, 14003 (2017)
46. V. Y. Fedorov, A. D. Koulouklidis, and S. Tzortzakis *"THz generation by two-color femtosecond filaments with complex polarization states: four-wave mixing versus photocurrent contributions"* Plasma Phys. Controlled Fusion 59, 014025 (2017).
47. K. G. Makris, D. G. Papazoglou, and S. Tzortzakis *"Invariant Superoscillatory Electromagnetic fields in 3D-space"* J. Opt. 19, 014003 (2017) *[Invited]*
48. D. Di Battista, H. Zhang, D. Ancora, K. Lemonaki, E. Liapis, S. Tzortzakis, G. Zacharakis *"Reconfigurable light sheets through opaque cylindrical lenses"* Optica 3, 1237-1240 (2016)
49. D. G. Papazoglou, V. Yu. Fedorov, and S. Tzortzakis *"Janus Waves"* Opt. Lett. 41, 4656-4659 (2016) *[Editors' Pick]*
50. V. Yu. Fedorov, M. Chanal, D. Grojo and S. Tzortzakis *"Accessing Extreme Spatiotemporal Localization of High-Power Laser Radiation through Transformation Optics and Scalar Wave Equations"* Phys. Rev. Lett. 117, 043902 (2016)
51. K. Liu, A. D. Koulouklidis, D. G. Papazoglou, S. Tzortzakis, X.-C. Zhang *"Enhanced terahertz wave emission from air-plasma tailored by abruptly autofocusing laser beams"* Optica 3, 605-608 (2016) *[Highlighted in Phys.org]*
52. H. Zhang, D. Di Battista, G. Zacharakis and S. Tzortzakis *"Robust authentication through stochastic femtosecond laser filament induced scattering surfaces"* Appl. Phys. Lett. 108, 211107 (2016)
53. M. Manousidaki, D. G. Papazoglou, M. Farsari, and S. Tzortzakis *"Abruptly autofocusing beams for advanced multiscale photo-polymerization"* Optica 3, 525-530 (2016)
54. D. Di Battista, D. Ancora, H. Zhang, K. Lemonaki, S. Avtzi, S. Tzortzakis, M. Leonetti and G. Zacharakis *"Tailored light sheets through opaque cylindrical lenses"* Proc. SPIE 9717, Adaptive Optics and Wavefront Control for Biological Systems II, 971719 (2016)

55. A. D. Koulouklidis, V. Yu. Fedorov, and S. Tzortzakis *"Spectral bandwidth scaling laws and pulse reconstruction of THz wave packets generated from two-color laser plasma filaments"* Phys. Rev. A 93, 033844 (2016)
56. P. Panagiotopoulos, A. Couairon, M. Kolesik, D. G. Papazoglou, J. Moloney, and S. Tzortzakis *"Nonlinear plasma assisted collapse of ring-Airy wavepackets"* Phys. Rev. A 93, 033808 (2016)
57. M. Mattheakis, I. J. Pitsios, G. P. Tsironis, and S. Tzortzakis *"Rogue events in complex linear and nonlinear photonic media"* Chaos, Solitons & Fractals 84, 73-80 (2016)
58. Z. Li, S. Cakmakyapan, B. Butun, Chr. Daskalaki, S. Tzortzakis, X. Yang, E. Ozbay *"Fano resonances in THz metamaterials composed of continuous metallic wires and split ring resonators"* Opt. Express 22, 26572-26584 (2014)
59. P. Panagiotopoulos, D. G. Papazoglou, A. Couairon, and S. Tzortzakis*"Controlling high power autofocusing waves with periodic lattices"* Opt. Lett. 39, 4958-4961 (2014)
60. A. Gorodetsky, A. D. Koulouklidis, M. Massaouti, and S. Tzortzakis *"Physics of the conical broadband terahertz emission from two-color laser-induced plasma filaments"* Phys. Rev. A 89, 033838 (2014)
61. Arnaud Couairon and Stelios Tzortzakis *"A Waveguide Made of Hot Air"* Physics 7, 21 (2014)
62. M. Massaouti and S. Tzortzakis *"Controlling laser filamentation induced strong THz fields" Invited* Chin. J. of Phys. 52, 490 (2014)
63. D. G. Papazoglou, D. Abdollahpour, and S. Tzortzakis *"Ultrafast electron and material dynamics following femtosecond filamentation induced excitation of transparent solids" Invited* Appl. Phys. A. 114, 161-168 (2014)
64. M. Bellec, G. Nikolopoulos and S. Tzortzakis "*State Transfer Hamiltonians in Photonic Lattices*", Book chapter in "Quantum State Transfer and Network Engineering", Springer, p. 223-245 (2014)
65. P. Panagiotopoulos, D. G. Papazoglou, A. Couairon, and S. Tzortzakis *"Sharply autofocused ring-Airy beams transforming into nonlinear intense light bullets"* Nature Communications 4, 2622 (2013)
66. M. Massaouti, C. Daskalaki, A. Gorodetsky, A. D. Koulouklidis, and S. Tzortzakis *"Detection of Harmful Residues in Honey Using Terahertz Time-Domain Spectroscopy"* Appl. Spectrosc. 67, 1264-1269 (2013)
67. S. Suntsov, D. Abdollahpour, D. G. Papazoglou, P. Panagiotopoulos, A. Couairon, and S. Tzortzakis *"Tailoring femtosecond laser pulse filamentation using plasma photonic lattices"* Appl. Phys. Lett. 103, 021106 (2013)
68. M. Massaouti, A. A. Basharin, M. Kafesaki, M. F. Acosta, R. I. Merino, V. M. Orera, E. N. Economou, C. M. Soukoulis, S. Tzortzakis *"Eutectic epsilon-near-zero metamaterial terahertz waveguides"* Opt. Lett. 38, 1140-1142 (2013)
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