CURICULUM VITAE

DR ELENI MAKARONA

Director of Research
Institute of Nanoscience and Nanotechnology
NCSR “Demokritos”

Curiculum Vitae

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Resume

Dr. Eleni Makarona received her BSc from the Department of Physics at the National and Kapodistrian University of Athens in 1998. During the final year of her studies, she worked as a research assistant in the Microelectronics Group (Institute of Electronic Structure and Laser) at the Foundation for Research and Technology-Hellas, receiving an undergraduate scholarship. She continued her postgraduate studies at Brown University (Rhode Island, USA) with a full scholarship for the first year and subsequently with research assistantship scholarships throughout the duration of her doctoral dissertation. She received her Master of Science in Physics (MSc in Physics) from the Department of Physics at Brown University in 2000 and was awarded her PhD in Physics from the same department in 2004. Her doctoral dissertation focused on the study of materials, the design, fabrication, and optoelectronic characterization of ultraviolet light-emitting devices based on III-Nitrides, with particular emphasis on spectroscopy techniques (time-correlated single photon counting). Additionally, she studied the piezoelectric properties of III-Nitrides and was involved in the fabrication and characterization of J-aggregate films.

Returning to Greece, she was hired in 2005 at the Institute of Microelectronics of NCSR 'Demokritos' (now the Institute of Nanoscience and Nanotechnology, INN) as a Postdoctoral Fellow (Associate Researcher with Lecturer’s level qualifications according to Law 1514/85). Since 2009, when her post-doctoral contract ended, Dr. Makarona continued her collaboration with the Institute of Microelectronics as a Research Associate on project-based contracts. She was appointed as an Adjunct Researcher (C-level) in 2014 with the academic subject 'Silicon Sensors and Nanosystems.' Today, she serves as a Senior Researcher (B-level) with the same academic subject *and was just elected as a Director of Research (A-level) in July 2024. She is awaiting for her official apoointment her new position by the Minsitry.*

During her tenure as an Associate Researcher (2005-2009), she collaborated with various teams at the Institute of Microelectronics on the development of molecular electronics and the implementation of electromagnetic energy harvesting generators, activities that resulted in the first patents. Since 2007, she began working on the development of optical biosensors, specifically on the advancement of Mach-Zehnder interferometry, which also led to subsequent patents and her participation in European and national projects both as a work package leader and as a scientific coordinator. Concurrently, she initiated a new activity at the Institute, developing zinc oxide nanostructures for the implementation of piezoelectric energy harvesting generators. This activity led to her participation in research projects as key research personnel or scientific coordinator. Her research activities in the aforementioned fields continued uninterrupted while she worked as an External Collaborator (2009-2014). After assuming her role as atenure-track Adjunct Researcher (2014-2018), she evolved her research engagements into two parallel axes: photonic silicon sensors for portable bio-diagnostic and food safety applications (Point-of-Care/Point-of-Need bioanalytical systems) and the study and development of multifunctional metal oxide nanostructures.

Since 2018, serving as a Senior Researcher, Dr. Makarona has continued to evolve her research axes with the primary goal of linking basic research with industry and promoting collaborations with direct applications in the fields of biodiagnostics, food safety and quality, environmental protection, and the sustainability of the semiconductor industry. This is achieved through the development of processes and innovative nanostructures with a low energy footprint (sustainable and low-carbon footprint processes and materials).

More specifically, regarding the first axis of photonic biosensors, Dr. Makarona was actively involved in the development of an innovative dip'n'read type photonic silicon sensor for rapid on-site biodiagnostic applications (named Photostick) and led efforts for its commercial exploitation. From a research perspective, the innovative sensor has already been successfully applied for the semi-quantitative determination of antibodies against the SARS-CoV-2 virus in blood serum and currently has shown promising results for the rapid and highly sensitive detection of adulterants and pathogens in fresh milk (aflatoxin AFM1, Salmonella typhimurium, and Escherichia coli) in collaboration with one of the largest food companies in Greece.

At the same time, focusing primarily on the further development and new applications of photonic sensors, Dr. Makarona has been testing the indirect determination of nutrients in food in collaboration with a Big Data Analytics company over the past two years. The initial findings from experiments with basil microgreens—already published—highlight that the processing of dynamically changing spectra with Machine Learning techniques has the potential to identify substances in plant products without the use of tracers and without any surface modification of the sensors. Her immediate plans include further investigation with either high-nutritional-value plant products or natural products of particular importance to the Greek agri-food sector.

In her second research axis, Dr. Makarona has focused on the development and study of metal oxide nanostructures, specifically ZnO, CuO, and NiO. The creation of various types of metal oxides (nanoparticles, nanostructures, and hierarchical nanoarchitectures) is carried out using chemical synthesis methods, which are studied in conjunction with their compatibility with micro- and nanofabrication techniques. The ultimate goal is to create low-cost, low-energy footprint methodologies for implementing innovative materials and devices in a wide range of applications. These applications include the development of low-cost optoelectronic devices, sensors, flexible electronic devices, nanocomposite polymers based on lithographic resins, and more recently, the preservation of wooden artifacts of cultural heritage. This multifaceted activity is an integral part of her future plans, addressing the sustainability of the semiconductor industry through the development of sustainable and low-carbon footprint processes and materials.

In the past five years, Dr. Makarona has been actively involved in the commercial exploitation of research. The research team that developed the Photostick technology approached VC funds for financing a spin-off company, an effort that continues to this day. The business idea presented by Dr. Makarona won the 1st prize in the pitching competition at the EIT Food Demo day, which took place at the 84th Thessaloniki International Fair (September 2019), and the 3rd prize at the 1st Agritech Challenge (December 2019). Additionally, from March 2021 to September 2022, she received pre-seed funding for acceleration from Athroa Innovations. Today, the detection system has been installed at the Wageningen Institute through a special cooperation agreement, where the photonic sensors are utilized for the detection of allergens in food and heavy metals in drinking water. Her views on academic entrepreneurship have already been published or presented in talks, and in August 2023, she was invited to be a member of the evaluation committee for business proposals in the 1st Proof-of-Concept Program of the Technology Transfer Hub Science Agora.

In the context of her teaching activities, Dr. Makarona has supervised 9 internships, 11 undergraduate/graduate theses, and 6 Master's theses. Currently, she supervises/co-supervises 2 undergraduate theses, 2 Master's theses, and 2 doctoral dissertations in collaboration with the Department of Chemistry at the National and Kapodistrian University of Athens (NKUA), the Department of Physics at the University of Patras, and the Department of Conservation of Antiquities and Works of Art at the University of West Attica (UniWA). In the context of past research collaborations, she has assisted in supervising 3 internships, 4 undergraduate/graduate theses, 5 Master's theses, and 2 doctoral dissertations. Between 2009 and 2013, she taught the laboratories of Transmission Lines, Physics I, and Physics II at the Technological Educational Institute (TEI) of Piraeus (now the University of West Attica). Recently (Spring Semester), she started co-teaching the course 'Polymers in Electronic and Photonic Devices and Microsystems' of the Master's program 'Polymer Science and Its Applications in Industry' at the Department of Chemistry, NKUA. She has also been responsible for the training on the Atomic Force Microscopy system at the INN since 2009.

She is the author/co-author of over 50 articles in international scientific journals, 3 book chapters, and has participated in more than 120 presentations at international scientific conferences, 12 of which were invited. She is a co-inventor on 7 patents.

Dr. Makarona has served as a member of the organizing committees for international conferences in the field of microsystems and sensors (as member of the organizing committee and/or program or conference co-chair) and has been a member of the international review committee for the Micro and Nanoengineering (MNE) and Eurosensors conferences since 2007. She is a member of the editorial board of the journals Sensors and Chips (MDPI) and was the managing guest editor for the special issue 'Nanofabrication' of the Micro and Nano Engineering journal (Elsevier). She has been a continuous reviewer for over 20 international scientific journals in the broader fields of microsystems and

nanotechnology. Dr. Makarona has also served as a reviewer for proposals and programs for the European Union, the General Secretariat for Research and Innovation (GSRI) of Greece, and the corresponding research secretariats of Romania, Serbia, the Czech Republic, and Croatia. Since 2020, she has been an external collaborator with the Wood, Furniture, and Wooden Packaging Institute of the University of Thessaly and is a key member of the advisory team for the Institute's research programs. Next month (August 2024), she will assume her new role as Associate Editor with Optics & Laser Technology.

Beyond her research and teaching activities, Dr. Makarona is actively involved in science outreach and communication activities for the general public (Athens Science Festival, Researcher's Night, SciFy Academy) and in educational seminars for students (Summer School of NCSR 'Demokritos') and schoolchildren (Summer Schools for middle and high school students organized by the Greek Physical Society, career orientation workshops).

In 2010, she was awarded the Greek prize for Young Women in Science (Physical Sciences) by L'Oréal-UNESCO, and she has appeared in related television programs and articles in the daily press concerning the role of women in science. She volunteers in the Working Groups 'Educational Actions for Gender Equality, Mentoring, Networking' and 'Issues of Promotion, Communication & Development of Collaborations with Other Organizations/Outreach on Gender Equality' of the Gender Equality Committee at NCSR 'Demokritos,' focusing on communication. She is frequently invited for mentoring in schools across Greece through the 100mentors platform (The Tipping Point). Dr. Makarona is also an Ambassador of the L'Oréal-UNESCO For Women in Science (FWIS) Community.

Finally, regarding her administrative activities, Dr. Makarona has been a member of the Scientific Council of the Institute between July 2022 and July 2024. From 2021 to 2023, she was elected as the Deputy Representative of Researchers on the Board of Directors of the Center. Between July 2023 and July 2025, she served as the elected Representative of Researchers/Technical Staff on the Board of Directors of the Center.

CV Data

I. Personal Info

Date of Birth:	December 24, 1975
Place of Birth:	Athens
Citizenship:	Greek
Childern:	2

II. EDUCATION

1993-1998	BSc (grade: 8.02/10), Physics Deprtments, National and Kapodistrian University of Athens Title of Bachelor's Thesis: "Transitional Electrical Phenomena During the Compression of LiF Crystals: The Effect of Gamma Radiation" Supervisor: Associate Professor V. Hadjicontis
1998-2000	M.Sc in Physics, Physics Department, Brown University, Providence, RI, USA
2000-2004	PhD in Physics, Physics Department, Brown University, Providence, RI, USA Title of Dissertation: "AlInGaN-based Ultra-violet Light Emitting Diodes: Microscopic Physics of Device Operation" PhD Committee: Prof. Arto V. Nurmikko (supervisor), Prof. Humphrey Marris, Prof. Jimmy Xu

III. CAREER

11/1997 – 08/1998	Undergraduate Research Assistant, Microelectronics Group (MRG), Foundation for Research and Technology – Hellas (FORTH), Heraklion, Crete
06/1999-05/2004	Graduate Research Assistant during PhD dissertation, Department of Physics, Brown University, under the supervision of Dr. A.V. Nurmikko (L. Herbert Ballou University Professor of Engineering and Physics, Brown University)
02/2005-06/2005	Professor of Physics, American University of Athens (Teaching Electromagnetism)
12/2005-11/2009	Post-doctoral Fellow (with qualifications of Level D according to Law 1514/85) at the Microelectronics Institute (now Institute of Nanoscience and Nanotechnology), NCSR 'Demokritos', with expertise in: 'Microsystems and Silicon Sensors'
12/2009-04/2014	Research Associate (on contracts), Microelectronics Institute (now Institute of Nanoscience and Nanotechnology), NCSR 'Demokritos'
10/2009-06/2013	Laboratory Teaching Assistan, Department of Electronics and General Department, ATEI of Piraeus (now Inoversity of West Attica)
05/2014-12/2018	Adjunct Researcher (Level C), Institute of Nanoscience and Nanotechnology, NCSR 'Demokritos', with expertise in: 'Silicon Sensors and Nanosystems'
12/2018-today	Senior Researcher (Level B), Institute of Nanoscience and Nanotechnology, NCSR 'Demokritos', with expertise in: 'Silicon Sensors and Nanosystems'

July 2024	Elected as Director of Research (Level A) Institute of Nanoscience and Nanotechnology, NCSR 'Demokritos', with expertise in: 'Silicon Sensors and Nanosystems' – sawaiting for official appointment from the Ministry

IV. ADDITIONAL EDUCATION

July 1996	8th Summer School of Advanced Physics, Physics Department University of Crete (upon selection after application)
July 1997	9th Summer School of Advanced Physics, Physics Department University of Crete (upon selection after application)
June 2005	Nano2Life Summer School "Methods in Micro- Nanotechnology and Nanobiotechnology", Institute of Microelectronics, NCSR "Demokritos"
Ocotber-Novemeber 2021	Educational Program on Start-up Entrepreneurship from KEMEL (Center for Volunteer Managers of Greece) and the HbiO Cluster
March-May 2022	"Self Awareness and the Effective Leader" (online non-credit course authorized by Rice University and offered through Coursera)
September 2022	WE HEALTH RIS TRAINING (Part of the EIT Health RIS Academy)

V. SCHOLARSHIPS

july1997	Award of a Scholarship for the Master's Program of the Department of Physics, University of Crete, following an examination after the completion of the 9th Advanced Physics Summer School
11/1997 – 07/1998	Undergraduate Scholarship for the Master's Program of the Department of Physics, University of Crete, awarded after an examination following the completion of the 9th Advanced Physics Summer School, and Research Assistant from the Microelectronics Group (MRG) of the Institute of Electronic Structure and Laser (IESL) of the Foundation for Research and Technology – Hellas (FORTH)
09/1998-06/1999	Graduate Fellowship during the first year of graduate studies (an honor awarded to the top 10% of selected fellows from around the world), Physics Department, Brown University
06/1999-01/2004	Graduate Research Assistantship throughout the duration of her PhD at the Department of Physics, Brown University

VI. AWARDS

[AW1]. Novemeber 2010	Greek L'Oreal-Unesco Award for Young Women in Science
[AW2]. September 2019	1st place at pithcing competition EIT Food Demo Day (84th TIF)
[AW3].December 2019	3rd Place 1st Agritech Challenge
[AW4]. November 2022	Best Oral Presentation Award, 9th International Conference on Micro-Nanoelectronics, Nanotechnology and MEMS

VIII. PATENTS

[P1]	I. Raptis, K. Misiakos, S. Kakabakos, P. Petrou, E. Makarona, M. Kitsara "Monolithically Integrated Physical Chemical and Biological Sensor Arrays based on Broad-band Mach-Zehnder Interferometry", GR1006491B (2007)
[P2]	I. Raptis, K. Misiakos, S. Kakabakos, P. Petrou, E. Makarona, M. Kitsara "Monolithically Integrated Physical Chemical and Biological Sensor Arrays based on Broad-band Mach-Zehnder Interferometry", PCT WO 2009/115847 A1 (2009)
[P3]	E. Kapetanakis, A.M. Douvas, D. Velessiotis, E. Makarona, P. Argitis, N. Glezos, P. Normand "Memory devices using proton-conducting polymeric materials GR20080100269
[P4]	E. Kapetanakis, A.M. Douvas, D. Velessiotis, E. Makarona, P. Argitis, N. Glezos, P. Normand "Memory devices using proton-conducting polymeric materials", PCT WO 2009/127884 A1 (2009)
[P5]	K. Misiakos, S. Kakampakos, I. Raptis, E. Makrona "Integrated Silicon Optoelectronic Biosensor for the Detection of Biomolecules Labeled with Chromophore Groups or Nanoparticles", GR1006509 (2009)
[P6]	K. Misiakos, E. Makarona, I. Raptis, A. Salapatas, S. Kakabakos, P. Petrou, E. Stavra "Integrated Broad-band Young Interferometers for Simultaneous Dual Polarization Biosensing Through Amplified Fringe Packet Shifts" GR20160100477A (2016)
[P7]	K. Misiakos, E. Makarona, I. Raptis, A. Salapatas, S. Kakabakos, P. Petrou, E. Stavra "Integrated Broad-band Young Interferometers for Simultaneous Dual Polarization Biosensing Through Amplified Fringe Packet Shifts", International Application No: PCT/GR2017/000053 (2017)

IX. RESEARCH PROJECTS**

Project Ttitle	Funding	Period	Role
PYTHIA* "Monolithically integrated interferometric biochiPs for label-free 7latf 7latform7 of Human dIseAses" (FP7-ICT-2007-2, Project ID:224030)	EU (FP7)	05.2008-04.2012	Work Package Leader WP2 Optoelectronic Chip Fabrication
MEMSENSE "Development of novel sensor systems of distributed intelligence"	ΓΓΕΚ	05.2009-02.2012	Key Research Personnel
"Self-assembled ZnO Nanostructures for Engineered Neuronal Networks"*, Bilateral Cooperation Greece-Hungary Contract No HUN53 Hungarian-Greek Intergovernmental S&T Cooperation Programme	ΓΓΕΚ	09.2012-10.2014	Coordinator, original concept and proposal preparation
"Advanced Materials and Devices for Energy Harvesting and Management" under the GSRT Framework **KRIPIS I*** (MIS: 452100)	ΓΓΕΚ	03.2013-12.2015	Work Package Leader WP4 Nanopiezotronic and Nanothermoelectric devices for energy harvesting
FOODSNIFFER* "FOOD Safety at the point-of-Need via monolithic spectroscopic chip 7latform7d7 7latfor substances in 7latf pRoduce" (FP7-ICT-2011-8, Project ID: 318319)	EU (FP7)	09.2012-02.2016	Key Research Personnel
AURORA* "All-silicon Ultra-sensitive field-deployable 7latform7d Optoelectronic 7latform for environmental Analysis» SYNERGSIA 2011 (GSRT, Conatract No SYN11_5_1517)	ΓΓΕΚ	07.2013-10.2016	Coordinator

"Development of Materials and Devices for Industrial, Health, Envrionmental and Cultural Applications" **KRIPIS II*** (MIS 5002567)	ΓΓΕΚ	11.2017	Key research personnel
Program **INNOVATION-EL*** (MIS 5002772) "Reinforcement of the Research and Innovation Infrastructure" Action, Operational Programme "Competitiveness, Entrepreneurship and Innovation" (NSRF 2014-2020)-	ΓΓΕΚ	04.2018	JRA 3.3.2 Leader Dissemination and Networking Committee Member
FOODSENS* "Rapid Detection of Pathogens and Adulteration in Raw Milk via immersible photonic sensors"	ΓΓΕΚ	29.10.2020-28.10.2023	Work Package Leader WP1 Design and Fabrication of Optoelectronic Chips Conceptualization, ΕΥ για το INN
GOHYDRO*: A smart-sensing AI-driven platform for scalable, low-cost hydroponic units	ERA-NET Co-fund ICT-AGRI-FOOD	01.03.2021-28.02.2023	Work Package Leader of WP2 "Multi-modal Sensor Kits" and WP7 "Dissemination" Conceptualization, ΕΥ για το ΕΚΕΦΕ «Δ»
A Preliminary Study of Grazing Angle X ray Fluorescence (GI XRF) and X ray Reflectometry (XRR) as Enabling Characterization Tools of Patterned Hierarchical Nanoarchitectures (Proposal number: 20205353)	ELETTRA SINCROTRONE	July 2021	Coordinatorodrinator

*Active Participation in Proposal writing and submission process

X. INVITED TALKS

[I1].	"GaN-based tunnel junction in optical device" T. Takeuchi, G. Hasnain, S. W. Corzine, M. Hueschen, R. P. Schneider, Jr., C.P.Kocot, M.Blomqvist, Y-L. Chang, D. Lefforge, M. R. Krames, L.W. Cook, S. Stockman,; J. Han, M. Diagne, Y. He, E. Makarona, A. V. Nurmikko, Physics and Simulation of Optoelectronic Devices X, (Invited) – Proc. SPIE 4646,555-562 (2002)
[I2].	"Broad-band Mach-Zehnder Interferometer biosensor targeting the early detection of human diseases through label-free monitoring of protein concentrations and DNA mutations" I. Raptis, E. Makarona, M. Kitsara and K. Misiakos 36th International Conference on Micro- and Nano-Engineering, MNE2010, Genoa, Italy
[I3].	"Monolithically Integrated Mach-Zehnder Biosensors for Real-time Label-free Monitoring of Biomolecular Reactions" E. Makarona, P. S. Petrou, A. Bourkoula, A. Botsialas, M. Kitsara, S. E. Kakabakos, R. Stoffer, G. Jobst, G. Nounesis, I. Raptis and K. Misiakos 33rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, IEEE EMBC 2011, Boston, USA
[I4].	"Micro- and Nanotechnologies for Energy Harvesting and Sensing" E. Makarona Invitation from the Institute of Chemistry, Technology and Metallurgy (ICTM), Center of Microelectronic Technologies and Single Crystals (CMTM), University of Belgrade
[I5].	"Monolithic silicon interferometric optoelectronic devices for label-free multi-analyte biosensing applications" K. Misiakos, E. Makarona, A. Salapatas, I. Raptis, A. Psarouli, S. E. Kakabakos, P. Petrou, M. Hoekman, R. Stoffer, K. Tukkiniemi, G. Jobst SPIE Photonics West 2013- OPTO**,** February 2013, San Fransisco, USA
[I6].	"All-silicon Monolithic Optoelectronic Platform for Multi-analyte Biochemical Sensing"

	K. Misiakos, E. Makarona, I. Raptis, A. Salapatas, A. Psarouli, S. Kakabakos, P. Petrou, M.Hoekman, R. Heidemac, R. Stoffer, K. Tukkiniemi, M. Soppanen, G. Jobst, G. Nounessis, A.Budkowski, J. Rysz SPIE Microtechnologies, April 24-26 2013, Grenoble, France
[I7].	"Piezoelectric Nanogenerators on Flexible Substrates for Self-Powered Systems and Sensors" E. Makarona SPIE Security + Defense 2014, Unmanned/Unattended Sensors and Sensor Networks, September 22-25, 2014, Amsterdam, The Netherlands
[I8].	"Si-based Monolithically Integrated Polychromatic Interferometers: a new enabling tool for food safety applications" E. Makarona, I. Raptis, P. Petrou, S. Kakabakos and K. Misiakos, Photonica 2015, V International School and Conference on Photonics, August 2015, Belgrade, Serbia
[I9].	Integrated Optoelectronic Platform for Rapid Point-of-Need Food Safety Applications" I.Raptis, E. Makarona, P. Petrou, S. Kakabakos and K. Misiakos E-MRS 2016, May 2-6, 2016, Lille, France
[I10].	"Monolithically Integrated Biosensors" E. Makarona EUROPTIODE XV, Nov. 29- Dec.1, 2021, Warsaw, Poland
[I11].	"Metal Oxide/Polymer Nanocomposites and Lithographic Patterning" E. Makarona and M. Chatzichristidi 13th Hellenic Polymer Society International Conference, December 12-16, 2021.

XI. CONFERENCE ORGANIZATION

[CO1]	Member of the Local Organizing Committee Eurosensors XXV (2011)
[CO2]	Organizing Co-chair, 4th International Workshop on Multianalyte Biosensing (2011)
[CO3]	Conference Co-chair and Co-editor of the Proceedings, Bio-MEMS and Medical Microdevices (EMT103), Part of the SPIE International Symposium on Microtechnologies 2013
[CO4]	Conference Program Co-chair συνεδρίου EUROPT®ODE XXII, 2014
[CO5]	Member of the Local Organizing Committee Micro and Nano Engineereing 2019
[CO6]	Conference Co-chair 10th International Conference on Micro-Nanoelectronics, Nanotechnology and MEMS 2023

XII. REVIEWING ACTIVITIES

[RA1]	Member of the international program committee of the συνεδρίου Micro and Nano Engineering Conference series since **2009**	
[RA2].	Member of the international program committee of the Eurosensors Conference series **2009-2015**	
[RA3]	Reviewer for the following journals:	
	-Lab-on-Chip and Analyst (RSC Publishing) -Chemical Communications (Elsevier)	-Journal of Physics: Condensed Matter (IOP) -Journal of the American Chemical Society (ACS)

	-Materials Science and Engineering B (Elsevier) -Journal of Thin Solid Films (Elsevier) -Physica status solidi (Elsevier) -Materials Chemistry and Physics (Elsevier) -Microelectronic Engineering (Elsevier) -Journal of Optics and Laser Technology (Elsevier) -Journal of Alloys and Compounds (Elsevier) -Sensors and Actuators B (Elsevier)	-Materials (MDPI) -Sensors (MDPI) -Chemosensors (MDPI) -Nanomaterials (MDPI) -Applied Sciences (MDPI) -Metals (MDPI) -Chips (MDPI)
[RA4]	Proposal Evaluator for the EU since **2012**	
[RA5]	Project Evaluator for GSRI	
[RA6]	Project Evaluator for HFRI	
[RA7]	Proposal Evaluator for the Romanian, Serbian, Czech (National Research Infrastructures), and Croatian Governments since 2012	
[RA8]	External Collaborator and key member of research program advisory at the Institute of Wood, Furniture, and Wooden Structures (University of Thessaly) since January 1, 2020	

XIII. PUBLICATIONS

XIII.1 Peer-reviewd Journals

1999

[J1]. A. Georgakilas, K. Michelakis, M. Kayambaki, K. Tsagaraki, E. Macarona, Z. Hatzopoulos, A.Vila, M. Calamiotou
"Material properties of InAlAs layers grown by MBE on vicinal (111)B InP substrates"
Journal of Crystal Growth **201**, 248-251 (1999)
DOI: 10.1016/S0022-0248(98)01331-1

2000

[J2]. A. Georgakilas, K. Tsagaraki, E. Makarona, G. Constantinidis, M. Adroulidaki, M. Kayambaki, E. Aperathitis, N.T. Pelekanos
Direct MBE growth of GaN on GaAs substrates for integrated short wavelength emitters
Materials Science in Semiconductor Processing 3 (5-6),511-515 (2000)
DOI: 10.1016/S1369-8001(00)00076-7

[J3]. Zhou, H., Diagne, M., Makarona, E., Nurmikko, A.V., Han, J., Waldrip, K.E., Figiel, J.J.
Near ultraviolet optically pumped vertical cavity laser
Electronics Letters **36**, 1777-1779 (2000).
DOI: 10.1049/el:20001257

2001

[J4]. K.E. Waldrip, J. Han, J.J. Figiel, H. Zhou, E. Makarona, A.V. Nurmikko
Stress engineering during metalorganic chemical vapor deposition of AlGaN/GaN distributed Bragg reflectors
Applied Physics Letters **78** (21),3205-3207 (2001)
DOI: 10.1063/1.1371240

[J5]. I. Ozden, E. Makarona, A.V. Nurmikko, T. Takeuchi, M. Krames
A dual-wavelength indium gallium nitride quantum well light emitting diode
Applied Physics Letters **79** (16), 2532-2534 (2001)
DOI: 10.1063/1.1410345

[J6]. M. Diagne, Y. He, H. Zhou, E. Makarona, A.V. Nurmikko, J. Han, T. Takeuchi, M. Krames
A High Injection Resonant Cavity Violet Light Emitting Diode Incorporating (Al,Ga)N Distributed Bragg Reflector
Physica Status Solidi (a) **188**(1), 105-108 (2001)
DOI: 10.1002/1521-396X(200111)188:13.0.CO;2-8

[J7]. M. Diagne, Y. He, H. Zhou, E. Makarona, A.V. Nurmikko, J. Han, K.E. Waldrip, M. Krames
Vertical cavity violet light emitting diode incorporating an luminium gallium nitride distributed Bragg mirror and a tunnel junction
Applied Physics Letters **79** (22), 3720-3722 (2001)
DOI: 10.1063/1.1415405

2002

[J8]. E. Makarona, B. Daly, J.-S. Im, H. Maris, A.V. Nurmikko, J. Han
Coherent generation of 100 GHz acoustic phonons by dynamic screening of piezoelectric fields in AlGaN/GaN multilayers
Applied Physics Letters **81** (15), 2791-2793 (2002)
DOI: 10.1063/1.1512821

2004

[J9]. H. Peng, E. Makarona, Y.He, Y.-K.Song, A.V. Nurmikko, J. Su, Z. Ren, J. Han
Ultraviolet light-emitting diodes operating in the 340 nm wavelength range and application to time-resolved fluorescence spectroscopy
Applied Physics Letters 85 (8),1436-1438 (2004)
DOI: 10.1063/1.1784537

2008

[J10]. D. Velessiotis, D. Maffeo, C. Millios, E. Makarona, C. Viswanathan, K, Yannakopoulou, I. Mavridis, Z. Pikramenou, N. Glezos
Molecular Nanodevices based on Functionalized Cyclodextrins
Physica Status Solidi (A) Applications and Materials **205** (11), 2532-2535 (2008)

[J11]. T. Speliotis, E. Makarona, F. Chouliaras, C.A. Charitidis, C. Tsamis, D. Niarchos
Effect of deposition pressure and post deposition annealing on SmCo thin film properties
Physica Status Solidi I Current Topics in Solid State Physics 3759-3762 (2008)

[J12]. E. Makarona, T. Speliotis, G. Niarchos, D. Niarchos, C. Tsamis
ZnO 11mmunose growth based on a low-temperature silicon-compatible combinatorial method
Physica Status Solidi I Current Topics in Solid State Physics **5** (12), 3809–3812 (2008)

[J13]. K. Misiakos, E. Makarona, M. Kitsara, I. Raptis
Monolithic Silicon Optocoupler Engineering based on Tapered Waveguides
Microelectronic Engineering **85** (5-6), 1074-1076 (2008)
DOI: 10.1016/j.mee.2007.12.009

[J14] E. Makarona, E. Kapetanakis, D. Velessiotis, A. Douvas, P. Argitis, P. Normand, T. Gotszalk, M. Woszcyna, N. Glezos
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[P11]. E. Makarona, I. Raptis, P. Petrou, S. Kakabakos and K. Misiakos
Si-based Monolithically Integrated Polychromatic Interferometers: a new enabling tool for food safety applications
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XIV. CONFERENCE PRESENTATIONS

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Growth and Characterization of AlGaN/GaN DBR Mirrors for UV Surface-Emitting Devices
MRS Fall Meeting 2000

[C2]. E. Makarona, I. Ozden, A.V.Nurmikko, T.Takeuchi, M.Krames
A Blue-Green, Two-Wavelength Monolithic LED
28th International Symposium in Compound Semiconductors 2001 (ISCS2001**)**

[C3]. Zhou H., Makarona E., Diagne M., Nurmikko A.V., Han J., Waldrip K.E., Figiel, J.J., Takeuchi T., Krames M.,
A resonant cavity violet vertical cavity light emitting diode incorporating AlGaN DBR mirrors
Conference on Lasers and Electro-Optics Europe (2001)

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[C4]. Y. He, I. Ozden, M. Diagne, H. Zhou, E. Makarona, A.V. Nurmmikko, J. Han, T. Takeuchi, and M. Krames,
Blue and Violet Vertical Cavity Light Emitters and Multielement Arrays
Inst. Phys. Conf. Ser. No 170, "Compound Semiconductors 2001

2002

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GaN-based tunnel junction in optical device", **Invited Lecture**
Physics and Simulation of Optoelectronic Devices X

2003

[C6]. M. Gherasimova, G. Cui, J. Su, J. Han, E. Makarona, H. Peng, Y. He, and A. V. Nurmikko,
Toward III-N λ-cavity vertical emitters: heteroepitaxy of GaN and AlN
30th International Symposium on Compound Semiconductors (ISCS2003)

[C7]. Z. Su, G. Ren, G. Cui, M. Gherasimova, J. Han, H. Peng, E. Makarona, Y. He, Y.-K.Song, and A.V. Nurmikko,
Performance Characteristics of High-Power UV LEDs operating at and below 330nm
8th Wide Bandgap III-Nitride Workshop (2003)

[C8]. M. Gherasimova, J. Su, G. Cui, J. Han, H. Peng, E. Makarona, Y. He, A.V. Nurmikko
High power 330 nm AlInGaN UV LEDs in the high injection regime
2003 MRS Fall Meeting

[C9]. J.-H. Song, Y. He, E. Makarona, A.V. Nurmikko, J. Tischler, V. Bulovic
Optical switching in an organic semiconductor microcavity in the polariton regime
Conference on Quantum Electronics and Laser Science (QELS)

2004

[C10]. J. Han, S.-R. Jeon, M. Gherasimova, J. Su, G. Cui, H. Peng, E. Makarona, M. Krames, A.V. Nurmikko,
Performance and application of high power ultraviolet AlGaInN light emitting diodes
SPIE Fourth International Conference on Solid State Lighting

[C11] H. Peng , E. Makarona, Y.-K. Song , A.V. Nurmikko , M. Gherasimova , S.-R. Jeon and J. Han
High Power Pulsed UV LEDs and Application to Time-resolved Fluorescence Spectroscopy
2004 MRS International Workshop on Nitride Semiconductors

2007

[C12]. E. Makarona, T. Speliotis, A. Darsinou, C. Tsamis, S. Chatzandroulis and D.Niarchos
Implementation of hard magnetic thin films on suspended cantilevers for electromagnetic energy harvesters
SPIE Microtechnologies for the New Millenium 2007, Smart Sensors, Actuators and MEMS III

[C13]. A. Douvas, E. Makarona, N. Glezos, P.Argitis
Polyoxometalate-Based Multilayers: Fabrication and Electrical Characterization
3rd Micro&Nano International Conference 2007 (MMN '07)

[C14]. T. Speliotis, E. Makarona, F. Chouliaras, C.A. Charitidis, C. Tsamis, D. Niarchos
Effect of deposition pressure and post deposition annealing on SmCo thin film properties
3rd Micro&Nano International Conference 2007 (MMN '07)

[C15]. E. Makarona, T. Speliotis, G. Niarchos, D. Niarchos & C. Tsamis
ZnO Nanowire Growth based on a Low-temperature, Si-compatible combinatorial method
3rd Micro&Nano International Conference 2007 (MMN '07)

[C16]. D. Velesiotis, D. Maffeo, E. Makarona, V. Chinnuswammy, K. Yannakopoulou, I. Mavridis, Z. Pikramenou, N. Glezos
Molecular Nanodevices based on Functionalized Cyclodextrins
3rd Micro&Nano International Conference 2007 (MMN '07)

[C17]. K. Misiakos, E. Makarona, M. Kitsara and I. Raptis
Monolithic Silicon Optocoupler Engineering for Advanced Sensing Applications
33rd International Conference of Micro- and Nano- Engineering 2007 (MNE '07)

[C18]. E. Makarona, E. Kapetanakis, D. Velesiotis, A. Douvas, P. Argitis, P. Normand, T. Gotszalk, M. Woszczyna, N. Glezos
Vertical Architectures of self-assembled hybrid organic/inorganic monolayers based on tungsten polyoxometalates: a step towards molecular electronic devices
33rd International Conference of Micro- and Nano- Engineering 2007 (MNE '07)

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Charging Effects in Hybrid Structures Based on Polyoxometallate Layers for Molecular Memory Applications
2007 MRS Fall Meeting

2008

[C20]. E. Makarona, V. Smyrnis, T. Speliotis, D. Niarchos, C. Tsamis
Characterization and Modeling of SmCo Micromagnets for Energy Harvesting Applications
Eurosensors XXII (2008)

[C21]. M. Kitsara, I. Raptis, K. Misiakos, E. Makarona
Integrated Broad-band Mach-Zehnder sensors for biochemical applications
3rd International Workshop on Multianalyte Biosensing Devices (2008)

[C22]. M. Kitsara, I. Raptis, K. Misiakos, E. Makarona
Integrated Biochemical Broad-band Mach-Zehnder Sensors
Eurosensors XXII (2008)

[C23]. E. Kapetanakis, A. M. Douvas, D. Velessiotis, E. Makarona, P. Argitis, N. Glezos, P. Normand
Molecular Proton Memory
34th International Conference of Micro- and Nano- Engineering 2008 (MNE '08)

[C25]. M. Kitsara, I. Raptis, K. Misiakos, E. Makarona
Broad-band Mach-Zehnder Interferometry as a detection principle for label-free biochemical sensing
IEEE Sensors 2008

2009

[C26]. G. Niarchos, E. Makarona and C. Tsamis
Growth of ZnO nanorods on patterned templates for energy harvesting applications
SPIE Europe Microtechnologies for the New Millenium 2009

[C27]. M. Kitsara, P. Petrou, D. Kontziampasis, K. Misiakos, E. Makarona, I. Raptis and K. Beltsios "Biomolecular Layer Thickness Evaluation using White Light Reflectance Spectroscopy"
35th International Conference of Micro- and Nano- Engineering 2009 (MNE '09)

C28]. G. Niarchos, E. Makarona, C. Tsamis
Estimation of Potential on Bent ZnO Nanorods for Nanogenerators
3rd International Conference on One-dimensional Nanomaterials (ICON 2009)

2010

[C29]. M. Kitsara, K. Misiakos, I. Raptis, R. Stoffer, P.S. Petrou, S. E. Kakabakos, E.Makarona
Monolithically integrated broad-band Mach-Zehnder interferometer arrays for real-time label-free monitoring of biomolecular interactions
10th Conference on Optical Chemical Sensors and Biosensors, EUROPTIODE X (2010)

[C30]. F.V. Farmakis, N. Kelaidis, C. Chatzimanolis-Moustakas, E. Makarona, C. Tsamis, M. Kompitsas , I. Fasaki, Th. Speliotis and P. Jedrasik
Influence of Au nanoparticles on ZnO field-effect transistors fabricated by Pulsed Laser Deposition
E-MRS Spring Meeting 2010

[C31]. P. S. Petrou, M. Kitsara, E. Makarona, I. Raptis, S. E. Kakabakos, R. Stoffer, G. Jobst, K. Misiakos
Monolithically Integrated Biosensors based on Frequency-Resolved Mach-Zehnder Interferometers for Multi-analyte determinations
32nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, IEEE EMBC 2010, "Merging Medical Humanism and Technology"

[C32]. I. Raptis, E. Makarona, M. Kitsara and K. Misiakos
Broad-band Mach-Zehnder Interferometer biosensor targeting the early detection of human diseases through label-free monitoring of protein concentrations and DNA mutations,
Invited Lecture
36th International Conference on Micro- and Nano-Engineering, MNE2010

[C33]. G. Niarchos, E. Makarona, C. Tsamis
"Low-cost ZnO nanorod arrays for nanogenerators of improved conversion efficiency"
36th International Conference on Micro- and Nano-Engineering, MNE2010

[C34]. P.Pavli, P.S. Petrou, A.M. Douvas, E. Makarona, S. Kakabakos, D. Dimotikali, P. Argitis
"Selective protein immobilization by using photopatternable non-fouling polyvinyl alcohol Structures"
36th International Conference on Micro- and Nano-Engineering, MNE2010

[C35]. A. Giakoumaki, M. Chatzichristidi, E. Makarona, M. Pitsikalis, P. Argitis
Synthesis of P(t-BMA)-b-PEO block copolymers with PEO block as the minor component and investigation of their self-assembled nanostructures
8th Hellenic Polymer Society Symposium 2010

[C36]. P. Pavli, P. S. Petrou, A. M. Douvas, E. Makarona, S. Kakabakos, D. Dimotikali, P. Argitis

Photo-patternable polyvinyl alcohol-based film exhibiting non-fouling Properties
4th International Conference on Micro-Nanoelectronics, Nanotechnologies & MEMs

2011

[C37]. E. Makarona, C. Fritz, G. Niarchos and C. Tsamis
Growth and characterization of uniform ZnO film as piezoelectric material using a hydrothermal growth technique
SPIE Microtechnologies "Smart Sensors, Actuators and MEMS" 2011

[C38]. N. Kelaidis, M. Widmann, E. Makarona, M. G. Kompitsas, T. Speliotis, F. V. Farmakis, P. T. Jedrasik, C. Tsamis
Nanostructured ZnO based field effect transistors for enhanced gas sensing applications
SPIE Microtechnologies "Smart Sensors, Actuators and MEMS" 2011

[C39]. E. Makarona, P. S. Petrou, A. Bourkoula, A. Botsialas, M. Kitsara, S. E. Kakabakos, R. Stoffer, G. Jobst, G. Nounesis, I. Raptis and K. Misiakos
Monolithically Integrated Mach-Zehnder Biosensors for Real-time Label-free Monitoring of Biomolecular Reactions
Invited Lecture
33rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, IEEE EMBC 2011

[C40]. E. Makarona, N. Vourdas, A. Tserepi, Th. Speliotis and C. Tsamis
Wettability control of ZnO nanorod arrays on micropatterned substrates for low-cost versatile microfluidic components
Eurosensors XXV

[C41]. P. Pavli, P.S. Petrou, A.M. Douvas, E. Makarona, S. Kakabakos, D. Dimotikali, P. Argitis
Selective immobilization of proteins guided by photo-patterned poly(vinyl alcohol) structures,
Eurosensros XXV

[C42]. K. Misiakos, A. Botsialas, P. Petrou, S. Kakabakos, G. Jobst, R. Stoffer, M. Hoekman, I.Raptis and E.Makarona
Monolithically Integrated Frequency-Resolved Mach-Zehnder Interferometers for Highly-sensitive Multiplexed Label-free Bio/Chemical Sensing
IEEE Sensors 2011

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[C43]. I. Raptis, P. Petrou, E. Makarona, A. Botsialas, A. Psarouli, S. Kakabakos, G. Jobst, R. Stoffer, M. Hoekman, M. Sopanen, K. Tukkiniemi and K. Misiakos
All-silicon Optoelectronic Lab-on-a-Chip for Label-free Multi-analyte Biosensing
11th Conference on Optical Chemical Sensors and Biosensors, EUROPTIODE XI (2012)

[C44]. G. Niarchos, E. Makarona, Th. Kyrasta, G. Voulazeris, Th. Speliotis and C. Tsamis
Comparison of ZnO-based Piezoelectric Nanogenerators on flexible substrates
4th International Conference "Smart Materials, Structures and Systems" (**CIMTEC 2012**) Symposium E: Next Generation Micro/Nano Systems

[C45]. E. Makarona, A. Kritharidou, C. Tsamis and Z. Georgoussi
Zinc Oxide Nanostructured Substrates as Alternative Low-cost Templates for the Development of Cell-based Circuits
Eurosensors XXVI

[C46]. G. Niarchos, E. Makarona, G. Voulazeris, Th. Speliotis, A. Arapoyanni, C. Tsamis
SOI-based Vibrational Energy Harvesting Microgenerators
Eurosensors XXVI

[C47]. M. Botzakaki, G. Skoulatakis, N. Xanthopoulos, C.Tsamis, E. Makarona, S. Kennou, S. Ladas, S.N. Georga and C.A. Krontiras
ALD deposited ZrO2 ultrathin films on Si substrates: morphology and electrical evaluation
XXVIII Panhellenic Conference on Solid State Physics and Material Science

[C48]. M. Botzakaki, G. Skoulatakis, N. Xanthopoulos, C.Tsamis, E. Makarona, S. Kennou, S. Ladas, S.N. Georga and C.A. Krontiras
ALD deposited ZrO2 ultrathin layers on Si and Ge substrates: A multiple technique characterization
5th International Conference on Micro&Nanoelectronics, Nanotechnology and MEMs

[C49]. I. Raptis, P. Petrou, E. Makarona, A. Botsialas, A. Psarouli, S. Kakabakos, G. Jobst, R. Stoffer, M. Hoekman, M. Sopanen, K. Tukkiniemi and K. Misiakos

Real-time Label-free Monitoring of Biomolecular Reactions by Monolithically Integrated Mach-Zehnder Biosensors
8th Aegean Analytical Chemistry Days

2013

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Monolithic silicon interferometric optoelectronic devices for label-free multi-analyte biosensing applications,
Invited Presentation, **SPIE Photonics West 2013- OPTO**

[C51]. A. Kritharidou, Z. Georgoussi, C. Tsamis and E. Makarona,
Zinc Oxide Nanostructures as Low-cost Templates for Neuronal Circuits
SPIE Microtechnologies 2103 – Bio-MEMS and Medical Microdevices (EMT103)

[C52]. E. Makarona, G. Niarchos, G. Voulazeris and C. Tsamis
Flexible piezoelectric microgenerators based on nanotextured ZnO films
SPIE Microtechnologies 22013 – Smart Sensors (EMT101)

[C53]. M. Botzakaki, V. Gianneta, N. Xanthopoulos, C.Tsamis, E. Makarona, S. Kennou, S. Ladas, S.N. Georga and C.A. Krontiras
Multiple technique characterization of ALD deposited Al/Al2O3/p-Ge MOS structures: The influence of the deposition temperature
E-MRS Fall Meeting 2013 (Symposium A : Alternative semiconductor integration in Si microelectronics: materials, techniques & applications)

[C54]. E. Polydorou, A. Soultati, O. Makrygenni, E. Makarona, C. Tsamis, N. Papanikolaou, P. Argitis, D. Davazoglou and M. Vasilopoulou
Solution-processable nanostructured zinc oxide cathode interfacial layers for efficient and stable inverted organic photovoltaics
39th International Conference on Micro- and Nano-Engineering, MNE2013

2014

[C55]. K. Misiakos, A. Salapatas, E. Makarona, Y. Petrou, S. Kakabakos, R. Stoffer, G. Jobst, M. Hoekman, I. Raptis
Spectrally-Resolved Mach-Zehnder Interferometry as an Ultra-sensitive analytical tool
EUROPTIODE XII 2014

[C56]. A. Psarouli, A. Botsialas, A. Salapatas, P.S. Petrou, I. Raptis, E. Makarona, G. Jobst, N. Chaniotakis, K. Misiakos, S.E. Kakabakos
Real-time, label-free and multi-analyte detection of biomolecules using monolithically integrated Mach-Zehnder interferometers
EUROPT(R)ODE XII 2014

[C57]. A. Kritharidou, Th. Kyrasta, Z. Georgoussi, C. Tsamis and E. Makarona
ZnO-nanostructure Modified Templates for Cell-based Optical Sensors
EUROPT(R)ODE XII 2014

[C58]. M. Angelopoulou, A. Botsialas, A. Salapatas, P.S. Petrou, W. Haasnoot, E. Makarona, G. Jobst, K. Misiakos, S.E. Kakabakos
Development of a label-free immunosensor based on monolithically integrated Mach-Zehnder Interferometers for the quantification of bovine milk in goat milk
EUROPT(R)ODE XII 2014

[C59]. Beatrix Peter, Anna Kritharidou, Zafiroula Georgoussi, Janos Volk, Christos Tsamis, Robert Horvath and Eleni Makarona
ZnO-based Hierarchical Templates for Cellular Cultures
Annual Conference of the Hungarian Society for Microscopy 2014

[C60]. E. Makarona
Piezoelectric Nanogenerators on Flexible Substrates for Self-powered Systems and Sensors
Invited Presentation
SPIE Security + Defense 2014, Unmanned/Unattended Sensors and Sensor Networks,

[C61]. E. Makarona, Th. Kyrasta, A. Smyrnakis, A. Zeniou, E. Gogolides and C. Tsamis
Fabrication of tunable three-dimensional ZnO/Si Nanoarchitectures
40th International Conference on Micro- and Nano-Engineering**, MNE2014**

[C62]. A. Kritharidou, B. Peter, T. Kyrasta, R. Horvath, C. Tsamis, Z. Georgoussi and E. Makarona
Cost-efficient Templates of ZnO-based Nanostructures for Cellular Networks
40th International Conference on Micro- and Nano-Engineering, MNE2014

[C63]. E. Makarona, Th. Kyrasta, and C. Tsamis
ZnO-based piezoelectric microgenerators on flexible substrates

40th International Conference on Micro- and Nano-Engineering, MNE2014

[C64]. E. Makarona, A. Salapatas, A. Botsialas, I. Raptis, T. Sarafidis and K. Misiakos
Photonic Engineering of an All-silicon Monolithic Optocoupler: On-chip Polarization Filtering
40th International Conference on Micro- and Nano-Engineering, MNE2014

[C65]. M. Botzakaki, G. Skoulatakis, P. Svarnas, C. Tsamis, E. Makarona, S. Kennoy, S. Ladas, S. N .l Georga and C.A. Krontiras
ALD deposited thin HfO2 films: electrical and structural characterization
XXX Panhellenic Conference on Solid State Physics and Materials Science

2015

[C66]. I.Raptis, E. Makarona, P. Petrou, S. Kakabakos and K. Misiakos
Monolithically Integrated Photonic Platform for Point-of-Need Application in Health and Food Safety
AISEM (Italian Association for Sensors and Microsystems) XVIII Annual Conference

[C67]. Ch. Koutzagioti, G. Ntalos, C. Tsamis and E. Makarona
Low-cost multi-functional bioinspired wood coatings based on ZnO nanostructures
E-MRS 2015 Spring Meeting, Symposium EE Protective coatings and thin films

[C68.] C. Prionostis, B. Athanassiou, E. Makarona, G. Skoufias, E. Tegou, M. C. Skoulikidou, C. Tsamis
Optimization of ZnO nanowires for energy harvesting applications
E-MRS 2015 Spring Meeting, Symposium M Multifunctional binary and complex oxides films and nanostructures for nanoelectronics and energy applications – II

[C69]. P. Petrou, A. Salapatas, A. Botsialas, E. Makarona, I. Raptis, S. Kakabakos and K. Misiakos
Biosensors based on polychromatic Young interferometers monolithically integrated on silicon chips
BITE 2015, 4th International Conference on Bio-Sensing Technology

[C70]. K. Misiakos, P. Petrou, S Kakabakos, A. Salapatas, A. Botsialas, I. Raptis, I. Kylintirea, T. Sarafidis, A. Lambidonis, A. Varouxis and E. Makarona
Si-based Monolithic Poylchromatic Young Interferometer as an Enabling Tool for Point-of-Need Food Safety Determinations
IEEE Biophotonics 2015

[C71]. P. Petrou, A. Salapatas, A. Botsialas, E. Makarona, I. Raptis, S. Kakabakos and K. Misiakos
Polychromatic Young Interferometers Integratedon Silicon Chips for Biosensing Applications
MiNaB-ICT 2015, International Workshop on "Micro-Nano-Bio-ICT Convergence, Current Research and Future Trends"

[C72]. I. Raptis (on behalf of the FOODSNIFFER consortium – Dr E. Makarona is a member of the project consortium)
Monolithically integrated platform for Point-of-Need applications in food safety
MiNaB-ICT 2015, International Workshop on "Micro-Nano-Bio-ICT Convergence, Current Research and Future Trends"

[C73]. E. Makarona, I. Raptis, P. Petrou, S. Kakabakos and K. Misiakos
Si-based Monolithically Integrated Polychromatic Interferometers: a new enabling tool for food safety applications
Photonica 2015, V International School and Conference on Photonics, August 2015
Invited Lecture

[C74]. E. Makarona, B. Athanassiou, C. Prionistis, E. Tegou and C. Tsamis
A cost-efficient solution-based process for the development of ZnO nanostructures: a comprehensive study of the role of the seeding layer formation conditions
Eurosensors XXIX

[C75]. G. Niarchos, G. Dubourg, G. Afroudakis, V. Tsouti, E. Makarona, J. Matovic, V. Crnojevic-Bengin and C. Tsamis
Low-cost paper-based humidity sensor based on ZnO nanoparticles
Eurosensors XXIX

[C76]. P. Petrou, E. Stavra, A. Salapatas, A. Botsialas, S. Kakabakos, K. Misiakos and E. Makarona
Atrazine detection in drinking water samples with monolithically integrated polychromatic Young interferometric chips
Eurosensors XXIX

[C77]. G. Afroudakis V. Tsouti, E. Makarona, D. Tsamakis. And C. Tsamis
Room temperature humidity sensors based on ZnO nanoparticles and nanostructured films
5th International Conference on Materials and Applications for Sensors and Transducers, IC-MAST 2015

[C78]. P Petrou , E Stavra, A Salapatas, A Botsialas, I Raptis, S Kakabakos, K Misiakos and E. Makarona
Monolithically integrated on silicon polychromatic Young Interferometer for label-free pesticide detection
5th International Conference on Materials and Applications for Sensors and Transducers, IC-MAST 2015

[C79]. M. Angelopoulou, V. Pagkali, Z. Tsialla, A. Botsialas, A. Salapatas, P.S. Petrou, E. Makarona, G. Jobst, D. Goustouridis, I. Raptis, S.E. Kakabakos and K. Misiakos
Monolithically integrated photonic platform for Point-of-Need application in food safety
41st International Conference on Micro- and Nano-Engineering, MNE2015

[C80]. G. Afroudakis, V. Tsouti, G. Skoufias, E. Makarona, D. Tsamakis and C. Tsamis
Low power chemical sensor based on nanostructured ZnO films
6th International Conference "Micro&Nano" 2015

[C81]. E. Makarona, G. Papageorgiou, A. Giannouli, D. Kati and C. Tsamis
Electrical characterization of ZnO p-n diodes based on an all-wet chemical process
6th International Conference "Micro&Nano" 2015

[C82]. G. Skoufias, V. Tsouti, E. Makarona, M. A. Botzakaki, S. N. Georga, C. A. Krontiras and C. Tsamis
Optimization of ZnO-based piezoelectric harvesters on flexible substrates
6th International Conference "Micro&Nano" 2015

[C83]. V. Pagkali, P. Petrou, A. Economou, A. Salapatas, E. Makarona, K. Misiakos, I. Raptis, and S. Kakabakos
Detection of ochratoxin A in beer samples by ELISA and a label-free optoelectronicv biosensor
14th International Conference on Environmental Science and Technology CEST2015

2016

[C84]. I. Raptis, K. Misiakos, E. Makarona, Al. Salapatas, P. Petrou, S. Kakabakos, A. Botsialas, G. Jobst, W. Haasnoot, A. Fernandez-Alba, M. Lees and E. Valamontes
A miniaturized optoelectronic system for rapid quantitative label-free detection of harmful species in food
SPIE Photonics West 2016

[C85]. E. Stavra, A. Malainou, A. Salapatas, A. Botsialas, P. Petrou, I. Raptis, E. Makarona, S. E. Kakabakos and K. Misiakos
Monolithically-integrated Young interferometers for label-free and multiplexed detection of biomolecules
SPIE Photonics West 2016, Silicon Photonics XI

[C86]. K. Misiakos, P.S. Petrou, A. Malainou, E. Stavra, S.E. Kakabakos, A. Salapatas, A. Botsialas, I. Raptis and E. Makarona
Polychromatic Young Interferometry: a novel tool for label-free detection of analytes
EUROPT(R)ODE XIII 2016

[C87]. P.S. Petrou, E. Makarona, G. Jobst, W. Haasnoot, M. Lees, A. R. Fernández-Alba, I. Raptis, S.E. Kakabakos and K. Misiakos
Fast & label-free determinations of harmful substances along the entire food chain: The FOODSNIFFER approach
EUROPT(R)ODE XIII 2016

[C88]. I.Raptis, E. Makarona, P. Petrou, S. Kakabakos and K. Misiakos
Monolithically Integrated Optoelectronic Platform for Rapid Point-of-Need Food Safety Applications
Invited presentation
E-MRS 2016

[C89]. E. Makarona, T. Kyrasta, G. Priniotakis, I. Chronis and C. Tsamis
Growth of Nanostructured Zinc Oxide on Fabrics for e-textile applications
16th World Textile Conference, AUTEX 2016, Session: Smart Functional and Interactive Textiles

[C90]. G. Niarchos, G. Dubourg, G. Afroudakis, V. Tsouti, E. Makarona, J. Matovic, V. Crnojevic-Bengin and C. Tsamis
Paper-based humidity sensor coated with ZnO nanoparticles: The influence of ZnO
Eurosensors XXX

[C91]. G. Skoufias, V. Tsouti, E. Makarona, G. Niarchos, M.A. Botzakaki, S. Georga, C. A. Krontiras, V. Crnojevic-Bengin, C. Tsamis
Performance optimization of ZnO nanostructure-based flexible energy harvesters
Eurosensors XXX

[C92]. G. Niarchos, G. Dubourg, G. Afroudakis, V. Tsouti, E. Makarona, J. Matovic, V. Crnojevic-Bengin and C. Tsamis
Humidity sensing with paper-based sensors coated with ZnO nanoparticles
International Conference on Bioscience ICBS 2016

2017

[C93]. E Makarona, T Pilioura, A Karytinou, V Psycharis, G. Priniotakis and C Tsamis
Decoration of yarns and fabrics with ZnO nanostructures for smart textile applications
AUTEX World Textile Conference 2017

2018

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