George Kenanakis - Curriculum vitae¹

Personal data

Name: George Kenanakis			
Studies : Chemical Engineer, M.Sc., Ph.D.			
Marital status : Married, 1 child			
Nationality : Greek			
Work address : FORTH - IESL, N. I	Plastira 100, Vasilika Vouton, GR-700 13 Heraklion, Crete, Greece		
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	Researcher ID: <u>http://www.researcherid.com/rid/G-1283-2010</u>		

Education

2011	Ph.D.	Institute :	University of Crete, Faculty of Sciences, Chemistry department.
			Ph.D. dissertation: "Synthesis of ZnO and TiO ₂ thin films and nanostructures using chemical techniques and study of their photocatalytic properties".
2007	M.Sc.	Institute :	University of Crete, Faculty of Sciences, Chemistry department.
			Postgraduate Program in "Environmental Protection Technologies".
			Grade scholarship prize during the postgraduate program "Environmental Protection Technologies".
			<i>M.Sc. dissertation:</i> "Synthesis of ZnO nanostructures using aqueous solutions and study of their ozone sensing properties"
2003	B. Eng. (Chem.)	Institute :	Aristotle University of Thessaloniki, Faculty of Engineering,
	& M.Sc.Eng. (Chem)		Chemical Engineering department.
			Diploma thesis: "The use of industrial minerals as soil enhancers in acidic soils".

Current position

Researcher B' in Foundation for Research and Technology - Hellas (FORTH) - Institute of Electronic Structure and Laser (IESL), in the field of "Photonic metamaterials and devices", since 02/12/20.

Work experience

Self employed chemical engineer from 30/10/2003 to 10/11/2016.

Registered chemical engineer in Prefecture of Lasithi's records since 17/09/2004.

Registered engineer in Greek Ministry of Environment, Energy and Climate change (ID No. 22384) since 01/06/2010.

Advanced auditor in Environmental Management Systems (ISO 14001) of TUV HELLAS since 20/12/04.

Advanced auditor in Quality Management Systems (ISO 9001) of EUROCERT since 10/07/05.

Collaborating researcher in Foundation for Research and Technology - Hellas (FORTH) - Institute of Electronic Structure and Laser (IESL), 01/01/06 - 03/11/16.

Assistant Researcher (Researcher C') in Foundation for Research and Technology - Hellas (FORTH) - Institute of Electronic Structure and Laser (IESL), in the field of "Photonic metamaterials and devices", 04/11/16 - 02/12/20.

Collaborating researcher in Center of Materials Science and Photonics of School of Applied Technology, Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete, since 01/09/06.

Accredited instructor registered in Hellenic Food Authority of Greek Ministry of Health and Social Solidarity (E.F.E.T.); (ID No. 631). Accredited instructor registered in Greek National Centre for Public Administration and Local Government (E.K.D.D.A.); (ID No. 9088).

Accredited instructor registered in Manpower Agency of Greece (O.A.E.D.); (ID No. 28894).

Accredited instructor registered in National Centre for Public Administration and Local Government (E.K.D.D.A.); (Decision No: 4466-21/05/2019).

Administrative experience

20/02/10 - 30/06/10

Member of Quality Assurance Unit (QAU - MODIP) of Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete, according to provisions of L.4009/2011 and the decision no 27/27-03-2009 made by the Committee of the Institute.

Teaching experience

University of Crete

 Winter semester 2018 - Teaching of the theoretical lecture "Introduction to the study of proteins and biomolecules through today infrared (FT-IR) and Raman spectroscopy", as part of the course "Structural Biotechnology" of the inter-disciplinary Postgraduate Program based on Protein Biotechnology organized by the departments of Biology and Chemistry at the University of Crete.

Hellenic Mediterranean University (HMU), former Technological and Educational Institute (TEI) of Crete

Lecturer at the School of Applied Technology of the Technological and Educational Institute of Crete since 20/02/06.

- 07/10/13 28/02/14 Teaching of the theoretical course "Plastic's technology" in Mechanical Engineering department.
- 21/02/11 31/07/13 Teaching of the laboratorial course "Environmental technology" in Electrical Engineering department.
- 21/02/11 31/07/13 Teaching of the laboratorial course "Structural Materials" in Civil Engineering department.
- 23/02/09 30/06/09 Teaching of the laboratorial course "Chemical Technology" in Mechanical Engineering department.
- O1/10/07 15/02/08 Teaching of the theoretical course "Material's Science and Engineering" in Mechanical Engineering department.
- O1/10/07 24/02/12 Teaching of the theoretical course "Material's Science and Engineering" in Electrical Engineering department.
- 01/10/07 14/02/14 Teaching of the laboratorial course "Electrochemistry and Material's Science" in Electrical Engineering department.
- ◆ 01/10/07 27/06/08 Teaching of the theoretical course "Chemical Technology" in Civil Engineering department.
- 20/02/06 28/02/15 Teaching of the laboratorial course "Material's Technology" in Mechanical Engineering department.

Advisor/Supervision of students, and post-docs

Post Doctorates (Post Docs)

- 04. Dr. A. Tasolamprou (2020 currently), Numerical simulations of advanced building components based on Phase Change Materials (PCMs), with low heating/cooling requirements, and electromagnetic shielding from wireless radiation, IESL FORTH.
- 03. Dr. V. Papadakis (2017 currently), FT-IR and Raman spectroscopy on biomedical samples, IESL FORTH.
- 02. Dr. Z. Viskadourakis (2016 currently), Metal Oxide nano-composites, via 3D printing and chemical syntheses, with novel environmental applications, IESL FORTH.
- 01. Dr. K. C. Vasilopoulos (2016 2017), Electromagnetic shielding effectiveness of 3D printed polymer composites, IESL FORTH.

Research Associates

01. Ms. C. Katsara (2019 - currently), Spectroscopic analysis and characterization of biological samples (using FT-IR and Raman spectroscopy), IESL - FORTH.

Doctorates (Ph.D.'s)

- 02. N. Vrithias, *3D composite porous materials for environmental applications*, Ph.D., Materials Science & Technology dept., University of Crete (on going work).
- 01. M. Sevastaki, *Three-dimensional ceramic and polymer composites with environmental applications*, Ph.D., Chemistry dept., University of Crete (on going work).

Masters (M.Sc.'s)

- 08. D. Mentzaki, *3D printed metamaterials for electromagnetic applications*, M.Sc. Materials Science & Technology dept., University of Crete (2019).
- 07. E. Petromichelaki, *Chemical synthesis of ZnO nanostructures, following environmental friendly approaches, and study of their structural and optical properties*, M.Sc. Materials Science & Technology dept., University of Crete (2019).
- 06. I. Heliadis, *Chemical synthesis of zinc oxide (ZnO) powders and study of their photocatalytic efficiency against methylene blue degradation in aqueous solutions*, M.Sc., Chemistry dept., University of Crete (2010), co-supervision with Prof. N. Katsarakis, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete.
- I. Vamvasakis, Chemical synthesis of tungsten oxide (WO₃) powders and study of their photocatalytic efficiency against methylene blue degradation in aqueous solutions, M.Sc., Chemistry dept., University of Crete (2010), co-supervision with Prof. N. Katsarakis, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete.
- 04. A. Psaroudakis, Chemical synthesis of titanium oxide (TiO₂) powders, doped with iron (Fe^{2+/3+}) and study of their photocatalytic efficiency against methylene blue degradation in aqueous solutions, M.Sc., Chemistry dept., University of Crete (2010), co-supervision with Prof. N. Katsarakis, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete.

- 03. M. Michailidis, A study of the photocatalytic efficiency of ZnO and TiO₂ nano-powders against various pollutants, M.Sc., Chemistry dept., University of Crete (2009), co-supervision with Prof. N. Katsarakis, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete.
- 02. Z. Gianakoudakis, *Chemical deposition of Al-doped ZnO thin films (Zn_{1-x}Al_xO); Study of their photacatalytic efficiency against stearic acid's degradation*, M.Sc., Chemistry dept., University of Crete (2009) co-supervision with Prof. N. Katsarakis, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete.
- 01. N. Lironi, Study of the photocatalytic efficiency of ZnO and TiO₂ thin films on polymer substrates, M.Sc., Material Science and Technology dept., University of Crete (2008), co-supervision with Prof. N. Katsarakis, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete.

Undergraduate Senior Theses

- 26. Th. Zavalis, *Chemical synthesis of Barium Titanate thin films for Nonvolatile Memory Applications*, Physics dept., University of Crete (on going work).
- 25. P. Kastriti, *Expanded Perlite-based polymeric structures for thermal insulating applications*, Materials Science & Technology dept., University of Crete (on going work).
- 24. V. Mouzi, 3D printed metamaterials for microwave energy harvesting devices, Materials Science & Technology dept., University of Crete (on going work).
- 23. A. Tzeiranidi, *3D printed photocatalysts, against everyday-use pollutants*, Materials Science & Technology dept., University of Crete (on going work).
- 22. A. Drymiskianaki, 3D printed polymeric samples for thermoelectric applications, Physics dept., University of Crete (2020).
- 21. Ev. Tamiolakis, 3D printed metamaterial-based energy harvesting systems, Physics dept., University of Crete (2020).
- 20. G. Fanourakis, 3D printed polymeric metamaterial samples with novel applications, Physics dept., University of Crete (2019).
- 19. D. Kosmidis, 3D printed polymeric samples with novel applications, Chemistry dept., University of Crete (2017).
- 18. D. Mentzaki, *Metabaterial-based sensors operating in microwaves*, Materials Science & Technology dept., University of Crete (2016), co-supervision with Prof. M. Kafesaki, Materials Science & Technology dept., University of Crete.
- 17. A. Arvanitakis, *Study of management and reuse dairy waste*, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete (2014).
- 16. Th. Demertzis, *Environmental impacts from the production and use of chemical detergents and soaps*, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete (2013).
- 15. Th. Leontarakis, *Waste combustion technologies; Specifications and financial data*, Mechanical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete (2013).
- 14. A. Ninos, Treatment and reuse of winery waste, Mechanical Engineering dept., TEI of Crete (2013).
- 13. M. Konsolaki, *Biological and environmental impact of the electricity transmission networks*, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete (2013).
- 12. C. Galanoulis, *Environmental impact of photovoltaics*, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete (2013).
- 11. G. Dourountakis, *Environmental impacts of biomass thermal processing*, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete (2012).
- 10. D. Kalogridakis, *Environmental impacts of hospital waste*, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete (2011).
- 09. M. Glada, *Study of management and disposal of ships waste*, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete (2011).
- 08. C. Georgakarakos, *Processing and exploitation of oil mill wastewater*, Mechanical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete (2011).
- 07. M. Vachatsakis, Deposition of Zn_{1-x}Al_xO (x = 0.0-5.0) thin films using ultrasonic spray pyrolysis (USP); Study of structural, morphological, optical and electrical properties, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete (2010).
- 06. C. Chatzis, Deposition of Zn_{1-x}Al_xO (x = 0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0) thin films using the sol-gel technique; Study of the conductivity as a function of the stoichiometry, Electrical Engineering dept., TEI of Crete (2010), co-supervision with Prof. N. Katsarakis, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete.
- 05. N. Kaklamanos, *Chemical deposition of titanium dioxide (TiO₂) thin films on glass substrates; Study of their photocatalytic and self-cleaning properties*, Civil Engineering dept., TEI of Crete (2010), co-supervision with Prof. N. Katsarakis, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete.
- 04. G. Kamitsas, *Photocatalytic degradation of methylene blue using titanium dioxide (TiO₂) thin films*, Mechanical Engineering dept., TEI of Crete (2013), co-supervision with Prof. N. Katsarakis, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete.

- 03. N. Kampitakis, *Chemical deposition of SiO₂/TiO₂ bilayers on glass and study of their optical and photocatalytic properties*, Civil Engineering dept., TEI of Crete (2010), co-supervision with Prof. N. Katsarakis, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete.
- 02. M. Egglezakis, *Electrical conductivity/photoconductivity measurements of ZnO thin films deposited by chemical methods using aqueous solutions*, Electrical Engineering dept., TEI of Crete (2009), co-supervision with Prof. N. Katsarakis, Electrical Engineering dept., TEI of Crete.
- 01. P. Milionis, Synthesis of ZnO nanostructures and study of their photoconductivity, Civil Engineering dept., TEI of Crete (2009), co-supervision with Prof. N. Katsarakis, Electrical Engineering dept., Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete.

Research interests

Interdisciplinary research interests ranging between applied physics and electromagnetism to chemical synthesis of materials and structural characterization and instrumentation.

Specifically,

- Electromagnetic wave propagation in composite media, with emphasis on metamaterials, photonic crystals, plasmonic structures, and random dielectric and metalodielectric systems.
- Design and simulation of both passive and dynamically controllable chiral metamaterials, as well as electromagnetic characterization of such metamaterials in microwaves and IR
- Realization/calculation of Casimir force between chiral metamaterials.

and

- Synthesis and study of metal oxide thin films and nanostructures of (ZnO, InO_x, WO₃, TiO₂, SiO₂, VO₂) emphasized in:
 (a) photocatalysis of organic pollutants in liquid and gas phase,
 - (b) growth of novel metal oxide coatings with self-cleaning properties,
 - (c) growth of thermoelectric, thermochromic and electrochromic materials.

and

- 3D printing/additive manufacturing of polymeric nanostructures with multifunction properties:
 - (a) 3D printed circuits and electronics,
 - (b) Energy harvesting prototypes, using existing EM radiation (e.g. GSM, FM, WiFi),
 - (c) 3D printed flexible electrodes for batteries,
 - (d) Large scale 3D photocatalytic/self-cleaning filters and devices,
 - (e) Industrial scale thermoelectric devices, for potential applications in random access memory devices etc.

The interaction between the synthesis of metal oxides using chemical techniques, and the electromagnetic properties of such materials, leads to metamaterials for novel applications such as perfect absorbers, electromagnetic shielding etc.

- Indeed, during the last year we are working, both theoretically and experimentally, on perfect absorbers based on Metal-Insulator-Metal (MIM) structures consisting of metal and ZnO or TiO₂, SiO₂, etc. multilayers, tuning their absorption peaks by selecting optimum dielectric spacer, which find application in thermovoltaic and photovoltaic solar cells and optics. This way, we are exploring to what extent it is possible to manage the solar light efficiency using semiconductor metamaterials perfect absorbers/emitters integrated with solar devices (infrared detection, sensors, LEDS).
- Another field of interest stands on plasmonic metamaterials, tuning their absorption spectra by selecting optimum geometry. Such way, we study potential use of such plasmonic metamaterials in optics and microscopy beyond the diffraction limit using Luneburg and Eaton lenses that interact with surface plasmon polaritons, rather than photons. In addition, plasmonic metamaterials can improve the mechanical, optical and electromagnetic properties of sensors; several metamaterial designs with sharp Fano resonances are studied as potential sensors/bio-sensors, both theoretically and experimentally, from GHz to THz regime.
- Moreover, the electromagnetic shielding effectiveness of either flexible polymeric membranes, or porous ceramics, or even paint-like nanocomposite layers is yet another hot topic of interest, since they offer quite effective electromagnetic shielding, similar or even better than that of commercial products, depending on their thickness and electrical resistivity. Several conducting metal oxides (such as ZnO, Al-doped ZnO, Indium Tin oxide, etc.), and carbon nanomaterials such as carbon nanotubes, graphene oxide and graphene nanoplatelets, are used, while various ferrites e.g. γ-Fe₂O₃, Fe₃O₄, and other thermoelectrics, are considered as tunable EMI shielding materials under thermal excitation.
- Finally, energy harvesting and the conversion of microwave signal to electrical power is a hot topic, due largely to the increasing demand of wireless charging for portable electronic devices and electric vehicles. We are focusing on the implementation of magnetic metamaterials in a wireless power transfer (WPT) system with different designs. We are close to the fabrication of samples and the experimental verification that the power transfer efficiency can be improved significantly by a metamaterial.

Scientific output and impact

79 papers in peer reviewed journals, more than 1418 citations, h-index: 23 (Web of Science), 9 conference proceedings, 4 book chapters, more than 100 participations in National and International Conferences, 5 invited and plenary talks.

Research experience - List of funded projects as Coordinator or Partner

Interdisciplinary experience and background ranging between natural sciences, chemical and structural characterization, instrumentation, technologies and electromagnetism.

01/01/06 – today Foundation for Research and Technology - Hellas (FORTH), Institute of Electronic Structure and Laser (IESL), *Photonic-, Phononic- and Meta-Materials (PPM) Group (<u>http://esperia.iesl.forth.gr/~ppm/</u>)*

- SEMI-WEB (2020 2023), "Advanced Energy Upgrading Building Components Containing Phase Change Composites and/or Ceramic Foams with Electromagnetic Shielding Properties", "Competitiveness, Entrepreneurship and Innovation" (EPAnEK) Operational Programme, Greek General Secretariat for Research and Technology (GSRT), Greece. *Role*: Principal Investigator - Coordinator. *Total budget*: ~600.000€ *Budget for IESL-FORTH*: 180.000€
- Antifoul (2020 2023), "Antifouling materials based on TiO₂ for aquaculture applications", GSRT special actions: Aquaculture Industrial materials - Open innovation culture, Greek General Secretariat for Research and Technology (GSRT), Greece. *Role*: Principal Investigator - Coordinator. *Total budget*: ~200.000€ *Budget for IESL-FORTH:* 40.000€
- ★ <u>Scientist-in-charge of NanoBioPack</u> (2020 2023), "Sustainable food packaging based on essential oils in polymer matrices", GSRT special actions: Aquaculture – Industrial materials – Open innovation culture, Greek General Secretariat for Research and Technology (GSRT), Greece.
 Role: Principal Investigator - Scientist-in-charge.
 Total budget: ~600.000€
 Budget for IESL-FORTH: 105.000€
- Coordinator of "Novel materials for fish farming nets exhibiting environmental friendly antifouling behavior" (2020 2023), European Maritime and Fisheries Fund - Operational Programme for Greece *Role*: Principal Investigator - Coordinator. *Total budget*: ~522.000€ *Budget for IESL-FORTH:* 87.000€
- NPRP11S-1128-170042 (2019 2022), "Advanced 3D-sculptured materials for catalysis", Texas A&M University at Qatar. Role: Principal Investigator. Total budget: 156.000 € Budget for IESL-FORTH: 65.000€
- PANTHEON (2019 2023), "Novel Approaches for Plant Health Monitoring", Marie Skłodowska-Curie Actions: Research and Innovation Staff Exchange (RISE) Call: H2020-MSCA-RISE-2018, H2020. Role: Research-Partner.

 Coordinator of POLY-SHIELD (2018 - 2021), "Polymeric Nanocomposites for Electromagnetic Shielding applications", "Competitiveness, Entrepreneurship and Innovation" (EPAnEK) Operational Programme, Greek General Secretariat for Research and Technology (GSRT), Greece. Role: Principal Investigator - Coordinator. Total budget: ~1.000.000.000€ Budget for IESL-FORTH: 225.000€

- <u>VisorSURF</u> (01/01/2017 30/06/2020), "A Hardware Platform for Software-driven Functional Metasurfaces", H2020 FET Open research and innovation actions.
 Role: Research-Partner.
- PHOTOMETA (01/03/13 28/02/18), "PHOTOnic METAmaterials: From Basic Research to Applications", ERC Advanced Grant 2012.

Role: Research-Partner.

- <u>SolarNano</u> (01/11/13 30/10/15), "Nanostructured plasmonic reflectors for efficient thin film solar cells", Greece-Germany Bilateral research cooperation.
 Role: Research-Partner.
- <u>EXEL</u> (22/05/12 21/09/15), "EXtending ELectromagnetism through novel artificial materials", ERC-02 by Greek General Secretariat for Research and Technology (GSRT). Role: Research-Partner.
- <u>COST Action MP0803</u> (20/10/08 21/11/12), "Plasmonic Components and Devices". Role: Research-Partner.
- <u>COST Action MP0702</u> (21/01/08 20/01/12), "Towards Functional Sub-wavelength Photonic Structures". Role: Research-Partner.
- <u>NIM NIL</u> (01/09/09 31/08/12), "Large Area Fabrication of 3D Negative Index Materials by Nano-Imprint Lithography", FP7 NMP EU project, Grant Agreement No:228637. Role: Research-Partner.

ECONAM (01/04/08 - 31/03/11), "Electromagnetic Characterization Of NAnostructured Materials", Coordination Action FP7 EU project.

Role: Research-Partner.

- ENSEMBLE (01/05/08 30/04/12), "ENgineered SElf-organized Multi-component structures with novel controllaBLE Electomagnetic functionalities", FP7 NMP EU Project, Grant Agreement No: NMP4-SL-2008-213669. Role: Research-Partner.
- PHOME (01/06/08 31/05/11), "PHOtonic MEtamaterials", FP7 ICT-FET Open Project, Project No: 213390. Role: Research-Partner.
- PHOREMOST (01/10/04 30/09/08), "PHOtonics to REalize MOlecular Scale Technologies", Network of Excellence (NoE) EU project.

Role: Research-Partner.

- METAMORHOSE (01/06/04 31/05/08), "METAMaterials ORganised for radio, millimeter wave and PHOtonic Superlattice Engineering", Network of Excellence (NoE) EU project. Role: Research-Partner.
- Reinforcement Program of Human Research Manpower PENED (01/01/06 30/04/06), "Growth of gas sensors", co-funded by the European Social Fund and National Resources. Role: Research-Partner.

15/09/05 – today Hellenic Mediterranean University (HMU), former Technological Educational Institute (TEI) of Crete, Center of Materials Science and Photonics of School of Applied Technology (CEMATEP) (<u>http://www.teicrete.gr/cmtl/cematep/</u>)

- <u>"Competitiveness, Entrepreneurship and Innovation" (EPAnEK) Operational Programme</u> (10/10/18 08/09/2019), "Construction of pre-composed high organic wastewater treatment plants with a combination of membrane technology (MBR) and bioreinforcement", Greek General Secretariat for Research and Technology (GSRT), Greece.
 Role: Research-Partner.
- G 5477, Science for Peace and Security (SPS) Programme NATO (2018-2021), "Nanostructured composite paints for electronics electromagnetic shielding".

Role: Research-Partner.

- Operational Program "Education and Lifelong Learning", Action ARCHIMEDES III (06/06/14 08/12/14), "Growth and characterization of novel nanostructured materials suitable for electromagnetic shielding applications in the GHz regime", co-funded by the European Social Fund and National Resources. Role: Research-Partner.
- Operational Program "Education and Lifelong Learning", Action ARCHIMEDES III (01/03/14 today), "Advanced low-cost electrochromic windows", co-funded by the European Social Fund and National Resources. Role: Research-Partner.
- Operational Program "Education and Lifelong Learning", Action ARCHIMEDES III (01/09/12 today), "Growth of nanostructured metal oxides with enhanced photocatalytic properties under visible radiation", co-funded by the European Social Fund and National Resources.

Role: Research-Partner.

- Project INTERREG III/A Greece-Cyprus (15/01/07 31/05/08), "Innovative photovoltaic elements and high efficiency photovoltaic systems", co-funded by the European Social Fund and National Resources.
 Role: Research-Partner.
- Project EPEAEK II ARCHIMEDES I (02/01/07 28/02/07), "Growth of ZnO thin films and their gas-sensing use against oxidizing gases", co-funded by the European Social Fund and National Resources. Role: Research-Partner.
- Project EPEAEK II ARCHIMEDES I (01/09/06 31/10/06), "Growth of thin films and their use in high analysis optical depiction in near infra-red", co-funded by the European Social Fund and National Resources. Role: Research-Partner.
- Project EPEAEK II ARCHIMEDES I (15/09/05 31/08/07), "Semimetal ferromagnets and antiferromagnets", co-funded by the European Social Fund and National Resources. *Role*: Research-Partner.

Publications in refereed journals

- 79. Waqas Ahmad, Bushra Jabbar, Imtiaz Ahmad, Badrul Mohamed Jan, Minas M. Stylianakis, <u>George Kenanakis</u> and Rabia Ikram, Highly Sensitive Humidity Sensors Fabrication based on Polyethylene Oxide/CuO/Multi Walled Carbon Nanotubes composite nanofibers, Materials, submitted (2020).
- 78. Waqas Ahmad, Atiq Ur Rahman, Imtiaz Ahmad, Muhammad Yaseen, Badrul Mohamed Jan, Minas M. Stylianakis, George Kenanakis and Rabia Ikram, Oxidative desulfurization of petroleum distillate fractions using Manganese dioxide supported Magnetic reduced graphene oxide as catalysts, Nanomaterials **11** (2021), 203.
- 77. Waqas Ahmad, Shanif Qaiser, Rahman Ullah, Badrul Mohamed Jan, Michael A. Karakassides, Constantinos E. Salmas, <u>George Kenanakis</u> and Rabia Ikram, *Utilization of Waste Tires derived Magnetic-Activated Carbon for Removal and Recovery of Hexavalent Chromium from Wastewater*, Materials **14** (2021), 14.
- 76. Maria Sevastaki, Vassilis M. Papadakis, Cosmin Romanita, Mirela Petruta Suchea, and <u>George Kenanakis</u>, Photocatalytic properties of eco-friendly ZnO nanostructures on 3D printed PLA scaffolds, Nanomaterials **11** (2021), 168.
- 75. Rabia Ikram, Badrul Mohamed Jan, Syed Atif Pervez, Vassilis M. Papadakis, Waqas Ahmad, Rani Bushra, George Kenanakis and Masud Rana, *Recent advances of N-doped graphene for rechargeable batteries; A review*, Crystals **10** (2020), 1080.
- 74. Anna C. Tasolamprou, Despoina Mentzaki, Zacharias Viskadourakis, Eleftherios N. Economou, Maria Kafesaki, and <u>George Kenanakis</u>, *Flexible 3D Printed Conductive Metamaterial Units for Electromagnetic Applications in Microwaves*, Materials **13** (2020), 3879.
- 73. Evangelia Takou, Anna C. Tasolamprou, Odysseas Tsilipakos, Zacharias Viskadourakis, Maria Kafesaki, <u>George Kenanakis</u>, and Eleftherios N. Economou, *Anapole tolerance to dissipation losses in thermally tunable water-based metasurfaces*, PR Applied, submitted (2020).
- 72. Evangelos Skoulas, Anna C. Tasolamprou, <u>George Kenanakis</u>, Emmanuel Stratakis, *Laser induced periodic surface structures as polarizing optical elements*, Appl. Surf. Sci., accepted (2020).
- 71. Panagiotis M. Angelopoulos, <u>George Kenanakis</u>, Zacharias Viskadourakis, P. Tsakiridis, Konstantinos C. Vasilopoulos, Michael A. Karakassides, Maria Taxiarchou, *Manufacturing of ABS/ expanded perlite filament for 3D printing of lightweight components through Fused Deposition Modeling*, Mater. Today-Proc., submitted (2020).
- Odysseas Tsilipakos, Angelos Xomalis, <u>George Kenanakis</u>, Maria Farsari, Costas M. Soukoulis, Eleftherios N. Economou, Maria Kafesaki, *Split-cube-resonator-based metamaterials for polarization-selective asymmetric perfect absorption*, Sci. Rep. **10** (2020), 17653.
- 69. Maria Sevastaki, Mirela Petruta Suchea, and <u>George Kenanakis</u>, 3D printed fully recycled TiO₂-polystyrene photocatalysts against drug residues, Nanomaterials **10** (2020), 2144.
- 68. Nectarios Vidakis, Markos Petousis, Athena Maniadi, Emmanuel Koudoumas, <u>George Kenanakis</u>, Cosmin Romanitan, Oana Tutunaru, Mirela Suchea, John Kechagias, *The mechanical and physical properties of 3D printed materials composed of ABS-ZnO nanocomposites and ABS-ZnO microcomposites*, Micromachines **11**(6) (2020), 615.
- 67. Evangelia Gavgiotaki, George Filippidis, Vassilis Tsafas, Savvas Bovasianos, <u>George Kenanakis</u>, Vasilios Georgoulias, Maria Tzardi, Sofia Agelaki, and Irene Athanassakis, *Third Harmonic Generation microscopy distinguishes malignant cell stage in human breast tissue biopsies*, Sci. Rep. **10** (2020), 11055.
- 66. George Perrakis, Anna C. Tasolamprou, <u>George Kenanakis</u>, Eleftherios N. Economou, Stelios Tzortzakis, Maria Kafesaki, *Passive* radiative cooling and other photonic approaches for the temperature control of photovoltaics: a comparative study for crystalline silicon-based architectures, Opt. Express **28** (2020), 18548.
- 65. George Perrakis, Anna C. Tasolamprou, <u>George Kenanakis</u>, Eleftherios N. Economou, Stelios Tzortzakis, Maria Kafesaki, Ultraviolet radiation impact on the efficiency of commercial crystalline silicon-based photovoltaics: A theoretical thermalelectrical study in realistic device architectures, OSA Continuum **3**(6) (2020), 1436.
- 64. Athena Maniadi, Maria Vamvakaki, Mirela Suchea, Ioan Valentin Tudose, Marian Popescu, Cosmin Romanitan, Cristina Pachiu, Octavian N. Ionescu, Zaharias Viskadourakis, <u>George Kenanakis</u>, and Emmanouel Koudoumas, *Effect of Graphene Nanoplatelets on the Structure, the Morphology, and the Dielectric Behavior of Low-Density Polyethylene Nanocomposites*, Materials **13** (2020), 4776.
- N. Vidakis, A. Maniadi, M. Petousis, M. Vamvakaki, <u>G. Kenanakis</u>, Emm. Koudoumas, *Mechanical and electrical properties investigation of 3D-Printed Acrylonitrile-Butadiene-Styrene Graphene and Carbon Nanocomposites*, J. Mater. Eng. Perform. 29 (2020), 1909.
- 62. Minas M. Stylianakis, Dimitrios M. Kosmidis, Katerina Anagnostou, Christos Polyzoidis, Miron Krassas, <u>George Kenanakis</u>, George Viskadouros, Nikolaos Kornilios, Konstantinos Petridis, and Emmanuel Kymakis, *Emphasizing the Operational Role of a Novel Graphene-based Ink into High Performance Ternary Organic Solar Cells*, Nanomaterials **10** (2020), 89.
- 61. Z. Viskadourakis, C. N. Mihailescu, and <u>G. Kenanakis</u>, Spray-pyrolysis deposited La_{1-x}Sr_xCoO₃ thin films for potential non-volatile memory applications, Appl. Phys. A **126** (2020), 80.
- 60. George Perrakis, George Kakavelakis, <u>George Kenanakis</u>, Constantinos Petridis, Emmanouel Stratakis, Maria Kafesaki, and Emmanuel Kymakis, *Efficient and environmental-friendly perovskite solar cells via embedding plasmonic nanoparticles: an optical simulation study on realistic device architecture*, Opt. Express **27(22)** (2019), 31144.
- 59. Antonis Papadopoulos, Evangelos Skoulas, Alexandros Mimidis, George Perrakis, George Kenanakis, George Tsibidis, Emmanuel

Stratakis, Biomimetic omnidirectional anti-reflective glass via ultrafast laser nanostructuring, Adv. Mater. 31 (2019), 1901123.

- 58. Dimitra Vernardou, and <u>George Kenanakis</u>, Electrochemistry Studies of Hydrothermally Grown ZnO on 3D-Printed Graphene, Nanomaterials **9(7)** (2019), 1056.
- 57. Amir Ziv, Avra Tzaguy, Zhiyuan Sun, Shira Yochelis, Emmanuel Stratakis, <u>George Kenanakis</u>, Lincoln J. Lauhon, David N. Seidman, Yossi Paltiel, and Roie Yerushalmi, *Broad-band high-gain room temperature photodetectors using semiconductor—metal nanofloret hybrids with wide plasmonic response*, Nanoscale **11** (2019), 6368.
- 56. Anna C. Tasolamprou, Anastasios D. Koulouklidis, Christina Daskalaki, Charalampros P. Mavidis, <u>George Kenanakis</u>, George Deligeorgis, Zacharias Viskadourakis, Polina Kuzhir, Stelios Tzortzakis, Maria Kafesaki, Eleftherios N. Economou, and Costas M. Soukoulis, *Experimental Demonstration of Ultrafast THz Modulation in a Graphene-Based Thin Film Absorber through Negative Photoinduced Conductivity*, ACS Photonics **6(3)** (2019), 720.
- 55. Minas Stylianakis, George Viskadouros, Christos Polyzoidis, George Veisakis, <u>George Kenanakis</u>, Nikolaos Kornilios, Konstantinos Petridis, Emmanuel Kymakis, *Updating the Role of Reduced Graphene Oxide Ink on Field Emission Devices in Synergy with Charge Transfer Materials*, Nanomaterials **9(2)** (2019), 137.
- 54. Z. Viskadourakis, G. Perrakis, E. Symeou, T. Kyratsi, J. Giapintzakis, and <u>G. Kenanakis</u>, *Transport properties of 3D printed polymer nanocomposites, for potential thermoelectric applications*, Appl. Phys. A **124** (2019), 159.
- George Perrakis, Odysseas Tsilipakos, <u>George kenanakis</u>, Maria Kafesaki, Costas M. Soukoulis, and Eleftherios N. Economou, Perfect optical absorption with nanostructured metal films: design and experimental demonstration, Opt. Express 27(5) (2019), 6842.
- 52. Michael Papacharalambous, Georgia Karvounis, <u>George Kenanakis</u>, Anshal Gupta and Boris Rubinsky, *The Effect of Textiles Impregnated with Particles of High Emissivity in the Far Infrared, on the Temperature of the Cold Hand*, J. Biomech. Eng., **141** (2019), 034502.
- 51. V. Papadakis, and <u>G. Kenanakis</u>, *Highly reusable surface enhanced Raman substrates using low-cost microwave annealing*, Appl. Phys. A **124** (2018), 869.
- 50. Konstantina Alexaki, Athanasia Kostopoulou, Maria Sygletou, <u>George Kenanakis</u>, Emmanuel Stratakis, *Unveiling the structure of Mo_xS_y nanocrystals produced upon laser fragmentation of MoS₂ platelets*, ACS Omega **3(12)** (2018), 16728-16734
- Evangelia Gavgiotaki, George Filippidis, Ioanna Zerva, <u>George Kenanakis</u>, Emmanuel Archontakis, Sofia Agelaki, Vasilios Georgoulias, Irene Athanassakis, *Detection of the T cell activation state using non-linear optical microscopy*, J. Biophotonics **12(3)** (2019), e201800277, doi: 10.1002/jbio.201800277.
- 48. Z. Viskadourakis, M. Sevastaki, and <u>G. Kenanakis</u>, 3D structured nanocomposites by FDM process; a novel approach for largescale photocatalytic applications, Appl. Phys. A **124** (2018), 585.
- 47. Ioanna Bakaimi, Evie L. Papadopoulou, <u>Georgios Kenanakis</u>, Emmanouel Spanakis and Alexandros Lappas, *Thin film growth of delafossite β-NaFeO*² on a ZnO layer by pulsed laser deposition, Thin Solid Films **645** (2018), 424.
- E. Drakakis, M. Suchea, V. Tudose, <u>G. Kenanakis</u>, D. Stratakis, K. Dangakis, A. Miaoudakis, D. Vernardou, E. Koudoumas, *Zinc oxide-graphene based composite layers for electromagnetic interference shielding in the GHz frequency ranges*, Thin Solid Films **651** (2018), 152-157.
- 45. Z. Viskadourakis, K. C. Vasilopoulos, E. N. Economou, C. M. Soukoulis, and <u>G. Kenanakis</u>, *Electromagnetic shielding effectiveness* of 3D printed polymer composites, Appl. Phys. A **123** (2017), 736.
- 44. D. Vernardou, K. C. Vasilopoulos, and <u>G. Kenanakis</u>, 3D printed graphene-based electrodes with high electrochemical performance, Appl. Phys. A **123** (2017), 623.
- 43. E. Vasilaki, D. Vernardou, <u>G. Kenanakis</u>, M. Vamvakaki, and N. Katsarakis, *TiO₂/WO₃ photoactive bilayers in the UV-Vis light region*, Appl. Phys. A **123** (2017), 231.
- 42. Argyro N. Giakoumaki, <u>George Kenanakis</u>, Argiro Klini, Maria Androulidaki, Zacharias Viskadourakis, Maria Farsari, and Alexandros Selimis, *3D micro-structured arrays of ZnO nanorods*, Sci. Rep. **7** (2017), 2100.
- 41. Argyro N. Giakoumaki, <u>George Kenanakis</u>, Argiro Klini, Maria Androulidaki, Zacharias Viskadourakis, Maria Farsari, and Alexandros Selimis, *3D patterning of ZnO nanostructures*, Mater. Today **20** (2017), 392.
- <u>G. Kenanakis</u>, Ch. P. Mavidis, E. Vasilaki, N. Katsarakis, M. Kafesaki, E. N. Economou, C. M. Soukoulis, *Perfect absorbers based on metal insulator metal structures in the visible region: a simple approach for practical applications*, Appl. Phys. A **123** (2017), 77.
- E. Drakakis, E. Kymakis, G. Tzagkarakis, D. Louloudakis, M. Katharakis, <u>G. Kenanakis</u>, M. Suchea, V. Tudose, E. Koudoumas, A study of the electromagnetic shielding mechanisms in the GHz frequency range of graphene based composite layers, Appl. Surf. Sci. **398** (2017), 15-18.
- 38. E. Gavgiotaki, G. Filippidis, H. Markomanolaki, <u>G. Kenanakis</u>, S. Agelaki, V. Georgoulias, and I. Athanassakis, *Distinction between breast cancer cell subtypes using third harmonic generation microscopy*, J. Biophotonics **10** (2017), 1152-1162.
- <u>G. Kenanakis</u>, K. C. Vasilopoulos, Z. Viskadourakis, N.-M. Barkoula, S. H. Anastasiadis, M. Kafesaki, E. N. Economou, and C. M. Soukoulis, *Electromagnetic shielding effectiveness and mechanical properties of graphite-based polymeric films*, *Appl. Phys. A* **122** (2016), 802.
- 36. <u>G. Kenanakis</u>, E. N. Economou, C. M. Soukoulis, and M. Kafesaki, *Controlling THz and far-IR waves with chiral and bianisotropic metamaterials*, EPJ Appl. Metamat. **2** (2015), 15.

- 35. Mikhail V. Shuba, Alesia G. Paddubskaya, Polina P. Kuzhir, Sergey A. Maksimenko, Gintaras Valusis, Nikolai A. Poklonski, Stefano Bellucci, <u>George Kenanakis</u>, and Maria Kafesaki, *Temperature induced modification of the mid-infrared response of single-walled carbon nanotubes*, J. Appl. Phys. **119** (2016), 104303.
- 34. Dimitrios Louloudakis, Dimitra Vernardou, Emmanuel Spanakis, Mirela Suchea, <u>George Kenanakis</u>, Martyn Pemble, Constantine Savvakis, Nikolaos Katsarakis, Emmanuel Koudoumas, and George Kiriakidis, *Atmospheric pressure chemical vapor deposition of amorphous tungsten doped vanadium dioxide for smart window applications*, Adv. Mater. Lett. **7** (2016) 100-150.
- 33. Melani A. Frysali, Lampros Papoutsakis, <u>George Kenanakis</u>, and Spiros H. Anastasiadis, *Functional Surfaces with Photocatalytic Behavior and Reversible Wettability: ZnO Coating on Silicon Spikes*, J. Phys. Chem. C **119** (2015) 25401-25407.
- 32. <u>George Kenanakis</u>, Costas M. Soukoulis, and Eleftherios N. Economou, *Casimir forces of metallic microstructures into cavities*, Phys. Rev. B **92** (2015), 075430.
- 31. I. Vamvasakis, I. Georgaki, D. Vernardou, <u>G. Kenanakis</u>, N. Katsarakis, *Synthesis of WO₃ catalytic powders: evaluation of photocatalytic activity under NUV/visible light irradiation and alkaline reaction pH*, J. Sol-Gel Sci. Technol. **76** (2015), 120-128.
- 30. <u>G. Kenanakis</u>, D. Vernardou, A. Dalamagkas and N. Katsarakis, *Photocatalytic and electrooxidation properties of TiO*₂ thin films *deposited by sol-gel*, Catal. Today **240** (2015), 146-152.
- 29. <u>G. Kenanakis</u>, A. Xomalis, A. Selimis, M. Vamvakaki, M. Farsari, M. Kafesaki, C.M. Soukoulis, and E.N. Economou, *Three-Dimensional Infrared Metamaterial with Asymmetric Transmission*, ACS Photonics **2** (2015), 287-294.
- 28. M. Suchea, I.V. Tudose, G. Tzagkarakis, <u>G. Kenanakis</u>, M. Katharakis, E. Drakakis, E. Koudoumas, *Nanostructured composite layers for electromagnetic shielding in the GHz frequency range*, Appl. Surf. Sci. **352** (2015), 151-154.
- 27. <u>G. Kenanakis</u>, and N. Katsarakis, Ultrasonic spray pyrolysis growth of ZnO and ZnO:Al nanostructured films: Application to photocatalysis, Mater. Res. Bull. **60** (2014), 752-759.
- 26. <u>G. Kenanakis</u>, R. Zhao, N. Katsarakis, M. Kafesaki, C.M. Soukoulis, and E.N. Economou, *Optically controllable THz chiral metamaterials*, Opt. Express **22** (2014), 12149-12159.
- 25. <u>G. Kenanakis</u>, and N. Katsarakis, *ZnO nanowires on glass via chemical routes: A prospective photocatalyst for indoors applications*, J. Env. Chem. Eng. **2** (2014), 1416-1422.
- 24. <u>G. Kenanakis</u>, and N. Katsarakis, *Chemically grown TiO*₂ on glass with superior photocatalytic properties, J. Env. Chem. Eng. **2** (2014), 1748-1755.
- 23. <u>G. Kenanakis</u>, N. Katsarakis E. Koudoumas, Influence of precursor type, deposition time and doping concentration on the morphological, electrical and optical properties of ZnO and ZnO:Al thin films grown by ultrasonic spray pyrolysis, Thin Solid Films **555** (2014), 62-67.
- 22. <u>G. Kenanakis</u>, M. Pervolaraki, J. Giapintzakis, N. Katsarakis, *The use of pulsed laser deposited seed layers for the aqueous solution growth of highly-oriented ZnO nanowires on sapphire substrates at 95 °C: Study of their photocatalytic activity in terms of octadecanoic (stearic) acid degradation, Appl. Catal., A 467 (2013), 559-567.*
- 21. Dimitra Vernardou, Antonis Sapountzis, Emmanouel Spanakis, <u>George Kenanakis</u>, Emmanouil Koudoumas, and Nikolaos Katsarakis, *Electrochemical activity of electrodeposited V₂O₅ coatings*, J. Electrochem. Soc **160** (2013), D6-D9.
- 20. <u>G. Kenanakis</u>, R. Zhao, A. Stavrinidis, G. Konstantinidis, N. Katsarakis, M. Kafesaki, C.M. Soukoulis, E.N. Economou, *Flexible Chiral metamaterials in the terahertz regime: A comparative study of various designs*, Opt. Mater. Express **2** (2012), 1702-1712.
- 19. <u>G. Kenanakis</u>, N.-H. Shen, Ch. Mavidis, N. Katsarakis, M. Kafesaki, C.M. Soukoulis, E.N. Economou, *Microwave and THz sensing using slab-pair-based metamaterials*, Physica B **407** (2012), 4070-4074.
- 18. A. Reyes-Coronado, M.F. Acosta, R.I. Merino, V.M. Orera, <u>G. Kenanakis</u>, N. Katsarakis, M. Kafesaki and C.M. Soukoulis, *Self-organization approach for THz polaritonic metamaterial*, Opt. Express **20** (2012), 14663-14682.
- 17. <u>G. Kenanakis</u>, D. Vernardou, N. Katsarakis, *Light-induced self-cleaning properties of ZnO nanowires grown at low temperatures*, Appl. Catal., A **411-412** (2012), 7-14.
- 16. <u>G. Kenanakis</u>, M. Androulidaki, D. Vernardou, N. Katsarakis, E. Koudoumas, *Photoluminescence study of ZnO structures grown* by Aqueous Chemical Growth, Thin Solid Films **520** (2011), 1353-1357.
- 15. <u>G. Kenanakis</u>, N. Katsarakis, *Light-induced photocatalytic degradation of stearic acid by c-axis oriented ZnO nanowires*, Appl. Catal., A **378** (2010), 227-233.
- 14. <u>G. Kenanakis</u>, Z. Giannakoudakis, D. Vernardou, C. Savvakis, N. Katsarakis, *Photocatalytic degradation of stearic acid by ZnO thin films and nanostructures deposited by different chemical routes*, Catal. Today **151** (2010), 34-38.
- 13. D. Vernardou, E. Spanakis, <u>G. Kenanakis</u>, E. Koudoumas and N. Katsarakis, *Hydrothermal growth of V₂O₅ photoactive films at low temperatures*, Mater. Chem. Phys. **124** (2010), 319-322.
- 12. A. Reyes-Coronado, M.F. Acosta, R.I. Merino, V.M. Orera, <u>G. Kenanakis</u>, N. Katsarakis, M. Kafesaki and C.M. Soukoulis, *Electromagnetic response of anisotropic eutectic metamaterials in THz range*, AIP Conf. Proc. **1291** (2010), 148-150.
- 11. N.H. Shen, <u>G. Kenanakis</u>, M. Kafesaki, N. Katsarakis, E.N. Economou and C.M. Soukoulis, *Parametric investigation and analysis* of fishnet metamaterials in the microwave regime, J. Opt. Soc. Am. B **26** [12] (2009), B61-B67.
- 10. D. Vernardou, G. Kalogerakis, E. Stratakis, <u>G. Kenanakis</u>, E. Koudoumas and N. Katsarakis, *Photoinduced hydrophilic and photocatalytic response of hydrothermally grown TiO*₂ nanostructured thin films, Solid State Sci. **11** (2009), 1499-1502.
- 09. <u>G. Kenanakis</u>, D. Vernardou, E. Koudoumas and N. Katsarakis, *Growth of c-axis oriented ZnO nanowires from aqueous solution: The decisive role of a seed layer for controlling the wires' diameter*, J. Cryst. Growth **311** (2009), 4799-4804.

- 08. D. Vernardou, E. Stratakis, <u>G. Kenanakis</u>, H.M. Yates, S. Couris, M.E. Pemble, E. Koudoumas and N. Katsarakis, *One Pot Direct Hydrothermal Growth of Photoactive TiO*₂ *Films on Glass*, J. Photochem. Photobiol. A, **202** (2009), 81-85.
- 07. <u>G. Kenanakis</u>, E. Stratakis, K. Vlachou, D. Vernardou, E. Koudoumas, N. Katsarakis, *Light induced reversible hydrophilicity of ZnO structures grown by Aqueous Chemical Growth*, Appl. Surf. Sci. **254** (2008), 5695-5699.
- 06. D. Vernardou, <u>G. Kenanakis</u>, K. Vlachou, E. Koudoumas, G. Kiriakidis, N. Katsarakis, *Influence of solution concentration and temperature on the aqueous chemical growth of zinc oxide structures*, Phys. Status Solidi A **5** (2008), 3348-3352.
- 05. S. Foteinopoulou, <u>G. Kenanakis</u>, N. Katsarakis, I. Tsiapa, M. Kafesaki, E.N. Economou, C.M. Soukoulis, *Experimental verification of backwards wave propagation at photonic crystal surfaces*, Appl. Phys. Lett. **91** (2007), 214102-1-3.
- 04. D. Vernardou, <u>G. Kenanakis</u>, S. Couris, A.C. Manikas, G.A. Voyiatzis, M. E. Pemble, E. Koudoumas and N. Katsarakis, *The effect of growth time on the morphology of ZnO structures deposited on Si (100) by the aqueous chemical growth technique*, J. Cryst. Growth **308** (2007), 105-109.
- 03. D. Vernardou, <u>G. Kenanakis</u>, S. Couris, E. Koudoumas, E. Kymakis, N. Katsarakis, *pH effect on the morphology of ZnO nanostructures with aqueous chemical growth*, Thin Solid Films **515** (2007), 8764-8767.
- 02. <u>G. Kenanakis</u>, D. Vernardou, E. Koudoumas, G. Kiriakidis, N. Katsarakis, *Ozone sensing properties of ZnO nanostructures grown by the aqueous chemical growth technique*, Sens. Actuators B **124** (2007), 187-191.
- 01. <u>G. Kenanakis</u>, M. Androulidaki, E. Koudoumas, C. Savvakis, N. Katsarakis, *Photoluminescence of ZnO nanostructures grown by the aqueous chemical growth technique*, Superlattice Microst. **42** (2007), 473-478.

1418 citations, h-factor=23 according to Web of Science (WoS),

1755 citations, h-factor=26 according to Google Scholar

Publications in refereed Conference Proceedings with ISBN (International Standard Book Number)

- 09. M. Kafesaki, <u>G. Kenanakis</u>, E.N. Economou, C.M. Soukoulis, *Chiral metamaterials: A tool for THz polarization control*, 16th International Conference on Transparent Optical Networks (ICTON), ISBN: 9781479956029, Th. B5.2 (2014).
- M. Kafesaki, A. Reyes-Corronado, S. Foteinopoulou, <u>G. Kenanakis</u>, N. Katsarakis, M.A. Acosta, R.I. Merino, V.M. Orera, V. Myroshnychenko, J. de Abajo, E.N. Economou, C.M. Soukoulis, *THz manipulation and superlensing using polaritonic metamaterials*, Metamaterials'2011 Proceedings, ISBN 978-952-67611-0-7, p. 1003-1005 (2011).
- 07. A. Reyes-Coronado, M.F. Acosta, R.I. Merino, V.M. Orera, <u>G. Kenanakis</u>, N. Katsarakis, M. Kafesaki and C.M. Soukoulis, *Electromagnetic response of anisotropic eutectic metamaterials in THz range*, AIP Conference Proceedings 1291, ISBN: 978-0-7354-0846-3, p.148-150 (2010).
- <u>G. Kenanakis</u>, C. Savvakis, and N. Katsarakis, *Light-induced photocatalytic degradation of stearic acid by c-axis ZnO oriented nanowires*, Proc. 1st International Workshop on Application of Redox Technologies in the Environment, (Istanbul, Turkey, 14-15 September), ISBN 9789755613543 & 9755613544, p.135-137 (2009).
- 05. <u>G. Kenanakis</u>, N. Lyroni, D. Vernardou and N. Katsarakis, *Light-induced photocatalytic degradation of methylene blue by ZnO and TiO₂ nanostructures deposited onto polymer substrates*, Proc. 1st International Workshop on Application of Redox Technologies in the Environment, (Istanbul, Turkey, 14-15 September), ISBN 9789755613543 & 9755613544, p.159-161 (2009).
- K. Kolodziejak, D. Pawlak, <u>G. Kenanakis</u>, N. Katsarakis, S. Foteinopoulou, M. Kafesaki, *Electromagnetic and other properties of MnTiO₃ TiO₂*, Metamaterials 2009 3rd International Congress on Advanced Electromagnetic Materials in Microwaves and Optics, (London, UK, August 30 September 4, 2009), ISBN 978-0-9551179-6-1, p. 824-826.
- 03. K. Kolodziejak, S. Turczynski, A. Klos, D. Pawlak, N. Katsarakis, <u>G. Kenanakis</u>, K. Rozniatowski, *Self-organized TiO₂-MnTiO₃ fishnet-like microstructure*, The 2nd European Topical Meeting on Nanophotonics and Metamaterials, (Tirol, Austria, 5-8 January 2009), Book of abstracts TUE4f.37.
- 02. E. Spanou, A. Kyprianou, G.E. Georgiou, D. Vernardou, <u>G. Kenanakis</u>, E. Kymakis, N. Katsarakis, E Koudoumas, *Metal oxide nanostructures for use in organic photovoltaic cells*, Proc. DEMSEE 2008 International Conference on Deregulated Electricity Market Issues in South-Eastern Europe, (Nicosia, Cyprus, September 22-23)), ISBN: 86-80581-81-X, Paper ref No: 152 (2008).
- 01. <u>G. Kenanakis</u>, Z. Giannakoudakis, D. Vernardou, E. Koudoumas and N. Katsarakis, *Structural, optical and photocatalytic properties of ZnO thin films and nanostructures deposited by different chemical routes*, Proc. 7th International Conference on Coatings on Glass and Plastics, (Eindhoven The Netherlands, 15-19 June)), ISBN 978-90-5986-281-4, p.113-114 (2008).

Book Chapters

- 4. <u>G. Kenanakis</u>, I. Georgaki, N. Katsarakis, *Environmental Technology*, Notes for laboratory course "Environmental technology" in Electrical Engineering department, ed. TEI of Crete (2011).
- 3. <u>G. Kenanakis</u>, N. Katsarakis, E. Geneiatakis, *Electrochemistry and Materials Technology*, Notes for laboratory course "Electrochemistry and Material's Science" in Electrical Engineering department, ed. TEI of Crete (2008).
- 2. <u>G. Kenanakis</u>, Z. Viskadourakis, C. Savvakis, *Quality control and materials technology*, Notes for laboratory course "Material's Science and Engineering" in Mechanical Engineering department, ed. TEI of Crete (2007).
- 1. A. Myrilla, <u>G. Kenanakis</u>, *Bioremediation of contaminated Landfills Chapter 6: Case studies*, Technical Camber of Greece, ISBN: 960-88663-0-8, Heraklion, May 2006.

Guest editor in Special Issues of refereed journals

- <u>"Graphene-Based Metasurfaces"</u>, a special issue of *MDPI Crystals* (ISSN 2073-4352). This special issue belongs to the section "Hybrid and Composite Crystalline Materials". <u>https://www.mdpi.com/journal/crystals/special_issues/graphene_based_metasurfaces</u>.
- <u>"Advanced Nanomaterials for Electronic and Photonic Applications"</u>, a special issue of *MDPI Materials* (ISSN 1996-1944). This special issue belongs to the section "Electronic Materials". <u>https://www.mdpi.com/journal/materials/special issues/electronic meta photonic</u>.

Distinctions - Awards

- <u>Cover of ACS Photonics Journal</u>, Volume 6 (Number 3), March 2019: "Experimental Demonstration of Ultrafast THz Modulation in a Graphene-Based Thin Film Absorber through Negative Photoinduced Conductivity".
- Cover of LaserLab-Europe Newsletter, Issue 24, December 2017: "Laser-made 3D zinc oxide nanostructures".
- <u>Cover of Materials Today journal</u>, December 2016: "ZnO grown on 3D structures".
- <u>Member of project team</u> "Extending electromagnetism through novel artificial materials EXEL" which was awarded from the European Union with the "DESCARTES" Prize for Research Laureates for its innovative scientific work in left-handed metamaterials in December 2005 (coordinator of the project: Prof. Costas Soukoulis).

Invited talks to peer-reviewed, internationally established conferences and advanced schools

- 07. "Fused Deposition Modeling 3D printed metasurfaces for microwave applications", everbrite online conference on Materials and Structures for Additive Manufacturing, Centre for Additive Layer Manufacturing (CALM), University of Exeter, UK, September 6, 2020.
- 06. *"A platform for ultrafast control in THz graphene-based metasurfaces"*, SPIE's 'Defense + Commercial Sensing' (DCS) conference (Next-Generation Spectroscopic Technologies XII: Terahertz technologies, instrumentation, and applications), Anaheim, California, USA, April 26-30, 2020.
- 05. *"3D printed nanocomposite structures for energy and environmental applications"*, 2nd International Conference on 3D Printing, 3D Bioprinting, Digital and Additive Manufacturing (I3D19), Thessaloniki, Greece, July 1-5, 2019.
- 04. "ZnO and TiO₂ nanostructured polymeric samples with enhanced photocatalytic behavior", Advances On PhotoCatalysis AdvPhotoCat2015 International Workshop 1st Edition 2015, Iasi, Romania, July 6-8, 2015.
- 03. "Chiral metamaterials: A tool for THz polarization control", 16th International Conference on Transparent Optical Networks (ICTON 2014), Graz, Austria, July 6-10, 2014.
- 02. *"Direct laser writing: principles, materials, and applications",* 5th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META'14), Singapore, May 20-23, 2014.
- 01. "Environmental impact assessments (EIA) for seawater desalination plants", 1st meeting on "Prospects of marine water desalination systems in lerapetra and exploitation of Renewable Energy Sources", TEI of Crete, lerapetra, Crete, Greece, February 16, 2008.

Organization of international conferences/schools

- 10. <u>September 2018</u>: "12th International Conference on Physics of Advanced Materials" (ICPAM-12), Heraklion, Crete, Greece, September 22-28, 2018.
- 09. <u>September 2018</u>: "3st Autumn School on Physics of Advanced Materials" (PAMS-1), Heraklion< Crete, Greece, September 22-28, 2018.
- 08. July 2017: "Advances on Photocatalysis" (AdvPhotoCat-E 2017) The 2nd International Workshop, Heraklion, Crete, Greece, July 14-16, 2017.
- 07. <u>September 2016</u>: "The 10th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics" (Metamaterials 2016), Chania, Crete, Greece, September 17-22, 2016.
- 06. <u>September 2014</u>: "10th International Conference on Physics of Advanced Materials" (ICPAM-10), Iași, Romania, September 22-28, 2014.
- 05. September 2014: "1st Autumn School on Physics of Advanced Materials" (PAMS-1), Iași, Romania, September 22-28, 2014.
- 04. <u>June 2011</u>: "Wave Propagation: From Electrons to Photonic Crystals and Metamaterials" Rethymnon, Crete, Greece, June 8-11, 2011.
- 03. <u>December 2010</u>: "European School on Experimental Characterization of Electromagnetic Metamaterials", Heraklion, Greece, December 13-17, 2010.
- 02. <u>June 2009</u>: "The 8th International Conference on the Electrical, Transport and Optical Properties of Inhomogeneous Media" (ETOPIM8), Rethymnon, Crete, Greece, June 7-12, 2009.
- 01. June 2009: Metamorphose school on "Fabrication and Optical Properties of Nanostructured Metamaterials", Rethymnon, Crete, Greece, June 12-13, 2009.

Active reviewer of Funding Organizations

- Czech Science Foundation (GAČR), Prague, Czech Republic
- Technology Foundation (STW), Netherlands
- King Fahd University of Petroleum & Minerals (KFUPM), Dhahran, Saudi Arabia
- Greek General Secretariat for Research and Technology (GSRT), Greece
- Hellenic Foundation for Research and Innovation (HFRI), Greece
- Research Promotion Foundation's (RPF) Innovation and Research Information System (IRIS), Cyprus

Active reviewer of International Journals

- Advanced Materials
- ACS Applied Materials & Interfaces
- Carbon
- Applied Catalysis B: Environmental
- Applied Catalysis A: Chemistry
- Nanotechnology (IOPscience)
- Applied Physics Letters
- Chemical Engineering Journal
- Nanomaterials (MDPI open access publishing)
- Sensors (MDPI open access publishing)
- Photonics (MDPI open access publishing)
- Applied Sciences (MDPI open access publishing)
- Journal of Photochemistry and Photobiology A: Chemistry
- IEEE Photonics Journal
- Colloids and Surfaces A: Physicochemical and Engineering Aspects

- Optical Materials Express
- Optics Letters
- Solar Energy Materials and Solar Cells
- Surface and Coatings Technology
- Applied Physics A
- Applied Physics B
- Materials Letters
- Journal of Industrial and Engineering Chemistry
- Materials Science and Engineering B
- Microelectronic Engineering
- Journal of the Optical Society of America A
- Superlattices and Microstructures
- Crystal Research and Technology
- Journal of Advanced Oxidation Technologies
- International Journal of Smart and Nano Materials

Academy memberships

- American Chemical Society, <u>http://www.acs.org/</u>
- American Physical Society, <u>http://www.aps.org/</u>
- Institute of Physics, <u>http://www.iop.org/</u>
- Metamorphose Virtual Institute, <u>http://www.metamorphose-vi.org/</u>
- Optical Society of America, <u>http://www.osa.org/</u>
- Hellenic Photonic Association, <u>http://photonicsgr.com/photonics-in-greece/</u>
- Nanotechnologies & Nanobiotechnologies (Nano | Net), <u>http://www.nano-net.gr/</u>
- Pan-Hellenic Association of Chemical Engineers, <u>http://www.psxm.org/</u>
- Technical Chamber of Greece, <u>http://portal.tee.gr/portal/page/portal/TEE_HOME</u>
- Standing Committee on the environment, Technical Chamber of Greece, part of Eastern Crete (TEE/TAK): 2010-2013, <u>http://www.teetak.gr/</u>
- Standing Committee on research and new technologies, Technical Chamber of Greece, part of Eastern Crete (TEE/TAK): 2014-2017, <u>http://www.teetak.gr/</u>

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- Prof. Maria Kafesaki, Materials Science and Technology Dept., University of Crete, Greece & IESL FORTH
- Dr. Emmanouel Stratakis, IESL FORTH
- Dr. Maria Farsari, IESL FORTH
- XPECTRALTEK LDA, Braga Portugal, <u>https://www.xpectraltek.com/index.php</u>
- PLASTIKA KRITIS S.A., Heraklion, Crete Greece, <u>https://www.plastikakritis.com/en</u>
- AKEK S.A., Heraklion, Crete Greece, <u>https://www.akek.gr/1/index.php/en</u>
- Thrace Nonwovens & Geosynthetics S.A., member of Thrace Group, Xanthi Greece <u>https://www.thracegroup.com/tr/en/companies/thrace-ng/</u>

Presentations in international scientific conferences

- 01. G. T. Oumbe Tekam, <u>G. Kenanakis</u>, J. Danckaert, and V. Ginis, *Microwave energy harvesting using metasurfaces with different polarizations*, 24th Annual Symposium of the IEEE Photonics Benelux Chapter, Amsterdam, The Netherlands, November 21-22, 2019.
- O. Tsilipakos, A. Pitilakis, A. C. Tasolamprou, C. Liaskos, A. Tsioliaridou, F. Liu, M. S. Mirmoosa, X. Wang, K. Kossifos, J. Georgiou, A. Pitsillides, N. V. Kantartzis, D. Manessis, S. Ioannidis, <u>G. Kenanakis</u>, G. Deligeorgis, E. N. Economou, C. M. Soukoulis, S. A. Tretyakov, M. Kafesaki, *Software-Defined Metasurfaces: The VISORSURF Project Approach*, 13th International Congress on Artificial Materials for Novel Wave Phenomena - Metamaterials 2019, Rome, Italy, September 16-21, 2019.
- 03. A. Maniadi, N. Vidakis, M. Petousis, <u>G. Kenanakis</u>, Z. Viskadourakis, M. Suchea, M. Vamvakaki, E. Koudoumas, *Mechanical properties of ABS/ZnO nanocomposites developed via 3D printing*, 34th annual Panhellenic Conference on Solid State Physics and Materials Science (XXXIV SSM 2019), Patras, Greece, September 11-14, 2019.
- 04. N. Vidakis, A. Maniadi, M. Petousis, <u>G. Kenanakis</u>, M. Suchea, M. Vamvakaki, E. Koudoumas, *Basic characteristics and electrical behavior of Acrylonitrile Butadiene Styrene/Zinc Oxide nanocomposites*, 34th annual Panhellenic Conference on Solid State Physics and Materials Science (XXXIV SSM 2019), Patras, Greece, September 11-14, 2019.
- 05. Anastasios D. Koulouklidis, Anna C. Tasolamprou, Christina Daskalaki, Charalampos P. Mavidis, <u>George Kenanakis</u>, George Deligeorgis, Zacharias Viskadourakis, Polina Kuzhir, Maria Kafesaki, Eleftherios N. Economou, Costas M. Soukoulis, and Stelios Tzortzakis, *Demonstration of Ultrafast THz Absorption Modulation in a Graphene-Based Thin Absorber*, 44th International Conference on Infrared, Millimeter, and Terahertz Waves (IRMMW-THz 2019), Paris, France, September 1-6. 2019.
- 06. A. C. Tasolamprou, O. Tsilipakos, A. Pitilakis, C. Liaskos, A. Tsioliaridou, F. Liu, M. S. Mirmoosa, X. Wang, K. Kossifos, J. Georgiou, A. Pitsillides, N. V. Kantartzis, D. Manessis, S. Ioannidis, <u>G. Kenanakis</u>, G. Deligeorgis, E. N. Economou, C. M. Soukoulis, S. A. Tretyakov, M. Kafesaki, *The Software-Defined Metasurfaces Concept and Electromagnetic Aspects*, 10th International Conference on Metamaterials, Photonic Crystals and Plasmonics META19, Lisbon, Portugal, July 23-26, 2019.
- 07. G. Kenanakis, *3D printed nanocomposite structures for energy and environmental applications* (invited talk), 2nd International Conference on 3D Printing, 3D Bioprinting, Digital and Additive Manufacturing (I3D19), Thessaloniki, Greece, July 1-5, 2019.
- 08. Vassilis M. Papadakis, and <u>George Kenanakis</u>, *Hybrid spectroscopic microscopy for the characterization of dried DNA samples*, SPIE Optical Metrology 2019, Munich, Germany, June 24-27, 2019.
- 09. Anastasios D. Koulouklidis, Anna C. Tasolamprou, Christina Daskalaki, Charalampos P. Mavidis, <u>George Kenanakis</u>, George Deligeorgis, Zacharias Viskadourakis, Polina Kuzhir, Maria Kafesaki, Eleftherios N. Economou, Costas M. Soukoulis, Stelios Tzortzakis, *Experimental Observation of Ultrafast THz Absorption Modulation in a Graphene-Based Metasurface*, 2019 Conference on Lasers & Electro-Optics/Europe and European Quantum Electronics Conference (CLEO®/Europe EQEC), Munich, Germany, June 23-27, 2019.
- 10. Z. Viskadourakis, and <u>G. Kenanakis</u>, *3D printed nanocomposite structures for energy and environmental applications*, 12th International Conference on Physics of Advanced Materials" (ICPAM-12), Heraklion, Crete, Greece, September 22-28, 2018.
- 11. Zacharias Viskadourakis, K. C. Vassilopoulos, E. N. Economou, C. M. Soukoulis, and <u>G. Kenanaki</u>s, *Electromagnetic shielding performance of 3D printed polymer composites*, 33rd annual Panhellenic Conference on Solid State Physics and Materials Science, Nicosia, Cyprus, September 17-19, 2018.
- 12. Anna C. Tasolamprou, Charalampros Mavidis, Anastasios D. Koulouklidis, Cristina Daskalaki, <u>George Kenanakis</u>, George Deligeorgis, Polina P. Kuzhir, Stelios Tzortzakis, Maria Kafesaki, Elefterios Economou, and Costas Soukoulis, *Optically induced absorption modulation in a graphene-based metasurface*, International Conference on Nanotechnologies and Bionanoscience (NanoBio), Heraklion, Crete, September 24-28, 2018.
- 13. Spiros H. Anastasiadis, Melani A. Frysali, <u>George Kenanakis</u>, Georgia Kaklamani, Lampros Papoutsakis, *Multi-functional surfaces with controllable wettability and water adhesion*, APS March Meeting 2017 (Session H10: Physics of Polymer Surfaces and Interfaces I), New Orleans, Louisiana USA, March 13-17, 2017.
- 14. Ch. P. Mavidis, <u>G. Kenanakis</u>, G. Deligiorgis, Polina P. Kuzhir, M. Kafesaki, E. N. Economou, C. M. Soukoulis, *Graphene-Dielectric-Metal tunable THz perfect absorber*, 2nd Israel-Greece Joint Meeting on Nanotechnology and BioNanoscience, Heraklion, Greece, October 25-28, 2016.
- 15. E. Gavgiotaki, G. Filippidis, H. Markomanolaki, <u>G. Kenanakis</u>, S. Agelaki, V. Georgoulias, I. Athanassakis,, *Breast cancer cell lines discrimination by employing Third Harmonic Generation microscopy as a diagnostic tool*, 2nd Israel-Greece Joint Meeting on Nanotechnology and BioNanoscience, Heraklion, Greece, October 25-28, 2016.
- 16. Melani A. Frysali, Georgia Kaklamani, <u>Georgios Kenanakis</u>, Lampros Papoutsakis, Spiros H. Anastasiadis, *Development of multi-functional surfaces with controllable wettability*, COST Action "Multi-Functional Nano-Carbon Composite Materials", Heraklion, Crete, October 19-20, 2016.
- 17. M. Kafesaki, <u>G. Kenanakis</u>, A.C. Tasolamprou, E.N. Economou, C.M. Soukoulis, *THz polarization control with chiral and bianisotropic metamaterials and metasurfaces*, International Conference on Transparent Optical Networks (ICTON 2016), Trento, Italy, July 10-14, 2016.
- 18. M. Kafesaki, A. Xomalis, E.N. Economou, <u>G. Kenanakis</u>, M. Farsari, G. Konstantinidis, C.M. Soukoulis, *THz and Far-IR Control with Chiral and Bianisotropic Metamaterials*, 7th Forum on New Materials (CIMTEC 2016), Perugia, Italy, June 5-9, 2016.

- M. Farsari, A. Giakoumaki, <u>G. Kenanakis</u>, A. Klini, Z. Viskadourakis, *Three-Dimensional Patterning of ZnO Nanostructure*, 10th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics (Metamaterials' 2016), Platanias-Chania, Greece, September 17-22, 2016.
- C. P. Mavidis, <u>G. Kenanakis</u>, G. Deligeorgis, M. Kafesaki, E. N. Economou, C. M. Soukoulis, *Graphene-Dielectric-Metal Tunable THz Perfect Absorber*, 10th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics (Metamaterials' 2016), Platanias-Chania, Greece, September 17-22, 2016.
- G. Perrakis, <u>G. Kenanakis</u>, M. Kafesaki, C. M. Soukoulis, E. N. Economou, *Perfect Electromagnetic Absorbers and Sensors Based* on Surface Plasmon Polaritons, 10th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics (Metamaterials' 2016), Platanias-Chania, Greece, September 17-22, 2016.
- 22. Konstantinos C. Vasilopoulos, <u>George Kenanakis</u>, and Spiros H. Anastasiadis, *In-situ FTIR and UV-VIS characterization possibilities using custom flow-cell and controlled temperature setups and apparatuses*, QualityNano Conference and Training Workshop, Heraklion, Crete Greece, July 15-17, 2015.
- M. A. Frysali, L. Papoutsakis, <u>G. Kenanakis</u>, E. Stratakis, G. Mountrichas, S. Pispas, and S. H. Anastasiadis, *Controllably Wetted Rough Polymeric Surfaces exhibiting photocatalytic activity*, 12th International Conference on Nano sciences and Nanotechnology, Thessaloniki, Greece, July 7-10, 2015.
- 24. <u>G. Kenanakis</u>, D. Vernardou and N. Katsarakis, *ZnO and TiO*² nanostructured polymeric samples with enhanced photocatalytic behavior, Advances On PhotoCatalysis AdvPhotoCat2015 International Workshop 1st Edition 2015, Iasi, Romania, July 6-8, 2015.
- <u>G. Kenanakis</u>, M. Kafesaki, E.N. Economou, and C. M. Soukoulis, *THz Control Using Chiral and Switchable-Chiral Metamaterials*, presented in 8th International Conference on Materials for Advanced Technologies of the Materials Research Society of Signapore (ICMAT2015), Signapore, June 28 - July 3, 2015.
- M. Kafesaki, <u>G. Kenanakis</u>, E.N. Economou, and C. M. Soukoulis, *THz polarization control with chiral and bianisotropic metamaterials*, presented in 10th International Electrical, Transport, and Optical Properties of Inhomogeneous Media (ETOPIM 10), Neveh Ilan, Israel, June 21-26, 2015.
- 27. M. A. Frysali, L. Papoutsakis, <u>G. Kenanakis</u>, and S. H. Anastasiadis, *Combined Photo-Active and Controllably Wetted Rough Polymeric Surfaces*, presented in 10th HELLENIC POLYMER SOCIETY CONFERENCE with International Participation (10th HPSC), Conference Center of the University of Patras, Rio-Patras, Greece, December 4-6, 2014
- 28. <u>G. Kenanakis</u>, N. Katsarakis, M. Kafesaki, C.M. Soukoulis and E.N. Economou, *Optically controllable THz chiral metamaterials*, presented in 30th Pan-hellenic conference on Solid-State Physics and Materials Science, Heraklion, Greece, September 21-24, 2014
- 29. Aggelos Xomalis, <u>G. Kenanakis</u>, A. Selimis, M. Kafesaki, M. Farsari, *Three-dimensional photonic crystals and metamaterials made by direct laser writing*, presented in 30th Pan-hellenic conference on Solid-State Physics and Materials Science, Heraklion, Greece, September 21-24, 2014
- G. Tzagkarakis, M. Suchea, I.V. Tudose, <u>G. Kenanakis</u>, M. Katharakis, E. Drakakis, E. Koudoumas, *Nanostructured Coatings for Electromagnetic Shielding in the GHz Frequency Band*, presented in 30th Pan-hellenic conference on Solid-State Physics and Materials Science, Heraklion, Greece, September 21-24, 2014
- 31. M.A. Frysali,, L. Papoutsakis, <u>G. Kenanakis</u>, E. Stratakis and S.H. Anastasiadis, *Polymeric surfaces with controlled wettability exhibiting unidirectional features*, presented in 30th Pan-hellenic conference on Solid-State Physics and Materials Science, Heraklion, Greece, September 21-24, 2014
- 32. Alexandros Selimis, <u>George Kenanakis</u>, Angelos Xomalis, Maria Kafesaki, Maria Farsari, *Direct laser writing: principles, materials, and applications (Invited Paper)*, presented in SPIE NanoScience + Engineering, part of SPIE Optics + Photonics, San Diego, California, United States, August 17-21, 2014
- Maria Kafesaki, <u>George Kenanakis</u>, Eleftherios N. Economou, Costas M. Soukoulis, *THz polarization control using chiral metamaterials*, presented in SPIE NanoScience + Engineering, part of SPIE Optics + Photonics, San Diego, California, United States, August 17-21, 2014
- 34. M. Kafesaki, <u>G. Kenanakis</u>, E.N. Economou, C.M. Soukoulis, *Chiral metamaterials: A tool for THz polarization control (Invited),* presented in the 16th International Conference on Transparent Optical Networks (ICTON 2014), Graz, Austria, July 6-10, 2014.
- 35. Elmina Kabouraki, Aggelos Xomalis, <u>George Kenanakis</u>, Maria Kafesaki, Maria Farsari, *Direct laser writing: principles, materials, and applications (Invited talk)*, presented in the 5th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META'14), Singapore, May 20-23, 2014
- 36. E. Vasilaki, D. Vernardou, I. Georgaki, <u>G. Kenanakis</u>, N. Katsarakis, *TiO₂ / WO₃ photoactive bilayers in the visible-light region*, presented in the 8th European Meeting on Solar Chemistry and Photocatalysis: Environmental Applications (SPEA8) Thessaloniki, Greece, June 25-28, 2014.
- I. Vamvasakis, I. Georgaki, D. Vernardou, <u>G. Kenanakis</u>, N. Katsarakis, *Synthesis of WO₃ catalytic powders: Evaluation of photocatalytic activity under Vis-irradiation and alkaline reaction pH*, presented in the 8th European Meeting on Solar Chemistry and Photocatalysis: Environmental Applications (SPEA8) Thessaloniki, Greece, June 25-28, 2014.

- 38. N. Katsarakis, <u>G. Kenanakis</u>, D. Vernardou, A. Dalamagkas, *Photocatalytic and electrochemical properties of TiO₂ thin films deposited by sol-gel*, presented in the 3rd European conference on environmental applications of Advanced Oxidation Processes (EAAOP-3), Almeria, Spain, October 27-30, 2013.
- 39. <u>G. Kenanakis</u>, N. Katsarakis, D. Vernardou, *Photocatalytic Response of Chemically Grown ZnO and TiO*₂ *Nanostructures on Polymer Substrates*, presented in the 3rd European conference on environmental applications of Advanced Oxidation Processes (EAAOP-3), Almeria, Spain, October 27-30, 2013.
- 40. N. Katsarakis, D. Vernardou, <u>G. Kenanakis</u>, E. Vasilaki, *Photocatalytic properties of WO₃ and WO₃/TiO₂ composites under UV and solar light illumination*, presented in the 3rd European Symposium on Photocatalysis JEP 2013, Portoroz, Slovenia, September 25-27, 2013.
- 41. N. Katsarakis and <u>G. Kenanakis</u>, *Photocatalytic properties of ZnO thin films and nanostructures deposited by Ultrasonic Spray Pyrolysis*, presented in the 3rd European Symposium on Photocatalysis - JEP 2013, Portoroz, Slovenia, September 25-27, 2013.
- 42. M. Kafesaki, <u>G. Kenanakis</u>, E.N. Economou and C.M. Soukoulis, *THz Control Using Chiral Metamaterials*, presented in the 7th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics Metamaterials 2013, Bordeaux, France, September 16-21, 2013.
- 43. N. Katsarakis, <u>G. Kenanakis</u>, *Metal Oxide nano-structured thin films: the effect of the deposition conditions on their photocatalytic properties*, presented in the 12th Panhellenic Symposium of Catalysis, Chania, Greece, October 25-27, 2012.
- 44. <u>G. Kenanakis</u>, N. Katsarakis, *Light-induced photocatalytic degradation of stearic acid and Methylene Blue by c-axis oriented ZnO thin films and nanowires using aqueous solution approaches*, presented in the 4th International Symposium on Transparent Conductive Materials (TCM 2012, former TCOs), Hersonissos, Crete, Greece, October 21-26, 2012.
- 45. <u>G. Kenanakis</u>, N. Lyroni, D. Vernardou and N. Katsarakis, *Light-induced photocatalytic degradation of azo-dyes by ZnO and TiO2 nanostructures deposited onto polymer substrates*, presented in the 4th International Symposium on Transparent Conductive Materials (TCM 2012, former TCOs), Hersonissos, Crete, Greece, October 21-26, 2012.
- 46. <u>G. Kenanakis</u>, N. Katsarakis, E. Koudoumas, *Electrical and optical properties of ZnO and ZnO:Al thin films grown by ultrasonic spray pyrolysis*, presented in the 4th International Symposium on Transparent Conductive Materials (TCM 2012, former TCOs), Hersonissos, Crete, Greece, October 21-26, 2012.
- 47. <u>G. Kenanakis</u>, N. Katsarakis, A. Stavrinidis, G. Konstantinidis, M. Kafesaki, C. M. Soukoulis, E. N. Economou, *Flexible Chiral metamaterials in the terahertz regime: A comparative study of various designs*, presented in "Micro&Nano2012" on Micro Nanoelectronics, Nanotechnologies and MEMS, Kokkini Hani, Heraklion, Greece, October 7-10, 2012
- 48. I. Georgaki, M. Mihailidis, J. Iliadis, <u>G. Kenanakis</u>, D. Vernardou, N. Katsarakis, *Synthetic photo catalytic nano-powders of titanium and zinc oxides degrading persistent organic compounds in industrial effluents*, presented in the IWA Regional Conference on Wastewater Purification & Reuse 2012, Heraklion, Crete, Greece, March 28-30, 2012.
- 49. <u>G. Kenanakis</u> and N. Katsarakis, *Structural, Self-cleaning Properties of ZnO Nanowires Grown at Low Temperatures*, presented in the XXVII Panhellenic Conference on Solid State Physics and Materials Science, Limassol, Cyprus, September 18-21, 2011.
- 50. I. Georgaki, J. Vamvasakis, J. Iliadis, A. Psaroudakis, <u>G. Kenanakis</u>, D. Vernardou and N. Katsarakis, *Structural, Photocatalytic Properties of Metal Oxide Powders and Nanostructures (TiO₂, ZnO and WO₃) Grown at Low Temperatures*, presented in the XXVII Panhellenic Conference on Solid State Physics and Materials Science, Limassol, Cyprus, September 18-21, 2011.
- M. Kafesaki, A. Reyes-Corronado, S. Foteinopoulou, <u>G. Kenanakis</u>, N. Katsarakis, M.A. Acosta, R.I. Merino, V.M. Orera, V. Myroshnychenko, J. de Abajo, E.N. Economou, C.M. Soukoulis, *THz manipulation and superlensing using polaritonic metamaterials*, presented in The Fifth International Congress on Advanced Electromagnetic Materials in Microwaves and Optics - Metamaterials'2011, Barcelona, Spain, October 10-15, 2011.
- A. Reyes-Coronado, M.F. Acosta, R.I. Merino, V.M. Orera, <u>G. Kenanakis</u>, N. Katsarakis, M. Kafesaki and C.M. Soukoulis, *Electromagnetic response of anisotropic eutectic metamaterials in THz range*, presented in the 3rd International Workshop on Theoretical and Computational Nano-Photonics (TaCoNa-Photonics), Physikzentrum, Bad Honnef, Germany, November 3-5, 2010.
- 53. <u>G. Kenanakis</u>, M. Androulidaki, D. Vernardou, N. Katsarakis, E. Koudoumas, *Photoluminescence study of ZnO structures grown by Aqueous Chemical Growth*, presented in the 3rd International Symposium on Transparent Conductive Materials (TCM 2010), Analipsi/Hersonissos, Crete, Greece, October 17-21, 2010.
- 54. <u>G. Kenanakis</u>, C. Savvakis and N. Katsarakis, Light-induced photocatalytic degradation of stearic acid by ZnO thin films and nanostructures deposited by Ultrasonic Spray Pyrolysis, presented in the 3rd International Symposium on Transparent Conductive Materials (TCM 2010), Analipsi/Hersonissos, Crete, Greece, October 17-21, 2010.
- R.I. Merino , M.F. Acosta, V.M. Orera, <u>G. Kenanakis</u>, A. Reyes-Coronado, N. Katsarakis, M. Kafesaki, *Hyperbolic Dispersion Relation in Directionally Solidified Eutectis in the THz Region*, presented in the 9th International Conference on Photonic and Electromagnetic Crystal Structures (PECS-IX 2010), Granada, Spain, September 26-30, 2010.
- 56. R.I. Merino, M.F. Acosta, V.M. Orera, <u>G. Kenanakis</u>, N. Katsarakis, M. Kafesaki, *Optical properties of NaCl-LiF directionally* solidified eutectics in the THz region, presented in the XI Congreso Nacional de Materiales, Zaragoza, Spain, June 23-25, 2010.
- 57. <u>G. Kenanakis</u>, C. Savvakis and N. Katsarakis, *Light-induced photocatalytic degradation of stearic acid by c-axis oriented ZnO nanowires grown at mild temperatures*, presented in the 8th International Conference on Coatings on Glass and Plastics (ICCG 8), Braunschweig, Germany, June 13-17, 2010.

- 58. <u>G. Kenanakis</u>, N. Lyroni, D. Vernardou, N. Katsarakis, *Light-induced photocatalytic degradation of azo dyes by ZnO and TiO₂ nanostructures deposited onto polymer substrates at mild temperatures*, presented in the 8th International Conference on Coatings on Glass and Plastics (ICCG 8), Braunschweig, Germany, June 13-17, 2010.
- 59. A. Klos, M. Gajc, <u>G. Kenanakis</u>, N. Katsarakis, A.E. Nikolaenko, N.I. Zheludev, D.A. Pawlak, *Directional solidifications of metallodielectric compounds*, presented in the 3rd Directionally solidified eutectic ceramics workshop, Seville, Spain, November 11-13, 2009.
- 60. <u>G. Kenanakis</u>, D. Vernardou, N. Katsarakis, *Light-induced photocatalytic degradation of stearic acid by c-axis ZnO oriented nanowires using aqueous solutions*, presented in the 2nd Hellenic Chemistry Post Grads Conference, Platanias, Chania, Crete, September 16-21, 2009.
- 61. <u>G. Kenanakis</u>, C. Savvakis, and N. Katsarakis, *Light-induced photocatalytic degradation of stearic acid by c-axis ZnO oriented nanowires*, presented in the 1st International Workshop on Application of Redox Technologies in the Environment (Arte' 2009), Istanbul, Turkey, September 14-15, 2009.
- 62. <u>G. Kenanakis</u>, N. Lyroni, D. Vernardou and N. Katsarakis, *Light-induced photocatalytic degradation of methylene blue by ZnO and TiO₂ nanostructures deposited onto polymer substrates*, presented in the 1st International Workshop on Application of Redox Technologies in the Environment (Arte'2009), Istanbul, Turkey, Semtember 14-15, 2009.
- 63. <u>G. Kenanakis</u>, C. Savvakis and N. Katsarakis, *Photocatalytic degradation of stearic by ZnO Thin Films and Nanostructures Deposited by Different Chemical Routes*, presented in the 2nd European conference on environmental applications of advanced oxidation (EAAOP 2), Nicosia, Cyprus, September 9-11, 2009.
- 64. K. Kolodziejak, D.A. Pawlak, M. Gajc, B. Andrzejewski, <u>G. Kenanakis</u>, N. Katsarakis, S. Foteinopoulou, M. Kafesaki, *Electromagnetic and other properties of MnTiO*₃ − *TiO*₂ *self organized microstructure*, presented in the "Metamaterials 2009" conference, London, UK, August 30 September 4, 2009.
- <u>G. Kenanakis</u>, N. Katsarakis, M. Kafesaki, C. M. Soukoulis and E. N. Economou, *Experimental study of fishnet and short-slab pair metamaterials in the GHz regime*, presented in the 8th International Conference on the Electrical, Transport and Optical Properties of Inhomogeneous Media (ETOPIM 8), Rethymnon, Crete, Greece, 7 12 June, 2009.
- 66. K. Kolodziejak, S. Turczynski, A. Klos, D.A Pawlak, N. Katsarakis, <u>G. Kenanakis</u> and K. Rozniatowski, *Self-organized TiO₂-MnTiO₃ fishnet-like microstructure*, presented in the 2nd European Topical Meeting on Nanophotonics and Metamaterials (NANOMETA 2009), Seefeld ski resort, Tirol, Austria, 5 8 January, 2009.
- 67. <u>G. Kenanakis</u>, S. Foteinopoulou, M. Kafesaki, N. Katsarakis, E. N. Economou, C. M. Soukoulis, *Slab-pair-based microwave metamaterials*, presented in the 2nd European Topical Meeting on Nanophotonics and Metamaterials (NANOMETA 2009), Seefeld ski resort, Tirol, Austria, 5 8 January, 2009.
- <u>G. Kenanakis</u>, S. Foteinopoulou, M. Kafesaki, N. Katsarakis, E. N. Economou, C. M. Soukoulis, *Fishnet Structure: The Occurrence of Left-Handed Behavior Over a Wide Range of Geometrical Parameters*, presented in the PhOREMOST Workshop "Advances in Nanophotonics", Barcelona, 30-31 October, 2008.
- 69. E. Spanou, A. Kyprianou, G.E. Georgiou, D. Vernardou, <u>G. Kenanakis</u>, E. Kymakis, N. Katsarakis, E Koudoumas, *Metal oxide nanostructures for use in organic photovoltaic cells*, presented in the International Conference on Deregulated Electricity Market Issues in South-Eastern Europe(DEMSEE 2008), Nicosia, Cyprus, 22-23 September, 2008.
- 70. <u>G. Kenanakis</u>, D. Vernardou, Emm. Koudoumas, C. Savvakis and N. Katsarakis, *Structural, Optical and Photocatalytic properties of ZnO Thin Films and Nanostructures Deposited by Different Chemical Routes*, presented in the XXIV Panhellenic Conference on Solid State Physics and Materials Science, Heraklion, Crete, September 21-24, 2008.
- 71. <u>G. Kenanakis</u>, Z. Giannakoudakis, D. Vernardou, E. Kymakis, Emm. Koudoumas and Nikos Katsarakis, *Optical, electrical and photoresponse studies of ZnO thin films grown by chemical routes*, presented in the 2nd International Symposium on Transparent Conductive Oxides (TCOs 2008), Hersonissos, Crete, Greece, October 22 26, 2008.
- 72. D. Vernardou, E. Stratakis, A. Mohamed, <u>G. Kenanakis</u>, Emm. Koudoumas and N. Katsarakis, *Hydrothermal growth of Fe⁺³ doped TiO₂ on glass for self-cleaning applications*, presented in the 2nd International Symposium on Transparent Conductive Oxides (TCOs 2008), Hersonissos, Crete, Greece, October 22 26, 2008.
- 73. D. Vernardou, K. Rizos, K. Moschovis, G. Kortidis, <u>G. Kenanakis</u>, Emm. Koudoumas, N. Katsarakis and G. Kiriakidis, *A comparative study of solution concentration and temperature on the hydrothermally grown ZnO ozone sensors*, presented in the 2nd International Symposium on Transparent Conductive Oxides (TCOs 2008), Hersonissos, Crete, Greece, October 22 26, 2008.
- 74. <u>G. Kenanakis</u>, Z. Giannakoudakis, D. Vernardou, Emm. Koudoumas and N. Katsarakis, *Structural, optical and photocatalytic properties of ZnO thin films and nanostructures deposited by different chemical routes*, presented in the 7th International Conference on Coatings on Glass and Plastics (ICCG 7), Eindhoven The Netherlands, June 15-19, 2008.
- 75. <u>G. Kenanakis</u>, S. Foteinopoulou, I. Tsiapa, T. Gundogdu, R. Penciu, M. Kafesaki, N. Katsarakis, E. N. Economou, C. M. Soukoulis, *Photonic crystals and left-handed materials in FORTH*, presented in the Women in Photonics (WiP) School on Photonic Metamaterials, Organized by the European Networks of Excellence, Metamorphose-VI and Phoremost-NoE, Paris, April 14-18, 2008.
- 76. I. Tsiapa, N. Katsarakis, M. Kafesaki, <u>G. Kenanakis</u>, C. M. Soukoulis, E. N. Economou, *Fishnet Structure: The Occurrence of Left-Handed Behavior Over a Wide Range of Geometrical Parameters*, presented in the Women in Photonics (WiP) School on Photonic Metamaterials, Organized by the European Networks of Excellence, Metamorphose-VI and Phoremost-NoE, Paris, April 14-18, 2008.

- 77. <u>George Kenanakis</u>, Zacharias Giannakoudakis, Dimitra Vernardou, Emmanuel Koudoumas and Nikos Katsarakis, *Comparative study of Zn1-xAlxO thin films and nanostructures deposited by different chemical routes*, presented in the 3rd International Conference Micro & Nano 2007, NCSR Demokritos, Athens, Greece, November 18 21, 2007.
- 78. <u>George Kenanakis</u>, Nikos Katsarakis, Costas Savvakis, *Environmental impact assessments (EIA) for seawater desalination plants*, presented in the 1st meeting on "Prospects of marine water desalination systems in lerapetra and exploitation of Renewable Energy Sources", TEI of Crete, lerapetra, Crete, Greece, February 16, 2008.
- 79. <u>G. Kenanakis</u>, Z. Giannakoudakis, D. Vernardou, E. Koudoumas and N. Katsarakis, *Investigation of the Structural, Morphological and Photocatalytic Properties of ZnO Thin Films and Nanostructures Deposited by Different Chemical Routes*, presented in the XXIII Panhellenic Conference on Solid State Physics and Materials Science, NCSR Demokritos, Athens, September 23 26, 2007.
- 80. D. Vernardou, E. Stratakis, <u>G. Kenanakis</u>, H.M. Yates, S. Couris, M.E. Pemble, E. Koudoumas and N. Katsarakis, *Light-induced reversible hydrophilicity of hydrothermal grown TiO*² *films*, presented in the XXIII Panhellenic Conference on Solid State Physics and Materials Science, NCSR Demokritos, Athens, September 23 26, 2007.
- K. Vlachou, G. Kalogerakis, D. Vernardou, E. Stratakis, <u>G. Kenanakis</u>, E. Koudoumas and N. Katsarakis, *Substrate and deposition time effect on the hydrothermally grown TiO₂ films*, presented in the XXIII Panhellenic Conference on Solid State Physics and Materials Science, NCSR Demokritos, Athens, September 23 26, 2007.
- 82. I. Tsiapa, N. Katsarakis, M. Kafesaki, <u>G. Kenanakis</u>, C.M. Soukoulis, and E.N. Economou, *Fishnet structure: The occurrence of left handed behavior over a wide range of geometrical parameters*, presented in the XXIII Panhellenic Conference on Solid State Physics and Materials Science, NCSR Demokritos, Athens, September 23 26, 2007.
- 83. Nikos Katsarakis, Maria Kafesaki, Irini Tsiapa, <u>George Kenanakis</u>, Eleftherios N. Economou, Costas M. Soukoulis, Thomas Koschny, *Fishnet structure: the occurrence of left-handed behavior over a wide range of geometrical parameters*, presented in the European Materials Research Society (E-MRS) 2007 conference, Strasbourg, France, May 28 June 1, 2007.
- 84. D. Vernardou, E. Stratakis, <u>G. Kenanakis</u>, E. Koudoumas and N. Katsarakis, *Hydrophilicity of ZnO nanostructures grown by aqueous chemical growth*, presented in the European Materials Research Society (E-MRS) 2007 conference, Strasbourg, France, May 28 June 1, 2007.
- D. Vernardou, <u>G. Kenanakis</u>, E. Koudoumas, G. Kiriakidis and N. Katsarakis, *Effect of Deposition Parameters on the Growth of Zinc Oxide Nanostructures Using Chemical Methods*, presented in the European Materials Research Society (E-MRS) 2007 conference, Strasbourg, France, May 28 June 1, 2007.
- I. Tsiapa, <u>G. Kenanakis</u>, S. Foteinopoulou, T. Gundogdu, R. Penciu, M. Kafesaki, N. Katsarakis, E. N. Economou, C. M. Soukoulis, *Left-Handed Electromagnetism in Composite Metamaterials and PC surfaces*, presented in the European Doctoral School on Metamaterials, Warsaw, Poland, May 7-9, 2007.
- 87. <u>G. Kenanakis</u>, S. Foteinopoulou, I. Tsiapa, T. Gundogdu, R. Penciu, M. Kafesaki, N. Katsarakis, E. N. Economou, C. M. Soukoulis, *Photonic crystals and left-handed materials in FORTH*, presented in the Phoremost 2007 conference, Marsalomas, Gran Canaria, Spain, May 2-4, 2007.
- 88. <u>G. Kenanakis</u>, D. Vernardou, E. Koudoumas, N. Katsarakis, *Nanostructures for Ozone sensing: Growth of ZnO on glass by Aqueous Chemical Growth technique*, presented in the 4th International Workshop on ZnO and Related Materials, Giessen, Germany, October 3-6, 2006.
- <u>G Kenanakis</u>, D. Vernardou, M. Suchea, S. Christoulakis, E. Koudoumas, G. Kiriakidis, N. Katsarakis, *Ozone sensing properties of ZnO nanostructures grown by the aqueous chemical growth technique*, presented in the 1st International Symposium on Transparent Conductive Oxides (TCOs 2006), Hersonissos, Crete, Greece, October 23-25, 2006.
- D. Vernardou, <u>G. Kenanakis</u>, S. Couris, E. Koudoumas, E. Kymakis, N. Katsarakis, *Initial studies of pH effect on growth of ZnO nanostructures by aqueous chemical growth*, presented in the 1st International Symposium on Transparent Conductive Oxides (TCOs 2006), Hersonissos, Crete, Greece, October 23-25, 2006.
- 91. <u>G. Kenanakis</u>, M. Androulidaki, E. Koudoumas, C. Savvakis, N. Katsarakis, *Photoluminescence of ZnO nanostructures grown by the aqueous chemical growth technique*, presented in the European Materials Research Society (E-MRS) 2006 conference, Nice, France, May 28 June 1, 2006.
- 92. A. Myrilla, <u>G. Kenanakis</u>, *Bioremediation of Landfill Emissions Case Studies*, presented in "*Bioremediation of contaminated Landfills*" meeting of Technical Camber of Greece, Heraklion, Crete, Greece, June 20th, 2006.

Technical/Research skills

- Synthesis of metal oxide thin films and micro-/nano-structures using chemical and physical techniques such as solution growth, sol-gel, spin-/dip coating, CVD, thermal evaporation etc.
- Materials' characterization using X-ray diffraction (XRD), FT-IR, Raman and UV-Vis spectroscopy, along with microscopy techniques (SEM and AFM).
- Electrical characterization of materials using Impedance spectroscopy, such as Seebeck Coefficient (Thermoelectric power) measurements, employing the so-called 2-probe, 4-probe and Van der Pauw techniques.
- Mechanical properties of several samples using tension/compression and flexural tests
- Experimental study of linear characteristics of radio frequency (RF) components and devices, along with the analysis of signal integrity and materials measurement, using a vector Network analyzer.

Computer knowledge

- Excellent knowledge of operational systems (Unix and Windows); construction techniques; hardware development concepts, practices and procedures; technical and scientific software i.e., spreadsheets; drafting software (AutoCAD, Microsoft Visio and Intergraph Microstation, Origin, Mathematica, MathCAD, MATLAB).
- Excellent knowledge of simulation and finite element analysis software (CST Microwave Studio, Comsol MultiPhysics).
- Excellent knowledge of image editing software (Adobe Photoshop, Paint Shop Pro, Corel Photo Paint, CorelDRAW); 3D modeling, animation, and rendering software (3D Studio MAX, Blender).
- Excellent knowledge of web design software (Macromedia Dreamweaver, Macromedia Flash, Microsoft FrontPage, Microsoft Visual Studio NET).
- In-depth knowledge of programming languages: Large experience with Fortran 77 and knowledge of Fortran 90, Python programming language.
- Deep knowledge of page layout and publishing software (Adobe PageMaker, QuarkXpress).
- Profound skills in interpreting field notes and diagrams, performing complex calculations, and in the use of AM/FM/GIS technology (*ArcView, MapInfo*).