

CURRICULUM VITAE

Personal information

Name, Surname:	Emmanouil Koudoumas		
Date of birth:	10.09.1960	Sex:	Male
Nationality:	Greek		
Researcher unique identifier(s) (ORCID, Researcher ID etc.):	Brain Map ID: https://www.brainmap.ro/e-koudoumas Orcid ID: https://orcid.org/0000-0002-2995-6992 Google Scholar ID: https://scholar.google.com/citations?hl=en&user=B9d5C8gAAAAJ&view_op=list_works&sortby=pubdate ; WoS ID: https://www.webofscience.com/wos/author/record/GXW-0969-2022		
URL for personal website (if case):	https://ece.hmu.gr/en/faculty/koudoumas-emmanuel/		

Education

Year	Faculty/department - University/institution - Country
1978-1983	B.Sc. in Physics, University of Athens, Greece.
1983-1984	M.Sc. in Lasers and their Applications, University of Essex, UK
1984-1987	M.Sc. in Applied Physics, University of Crete, Greece
1987-1991	Ph.D in Physics, "A study of the generation of coherent VUV radiation in Hg" University of Patras, Greece

Positions - current and previous

Year	Job title – Employer - Country
Jul. 2023- today	Project Coordinator, IMT Bucharest, Romania
Dec. 2002- today	Professor, Department of Electrical and Computer Engineering, Hellenic Mediterranean University, Greece
Dec 2022- today	Scientific Advisor, Mediterranean Agrofood Competence Center
Nov. 1997- Nov. 2002	Researcher, FORTH-IESL, Greece
Oct. 1993- Oct. 1997	Research Associate, FORTH-IESL, Greece

Career breaks (if case)

Year	Reason
Apr. 1992-Sept 1993	Army service

Recent project management experience

Year	Project title
2023-2026	"Development of novel nanocomposite materials with tunable conductivity for electromagnetic shielding and potential uses in electronics and optoelectronics applications",

	PNRR/2022/C9/MCID/I8 CF23/ 14 11 2022 contract 760101, Coordinator, IMT Bucharest, 7,000,000.00 LEI, https://www.pnrref23.ro/
2022-2025	"New germicidal materials for biological protection and disinfection", G5868, Coordinator, Hellenic Mediterranean University, €174,900.00.
2019-2023	"Innovative materials for fish farming networks with environmentally friendly anti-pollution action", OPS (MIS) 5029684, Coordinator, Hellenic Mediterranean University, €121,450.00.
2018-2022	"Nanocomposite paints for electromagnetic shielding of electronics", G5477, Coordinator, Hellenic Mediterranean University, €200,000.00.
2020-2023	"Sustainable food packaging based on essential oils in polymer matrices", Scientist-in-charge/Principal Investigator, Hellenic Mediterranean University, €105.000
2018-2021	"Polymeric Nanocomposites for Electromagnetic Shielding applications", Scientific Responsible, Principal Investigator, Hellenic Mediterranean University, € 225.000
2021-2023	"Remote and real-time evaluation of the functionality of polymeric insulators of outdoor high-voltage installations", Scientific Responsible, Principal Investigator, Hellenic Mediterranean University, € 225.000

Other relevant professional experiences

Year	Description - Role
2016-2022	Vice-president of the Research Committee of the Hellenic Mediterranean University
2015-2022	Director of the Master's Program "MBA for Engineers" of the Hellenic Mediterranean University
2018-2021	Vice-president of the Center for Further Education and Lifelong Learning of the Hellenic Mediterranean University
2016-2019	Director of the Laboratory "Center of Materials Technology and Photonics" of the Hellenic Mediterranean University
2019-today	Member of the Editorial Board of two Journals
2003-today	Reviewer in several journals
2012-today	Evaluator of research proposals at national and European level
	Member of the Organizing Committee of: International Symposium on Materials, Electrochemistry and Environment CIMEE http://cimee-science.org/ ; International Conference of Physics of Advanced Materials (ICPAM) www.icpam.ro ; Advances on Photocatalysis including Environmental and Energy Applications AdvPhotoCat-EE https://photocatalysis-workshop.eu/
	Member of the Editorial Board of the Journals: (a) Molecules and (b) Coatings. He is a reviewer in over 25 significant journals in his scientific fields.
	Evaluator of submitted proposals in: (a) National Science Center, Poland, (b) Nederlandse Organisatie voor Wetenschappelijk Onderzoek, (c) SOLAR-ERA.NET, (d) several Greek national calls
	Organization of many events for the promotion of the research activities of his university as well as innovation and entrepreneur, intellectual property, collaboration of academia with the market etc

C.2 Track record of the last 4 years

1. M.P., Sucheana, M., Petruta, I.V., Tudose, Ioan Valentin, C., Romanițan, Cosmin, C., Pachiou, Cristina, M.C., Popescu, Marian C., K., Mouratis, Kyriakos, M., Manica, Marina, Ș., Antohe, Ștefan, S., Couris, Stelios, D.G., Zisopol, Dragos Gabriel, Ionescu Octavian Narcis & Koudoumas Emmanuel, Study of evolution for 3D structured surface with nano-balls and walls-like features with thickness variation for WO₃ thin films made by spray deposition, (2025) Scientific Reports, 15 (1), art. no. 4275.

2. A.G.M., Popescu, Andreea Gabriela Marina, I.V., Tudose, Ioan Valentin, K., Mouratis, Kyriakos, C., Romanițan, Cosmin, O.A., Brincoveanu, O. Andreea, C., Pachiou, Cristina, D., Manica, Dumitru, M., Manica, Marina, P., Șchiopu, Paul, M., Vlădescu, Marian, Ionescu Octavian Narcis, Pascariu Petronela, Koudoumas Emmanouel, Suchea Mirela Petruta, Influence of molybdenum and chromium doping on WO₃ thin films fabricated by spray pyrolysis: Structural and optical characterization, (2025) *Surfaces and Interfaces*, 72, art. no. 107427.
3. Z.A., Viskadourakis, Zacharias A., P.M., Angelopoulos, Panagiotis M., M., Orfanou, Maria, A., Drymiskianaki, Argyri, A., Manousaki, Alexandra, E., Koudoumas, Emmanuel, M., Taxiarchou, Maria, G., Kenanakis, Georgios, Low Thermal Conductivity Plaster – Perlite Microsphere Composites as Potential Thermal Insulation Materials in Building Construction, (2025) *International Journal of Thermophysics*, 46 (7), art. no. 101.
4. P., Pascariu Dorneanu, Petronela, O.T., Nedelcu, Oana Tatiana, T., Sandu, Titus, C., Romanițan, Cosmin, O.A., Brincoveanu, O. Andreea, C., Pachiou, Cristina, D., Manica, Dumitru, M., Manica, Marina, A.G.M., Popescu, Andreea Gabriela Marina, Ș., Antohe, Stefan, Ionescu Octavian Narcis, Suchea Mirela Petruta, Koudoumas Emmanouel, Lanthanum doping effects on microstructure and properties of nanostructured ZnO, (2025) *Materials Characterization*, 224, art. no. 114994.
5. P., Pascariu Dorneanu, Petronela, F., Tudorache, Florin, C., Romanițan, Cosmin, A.B., Serban, Andreea Bianca, E., Koudoumas, Emmanuel, 1 % lanthanide-doped ZnO nanostructures as a versatile approach for state-of-the-art capacitive and resistive humidity sensors, (2025) *Ceramics International*, 51 (13), pp. 17090 - 17100.
6. O., Kokkinaki, Olga, P., Siozos, P., N.C., Mavrikakis, Nikolaos C., K.G., Siderakis, Kiriakos G., K., Mouratis, Kyriakos, E., Koudoumas, Emmanuel, I., Liontos, Ioannis, K., Hatzigiannakis, Kostas, D., Anglos, Demetrios, Correlation of Plasma Temperature in Laser-Induced Breakdown Spectroscopy with the Hydrophobic Properties of Silicone Rubber Insulators, (2024) *Chemosensors*, 12 (10), art. no. 204.
7. E., Koudoumas, Emmanuel, K.T., Le, Khac Top, D., Vernardou, Dimitra, Recent advances of chemical vapor deposited thermochromic vanadium dioxide materials, 8. (2023) *Energy Nexus*, 11, art. no. 100237.S
8. C., Romanițan, Cosmin, I.V., Tudose, Ioan Valentin, K., Mouratis, Kyriakos, M.C., Popescu, Marian C., C., Pachiou, Cristina, S., Couris, Stelios, E., Koudoumas, Emmanuel, M.P., Suchea, M. Petruta, Structural Investigations in Electrochromic Vanadium Pentoxide Thin Films, (2022) *Physica Status Solidi (A) Applications and Materials Science*, 219 (16), art. no. 2100431.
9. I.V., Tudose, Ioan Valentin, K., Mouratis, Kyriakos, O.N., Ionescu, O. Narcis, C., Romanițan, Cosmin, C., Pachiou, Cristina, O.A., Brincoveanu, O. Andreea, M.P., Suchea, M. Petruta, E., Koudoumas, Emmanuel, Comparative Study of Graphene Nanoplatelets and Multiwall Carbon Nanotubes-Polypropylene Composite Materials for Electromagnetic Shielding, (2022) *Nanomaterials*, 12 (14), art. no. 2411.
10. I.V., Tudose, Ioan Valentin, K., Mouratis, Kyriakos, O.N., Ionescu, O. Narcis, C., Romanițan, Cosmin, C., Pachiou, Cristina, E., Pricop, Emil, V.G., Khomenko, Volodymyr G., O., Butenko, Oksana, O.V., Chernysh, Oxana V., V.Z., Barsukov, Viacheslav Z., Suchea M. P. and Koudoumas E., Carbon Allotropes-Based Paints and Their Composite Coatings for Electromagnetic Shielding Applications, (2022) *Nanomaterials*, 12 (11), art. no. 1839.
11. V.G., Khomenko, Volodymyr G., O., Butenko, Oksana, O.V., Chernysh, Oxana V., V.Z., Barsukov, Viacheslav Z., M.P., Suchea, M. Petruta, E., Koudoumas, Emmanuel, Electromagnetic Shielding of Composite Films Based on Graphite, Graphitized Carbon Black and Iron-Oxide, (2022) *Coatings*, 12 (5), art. no. 665.
12. K., Mouratis, Kyriakos, I.V., Tudose, Ioan Valentin, C., Romanițan, Cosmin, C., Pachiou, Cristina, M.C., Popescu, Marian C., G., Simistiras, Georgios, S., Couris, Stelios, M.P., Suchea, M. Petruta, E., Koudoumas, Emmanuel, WO₃ Films Grown by Spray Pyrolysis for Smart Windows Applications, (2022) *Coatings*, 12 (4), art. no. 545.
13. A., Bouranta, Andrianna, I.V., Tudose, Ioan Valentin, L., Georgescu, Luciana, A., Karaiskou, Anna, N.R.E., Vrithias, Nikolaos Rafael E., Z.A., Viskadourakis, Zacharias A., G., Kenanakis, Georgios, E., Sfakaki,

Efsevia, N., Mitrizakis, Nikolaos, G., Strakantounas, George, Papandroulakis Nikolaos, Romanitan Cosmin, Pachiu Cristina, Tutunaru Oana, Barbu-Tudoran Lucian, Suchea Mirela Petruta and Koudoumas Emmanouel, 3D Printed Metal Oxide-Polymer Composite Materials for Antifouling Applications, (2022) *Nanomaterials*, 12 (6), art. no. 917.

14. I.V., Tudose, Ioan Valentin, K., Mouratis, Kyriakos, O.N., Ionescu, O. Narcis, C., Romanițan, Cosmin, C., Pachiu, Cristina, M.C., Popescu, Marian C., V.G., Khomenko, Volodymyr G., O., Butenko, Oksana, O.V., Chernysh, Oxana V., G., Kenanakis, Georgios, Barsukov Viacheslav, Suchea Mirela Petruta and Koudoumas Emmanouel, Novel Water-Based Paints for Composite Materials Used in Electromagnetic Shielding Applications, (2022) *Nanomaterials*, 12 (3), art. no. 487.

15. M., Stavrou, Michalis, A., Stathis, Aristeidis, I., Papadakis, Ioannis, A., Lyuleeva-Husemann, Alina, E., Koudoumas, Emmanouel, S., Couris, Stelios, Silicon nanosheets: An emerging 2d photonic material with a large transient nonlinear optical response beyond graphene, (2022) *Nanomaterials*, 12 (1), art. no. 90.

C.3 Narrative CV

He obtained his Degree in Physics in 1983 from Physics Department of National and Kapodestrian University of Athens, his M.Sc. in "Laser and Application" in 1984 from Physics Department of University of Essex, his M.Sc. in "Applied Physics" in 1987 from Physics Department of University of Crete and his Ph.D. in Physics in 1991 from Physics Department of University of Patras. During the period 1993 to 2002, he was working as researcher in the Institute of Electronic Structure and Lasers of the Foundation of Research and Technology Hellas. His research background, based on that period, includes high intensity short pulse interactions in atoms and molecules, linear and nonlinear optical response of novel materials, laser based diagnostic techniques and novel laser sources of VUV radiation. Since 2002, he is a Professor at the Electrical and Computer Engineering Department of the Hellenic Mediterranean University - HMU (former Technological Educational Institute of Crete – TEI of Crete), while, since July 2023, he is coordinating the project PNRR/2022/C9/MCID/I8 CF23/14 11 2022 contract 760101, in IMT Bucharest. He was the founder of the laboratory "Center of Materials Technology and Photonics" of the School of Engineering of the Hellenic Mediterranean University. In present, Dr E. Koudoumas is a very experienced researcher, his recent research activities focusing on the use of simple, low cost and environmental friendly techniques for the growth of thin films, nanostructure layers, nanomaterials, nanocomposites and suspensions, based on pure or doped metal oxides, metals and carbon allotropes, exhibiting properties suitable for various applications, emphasis given on solar control coatings, electromagnetic shielding, photocatalytic/antifouling/antibacterial action, transparent electrodes, self-cleaning windows, optoelectronic devices, Li ion batteries, food packaging etc. He has 170 publications in peer review journal, with 5.000 citations and an h-index of 42, while he has been involved in a large number of funded projects as coordinator or member of the research team. He was also involved in various administrative activities, these including Vice-president of the Research Committee of Hellenic Mediterranean University for 6 years; Director of the Master's Program "MBA for Engineers" of the Hellenic Mediterranean University for 6 years; Vice-president of the Center for Further Education and Lifelong Learning of the Hellenic Mediterranean University for 4 years; Founder of the Center of Materials and Photonics Technology of the Hellenic Mediterranean and its Director University for 4 years; Member of the University Council of Hellenic Mediterranean University for 4 years; Chairman of the Electrical Engineering Department of Hellenic Mediterranean University for 5 years. Acting as an advisor regarding the perspectives for promotion of laboratory results of various institutions to the market, as an advisor regarding the incorporation of innovation in companies and with large experience in the exploitation of innovative technologies and technology transfer.

Teaching activities: Teaching in undergraduate level: Electrical Measurement, Technology of Measurements, Electric Circuits, Antennas, Optical Fibers, Optical Systems, Physics. Teaching in graduate level: Advanced functional materials: development, properties and applications, Lasers systems for metrology and materials

processing, Technology exploitation: Thesis Supervision 8 PhD Theses, 12 MSc Theses and more than 150 diploma theses.

Research: Use of simple, low cost and environmental friendly techniques for the growth of thin films, nanostructure layers, nanomaterials, composites and suspensions based on pure or doped metal oxides, exhibiting properties suitable for applications in energy and environment, emphasis given on solar control coatings, photo-catalytic / antifouling / antibacterial action, electromagnetic shielding, transparent electrodes, self-cleaning windows, optoelectronic devices, Li ion batteries, food packaging etc; Investigation of the performance of carbon allotropes such as those of the graphene family, in applications like hybrid solar cells, electromagnetic shielding, transparent electrodes, photo-catalysis, Li ion batteries; Laser based diagnostic techniques –Spectroscopic techniques; Investigation of optical, electrical and mechanical properties of materials and devices; Investigation of the performance of polymer based outdoor insulators used in high voltage applications; Linear and nonlinear optical response of novel materials; High intensity short pulse interactions in atoms and molecules; Generation of VUV radiation

Funding: He has been involved in more than 40 projects in both Hellenic Mediterranean University and Foundation of Research and Technology-Hellas, as coordinator of the whole project, as a coordinator of his home institution and as a member of the research teams.

Greek National collaborations: Foundation for Research and Technology-Hellas, University of Crete, University of Patras, University of Thessaly, National Center for Scientific Research Demokritos, National Technical University, Hellenic Electricity Distribution Network Operator S.A., Heraklion Port Authority Greece, Technical Institute of Heraklion Chamber of Commerce and Industry Greece.

International collaborations: IMT Bucharest Romania, Kyiv National University of Technologies and Design, Ukraine, Atlantic Technological University Ireland, Universitatea 'Politehnica' din Bucuresti Romania, University Alexandru Ioan Cuza Iasi, Romania, Lebanese University, Universite Paul Sabatier Toulouse III, Tyndall Institute, Cork Ireland.

Participation in conferences, invited talks: He and his group have presented about 250 oral talks or poster in several international and national conferences. Recent invited talks: (a) International Semiconductor Conference CAS22 an IEEE event <https://www.imt.ro/cas/programme.php> and (b) International Symposium on Materials, Electrochemistry and Environment CIMEE22 <http://cimee-science.org> .

Other significant activities:

He is a member of the Organizing Committee: International Symposium on Materials, Electrochemistry and Environment CIMEE <http://cimee-science.org/>; International Conference of Physics of Advanced Materials (ICPAM) www.icpam.ro ; Advances on Photocatalysis including Environmental and Energy Applications AdvPhotoCat-EE <https://photocatalysis-workshop.eu/> . Moreover, he has organized many events for the promotion of the research activities of his university as well as innovation and entrepreneur, intellectual property, collaboration of academia with the market etc

Editor and Reviewing: He is a member of the Editorial Board of the Journals: (a) Molecules and (b) Coatings. He is a reviewer in over 25 significant journals in his scientific fields. He is evaluator of submitted proposals in: (a) National Science Center, Poland, (b) Nederlandse Organisatie voor Wetenschappelijk Onderzoek, (c) SOLAR-ERA.NET, (d) several Greek national calls

Innovation and entrepreneur activities: Scientific advisor in the spin-off company “Mediterranean Agrofood competence center”, a company with 48 stakeholders, including bodies from academia, society, industry (food production/ distribution, mass market providers, plastics manufacturer, IoT systems, sensors etc.) and public authorities; Acting as an advisor regarding the perspectives for promotion of laboratory results of various institutions to the market; Acting as an advisor regarding the incorporation of innovation in companies; Large experience in the exploitation of innovative technologies and technology transfer.