Curriculum Vitae

Dr. Nikolaos Kostoglou 	Date of Birth: 11 September 1989 Place of Birth: Larisa, Greece Website: https://linkedin.com/in/nikolaos-kostoglou-65a89862 ORCID: https://orcid.org/0000-0002-3821-2063 Email: nkostoglou@ig.forth.gr Tel.: +302811392203
Research Institution	Foundation of Research and Technology – Hellas Institute of GeoEnergy (IG) Building M1, University Campus (TU Crete) Akrotiri, 73100 Chania, Greece https://www.ig.forth.gr/

Academic Career

01/2026 – Present	**Principal Researcher Grade B'/Associate Research Professor**, Institute of GeoEnergy, Foundation of Research and Technology – Hellas, Chania, Greece
01/2021 – 12/2025	**Senior Postdoctoral Researcher & Group Leader** in Porous Materials, Department of Materials Science, Montanuniversität Leoben, Leoben, Austria
01/2018 – 12/2020	**Postdoctoral Researcher**, Department of Materials Science, Montanuniversität Leoben, Leoben, Austria
01/2015 – 11/2017	**PhD Student** in Materials Science (H_2 storage materials), Department of Materials Science, Montanuniversität Leoben, Leoben, Austria
07/2014 – 12/2014	**Research Assistant**, Department of Mechanical and Manufacturing Engineering, University of Cyprus, Nicosia, Cyprus
09/2012 – 06/2014	**MSc Student** in Energy Technologies & Sustainable Design & **Teaching Assistant**, School of Engineering, University of Cyprus, Nicosia, Cyprus
09/2013 – 05/2014	**Visiting Researcher**, National Center for Scientific Research "Demokritos", Athens, Greece
09/2007 – 06/2012	**Bachelor & Diploma Student** in Mechanical Engineering, Department of Mechanical & Manufacturing Engineering, University of Cyprus, Nicosia, Cyprus

Dissertations

- **Doctoral thesis**: *"Carbon-based nanoporous materials for hydrogen storage"*
  - Supervisor: Prof. Christian Mitterer
  - Institution: Department of Materials Science, Montanuniversität Leoben, Leoben, Austria
  - Grade: "Passed with honors"
  - Graduation year: 2017

- **Master thesis**: *"Solid-state hydrogen storage by physical adsorption in nanoporous materials"*
  - Supervisor: Prof. Claus Rebholz
  - Institution: School of Engineering, University of Cyprus, Nicosia, Cyprus
  - Grade: "Excellent"
  - Graduation year: 2014

- **Bachelor thesis**: *"Experimental device for the evaluation of metal surface corrosion using electrochemical methods"*
  - Supervisor: Assoc. Prof. Andreas Kyprianou
  - Institution: Department of Mechanical and Manufacturing Engineering University of Cyprus, Nicosia, Cyprus
  - Grade: 9/10 ("Excellent")
  - Graduation year: 2011

Research Areas

- Nanomaterials; Nanoporous materials; Functionalized carbons; Metal-decorated carbons; Nanocomposites; Nanoparticles; Heterogeneous catalysts; Carbon nanostructures; Few-layer graphene; Carbon nanotubes; Graphene oxide foams; Activated carbons; Boron nitride (BN) nanostructures; BN nanoplatelets; BN nanotubes
- Plasma treatment; Magnetron sputtering; Wet chemistry; Combustion synthesis; Nanoparticle deposition
- Gas adsorption, separation, selectivity; Adsorbents; Gas-solid interactions; Surface area and pore size analysis
- Hydrogen sorption and storage; Gravimetric and volumetric capacity; Heat of adsorption; Reversibility; Kinetics
- Electrochemical energy storage; Supercapacitors; Electrosorption; Electrodes; Aqueous electrolytes; Capacitance
- Hydrogen production; Water splitting; Hydrogen evolution reaction; Oxygen evolution reaction
- Water purification; Oil-water mixture separation; Removal of toxic dyes and radionuclides; Hydrophobicity
- Detection of chemical and biological substances; Surface Enhanced Raman Spectroscopy

Research Achievements

- Development, modification/functionalization and advanced characterization of nanoporous materials and nanocomposites for energy and environmental applications, including hydrogen production and storage, selective gas separation, electrochemical energy storage and water purification
- Establishment of correlations between pore structure and surface chemistry characteristics of carbon-based materials and nanocomposites with application performance
- Authored **54 papers** (including **13 first authorships**, **23 corresponding authorships** and **4 last authorships**) published in **33 international, high-impact, peer-reviewed journals** (**1600 citations** and **h-index 22** as of 14 January 2026; Source: Google Scholar) since 2015
- Applied for **1 patent** at the Austrian Patent Office (pending)
- Authored **63 abstracts** submitted in **49 international conferences and workshops** worldwide since 2014, including **29 oral presentations**, **26 posters** and **8 invited lectures**
- On-site participation in **22 international conferences and workshops** in Europe (Austria, Greece, Serbia, UK) and USA

Editorial & Review Work

- **Early Career Editorial Board Member** for the C—Journal of Carbon Research published by MDPI (Basel, Switzerland) since 2025, https://www.mdpi.com/about/announcements/12636
- **Topical Advisory Panel Member** for the C—Journal of Carbon Research published by MDPI (Basel, Switzerland) since 2020, https://www.mdpi.com/journal/carbon/topic_editors
- **Topical Advisory Panel Member** for the Nanomaterials journal published by MDPI (Basel, Switzerland) since 2023, https://www.mdpi.com/journal/nanomaterials/topical_advisory_panel
- **Editorial Board Member** for the Journal of Advanced Materials Science and Technology published by Omniscient Pte Ltd (Singapore) between September 2021-September 2023
- **Guest Editor** for **6 special issues** since 2018:
  - *"Extreme Wettability of Surfaces: Advanced Methods & Applications"* to be published in 2026 by the the Surface & Coatings Technology journal (Elsevier)
  - *"Advances in Boron Nitride (Nano)Materials: Synthesis, Functionalization and Applications"* to be published in 2026 by the Nanomaterials journal (MDPI, https://www.mdpi.com/topics/PP201TY978)

- *"Nanoporous Carbons for Hydrogen Sorption and Electrochemical Energy Storage"* published in 2025 by the C—Journal of Carbon Research (MDPI, https://www.mdpi.com/journal/carbon/special_issues/44MV18GHT2)
- *"Coatings for Batteries and Devices for Energy Conversion and Storage"* published in 2021 by the Surface & Coatings Technology journal (Elsevier, https://www.sciencedirect.com/journal/surface-and-coatings-technology/special-issue/10DTZJ8ND7X)
- *"Carbon-Based Materials for Hydrogen Production, Storage and Conversion"* published in 2020 by the C—Journal of Carbon Research (MDPI, https://www.mdpi.com/journal/carbon/special_issues/carbons_for_hydrogen)
- *"Nanoporous Materials, Surfaces and Coatings for Green Energy Conversion & Storage"* published in 2018 by the Surface & Coatings Technology journal (Elsevier, https://www.sciencedirect.com/journal/surface-and-coatings-technology/special-issue/1000185BBLZ)

- **Recognized Reviewer** for international peer-reviewed journals since 2015
  - Elsevier: Carbon, International Journal of Hydrogen Energy, Fuel, Surface & Coatings Technology, Arabian Journal of Chemistry)
  - MDPI: Nanomaterials, Materials, ChemEngineering, Molecules, Applied Sciences, Fibers
  - ACS: Energy & Fuels
  - Wiley: Physica Status Solidi A: Applications & Materials Science

Organized Workshops & Session Chairs

- **Co-organizer & Session Chair** of the 85th IUVSTA Workshop on *"Nanoporous Materials for Green Energy Conversion and Storage"*, Schloss Seggau, Austria, 14-19 October 2018, https://iuvsta.org/iuvsta2/assets/docs/pdf/Final_Report_IUVSTA85.pdf
- **Co-organizer** of the workshop *"New avenues for the functionalization and characterization of nanocarbons"*, Montanuniversität Leoben, Austria, 3 July 2023, https://materials.unileoben.ac.at/en/department/news/neue-ansaetze-zur-funktionalisierung-und-charakterisierung-von-nanoporoesen-kohlenstoffen
- **Session Chair** during the 2nd International Conference on Innovative Materials in Extreme Conditions (IMEC 2024), Belgrade, Serbia, 20-22 March 2024, https://sim-extreme.edu.rs/programme-2024/

Academic Experience

- **Participation and management in research projects** funded by the European Union (H2FC, SOLAR-ERA.NET), Austrian government (FFG, Montanuniversität Leoben) and industrial partners (RAG Austria AG, TDE Group); 2013-present

- **Preparation and submission of research proposals** for funding in Austria (Future Fund Styria/Zukunftsfonds Steiermark, Austrian Science Fund/FWF, Austrian Promotion Research Agency/FFG); 2018-present
- **Supervision, support and mentoring of 22 students and trainees** (5 PhD students, 7 Master students, 5 Bachelor students and 5 Erasmus trainees) at Montanuniversität Leoben and the University of Cyprus carrying out research on nanoporous materials and nanocomposites for energy, environmental and biomedical applications; 2018-present
- **Teaching experience as Lecturer for 3 semesters** at Montanuniversität Leoben; 2023-present
- **Teaching assistant duties for 4 semesters** at the University of Cyprus; 2012-2014
- Establishment of a **Porous Materials Group** at Montanuniversität Leoben with the participation of PhD, Master and Bachelor students from the Department of Materials Science and the Chair of Physics; 2020-present
- **Training students and trainees** for using advanced experimental equipment at Montanuniversität Leoben; 2018-present
- **Collaboration with commercial suppliers** of nanomaterials, including BNNT LLC (USA), Chemviron Carbon SA (Belgium), Donau Chemie (Germany), Evertech Envisafe Technology Co Ltd (Taiwan), Fibrtec Inc (USA), Loggins GmbH (Austria) and Perpetuus Advanced Materials (UK); 2014-present

Teaching & Lecturing Experience

- **Lecturer** for the course *"Nanoporous Materials Characterization for Advanced Applications"*, offered on a weekly basis for the 3rd time at Montanuniversität Leoben in the Summer Semester 2025; March-June 2025
- **Lecturer** for the course *"Nanoporous Materials Characterization for Advanced Applications"*, offered on a weekly basis for the 2nd time at Montanuniversität Leoben in the Summer Semester 2024; March-June 2024
- **Designed, developed and delivered weekly lectures** for the course *"Nanoporous Materials Characterization for Advanced Applications"*, offered for the 1st time at Montanuniversität Leoben in the Summer Semester 2023; March-June 2023
- **Teaching Assistant** in the undergraduate courses *"Machine Elements"*, *"Internal Combustion Engines"*, *"Design and Manufacturing"* and *"Manufacturing Processes"* and the postgraduate course *"Surface Engineering"*, offered by the Department of Mechanical and Manufacturing Engineering at the University of Cyprus; September 2012-May 2014

Supervision & Mentoring Experience

- **Supervision of the Erasmus traineeship** of Mr. Kyriacos Ioannou (University of Cyprus) in the Chair of Functional Materials & Materials Systems at Montanuniversität Leoben focusing on the characterization of zeolitic imidazolate framework (ZIF)-based materials and composites; October-December 2025

- **Supervision of the Erasmus traineeship** of Mr. Panagiotis Andreou (University of Cyprus) in the Chair of Functional Materials & Materials Systems at Montanuniversität Leoben focusing on the characterization of NiAl intermetallic powders, respectively; July-September 2025
- **Supervision of the Erasmus traineeship** of Mrs. Georgia-Maria Christodoulou (University of Cyprus) in the Chair of Functional Materials & Materials Systems at Montanuniversität Leoben focusing on the characterization of cement-based composites, respectively; July-September 2025
- **Co-supervision of the PhD thesis** of Mr. Sebastian Stock (Montanuniversität Leoben) titled *"Supercritical Hydrogen Adsorption in Nanoporous Carbons: Understanding Confinement Effects Through Neutron Scattering"* provided by the Chair of Physics at Montanuniversität Leoben; started in April 2021 and successfully defended in April 2025
- **Scientific support during the Master thesis** of Mr. Hector Herreria Gil (Montanuniversität Leoben) titled *"Effects of Partial Oxidation on the Microstructure of Wood Derived Carbons"* provided by the Chair of Physics at Montanuniversität Leoben; successfully defended in March 2025
- **Co-supervision of the Master thesis** of Mr. Marco Strassburg (Montanuniversität Leoben) titled *"Sample Preparation and Mechanical Characterization of Nanoporous Activated Carbon Materials"* provided by the Chair of Functional Materials & Materials Systems at Montanuniversität Leoben; successfully defended in February 2025
- **Co-supervision of the PhD thesis** of Mr. Florian Knabl (Montanuniversität Leoben) titled *"Pathways towards the functionalization of three-dimensional substrates"* provided by the Chair of Functional Materials & Materials Systems at Montanuniversität Leoben; started in May 2021 and successfully defended in April 2024
- **Supervision of the Erasmus traineeships** of Mr. Panagiotis Andreou and Mrs. Georgia-Maria Christodoulou (both from the University of Cyprus) in the Chair of Functional Materials & Materials Systems at Montanuniversität Leoben working on the plasma treatment and characterization of carbon materials; July-September 2023
- **Co-supervision of the joint Bachelor thesis** of Mr. Gkerman Kotanidis and Mr. Kyriacos Ioannou (both from the University of Cyprus) titled *"Nanoporous carbons for water purification (from crystal violet)"* provided by the Department of Mechanical and Manufacturing Engineering at the University of Cyprus; successfully concluded in June 2023
- **Co-supervision of the Bachelor thesis** of Mr. Johannes Roscher (Montanuniversität Leoben) titled *"A systematic study on the influences of measurement parameters on the skeletal density of nanoporous materials"* provided by the Chair of Physics at Montanuniversität Leoben; successfully concluded in March 2023
- **Supervision and examination of the Bachelor thesis** of Mr. Hector Herreria Gil (Universidad de Valladolid, Spain) titled *"Development and characterization of plasma-processed graphite"* provided by the Chair of Functional Materials & Materials Systems at Montanuniversität Leoben within the Erasmus+ program; successfully concluded in September 2022

- **Supervision of the Master thesis** of Mr. Florian Knabl (Montanuniversität Leoben) titled *"Structural characterization of carbons derived from methane pyrolysis"* provided by the Chair of Functional Materials & Materials Systems at Montanuniversität Leoben; successfully defended in March 2021
- **Supervision of the Master thesis** of Mr. Sebastian Stock (Montanuniversität Leoben) titled *"The potential of biomass-derived activated carbon for hydrogen storage"* provided by the Chair of Physics at Montanuniversität Leoben; successfully defended in February 2021
- **Supervision of the Master thesis** of Mr. Nikolas Natter (Montanuniversität Leoben) titled *"Synthesis and characterization of novel carbon-based nanoporous materials for energy storage applications"* provided by the Chair of Functional Materials & Materials Systems at Montanuniversität Leoben in cooperation with the Institute of Research for Ceramics in France; successfully defended in September 2020
- **Co-supervision of the Master thesis** of Mr. Maximilian Preindl (Montanuniversität Leoben) titled *"Sputter Deposited SnOx films for gas sensors"* provided by the Chair of Functional Materials & Materials Systems at Montanuniversität Leoben; successfully defended in September 2020
- **Supervision of the Erasmus traineeship** of Mr. Angelos Solomi (University of Cyprus) in the Chair of Functional Materials & Materials Systems at Montanuniversität Leoben working on the structural characterization of boron nitride nanomaterials; July-December 2020
- **Supervision and Examination of the Bachelor thesis** of Mr. Nikolas Natter (Montanuniversität Leoben) titled *"Functionalized graphene-based materials for water purification"* provided by the Chair of Functional Materials & Materials Systems at Montanuniversität Leoben; successfully concluded in May 2018

Supervised Students

Location of research activities: MUL → Montanuniversität Leoben, Austria; UCY → University of Cyprus, Cyprus

- **Doctoral students (×5):** Stefan Zeiler (2023-present; MUL), Sebastian Stock (2021-2025; MUL), Florian Knabl (2021-2024; MUL), Antonis Kyriacou (2020-present; UCY), Batuhan Mulla (2020-present; UCY)
- **Master students (×7):** Hector Herreria Gil (2024-2025; MUL); Marco Strassburg (2024-2025; MUL); Kyriacos Ioannou (2024-present; UCY), Florian Knabl (2021; MUL), Sebastian Stock (2021; MUL), Maximilian Preindl (2020; MUL), Nikolas Natter (2020; MUL)
- **Bachelor students (×5):** Johannes Roscher (2023; MUL), Gkerman Kotanidis & Kyriacos Ioannou (2023; UCY), Hector Herreria Gil (2022; MUL), Nikolas Natter (2018; MUL)

- **Erasmus trainees (×6):** Kyriakos Ioannou (2025; MUL-UCY), Panagiotis Andreou (2025; MUL-UCY), Georgia-Maria Christodoulou (2025; MUL-UCY); Panagiotis Andreou (2023; MUL-UCY), Georgia-Maria Christodoulou (2023; MUL-UCY), Angelos Solomi (2020; MUL-UCY)

Internships & Traineeships

- 2010: **Mechanical Engineer Trainee** at the Hellenic Defense Systems S.A. (Athens, Greece) as a part of the International Student Exchange Program for Technical Experience (IAESTE)
- 2009-2010: **Worksite Assistant** at SAK Engineering Consultants (Jeddah, Saudi Arabia); technical experience in the construction of the Aal Taher Tower commercial building (Jeddah, Saudi Arabia)
- 2007: **Project Manager Assistant** at Emvatis S.A. (Athens, Greece); technical experience in the construction of a workshop for aircraft discoloration at the Hellenic Aerospace Industry (Athens, Greece)

Participation & Management in Research Projects

- **Industry-funded project** at Montanuniversität Leoben titled *"Hydrogen Storage Cryo-Tank System: Concept towards the Realization of a Prototype"*
  - Duration: 2023-2025
  - Budget: €857,000
  - Funding Body: TDE Group
  - Partners: Montanuniversität Leoben, TDE Group
  - Personal Role: **Contribution in proposal preparation; Expert Advisor**

- **Internally funded project** at Montanuniversität Leoben titled *"Surface enhanced Raman Spectroscopy for virus detection in exhaled droplets (SERS4SARS)"*
  - Duration: 2022-2023
  - Budget: €100,000
  - Funding Body: Resources Innovation Center Leoben − Montanuniversität Leoben
  - Personal Roles: **Proposal preparation**; **Co-Principal Investigator & Project Manager**

- **European Union** (**EU)-funded SOLAR-ERA.NET project** at Montanuniversität Leoben titled *"Nanomaterials for reduced maintenance costs in concentrated solar power plants (Nano4CSP)"*, https://nano4csp.cyi.ac.cy/
  - Duration: 2020-2023
  - Budget: €333,439

- Funding Body: European Commission within the EU Framework Programme for Research and Innovation HORIZON 2020 (Cofund ERA-NET Action, Grant Agreement No. 786483)
- Partners: Montanuniversität Leoben, National Centre for Scientific Research "Demokritos", The Cyprus Institute, BFP Advanced Technologies
- Personal Role: **Research Associate**

- **Industry-funded project** at Montanuniversität Leoben titled *"Sustainable carbon supply and energy mining",* https://ric-leoben.at/sdg/methane-pyrolysis/
  - Duration: 2020-2021
  - Budget: €72,200
  - Funding Body: Primetals Technologies Limited, Wien Energie GmbH, voestalpine AG and RAG Austria AG
  - Partners: Montanuniversität Leoben, Vienna University of Technology, Primetals Technologies Limited, Wien Energie GmbH, voestalpine AG, RAG Austria AG
  - Personal Role: **Contribution in proposal preparation**; **Research Associate**

- **Austrian Science Fund (FFG) COMET-K2-Center IC-MPPE project** at Montanuniversität Leoben titled *"Innovative chemical nano-sensors for safety applications in homes and industry (NanoSense)",* www.mcl.at/fileadmin/content/SuccessStory/IC-MPPE_SuccessStory_6_Nanosense_EN_Final.pdf
  - Duration: 2018-2021
  - Budget: €122,000
  - Funding Body: Austrian Science Fund (FFG)
  - Partners: Montanuniversität Leoben, Materials Center Leoben GmbH
  - Personal Role: **Research Associate**

- **Internal funding** at Montanuniversität Leoben for research activities on nanoporous materials for energy and environmental applications
  - Duration: 2018-2020
  - Budget: €250,000
  - Funding Body: Chair of Functional Materials & Materials Systems − Montanuniversität Leoben
  - Personal Roles: **Principal Investigator & Research Associate**

- **Own doctoral thesis** on *"Carbon-based nanoporous materials for hydrogen storage"* partially supported by Montanuniversität Leoben, https://pure.unileoben.ac.at/en/publications/carbon-based-nanoporous-materials-for-hydrogen-storage
  - Duration: 2015-2017
  - Type of support: Access to facilities and consumables
  - Personal Role: **Research Associate**

- **European Commission (EC) FP7-INFRASTRUCTURES project H2FC (Grant Agreement No. 284522)** titled *"Graphene-based nanomaterials for hydrogen storage applications"*, https://h2fc.eu/portal.html
  - Duration: 2015-2016
  - Type of support: Access to facilities
  - Partners: National Centre for Scientific Research "Demokritos", Montanuniversität Leoben
  - Personal Role: **Research Associate**

- **European Commission (EC) FP7-INFRASTRUCTURES project H2FC (GA No. 284522)** titled *"Carbon-based nanostructures for hydrogen storage"*, https://h2fc.eu/portal.html
  - Duration: 2013-2014
  - Type of support: Access to facilities
  - Partners: National Centre for Scientific Research "Demokritos", University of Cyprus
  - Personal Role: **Research Assistant**

Distinctions & Awards

- **Featured as Front Cover Story** for the peer-reviewed publication titled *"Plasma-Treated Cobalt-Doped Nanoporous Graphene for Electrochemical Applications"* in the C—Journal of Carbon Research, Volume 10, Issue 2, June 2024
- **Co-author of the award-winning poster** titled *"Hydrogen storage in nanoporous FeTi foams"* in the Best Poster Awards competition at the 18th International Symposium on Metal-Hydrogen Systems, Saint Malo, France, 26-31 May 2024
- **Member of the Challenge Winner team** *"SERS substrates for virus detection in exhaled droplets"* in the *"Health & Life: Cheap Rapid Tests"* category of the EUvsVirus Hackathon organized by the European Innovation Council of the European Commission, 24-26 April 2020, https: //www.euvsvirus.org/results/; https://devpost.com/software/sers4sars
- **Winner of the Silver Prize** in the Young Scientist Lecture competition at the 10th International NANOSMAT Conference, Manchester, England, 13-16 September 2015, https://ucyweb.ucy.ac.cy/pr/documents/Press_Releases/2015/Press_releases_english_2015/Kostoglou.pdf

- **Recipient of an Honorary Diploma** from the Union of Hellenic Air Force Veterans for being an outstanding student during the 3rd class of General Lyceum, Athens, Greece, September 2007

Sponsorships & Scholarships

More than €15,000 in total:

- **Recipient of a conference sponsorship** (CHF500) from the C—Journal of Carbon Research (MDPI) for participation in the 2nd International Conference on Innovative Materials in Extreme Conditions, Belgrade, Serbia, 20-22 March 2024
- **Recipient of a workshop sponsorship** (€6,000) from the International Union of Vacuum Science, Technique and Applications (IUVSTA) for organization of the 85th IUVSTA workshop on *"Nanoporous Materials for Green Energy Conversion and Storage"*, Schloss Seggau, Austria, 14-19 October 2018
- **Recipient of a travel sponsorship** (€900) from Montanuniversität Leoben for a weekly scientific visit at the "Ellettra" Synchrotron facility, Trieste, Italy, 31 August-6 September 2017
- **Recipient of a travel scholarship** (€1,270) from Montanuniversität Leoben for participation in the 4th International Conference of the Serbian Society for Ceramic Materials, Belgrade, Serbia, 14-16 June 2017
- **Recipient of a travel sponsorship** ($2,500) from the Society of Vacuum Coaters (SVC) Foundation for participation in the 60th Annual SVC Technical Conference, Rhode Island-Providence, USA, 29 April-4 May 2017
- **Recipient of a research grant** (€4,000) from Montanuniversität Leoben for completion of doctoral dissertation in the field of Materials Science, February-June 2016

Patents

[1] S. Zeiler, **N. Kostoglou**, R. Obenaus-Emler, V. Maier-Kiener, C. Mitterer, *Nanoporous composition with nanoporous components having different pore characteristics, and fluid storage device*, Austrian Patent Office, Patent application no. A50111/2025, filled 18 February 2025 (pending)

Peer-reviewed Publications in International Journals

[1] **N. Kostoglou***, P. Andreou, G.-M. Christodoulou, V. Terziyska, A. Hofer-Roblyek, S. Hinder, M. Baker, G. Constantinides, K. Kostoglou, C. Rebholz, C. Mitterer, Plasma-induced functionalization of graphitic surfaces: The role of nitrogen-argon gas mixtures, *Materials Chemistry and Physics* 348 (2026) 131607, DOI: 10.1016/j.matchemphys.2025.131607

[2] S. Stock, C.O.W. Trost, M. Seyffertitz, J. Selinger, R.K. Gupta, C. Tampaxis, T. A. Steriotis, C. Rebholz, C. Mitterer, O. Paris, **N. Kostoglou***, Transforming breakfast bio-waste into hydrogen storage materials, *International Journal of Hydrogen Energy* 114 (2025) 519-533, DOI: 10.1016/j.ijhydene.2025.03.002

[3] C.-Y. Hsu, **N. Kostoglou***, C. Mitterer, C. Rebholz, C.-K. Chang, Y.-C. Chuang, C.-Y Wang, Enhanced dehydrogenation and regeneration behavior of $LiBH_4$–$LiAlH_4$–$MgCl_2$ in nanoporous carbons, *International Journal of Hydrogen Energy* 106 (2025) 712-722, DOI: 10.1016/j.ijhydene.2025.01.377

[4] P. Dutta, J.M. von Mentlen, S. Mondal, **N. Kostoglou**, B. Wilts, S.A. Freunberger, G.A. Zickler, C. Prehal, Bridging solution and solid-state mechanism: Confined quasi-solid-state conversion in Li–S Batteries, *ACS Energy Letters* 10 (2025) 5722-5732, DOI: 10.1021/acsenergylett.5c02093

[5] D.A. Giannakoudakis, I. Ioannidis, K. Ioannou, E.D. Salonikidou, F. Florides, S. Zeiler, **N. Kostoglou**, M. Barczak, K. Triantafyllidis, I. Pashalidis, C. G. Rebholz, Ultrahigh surface area nanoporous carbon for air and water purification: Pushing the boundaries and unveiling the key physicochemical features, *Chemical Engineering Journal* 524 (2025) 169457, DOI: 10.1016/j.cej.2025.169457

[6] S. Stock, N. Corrente, M. Seyffertitz, M.V. Rauscher, S. Zeiler, **N. Kostoglou**, B. Demé, N.A. Marks, A.V. Neimark, O. Paris, On the supercritical adsorption of molecular hydrogen and deuterium in microporous carbons, *Carbon* 242 (2025) 120436, DOI: 10.1016/j.carbon.2025.120436

[7] M. Safaei-Farouji, D. Misch, R. F. Sachsenhofer, F. Knabl, **N. Kostoglou**, Hybrid chemisorption−physisorption of subcritical CO_2 on coals: Implications for safe and long-term underground CO_2 sequestration, *ACS Energy & Fuels* 39 (2025) 12054-12063, DOI: 10.1021/acs.energyfuels.5c02015

[8] B. Mulla, K. Ioannou, I. Ioannidis, I. Pashalidis, **N. Kostoglou***, C. Rebholz, The impact of carbon felt thickness and de-bundled felt fibers on dye adsorption: The external surface matters, *Sustainable Chemistry for the Environment* 10 (2025) 100254, DOI: 10.1016/j.scenv.2025.100254

[9] M. Safaei-Farouji, D. Misch, R.F. Sachsenhofer, **N. Kostoglou**, G. Gaus, T. Bauersachs, M. Junussov, M. Fustic, CO_2 utilization and sequestration potential in deep coal seams: A case study from the carboniferous coals, Karaganda Basin, Kazakhstan, *Journal of CO_2 Utilization* 101 (2025) 103204, DOI: 10.1016/j.jcou.2025.103204

[10] N. Mouti, **N. Kostoglou**, R. Obenaus-Emler, C. Mitterer, Nanoparticle-functionalized 3D substrates for superior analytical performance in surface enhanced Raman spectroscopy, *Journal of Vacuum Science & Technology A* 43 (2025) 033103, DOI: 10.1116/6.0004328

[11] A. Kountouris, K. Efstathiou, **N. Kostoglou**, D. Manolakos, C. Rebholz, A new recycling technology to produce premixed thermal insulating mortars from polyurethane waste foams, *Polymers* 17 (2025) 2233, DOI: 10.3390/polym17162233

[12]**N. Kostoglou***, S. Stock, A. Solomi, D.M. Holzapfel, S. Hinder, M. Baker, G. Constantinides, V. Ryzhkov, J. Maletaskic, B. Matovic, J.M. Schneider, C. Rebholz, C. Mitterer, The roles of impurities and surface area on thermal stability and oxidation resistance of BN nanoplatelets, *Nanomaterials* 14 (2024) 601, DOI: 10.3390/nano14070601

[13]S. Stock, M. Seyffertitz, **N. Kostoglou**, M.V. Rauscher, V. Presser, B. Demé, V. Cristiglio, M. Kratzer, S. Rols, C. Mitterer, O. Paris, Hydrogen densification in carbon nanopore confinement: Insights from small-angle neutron scattering using a hierarchical contrast model carbon, *Carbon* 221 (2024) 118911, DOI: 10.1016/j.carbon.2024.118911

[14]A.R. Selvaraj, **N. Kostoglou**, R. Rajendiran, I. Cho, C. Rebholz, N.D. Chakravarthi, K. Prabakar, Scalable synthesis of biomass-derived three-dimensional hierarchical porous activated carbons for electrochemical energy storage and hydrogen physisorption, *Journal of Energy Storage* 92 (2024) 112085, DOI: 10.1016/j.est.2024.112085

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*Corresponding author

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Presentations, Posters & Invited Lectures in Conferences & Workshops

❖ **Oral Presentations:**

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[29] **N. Kostoglou**, V. Tzitzios, K. Giannakopoulos, C. Tampaxis, G. Charalambopoulou, T. Steriotis, Y. Li, K. Liao, K. Polychronopoulou, C. Rebholz, Hydrogen storage capacity of different nanoporous carbon adsorbents, *30th Panhellenic Conference on Solid-State Physics & Materials Science*, Heraklion-Crete, Greece, 21-24 September 2014

❖ **Posters:**

[1] K. Ioannou, B. Mulla, I. Ioannidis, I. Pashalidis, **N. Kostoglou**, C. Rebholz, Functionalized activated carbon spheres for enhanced water decontamination, *8th Conference of the Serbian Society for Ceramic Materials (8CSCS-2025)*, Belgrade, Serbia, 18-20 June 2025

[2] I. Ioannidis, K. Ioannou, S. Zeiler, C. Mitterer, **N. Kostoglou**, D.A. Giannakoudakis, I. Pashalidis, C. Rebholz, Dual-functional carbon material with ultra-high surface area for efficient removal of airborne and water pollutants: Mustard gas vapours

and aquatic radionuclide (Am-241 and U-232) remediation, 1st Conference of the Cyprus Advanced Materials Network, Nicosia, Cyprus, 13-14 January 2025

[3] K. Ioannou, B. Mulla, I. Ioannidis, I. Pashalidis, **N. Kostoglou**, C. Rebholz, The Impact of different textural carbon felt materials on dye adsorption: The external surface matters, *23rd Panhellenic Chemistry Conference with International Participation*, Athens, Greece, 25-28 September 2024

[4] A. Kyriacou**, N. Kostoglou**, E. Gunduz, C. Rebholz, Engineering nickel-aluminum reactive powders: Influence of ball milling duration and starting particle size on specific surface area and skeletal density, *23rd Panhellenic Chemistry Conference with International Participation*, Athens, Greece, 25-28 September 2024

[5] N. Mouti, **N. Kostoglou**, R. Obenaus-Emler, C. Mitterer, Nanoparticle-functionalized 3D substrates for superior analytical performance in surface enhanced Raman spectroscopy, 20th *Raman Imaging Symposium*, Ulm, Germany, 23-25 September 2024

[6] M. Safaei-Farouji, D. Misch, R.F. Sachsenhofer, **N. Kostoglou**, M. Junussov, M. Fustic, CO_2 storage potential of low-rank and medium-rank coal deposits from Austria and Kazakhstan, *Pangeo-DEUQUA 2024 Conference*, Salzburg, Austria, 23-27 September 2024

[7] L. Schweiger, F. Spieckermann, **N. Kostoglou**, S. Stock, P. Cengeri, M. Zehetbauer, O. Paris, D. Kiener, J. Eckert, Hydrogen storage in nanoporous FeTi foams, *18th International Symposium on Metal-Hydrogen Systems (MH2024)*, Saint-Malo, France, 26-31 May 2024

[8] **N. Kostoglou**, Advanced characterization of nanoporous materials, *Science 4 Technology @MUL – Poster Exhibition 2024*, Leoben, Austria, 23-31 May 2024

[9] S. Stock, M. Jop, **N. Kostoglou,** M.V. Rauscher, B. Deme, C. Mitterer, O. Paris, Small-angle neutron scattering reveals high-density adsorbed hydrogen in carbon micropores at low pressures and supercritical temperature, *9th International Workshop on Characterization of Porous Materials: From Angstroms to Millimeters (CPM9)*, Delray Beach-Florida, USA, 19-22 May 2024

[10] **N. Kostoglou**, S. Stock, A. Solomi, D. Holzapfel, S. Hinder, M. Baker, G. Constantinides, V. Ryzhkov, J. Maletaskic, B. Matovic, J. Schneider4, C. Rebholz, C. Mitterer, Purity and surface area: Key factors on thermal stability and oxidation resistance of BN nanoplatelets, *2nd International Conference on Innovative Materials in Extreme Conditions (IMEC 2024)*, Belgrade, Serbia, 20-22 March 2024

[11] **N. Kostoglou**, C. Tampaxis, G. Charalambopoulou, G. Constantinides, V. Ryzhkov, C. Doumanidis, B. Matovic, C. Mitterer, C. Rebholz, Boron nitride nanotubes versus carbon nanotubes: A thermal stability and oxidation behavior study, *2nd International Conference on Innovative Materials in Extreme Conditions (IMEC 2024)*, Belgrade, Serbia, 20-22 March 2024

[12]I. Ioannidis, B. Mulla, G. Kotanidis, K. Ioannou, **N. Kostoglou**, I. Pashalidis, C. Rebholz, Actinide (U-232 and Am-241) removal from waters by oxidized carbon fabrics, *1st Aristotle Conference on Chemistry (ACC 2023)*, Thessaloniki, Greece, 12-15 November 2023

[13]B. Mulla, K. Ioannou, G. Kotanidis, I. Ioannidis, **N. Kostoglou**, I. Pashalidis, C. Rebholz, Removal of crystal violet dye from aqueous solutions through adsorption onto activated carbon cloth materials, *1st Aristotle Conference on Chemistry (ACC 2023)*, Thessaloniki, Greece, 12-15 November 2023

[14] **N. Kostoglou**, S. Stock, G. Popovski, O. Paris, C. Mitterer, Gas sorption analysis for advanced nanoporous structure characterization, *2nd H_2-C Symposium*, Leoben, Austria, 10-11 July 2023

[15]S. Stock, M. Seyffertitz, **N. Kostoglou**, M.V. Rauscher, B. Deme, V. Cristiglio, S. Rols, S. Hinder, M. Baker, V. Presser, C. Mitterer, O. Paris, Hydrogen physisorption mechanisms in nanoporous carbons: Insights from small angle neutron scattering using a hierarchical contrast model, *2nd H_2-C Symposium*, Leoben, Austria, 10-11 July 2023

[16] F. Knabl, **N. Kostoglou**, C. Bandl, M. Tkadletz, T. Grießer, C. Mitterer, Functionalization of nanoporous carbons for hydrogen storage, *2nd H_2-C Symposium*, Leoben, Austria, 10-11 July 2023

[17]S. Zeiler, M. Strassburg, **N. Kostoglou**, V. Maier-Kiener, C. Mitterer, Mechanical properties of nanoporous carbons for hydrogen storage applications, *2nd H_2-C Symposium*, Leoben, Austria, 10-11 July 2023

[18] S. Stock, G. Fritz-Popovski, M. Jop, **N. Kostoglou**, B. Deme, O. Paris, Interpreting the differences between SAXS and SANS signals from nanoporous carbon surfaces, *71st Annual Meeting of the Austrian Physical Society (ÖPG 2022)*, Leoben, Austria, 26-30 September 2022

[19] S. Stock, M. Jop, B. Deme, V. Cristiglio, S. Rols, C. Prehal, **N. Kostoglou**, O. Paris, In-situ small angle neutron scattering study of hydrogen physisorption in nanoporous carbons, *International Conference on Neutron Scattering (ICNS 2022)*, Buenos Aires, Argentina, 21-25 August 2022

[20] A. Solomi, K. Philippou, **N. Kostoglou**, I. Pashalidis, C. Rebholz, Copper adsorption by chemically modified pine needles, *13th Cyprus-Greece Chemistry Conference*, 31 October-3 November 2019

[21] **N. Kostoglou**, C. Koczwara, C. Prehal, B. Babic, C. Tampaxis, G. Charalambopoulou, T. Steriotis, K. Polychronopoulou, G. Constantinides, O. Paris, C. Rebholz, C. Mitterer, Nanoporous activated carbon cloth for H_2 adsorption, selective CO_2/CH_4 separation and supercapacitor energy storage, *45th International Conference on Micro & Nano Engineering (MNE2019)*, Rhodes, Greece, 23-26 September 2019

[22] **N. Kostoglou**, C. Koczwara, C. Prehal, B. Babic, C. Tampaxis, G. Charalambopoulou, T. Steriotis, K. Polychronopoulou, G. Constantinides, O. Paris, C. Rebholz, C. Mitterer, Nanoporous activated carbon cloth for H_2 adsorption, selective CO_2/CH_4 separation and supercapacitor energy storage, *85th Workshop of the International Union of Vacuum Science, Technique and Applications (IUVSTA) on "Nanoporous Materials for Green Energy Conversion and Storage"*, Schloss Seggau, Austria, 14-19 October 2018

[23] **N. Kostoglou**, C. Koczwara, B. Babic, T. Steriotis, K. Polychronopoulou, G. Constantinides, O. Paris, C. Rebholz, C. Mitterer, Nanoporous activated carbon cloth for H_2 storage and selective CO_2/CH_4 separation, *15th International Conference on Nanosciences & Nanotechnologies (NN18)*, Thessaloniki, Greece, 3-6 July 2018

[24] **N. Kostoglou**, B. Babic, B. Matovic, G. Constantinides, G. Charalambopoulou, T. Steriotis, M. Baker, K. Polychronopoulou, C. Mitterer, C. Rebholz, Hydrogen storage and selective gas separation performance of a nanoporous carbon cloth-like material, *4th Conference of the Serbian Society for Ceramic Materials (4CSCS-2017)*, Belgrade, Serbia, 14-16 June 2017

[25] **N. Kostoglou**, M. Tian, L. Holyfield, V. Ting, T. Mays, G. Constantinides, K. Polychronopoulou, C. Mitterer, C. Rebholz, Few-layer graphene derived by plasma processing: Properties towards hydrogen adsorption and selective carbon dioxide/methane gas separation, *1st International Conference on Advanced Energy Materials (AEM 2016)*, University of Surrey, Guildford, England, 12-14 September 2016

[26] C. Rebholz, **N. Kostoglou**, V. Tzitzios, C. Tampaxis, G. Charalambopoulou, T. Steriotis, A. Kontos, K. Giannakopoulos, Y. Li, K. Liao, K. Polychronopoulou, Synthesis, characterization and hydrogen storage capacity of nanoporous graphene-based adsorbents, *61st Annual International Symposium and Exhibition of the American Vacuum Society (AVS 61)*, Baltimore-Maryland, USA, 11-13 November 2014

❖ **Invited Lectures:**

[1] **N. Kostoglou**, O. Paris, C. Mitterer, New instruments for carbon synthesis and characterization at MUL, *Workshop of the Chair of Physics and the Chair of Functional Materials and Materials Systems at Montanuniversität Leoben on "New avenues for the functionalization and characterization of nanocarbons"*, Leoben, Austria, 3 July 2023

[2] **N. Kostoglou**, Functionalized nanoporous carbons for hydrogen storage, *2021 China-Austria Roundtable of NanoScience and Technology*, online meeting, 8-9 September 2021

[3] **N. Kostoglou**, Autosorb iQ^3 gas sorption analyzer: Specifications & Capabilities, *Workshop of the Institute of Physics at the Montanuniversität Leoben on "Gas Physisorption for the Advanced Characterization of Nanopores"*, Leoben, Austria, 13 February 2020

[4] C. Mitterer, **N. Kostoglou**, C. Rebholz, Nanoporous carbon-based materials for hydrogen storage, *International Conference on Integrated Computational Materials, Process and Product Engineering (IC-MPPE 2019)*, Leoben, Austria, 20-22 November 2019

[5] **N. Kostoglou**, C. Koczwara, N. Natter, C. Prehal, B. Babic, C. Tampaxis, G. Charalambopoulou, T. Steriotis, K. Polychronopoulou, G. Constantinides, O. Paris, C.Y. Wang, C. Rebholz, C. Mitterer, Nanoporous carbon-based materials for energy and environmental applications, *85th Workshop of the International Union of Vacuum Science, Technique and*

Applications (IUVSTA) on "Nanoporous Materials for Green Energy Conversion and Storage", Schloss Seggau, Austria, 14-19 October 2018

[6] **N. Kostoglou**, Carbon-based nanoporous materials for hydrogen storage, *Workshop of the Institute of Physics at the Montanuniversität Leoben on "Porous Materials for Energy applications: Materials & Characterization"*, Leoben, Austria, 26-27 March 2018

[7] **N. Kostoglou**, B. Babic, B. Matovic, G. Constantinides, A. Kontos, T. Steriotis, V. Ryzhkov, E. Gunduz, C. Mitterer, C. Rebholz, Novel production routes for porous boron nitride nanostructures and carbon foam-aluminium fluoride nanocomposites, *4th Conference of the Serbian Society for Ceramic Materials (4CSCS-2017)*, Belgrade, Serbia, 14-16 June 2017

[8] **N. Kostoglou**, C. Rebholz, Thermal stability of different hexagonal boron nitride (h-BN) nanostructures, *3rd Conference of the Serbian Society for Ceramic Materials (3CSCS-2015)*, Belgrade, Serbia, 15-17 June 2015

Professional Talks & Participations

[1] **Invited Talk** on *"Nanoporous Materials Systems for Sustainable Hydrogen Storage Applications"* for the Institute of Geoenergy, Foundation for Research and Technology – Hellas (FORTH), Chania-Crete, Greece, 14 January 2025

[2] **Online Lecture Series 2024 *"Energy Transition"*** organized by the TU Bergakademie Freiberg under the EURECA-PRO initiative, Winter Semester 2024/2025

[3] **Invited Talk** on *"Engineering Nanostructured & Nanoporous Materials for Green Energy Conversion & Storage Applications"* for the School of Chemical Engineering, National Technical University of Athens, Athens, Greece, 13 February 2024

[4] **Online Workshop on Computational Materials Science (CMS23)** co-organized by the Department of Physics of the National Kapodistrian University of Athens, the Physics Laboratory Department of Education (ASPETE) and the Hellenic Society for the Science and Technology of Condensed Matter (HSSTCM), 9-10 December 2023

[5] **Invited Talk** on *"Engineering Nanostructured & Nanoporous Materials for Green Energy Storage"* for the Department of Environment, University of the Aegean, Mytilene-Lesvos, Greece, 3 November 2023

[6] **Masterclass on *"Surface & Pores"*** organized by Anton-Paar GmbH, Graz, Austria, 14-15 February 2023

[7] **1st H_2-C Brunch** organized by the Resources Innovation Center of Montanuniversität Leoben, Austria, 15 February 2023

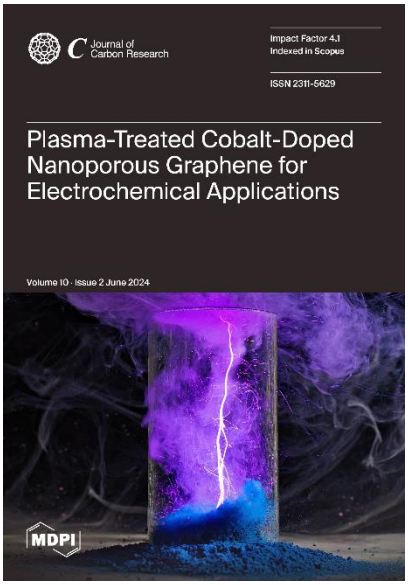
[8] **Invited Talk** on *"Engineering Nanostructured & Nanoporous Materials for Green Energy Storage"* for the Department of Mechanical and Manufacturing Engineering, University of Cyprus, Nicosia, Cyprus, 30 June 2022

[9] **1st H_2-C Symposium** organized by the Resources Innovation Center of Montanuniversität Leoben, Austria, 27 June 2022

[10] **Online Workshop on Computational Materials Science (CMS21)** co-organized by the Department of Materials Science of the University of Patras and the Hellenic Society for the Science and Technology of Condensed Matter (HSSTCM), 18 December 2021

Front Cover Feature/Story

- Peer-reviewed publication “Plasma-Treated Cobalt-Doped Nanoporous Graphene for Electrochemical Applications”, *C—Journal of Carbon Research*, Volume 10, Issue 2, June 2024



https://www.mdpi.com/files/uploaded/covers/carbon/big_cover-carbon-v10-i2.png

Scientific Visits in Large-scale Facilities

- Small-angle neutron scattering experiments on nanoporous carbons at the **D16 beamline** of the Institut Laue-Langevin (ILL), Grenoble, France; 30 May-6 June 2023
- Ultraviolet-Visible (UV-Vis) experiments on TiO_2 coatings at the Institute of Nanoscience & Nanotechnology of the **National Centre for Scientific Research “Demokritos”**, Athens, Greece; 22-23 December 2022
- Small-angle X-ray scattering experiments on nanoporous carbons at the **Austrian SAXS beamline** of the Ellettra Sincrotrone Trieste, Trieste, Italy; 31 August-6 September 2017
- Gas cryo-adsorption experiments on nanoporous materials at the HYSORB Laboratory of the Institute of Nanoscience & Nanotechnology at the **National Center for Scientific Research “Demokritos”**, Athens, Greece; September 2013-May 2014

Accepted Beamtime Proposals (Co-authored)

- S. Stock, A. Markus, S. Rols, M. Seyffertitz, **N. Kostoglou**, O. Paris, Dynamics of molecular hydrogen in the strong spatial confinement of microporous carbons, Proposal no. 6-07-102, IN16B beamline, 18-25 September 2023 and PANTHER beamline, Institut Laue-Langevin (ILL), France**,** 4-7 December 2023; **Proposer**

- S. Stock, V. Cristiglio, B. Deme, G.J. Cuello, M. Jop, **N. Kostoglou**, O. Paris, Hydrogen storage mechanisms in disordered nanoporous carbons studied by small and wide-angle neutron scattering, Proposal no. 1-04-242, D16 beamline, Institut Laue-Langevin (ILL), France, 30 May-6 June 2023; **Proposer & Experimenter**
- S. Stock, B. Deme, C. Mitterer, **N. Kostoglou** O. Paris, V. Cristiglio, Hydrogen storage mechanisms in disordered nanoporous carbons at high pressures, Proposal no. 1-04-235, April 2021, D16 beamline, Institut Laue-Langevin (ILL), France, 9-14 September 2021; **Proposer**
- O. Paris, C. Mitterer, S. Stock, **N. Kostoglou**, V. Cristiglio, B. Deme, Hydrogen storage mechanisms in disordered nanoporous carbons, Proposal no. 1-04-218, October 2020, D16 beamline, Institut Laue-Langevin (ILL), France, 4-8 March 2021; **Proposer**

Certifications

- **Service as a Topical Advisory Panel Member** given by the C—Journal of Carbon Research (MDPI)
- **Service as a Topical Advisory Panel Member** given by the Nanomaterials journal (MDPI)
- **Service as a Guest Editor** of the special issue *"Nanoporous Carbons for Hydrogen Sorption and Electrochemical Energy Storage"* by the C—Journal of Carbon Research (MDPI); 2024
- **Service as a Guest Editor** of the special issue *"Boron nitride (BN) Nanomaterials and their Emerging Applications"* by the Nanomaterials journal (MDPI); 2024
- **Service as a Guest Editor** of the special issue *"Carbon-Based Materials for Hydrogen Production, Storage and Conversion"* by the C—Journal of Carbon Research (MDPI); 2020
- **Outstanding contribution in reviewing** by the International Journal of Hydrogen Energy (Elsevier); since 2018
- **Outstanding contribution in reviewing** by the Surface & Coatings Technology journal (Elsevier); since 2016
- **Recognition of peer review activities** for the American Chemical Society (ACS Publications); since 2016
- **Recognition of peer review activities** for the Carbon journal (Elsevier); since 2015
- **Completion of a 60-hour training course** in AutoCAD 2D software given by Autodesk; 2013
- **Completion of practical training** by the International Association for the Exchange of Students for Technical Experience (IAESTE); 2010
- **Completion of educational seminars** on MATLAB, AutoCAD and C programming provided by the Center for Teaching and Learning at the University Cyprus (Nicosia, Cyprus); 2010-2011

Technical Skills

- 14 years of experience with advanced materials characterization methods such as gas sorption analysis, gas pycnometry, scanning electron microscopy (SEM), energy dispersive X-ray spectroscopy (EDX), X-ray photoelectron spectroscopy (XPS),

X-ray diffraction (XRD), Raman and infrared (IR) spectroscopy, thermal gravimetric analysis (TGA) and differential scanning calorimetry (DSC)

- Experienced operator of low-pressure (0-1 bar) and high-pressure (0-100 bar) gas sorption analyzers and a gas pycnometer (Anton-Paar QuantaTec Autosorb iQ^3, Anton-Paar QuantaTec iSorb HP-1 and Anton-Paar Ultrapyc 5000, respectively) located at the Chair of Physics, Montanuniversität Leoben, Austria
- Advanced gas sorption data analysis with the ASiQWin software (Quantachrome Instruments)
- Data analysis and plotting with MATLAB (MathWorks) and Origin (OriginLab Corporation) softwares
- Proficient in using the Moodle platform for course management, content delivery, student assessments and communication in online and blended learning environments
- Mechanical design with AutoCAD Classic and Autodesk Mechanical Desktop softwares
- Proficient in Microsoft Office (Word, Excel, and PowerPoint)

Language Skills

- **Greek** (mother tongue)
  - General Lyceum Graduation Certificate, 3rd General Lyceum of Kifisia, Ministry of National Education and Religion, Hellenic Republic, 2007; Grade: 18.6/20 (“Excellent”)
  - Participation in the Pan-Hellenic Exams of 2007
- **English** (C2, proficient user)
  - Edexcel International: Proficient Communication, University of Westminster, 2005
  - Advanced Level Certificate in English, Hellenic American University, 2005
  - Edexcel International: Upper Intermediate Communication, University of Westminster, 2003
  - First Certificate in English, University of Cambridge, 2003
- **French** (C2, proficient user)
  - Proficient Skills in French Language, Ministry of National Education & Religious Affairs, Hellenic Republic, 2008
  - Diplome Approfondi de Langue Francaise (DALF), Ministry of National Education, French Republic, 2005
  - Diplome d’Etudes en Langue Francaise (DELF II), Ministry of National Education, French Republic, 2004
  - Diplome d’Etudes en Langue Francaise (DELF I), Ministry of National Education, French Republic, 2004
- **German** (A1-A2, basic user)
  - Weekly online courses, 2023-present
  - Weekly courses at Montanuniversität Leoben, Austria, 2015-2017

Participation in Scientific Societies

- Association of Material Scientists (VLW) in Leoben, Austria (since May 2022)
- Materials Research Society (MRS), USA (since November 2021)
- Hellenic Society for the Science & Technology of Condensed Matter (HSSTCM), Athens, Greece (since May 2015)
- Technical Chamber of Greece (TEE), Athens, Greece (since July 2013)
- Cyprus Scientific & Technical Chamber (ETEK), Nicosia, Cyprus (since September 2012)

Network of Scientific & Industrial Partners

- Austria: Montanuniversität Leoben; Graz University of Technology; RAG Austria AG; TDE Group; Loginns GmbH
- Canada: Polytechnique Montréal
- Cyprus: University of Cyprus; Cyprus University of Technology; The Cyprus Institute; Nicolaides & Kountouris Metal Company Ltd; H2Era Innovation Ltd
- France: French National Center for Scientific Research (CNRS); University of Limoges
- Germany: RWTH Aachen
- Greece: National Center for Scientific Research Demokritos; National Technical University of Athens
- Russia**:** Tomsk Polytechnic University
- Serbia: University of Belgrade; University of Novi Sad; Vinča Institute of Nuclear Sciences
- South Korea: Pusan National University; Sungkyunkwan University
- Taiwan: National Yang Ming Chiao Tung University
- UAE: Khalifa University
- UK: University of Manchester; University of Surrey; University of Bath; University of Bristol; Perpetuus Advanced Materials
- USA: Stanford University; Pittsburg State University; Purdue University; Naval Postgraduate School; Fibrtec Inc

Most Important Academic Collaborators

- Prof. Christian Mitterer, Prof. Oskar Paris and Prof. David Misch, Montanuniversität Leoben, Austria
- Prof. Stefan Spirk, Graz University of Technology, Austria
- Dr. Etienne Bousser, Polytechnique Montréal, Canada
- Prof. Claus Rebholz, University of Cyprus, Cyprus
- Assoc. Prof. Georgios Constantinides, Cyprus University of Technology, Cyprus

- Dr. Theodore Steriotis and Dr. Konstantinos Giannakopoulos, National Centre for Scientific Research Demokritos, Greece
- Dr. Vladislav Ryzhkov, Tomsk Polytechnic University, Russia
- Prof. Branko Matovic, Vinca Institute of Nuclear Sciences, Serbia
- Assoc. Prof. Cheng-Yu Wang, National Yang Ming Chiao Tung University, Taiwan
- Prof. Kyriaki Polychronopoulou, Khalifa University, UAE
- Dr. Mark Baker and Dr. Steve Hinder, University of Surrey, UK
- Prof. Ram Gupta, Pittsburg State University, USA
- Prof. Charis Doumanidis, University of South Alabama, USA

Personal Information & Interests

- Long-term residence in different European cities and countries; Newcastle-UK (1992-1994), Larisa-Greece (1995-1998), Brussels-Belgium (1999-2002), Athens-Greece (2003-2006), Nicosia-Cyprus (2007-2014) and Leoben-Austria (2015-today)
- Completed military service obligations in Greece (Hellenic Air Force, 2022)
- Admitted in the School of Production Engineering & Management at the Technical University of Crete (Greece) after the Pan-Hellenic Exams of 2007
- Former Karate athlete (black belt degree); participation in local and Pan-Hellenic Karate competitions between 1997-2007; winner of 5 medals (2 gold, 1 silver and 2 bronze)
- Participation in different running events organized in Austria; Erzberg Dirtrun (15-07-2023), Graz City Run (07-10-2023), Leoben Lauf Event (16-09-2023), Brucker Business Lauf (16-05-2024)