

CURRICULUM VITAE

Personal Information

Last Name: Kouloumpis
First Name: Antonios
Date of Birth: 02 December 1986
ORCID: [0000-0002-8738-3141](https://orcid.org/0000-0002-8738-3141)

Academic Career

2023 - Assistant Professor, Dept. of Chemistry, University of Crete
2020 - 2023 Postdoctoral researcher, Dept. of Materials Science & Engineering, Cornell University, Ithaca, New York, U.S.A.
2018 - 2019 Postdoctoral researcher, Regional Centre of Advanced Technologies and Materials Institute, Palacký University, Olomouc, Czech Republic.
2017 - 2018 Military Service
2013 - 2017 Double Doctorate Degree under the joint supervision of Zernike Institute for Advanced Materials, Faculty of Science & Engineering, University of Groningen, The Netherlands and Department of Materials Science & Engineering, School of Engineering, University of Ioannina, Greece – Thesis title: *“Development and study of low-dimensional hybrid and nanocomposite materials based on layered nanostructures”*

2013 - 2014 Short-term visiting researcher:

- Dept. of Materials Science & Engineering, University of North Texas, Denton, U.S.A.
- Dept. of Chemistry, University of Florida, Gainesville, U.S.A.
- Dept. of Materials Science, Korea Basic Science Institute, Daejeon, South Korea

2010 - 2013 Master Diploma Degree in “Chemistry and Technology of Materials” in the cross-departmental Master Program of Materials Science & Engineering and Chemistry Departments of University of Ioannina, in cooperation with the General Department of Physics – Chemistry and Materials Technology, School of Technological Applications, T.E.I. of Athens, Greece

2004 - 2010 Bachelor Diploma, Dept. of Materials Science & Engineering, University of Ioannina, Greece

Honors-Scholarships

- Award of the Ph.D. degree with *cum laude* distinction from the Zernike Institute for Advanced Materials, Faculty of Science and Engineering, University of Groningen, The Netherlands.
- Scholarship from the Christodoulou Euthimiou Foundation, during under-graduation studies at the Dept. of Materials Science and Engineering, University of Ioannina, Greece.

Research Interests

The main objective of the research is to explore, identify and apply the rules of chemistry in a variety of carbon-based nanomaterials (graphene and derivatives, dots, nanotubes, fullerenes, nanodisks) and other inorganic layered materials (MoS_2 , Bi_2Se_3 , germanane), toward the synthesis of stable derivatives with tailored properties, e.g., optical, electrical, magnetic, and antibacterial properties, dispersibility in polar media, etc. Such materials are also used as building blocks for the synthesis of hybrid/nanocomposites by covalent/non-covalent attachment with other organic/inorganic moieties, biomolecules, or nanomaterials for the development of novel nanostructures with new or enhanced properties. In addition, precise layer-by-layer approaches, such as the Langmuir-Blodgett technique and self-assembly, are used, allowing the structural control of simple and hybrid nanostructures.

Research activity

The published work is related to the synthesis, development, chemical functionalization, characterization, and study of properties of simple or hybrid/composite nanomaterials and thin films with huge technological interest, especially in the fields of energy, sensors and biotechnology.

Publication List:

1. Gd(III)-doped carbon dots as a dual fluorescent-MRI probe. A. B. Bourlinos, A. Bakandritsos, A. Kouloumpis, D. Gournis, M. Krysmann, E. P. Giannelis, K. Polakova, K. Safarova, K. Hola, R. Zboril. *Journal of Materials Chemistry*, 2012, 22, 44, 23327-23330. (DOI: [10.1039/C2JM35592B](https://doi.org/10.1039/C2JM35592B))
2. Aqueous-dispersible fullerol-carbon nanotube hybrids. A. B. Bourlinos, V. Georgakilas, A. Bakandritsos, A. Kouloumpis, D. Gournis, R. Zboril. *Materials Letters*, 2012, 82, 48-50. (<https://doi.org/10.1016/j.matlet.2012.05.026>)
3. Synthesis, characterization and non-linear optical response of organophilic carbon dots. A. B. Bourlinos, M. A. Karakassides, A. Kouloumpis, D. Gournis, A. Bakandritsos, I. Papagiannouli, P. Aloukos, S. Couris, K. Hola, R. Zboril, M. Krysmann, E. P. Giannelis. *Carbon*, 2013, 61, 640-643. (<https://doi.org/10.1016/j.carbon.2013.05.017>)
4. Tuning the Dispersibility of Carbon Nanostructures from Organophilic to Hydrophilic: Towards the Preparation of New Multipurpose Carbon-Based Hybrids. V. Georgakilas, A. Kouloumpis, D. Gournis, A. Bourlinos, C. Trapalis, R. Zboril. *Chemistry - A European Journal*, 2013, 19, 12884-12891. (DOI: [10.1002/chem.201301200](https://doi.org/10.1002/chem.201301200))
5. Wetting behavior of plasma treated low-k films in dHF cleans solutions. T. S. Smith, K. M. Lynch, C.M. Cooper, O. Okobiah, E. Osei-Yiadom, M. Bischof, A. Kouloumpis, M. Baikousi, K. Dimos, R. F. Reidy. *Microelectronic Engineering*, 2014, 128, 79-84. (<https://doi.org/10.1016/j.mee.2014.05.006>)
6. Performance of layer-by-layer deposited low dimensional building blocks of graphene-prussian blue onto graphite screen-printed electrodes as sensors for hydrogen peroxide. A. Michopoulos, A. Kouloumpis, D. Gournis, M. I. Prodromidis. *Electrochimica Acta*, 2014, 146, 477-484. (<https://doi.org/10.1016/j.electacta.2014.09.031>)
7. Green and simple route toward boron doped carbon dots with significantly enhanced non-linear optical properties. A. B. Bourlinos, G. Trivizas, M. A. Karakassides, M. Baikousi, A. Kouloumpis, D. Gournis, A. Bakandritsos, K. Hola, O. Kozak, R. Zboril, I. Papagiannouli, P. Aloukos, S. Couris. *Carbon*, 2015, 83, 173-179. (<https://doi.org/10.1016/j.carbon.2014.11.032>)
8. Hydrophilic nanotube supported graphene-water dispersible carbon superstructure with excellent conductivity. V. Georgakilas, A. Demeslis, E. Dararas, A. Kouloumpis, K. Dimos, D. Gournis, M. Kocman, M. Otyepka, R. Zboril. *Advanced Functional Materials*, 2015, 25 (10) 1481-1487. (<https://doi.org/10.1002/adfm.201403801>)
9. A bottom-up approach for the synthesis of highly ordered fullerene-intercalated graphene hybrids. A. Kouloumpis, K. Spyrou, K. Dimos, V. Georgakilas, P. Rudolf, D. Gournis. *Frontiers in Materials*, 2015, 2, 10 (1-8). (<https://doi.org/10.3389/fmats.2015.00010>)
10. In situ growth of capping-free magnetic iron oxide nanoparticles on liquid-phase exfoliated graphene. T. Tsoufis, Z. Syrgiannis, N. Akhtar, M. Prato, F. Katsaros, Z. Sideratou, A. Kouloumpis, D. Gournis, P. Rudolf. *Nanoscale*, 2015, 7, 8995-9003. (DOI: [10.1039/C5NR00765H](https://doi.org/10.1039/C5NR00765H))
11. Highly dispersible disk-like graphene nanoflakes. V. Georgakilas, K. Vrettos, K. Katomeri, A. Kouloumpis, K. Dimos, D. Gournis and R. Zboril. *Nanoscale*, 2015, 7, 15059. (DOI: [10.1039/C5NR04422G](https://doi.org/10.1039/C5NR04422G))



12. Introduction of micronuclei by multi-walled carbon nanotubes interacting with humic acids in cultured human. M. S. Vidali, E. Bletsas, A. Kouloumpis, C. G. Skoutelis, Y. Deligiannakis, D. Gournis, D. Vlastos. *Environmental Science: Nano*, 2016, 3, 74. (DOI: [10.1039/C5EN00138B](https://doi.org/10.1039/C5EN00138B))
13. Carbon nanostructures containing polyhedral oligomeric silsesquioxanes (POSS). G. Potsi, A. Rossos, A. Kouloumpis, M. K. Antoniou, K. Spyrou, M. A. Karakassides, D. Gournis, P. Rudolf. *Current Organic Chemistry*, 2016, 20(6): 662-673. – Review – (DOI: [10.2174/1385272819666151006010352](https://doi.org/10.2174/1385272819666151006010352))
14. Graphene oxide derivatives with variable alkyl chain length and terminal functional groups as supports for stabilization of cytochrome c. M. Patila, I. V. Pavlidis, A. Kouloumpis, K. Dimos, K. Spyrou, P. Katapodis, D. Gournis, H. Stamatis. *International Journal of Biological Macromolecules*, 2016, 84, 227-235. (<https://doi.org/10.1016/j.ijbiomac.2015.12.023>)
15. Laccase-functionalized graphene oxide assemblies as efficient nanobiocatalysts for oxidation reactions. M. Patila, A. Kouloumpis, D. Gournis, P. Rudolf, H. Stamatis. *Sensors*, 2016, 16 (3), 287. (DOI: [10.3390/s16030287](https://doi.org/10.3390/s16030287))
16. Unexpected orbital magnetism in Bi-rich Bi₂Se₃ nanoplatelets. H. J. Kim, M. S. Katsiotis, S. Alhassan, I. Zafiropoulou, M. Pissas, Y. Sanakis, G. Mitrikas, N. Panopoulos, N. Boukos, V. Tzitzios, M. Fardis, J. G. Kim, S. G. Lee, Y. M. Kim, S. J. Yoo, J. H. Lee, A. Kouloumpis, D. Gournis, M. Karakassides, G. Papavassiliou. *NPG Asia Materials*, 2016, 8, e271. (<https://doi.org/10.1038/am.2016.56>)
17. Determination of phenolic compounds using spectral and color transitions of rhodium nanoparticles. V. Gatselou, D. C. Christodouleas, A. Kouloumpis, D. Gournis, D. L. Giokas. *Analytica Chimica Acta*, 2016, 932, 80-87. (<https://doi.org/10.1016/j.aca.2016.05.029>)
18. Graphene Nanobuds: Synthesis and Selective Organic Derivatization. V. Georgakilas, A. B. Bourlinos, E. Ntararas, A. Ibraliu, D. Gournis, K. Dimos, A. Kouloumpis, R. Zboril. *Carbon*, 2016, 110, 51-55. (<https://doi.org/10.1016/j.carbon.2016.09.003>)
19. Fe(III)-functionalized carbon dots-highly efficient photoluminescence redox catalyst for hydrogenations of olefins and decomposition of hydrogen peroxide. A. B. Bourlinos, A. K. Rathi, M. B. Gawande, K. Hola, A. Goswami, S. Kalytchuk, M. A. Karakassides, A. Kouloumpis, D. Gournis, Y. Deligiannakis, E. P. Giannelis, R. Zboril. *Applied Materials Today*, 2017, 7, 179-184. (<https://doi.org/10.1016/j.apmt.2017.03.002>)
20. Graphene/Carbon-dot hybrid thin films prepared by a modified Langmuir-Schaefer method. A. Kouloumpis, E. Thomou, N. Chalmpes, K. Dimos, K. Spyrou, A. B. Bourlinos, I. Koutselas, D. Gournis, P. Rudolf. *ACS Omega*, 2017, 2, (5), 2090-2099. (DOI: [10.1021/acsomega.7b00107](https://doi.org/10.1021/acsomega.7b00107))
21. Fullerol-Graphene Nanobuds: Novel Water Dispersible and Highly Conductive Nanocarbon for Electrochemical Sensing. A. B. Bourlinos, V. Georgakilas, V. Mouselimis, A. Kouloumpis, E. Mouzourakis, A. Koutsoukis, M. K. Antoniou, D. Gournis, M. A. Karakassides, Y. Deligiannakis, V. Urbanova, K. Cepe, A. Bakandritsos, R. Zboril. *Applied Materials Today*, 2017, 9, 71-76. (<https://doi.org/10.1016/j.apmt.2017.05.006>)
22. Top-down and bottom-up approaches to transparent, flexible and luminescent nitrogen-doped carbon nanodots-clay hybrid films. K. Dimos, F. Arcudi, A. Kouloumpis, I. Koutselas, P. Rudolf, D. Gournis, M. Prato. *Nanoscale*, 2017, 9, (29), 10256-10262. (DOI: [10.1039/C7NR02673K](https://doi.org/10.1039/C7NR02673K))
23. Hydrogenated fluorographene: A 2D counterpart of graphene with enhanced nonlinear optical properties. I. Papadakis, Z. Bouza, S. Couris, A. B. Bourlinos, V. Mouselimis, A. Kouloumpis, D. Gournis, A. Bakandritsos, J. Ugolotti, R. Zboril. *The Journal of Physical Chemistry C*, 2017, 121 (40), 22567-22575. (DOI: [10.1021/acs.jpcc.7b08470](https://doi.org/10.1021/acs.jpcc.7b08470))
24. Synthesis, characterization and assessment of hydrophilic oxidized carbon nanodiscs in biorelated applications. P. Zygouri, T. Tsoufis, A. Kouloumpis, M. Patila, G. Potsi, A. A. Sevastos, Z. Sideratou, F. Katsaros, G. Charalambopoulou, H. Stamatis, P. Rudolf, T. A. Steriotis, D. Gournis. *RSC Advances*, 2018, 8, 122. (DOI: [10.1039/C7RA11045F](https://doi.org/10.1039/C7RA11045F))
25. Controlled deposition of fullerene derivatives within a graphene template by means of a modified Langmuir-Schaefer method. A. Kouloumpis, N. Vourdas, P. Zygouri, N. Chalmpes, G. Potsi, V. Kostas, K. Spyrou, V. N. Stathopoulos, D. Gournis, P. Rudolf. *Journal of Colloid and Interface Science*, 2018, 524, 388-398. (<https://doi.org/10.1016/j.jcis.2018.04.049>)
26. Hybrid Nanomaterials of Magnetic Iron Nanoparticles and Graphene Oxide as Matrices for the Immobilization of β-Glucosidase: Synthesis, Characterization, and Biocatalytic Properties. G. Orfanakis, M. Patila, A. V. Chatzikonstantinou, K. M. Lyra, A. Kouloumpis, K. Spyrou, P. Katapodis, A. Paipetis, P. Rudolf, D. Gournis, H. Stamatis. *Frontiers in Materials*, 2018, Vol. 5, Article 25. (<https://doi.org/10.3389/fmats.2018.00025>)
27. Self-assembly of one-side-functionalized graphene nanosheets in bilayered superstructures for drug delivery. V. Bekiari, A. Karakassides, S. Georgitsopoulou, A. Kouloumpis, D. Gournis, V. Georgakilas. *Journal of Materials Science*, 2018, Vol. 53, Issue 16, pp 11167-11175. (<https://doi.org/10.1007/s10853-018-2444-8>)

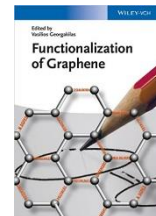
28. Facile MoS₂ Growth on Reduced Graphene-Oxide via Liquid Phase Method. V. Tzitzios, K. Dimos, S. M. Alhassan, R. Mishra, A. Kouloumpis, D. Gournis, N. Boukos, M. A. Roldan, J-C. Idrobo, M. A. Karakassides, G. Basina, Y. Alwahedi, H. J Kim, M. S. Katsiotis, M. Fardis, A. Borisevich, S. J. Pennycook, S. T. Pantelides, G. Papavassiliou. *Frontiers in Materials*, 2018, Vol. 5, Article 29. (<https://doi.org/10.3389/fmats.2018.00029>)
29. Optimization of Silver Nanoparticle Synthesis by Banana Peel Extract Using Statistical Experimental Design and testing of their Antibacterial and Antioxidant Properties. N. Rigopoulos, E. Thomou, A. Kouloumpis, E. R. Lamprou, V. Petropoulea, D. Gournis, E. Poulis, H. C. Karantonis, E. Giaouris. *Current Pharmaceutical Biotechnology*, 2019, 20, (10), 858–873. (DOI: [10.2174/1389201020666181210113654](https://doi.org/10.2174/1389201020666181210113654))
30. Layer-by-Layer Assembly of Clay–Carbon Nanotube Hybrid Superstructures. N. Chalmpes,[#] A. Kouloumpis,[#] P. Zygouri, N. Karouta, K. Spyrou, P. Stathi, T. Tsoufis, V. Georgakilas, D. Gournis, P Rudolf. *ACS Omega*, 2019, 4, 18100–18107. (DOI: [10.1021/acsomega.9b01970](https://doi.org/10.1021/acsomega.9b01970)), [#]Equal contribution
31. Non-porous phosphonated ionic silica nanospheres as nanocarriers for efficient intracellular delivery of doxorubicin. K. N. Panagiotaki, K. Spyrou, M. Zachariadis, H. Pratsinis, A. Kouloumpis, L. G. Boutsika, A. Enotiadis, D. Gournis, E. P. Giannelis, Z. Sideratou. *Materials Today Communications*, 2020, 23, 100787. (<https://doi.org/10.1016/j.mtcomm.2019.100787>)
32. One-Step Synthesis of Janus Fluorographene Derivatives. A. Kouloumpis, D. D. Chronopoulos, G. Potsi, M. Pykal, J. Vlček, M. Scheibe, M. Otyepka. *Chemistry – A European Journal*, 2020, 26, 6518–6524. (<https://doi.org/10.1002/chem.201905866>)
33. Segregation of Maghemite Nanoparticles Within Symmetric Diblock Copolymer and Triblock Terpolymer Patterns Under Solvent Vapor Annealing. G. Zapsas, D. Moschovas, K. Ntetsikas, A. Karydis-Messinis, N. Chalmpes, A. Kouloumpis, D. Gournis, N. E. Zafeiropoulos, A. Avgeropoulos. *Materials (Basel)*, 2020, 13, 6, 1286. (DOI: [10.3390/ma13061286](https://doi.org/10.3390/ma13061286))
34. Synthesis, Characterization and Mechanical Properties of Nanocomposites Based on Novel Carbon Nanowires and Polystyrene. V. Kostas, M. Baikousi, N.-M. Barkoula, A. Giannakas, A. Kouloumpis, A. Avgeropoulos, D. Gournis, M. A. Karakassides. *Applied Sciences*, 2020, 10, 5737. (DOI: [10.3390/app10175737](https://doi.org/10.3390/app10175737))
35. Cytotoxicity Effects of Water-Soluble Multi-Walled Carbon Nanotubes Decorated with Quaternized Hyperbranched Poly(ethyleneimine) Derivatives on Autotrophic and Heterotrophic Gram-Negative Bacteria. N. S Heliopoulos, G. Kythreoti, K.-M. Lyra, K. N Panagiotaki, A. Papavassiliou, E. Sakellis, S. Papageorgiou, A. Kouloumpis, D. Gournis, F. K. Katsaros, K. Stamatakis, Z. Sideratou. *Pharmaceuticals (Basel)*, 2020, 6;13, (10): E293. (DOI: [10.3390/ph13100293](https://doi.org/10.3390/ph13100293))
36. Synthesis of 2D germanane (GeH): a new, fast and facile approach. T. Giousis, G. Potsi, A. Kouloumpis, K. Spyrou, Y. Georgantas, N. Chalmpes, K. Dimos, M.-K. Antoniou, G. Papavassiliou, A. B. Bourlinos, H.-J. Kim, V.-K. Shankarayya, W.-S. Alhassan, M. Ahmadi, B. J Kooi, G. Blake, D. M. Balazs, M. Loi, D. Gournis, P. Rudolf. *Angewandte Chemie, Int. Ed.*, 2021, 59, 2–8. (<https://doi.org/10.1002/anie.202010404>)
37. Germanane Monolayer Films as Antibacterial Coatings. A. Kouloumpis, A. V. Chatzikonstantinou, N. Chalmpes, T. Giousis, G. Potsi, P. G. Katapodis, H. Stamatis, D. Gournis, P. Rudolf. *ACS Applied Nano Materials*, 2021, 4 (3), 2333–2338. (<https://doi.org/10.1021/acsnm.0c03149>)
38. Immobilization of laccase on hybrid super-structured nanomaterials for the decolorization of phenolic dyes. M. Patila, P. E. Athanasiou, L. Kortessis, G. Potsi, A. Kouloumpis, D. Gournis, H. Stamatis. *Processes*, 2022, 10(2), 233. (<https://doi.org/10.3390/pr10020233>).
39. Graphene Oxide–Cytochrome c Multilayered Structures for Biocatalytic Applications: Decrypting the Role of Surfactant in Langmuir–Schaefer Layer Deposition. N. Chalmpes, M. Patila, A. Kouloumpis, C. Alatzoglou, K. Spyrou, M. Subrati, A. C. Polydera, A. B. Bourlinos, H. Stamatis, D. Gournis. *ACS Applied Materials and Interfaces*, 2022, 14, 22, 26204–26215. (<https://doi.org/10.1021/acsnm.2c03944>)
- 40. Probing the Mechanism of Targeted Delivery of Molecular Surfactants Loaded into Nanoparticles after Their Assembly at Oil–Water Interfaces.** M. A. Hammami,[#] A. Kouloumpis,[#] G. Qi, A. W. Alsmail, B. Aldakkan, M. Y. Kanj, E. P. Giannelis. *ACS Applied Materials & Interfaces*, 2023, 15, 4, 6113–6122. (<https://doi.org/10.1021/acsnm.2c18762>), [#]Equal contribution
- 41. Probing the Interfacial Properties of Oil–Water Interfaces Decorated with Ionizable, pH Responsive Silica Nanoparticles.** A. W. Alsmail, A. Kouloumpis, G. Potsi, M. A. Hammami, M. Y. Kanj, E. P. Giannelis. *Langmuir*, 2023. (<https://doi.org/10.1021/acs.langmuir.2c03286>)



Books/Chapters

Functionalization of Graphene (edited by Vasilios Georgakilas). Author of Chapter 11, Layer-by-layer assembly of graphene-based hybrid materials. A. Kouloumpis, P. Zygouri, K. Dimos, D. Gournis. 2014, pp. 359-399, ©Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim, Germany, ISBN-9783527672790.

(<https://doi.org/10.1002/9783527672790.ch11>)



Presentation in Conferences

1. 5th PanHellenic Symposium on Porous Materials, 2011, Heraklion, Crete, Greece. "Synthesis, characterization and thermal analysis of nylon 6.10 nanocomposites with layered materials". A. Kouloumpis, E. K. Diamanti, A. Enotiadis, D. Gournis.
2. The 9th International Conference on Functional and Nanostructured Materials, (FNMA12), 2012, Aegina, Greece. "A modified Langmuir-Schaefer approach for the synthesis of highly-ordered clay/carbon nanotube hybrids". P. Zygouri, P. Stathi, T. Tsoufis, A. Kouloumpis, D. Gournis, P. Rudolf.
3. 6th PanHellenic Symposium on Porous Materials, 2013, Kavala, Greece. "Graphene/Fullerene hybrid thin films by a modified Langmuir-Schaefer method". A. Kouloumpis, K. Spyrou, K. S. Triantafyllidis, D. Gournis. – **Poster award**
4. 224th ECS Meeting, 2013, San Francisco, U.S.A. "Controlled deposition of carbon nanotubes within a smectite nanoclay by means of a modified Langmuir-Schaefer approach". A. Kouloumpis, P. Zygouri, K. Spyrou, T. Tsoufis, P. Stathi, P. Rudolf, D. Gournis.
5. 5th PanHellenic Symposium on Green Chemistry and Sustainable Development, 2014, Ioannina, Greece. "A bottom-up approach for the synthesis of highly ordered fullerene-intercalated graphene hybrids". A. Kouloumpis, P. Zygouri, G. Potsi, K. Spyrou, K. Dimos, M. A. Karakassides, D. Gournis.
6. 11th International Conference on Nanosciences & Nanotechnologies (NN14), 2014, Thessaloniki, Greece. "Nanographene oxide stabilized with biodegradable and biocompatible copolymers for the controlled delivery of anticancer drugs". A. Angelopoulou, K. Avgoustakis, E. K. Diamanti, A. Kouloumpis, D. Gournis.
7. International Conference on Diamond and Carbon Materials, 2014, Madrid, Spain. "A bottom-up approach for the synthesis of highly ordered fullerene-intercalated graphene hybrids". A. Kouloumpis, P. Zygouri, G. Potsi, K. Spyrou, K. Dimos, M. A. Karakassides, D. Gournis.
8. Vlieland conference of Zernike Institute National Research Centre (NRC), 2015, Vlieland, The Netherlands. "Synthesis and characterization of copper-substituted silsesquioxanes pillared clays". G. Potsi, A. Kouloumpis, R. Gengler, D. Gournis, P. Rudolf.
9. E-MRS 2016 Spring Meeting, 2016, Lille, France. "Graphene/C-dots hybrid thin films by a modified Langmuir-Schaefer method". A. Kouloumpis, E. Thomou, K. Dimos, I. Koutselas, D. Gournis, P. Rudolf.
10. SETAC Brussels – Environmental Quality Through Transdisciplinary Collaboration, 2017, Brussels, Belgium. "Evaluation of the toxic, cytotoxic and genotoxic activity of three composite nanomaterials". I. Efthimiou, C. Ioannidou, F. Tsilimigka, A. Goutas, G. Potsi, A. Kouloumpis, D. Vlastos, E. Drosopoulou, D. Gournis, P. Mavragani-Tsipidou, H. Stamatis.
11. 5th Conference of Chemistry Department of University of Ioannina, 2017, Ioannina, Greece. "Synthesis of novel layered materials and development of derivatives/hybrid structures in germanane and silicane matrices". G. Potsi, A. Kouloumpis, T. Giousis, N. Chalmpes, D. Gournis.
12. Chains 2018, Veldhoven, The Netherlands. "A new synthetic route for the development of 2D germanane". T. Giousis, G. Potsi, A. Kouloumpis, K. Spyrou, Y. Georgantas, N. Chalmpes, K. Dimos, M-K. Antoniou, G. Papavassiliou, A. Bourlinos, H-J. Kim, H. Stamatis, G. Blake, D. Gournis, P. Rudolf.
13. Graphene, 2019, Rome, Italy. "Synthesis and characterization of 2D ButylGeH". T. Giousis, A. Kouloumpis, G. Potsi, K. Spyrou, N. Chalmpes, A. Syari'ati, C. Gioti, D. Gournis, P. Rudolf.
14. Vlieland conference of Zernike Institute National Research Centre (NRC), 2019, Vlieland, The Netherlands. "Synthesis and characterization of 2D ButylGeH". T. Giousis, A. Kouloumpis, G. Potsi, K. Spyrou, N. Chalmpes, A. Syari'ati, C. Gioti, D. Gournis, P. Rudolf.
15. E-MRS 2021 Spring Meeting, 2021, Virtual Conference, "Langmuir-Blodgett assembly of germanane nanosheets". A. Kouloumpis, T. Giousis, G. Potsi, N. Chalmpes, K. Dimos, G. Papavassiliou, A. B. Bourlinos, G. Blake, M. A. Loi, H. Stamatis, B. J. Kooi, D. Gournis, P. Rudolf.

16. ACS Fall 2021, 2021, Atlanta, Georgia, USA, "Antibacterial germanane monolayer films by the Langmuir-Blodgett assembly." A. Kouloumpis, G. Potsi, T. Giouisis, A. Chatzikonstantinou, N. Chalmes, P. Katopodis, H. Stamatis, D. Gournis, P. Rudolf.

Talks

- 2019
- "Low dimensional thin films based on layered materials". Faculty of Sciences, Palacký University, Olomouc, Czech Republic.
 - "Derivatives of graphene as supercapacitors". Regional Centre of Advanced Technologies and Materials Institute, Olomouc, Czech Republic.
 - "Asymmetric covalent functionalization of fluorographene". Regional Centre of Advanced Technologies and Materials Institute, Olomouc, Czech Republic.
- 2016
- Condensed Matter (CMD16), 2016, Groningen, The Netherlands. "Fullerene-intercalated graphene hybrid thin films by a modified Langmuir-Schaefer approach". A. Kouloumpis, P. Zygouri, K. Spyrou, P. Rudolf, D. Gournis.
- 2016
- 7th PanHellenic Symposium on Porous Materials, 2016, Ioannina, Greece. "A bottom-up synthesis of transparent flexible clay-carbon dot hybrid films". A. Kouloumpis, K. Dimos, F. Arcudi, I. B. Koutselas, M. Prato, P. Rudolf, D. Gournis. –[Oral award](#)

Organization of scientific meetings

Member of the Organizing committee at the 7th PanHellenic Symposium on Porous Materials, University of Ioannina, 02-04 June 2016, Ioannina, Greece.

Service to scientific community

Reviewer referee for research articles in international scientific journals: **ACS Applied Nano Materials** (ACS), *Colloids and Surfaces A: Physicochemical and Engineering Aspects* (Elsevier), *Carbon* (Elsevier), *Carbon Trends* (Elsevier), *International Journal of Biological Macromolecules* (Elsevier), *Measurement* (Elsevier), *Nanomaterials* (MDPI), *International Journal of Energy Research* (Wiley).