Dr. A. B. Bourlinos

CV info 27/2/2024

***Full name*:** Athanasios (Thanos) B. Bourlinos

***Title*:** Dr. (PhD in Chemistry)

***Date of birth*:** 4/10/1973

***Place of birth*:** Athens, Greece

***Citizenship*:** Greek

***Job position*:** Professor

***Organization*:** University of Ioannina

***Location*:** Ioannina 45110, Greece

***Department*:** Physics

***Office*:** Φ2-221γ

***Phone*:** 00302651008511

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thanosbourlinos@gmail.com

***Education*:** PhD (1999-2002), MSc (1997-1999) and BSc (1991-1995) in Chemistry from University of Athens, Athens, Greece (1995-1997: mandatory military service of 18 months) (high-school diploma ΕΠΛ Ν. Philadelfeias 1988-1991)

- PhD thesis, 2002: Surface modification of MCM-41 porous silica with metal ions and magnetic iron oxide nanoparticles, Supervisor: Dr. D. Petridis, Institute of Materials Science, NCSR Demokritos, Athens, Greece
- MSc thesis, 1999: Synthesis and characterization of iron-substituted MCM-41 porous silica through cation exchange of the template, Supervisor: Dr. D. Petridis, Institute of Materials Science, NCSR Demokritos, Athens, Greece
- Undergraduate thesis, 1995: Polymerization of diphenylacetylene in the presence of the binuclear complex $Re_2Cl_8^{2-}$ having a Re-Re quadruple bond, Supervisor: Prof. K. Mertis, Chemistry Department, University of Athens, Athens, Greece

***Honors*:**

- Successive participation in three Panhellenic Student Chemistry Competitions-ΕΠΛ Ν. Philadelfeias
- Rewarded funds from the State Scholarships Foundation for 3rd rank achievement at university entrance exam from the Chemistry Department, Athens University, Greece
- Rewarded funds from the State Scholarships Foundation for 1st rank achievement in the Master's postgraduate program from the Chemistry Department, Athens University, Greece
- A three-year PhD scholarship from the Institute of Materials Science, NCSR Demokritos, Athens, Greece
- Most cited Greek scientists in "Tractatus for the sixth fame" by J. Ioannidis
- Top 2 % scientists in the world, Stanford's List (3)

- Top scientists in Materials Science based on Research.com (2)

***Professional experience*:**

- 2024-to date: Professor at the Physics Department, University of Ioannina, Ioannina (Greece) (dedicated to the memory of my very beloved father Vasilis)
- 2020-2024: Associate Professor at the Physics Department, University of Ioannina, Ioannina (Greece)
- 2016-2020: Assistant Professor (tenure) at the Physics Department, University of Ioannina, Ioannina (Greece)
- 2012-2016: Assistant Professor (3-years appointment) at the Physics Department, University of Ioannina, Ioannina (Greece)
- 2011-2012: Research associate at the Physics Department, University of Ioannina, Ioannina (Greece) (Prof. R. Zboril)
- 2005-2011: Research associate at the Institute of Materials Science, NCSR Demokritos, Athens (Greece) (Dr. T. Steriotis, Dr. A. Stubos, Dr. G. Charalambopoulou)
- 2002-2004: Post-doctoral fellow at Materials Science and Engineering, Cornell University, Ithaca NY (USA) (Prof. E. P. Giannelis)
- 2002: Post-doctoral fellow at the Institute of Materials Science, NCSR Demokritos, Athens (Greece) (Dr. D. Niarchos)

***Subject area*:**

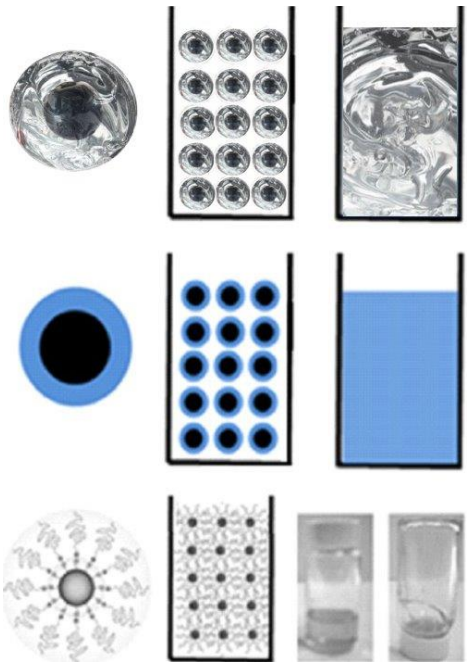
Experimental solid state physics: electronic and magnetic properties of nanostructured solids

***Research interests*:**

Synthesis or surface modification, physical characterization and magnetic/optical properties of nanoscale materials (porous, layered, nanoparticles) with emphasis on carbon nanostructures. Carbon materials of interest include amorphous carbon, carbon dots, nanodiamonds, fullerenes, carbon nanotubes, carbon nanocones, graphite and graphene/fluorographene derivatives. The studied properties pertain to magnetism, electrical conductivity, photoluminescence, non-linear optical response, catalysis, hypergolics, hydrogen storage, gas sorption, rheology, biomedical applications and environment

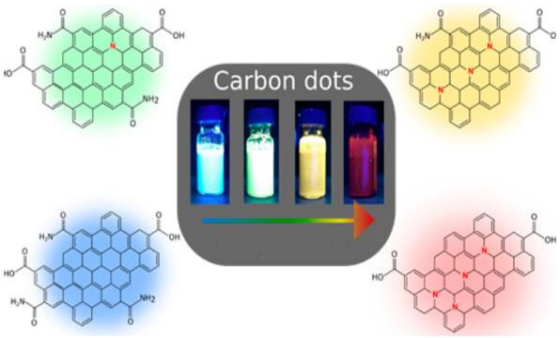
***Research highlights*:**

- *Surface-functionalized nanostructures with liquid-like behavior*



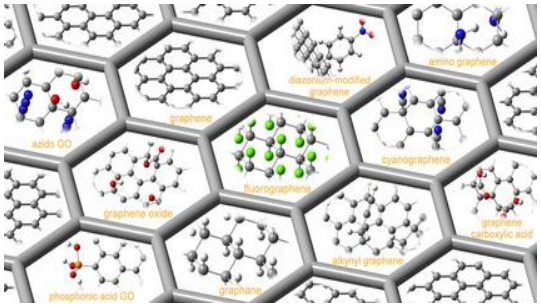
This is a radically new class of solvents, namely nanosolvents, which differentiate from common molecular solvents in that their basic unit is a surface functionalized nanostructure made up of a solid core (inorganic, carbonic, DNA, protein, virus, polymeric etc.) and a supported liquid organic shell or gel, the latter imparting fluidity to the system (Advanced Materials 2005, vol. 17, pp. 234-237; Applied Organometallic Chemistry 2010, vol. 24, pp. 581-589). Nanosolvents exhibit zero vapor pressure while combining fluidity with the physicochemical properties of a particular nanostructure. Our work has been marked and cited as a leading-edge research in the literature, including Nature (M. Peplow, Research highlights, Nature 2004, vol. 432, p. 688), Angew. Chem. (B. Smarsly, H. Kaper, Liquid inorganic-organic nanocomposites: novel electrolytes and ferrofluids, Angewandte Chemie International Edition 2005, vol. 44, pp. 3809-3811) and other notable review articles and book chapters. The particular project has resulted in a competitive grant of $ 25.000.000 for raising the KAUST-CU center at Cornell University for Energy and Sustainability (co-directors: Prof. E. P. Giannelis & Prof. L. A. Archer) (see report by R. Emro, Creating nanoscale solutions to global problems, Cornell Engineering Magazine, spring 2009, Cornell University). In addition, it has gave birth to the spin-off startup company NOHMs Technologies, Inc. (https://www.nohms.com/), first established at Cornell University in 2011 and then based in Rochester, NY (co-founder: Prof. L. A. Archer) (https://www.engineering.cornell.edu/magazine/features/lynden-archer-passionate-about-nohms)

- *Molecular synthesis of photoluminescent carbon dots*



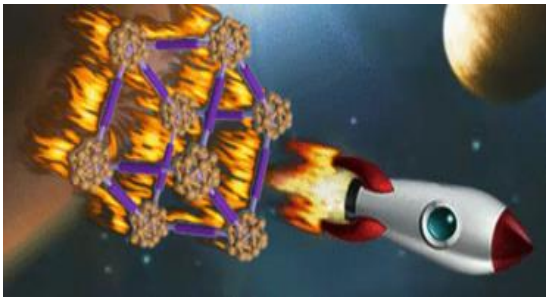
Carbon dots define an innovative class of carbon nanomaterials that are spherical in shape, possess a size of < 10 nm, exhibit bright photoluminescence in the visible region, and display relatively low toxicity. As such, they display numerous optical and biological applications as a cheaper and safer alternative to highly toxic quantum dots based on heavy metal chalcogenides. Especially the citrate method developed from our group (Small 2008, vol. 4, pp. 455-458; Chemistry of Materials 2008, vol. 20, pp. 4539-4541) has been marked and cited as classic in the literature, including Angew. Chem. (S. N. Baker, G. A. Baker, Luminescent carbon nanodots: emergent nanolights, Angewandte Chemie International Edition 2010, vol. 49, pp. 6726-6744) and several other notable review articles, placing it amongst the most influential contributions in the field of carbon dots. Our work on C-dots has served as one of the main research directions and funding resources of the research institute RCPTM, Olomouc, Czech Republic, as well as of the KAUST-CU center at Cornell University for Energy and Sustainability

- *Production and functionalization of graphene and its derivatives*



Graphene presents interesting optical, mechanical and electronic properties that can be custom engineered for a desired purpose through chemical functionalization of the carbon lattice and control of its energy band gap from metal to semiconductor. In this way, a wide range of valuable graphene derivatives can be received suitable for sensing, magnetic, nonlinear optical or biological applications (Chemical Reviews 2012, vol. 112, pp. 6156-6214; Chemical Reviews 2016, vol. 116, pp. 5464-5519). Some notorious articles from our group that have been considered classic in the field of graphene production (e.g., chemical reduction of graphite oxide and liquid phase exfoliation of graphite) include: Langmuir 2003, vol. 19, pp. 6050-6055; Small 2009, vol. 5, pp. 1841-1845; Solid State Communications 2009, vol. 149, pp. 2172-2176 (virtual special issue 2018 "10 years of graphene research in solid state communications"). In this context, significant should be also considered our contribution to fluorographene chemistry (Small 2010, vol. 6, pp. 2885-2891). Our work on graphene/fluorographene chemistry has served as one of the main research directions and funding resources of the research institute RCPTM, Olomouc, Czech Republic, including an ERC grant (Two-dimensional chemistry towards new graphene derivatives, 2D-CHEM Grant agreement ID: 683024, Prof. M. Otyepka) (https://cordis.europa.eu/project/id/683024)

- *Hypergolic materials synthesis*



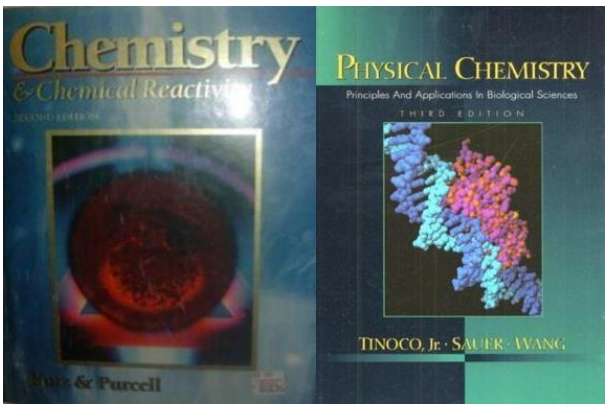
Hypergolic materials synthesis is a new preparative technique in materials science, developed from our group, that allows a wide range of carbon (nanosheets, dots, hollow spheres, discs, graphene/graphite) or inorganic (magnetic, photocatalytic, metallic or metal alloy) solids with useful properties to be obtained (Journal of Nanotechnology Research 2022, vol. 4, pp. 31-68). Solely based on simple hypergolic reactions that lift off rockets in space, the method not only permits the fast and spontaneous synthesis of several nanomaterials at ambient conditions but also releases a sizable amount of energy that can be directly converted into useful work, such as chemical, mechanical, photovoltaic, thermoelectric or heating fluids

***Teaching experience (undergraduate-postgraduate)*:**

- General Chemistry (4 hours/week, fall semester, Physics Department, University of Ioannina) (2012-to date)
- Physical Chemistry I (4 hours/week, fall semester, Physics Department, University of Ioannina) (2012-2022)
- Physical Chemistry II (4 hours/week, spring semester, Physics Department, University of Ioannina) (2012-2022)
- Physical Chemistry (4 hours/week, spring semester, Physics Department, University of Ioannina) (2022-to date)

- Physics Mechanics Lab (4 hours/week 2012-2023 & 8 hours/week 2024-to date, spring semester, Physics Department, University of Ioannina)
- Teaching courses in the interdisciplinary post-graduate study program of Materials Science and Engineering Department, University of Ioannina (2014-to date)
- Experiments demonstration room: demonstration of science experiments to school visitors (exothermic reactions, energy, microwaves, polymers, advanced materials) (Physics Department, University of Ioannina) (2014-to date)
- Outreach UOI Physics Department-YouTube 2022, Section IV (video with oral presentation & experiments for students of the secondary education)
- Advisor of students' spring/summer practicum (9)

***Suggested reading*:**



***Notes*:**

- A. B. Bourlinos, "Materials synthesis: a practical guide for physicists", Ioannina 2015 (http://phys-exp.physics.uoi.gr/wp-content/uploads/2015/09/MatLab.pdf)
- V. Mouselimis, A. B. Bourlinos, "Physical chemistry of carbon", Ioannina 2018 (http://phys-exp.physics.uoi.gr/wp-content/uploads/2018/06/ΦΥΣΙΚΟΧΗΜΕΙΑ-ΤΟΥ-ΑΝΘΡΑΚΑ.pdf)
- Analytical class notes on the ecourse platform (http://ecourse.uoi.gr/) for the General Chemistry, former Physical Chemistry I & II and current Physical Chemistry undergraduate courses of the Physics Department, University of Ioannina 2022 (roughly a total of 4200 colored power point slides with theory, schemes, images, proofs, working examples and applications)

***Recommendation letters*:**

Significant number of letters of recommendation to students for postgraduate or postdoctoral studies in Greece and abroad (> 20)

***Supervisor of undergraduate theses*:**

- G. Trivizas, Preparation of functional carbon materials using microwave chemistry, Ioannina 2013
- A. Voulgarides, Preparation and study of hybrid materials of graphene and nanodiamonds with elemental nanoparticles, Ioannina 2014

- A. Gosiou, Materials synthesis: a practical guide for physicists, Ioannina 2015 (the thesis aims to introduce chemistry lab courses for physicists in our department)
- K. Ferendinou & N. Damianides, Materials synthesis I & II, Ioannina 2016
- Actively involved and acknowledged in other undergraduate theses by synthesizing samples provided to the candidates as a key part of their undergraduate study

***Supervisor of Master thesis*:**

- G. Trivizas, Nonlinear optical properties of carbon nanoparticles, Ioannina 2015
- V. Mouselimis, Synthesis, characterization and electrical properties of fullerol-graphene derivatives, Ioannina 2018
- I. Bestas, Energy conversion experiments in secondary education, Ioannina 2019
- A. Karakassides, Chemical functionalization of graphene and its effect on the electrical and magnetic properties, Ioannina 2019 (co-supervised with Ass. Prof. V. Georgakilas)
- Actively involved and acknowledged in several MSc theses by synthesizing and characterizing samples provided to the candidates as a key part of their postgraduate study. This is certified by a participation in a large number of three-member advisory committees of MSc (> 25)

***Supervisor of PhD theses*:**

- Assisting supervision/mentoring of PhD thesis (supervisor: E. P. Giannelis, Cornell University, USA) of Rafael Herrera, Single component nanocolloids and nanohybrid membranes: synthesis, characterization and properties (2002-2004)
- V. Mouselimis, Fluorographene derivatives and study of their optical properties, Ioannina 2020
- N. Chalmpes, Development and study of novel two dimensional nanostructures for technological applications, Ioannina 2021 (co-supervised with Prof. D. Gournis)
- Actively involved and acknowledged in several PhD theses by synthesizing and characterizing samples provided to the candidates as a key part of their PhD study. This is certified by a participation in a large number of three-member advisory committees of PhDs (> 15) and in more than 25 PhDs committees

***Supervisor of post-docs*:**

- Dr. G. Potsi, Derivatives of fluorographene and properties, RCPTM Olomouc, Czech Republic 2017-2019 (co-supervised with Prof. M. Otyepka-Prof. R. Zboril)
- Dr. N. Chalmpes, Hypergolic materials synthesis, Materials Science & Engineering, Cornell University, USA 2023 (co-supervised with Prof. E. P. Giannelis)

***Participation in funded research projects*:**

- Sol-gel films on glass substrates as UV filters, 1998 (under the supervision of Dr. D. Petridis & Dr. M. A. Karakassides, Institute of Materials Science, NCSR Demokritos, in collaboration with Prof. D. Katakis, Chemistry Department, University of Athens, Athens, Greece)
- NATO grant “Modification of electrodes with mesoporous solids for catalytic and sensor applications” (1996-1998 France-Greece, Prof. P. Labbè-Dr. M. A. Karakassides-Dr. D. Petridis, Institute of Materials Science, NCSR Demokritos)

- NATO grant No. ENVIR.LG960569 “Interactions of heavy metal cations with swelling clay minerals” (1996-1998 Slovakia-Greece, Prof. P. Komadel-Dr. M. A. Karakassides-Dr. D. Petridis, Institute of Materials Science, NCSR Demokritos)
- Nano-free rotors, EC-CRAFT (1998-2000, Dr. D. Niarchos-Dr. D. Petridis-Dr. A. Simopoulos, Institute of Materials Science, NCSR Demokritos)
- Colorimetric determination of iron in rosins, 2000 (under the supervision of Dr. D. Petridis and Dr. M. A. Karakassides, Institute of Materials Science, NCSR Demokritos, in collaboration with AFOI PAPADIMITRAKOPOULOI A.E., HLEIA, Greece)
- NATO Science Program: “Graphite Oxide: Intercalation properties and synthesis of graphite oxide/polymer composites”, PST, CLG 977550 (2001-2002 Hungary-Greece, Prof. I. Dékány & Dr. D. Petridis, Institute of Materials Science, NCSR Demokritos)
- Self-assembled nanoparticles and nanopatterned arrays for high density magnetorecording (HIDEMAR), Synthesis and magnetic properties of CoPt nanoparticles (2002, NCSR Demokritos, Greece). Principal investigator: Dr. D. Niarchos
- Roam & Haas (intercalated clay polymer composites as novel paint additives) and Eastman Kodak (laser annealing of ITO nanofilms and their electronic properties) (2002-2004, Cornell USA). Principal investigator: Prof. E.P. Giannelis
- Proton conductivity of clay-Nafion composite membranes for fuel cells (2002-2004, Cornell USA). Principal investigator: Prof. E.P. Giannelis
- NESSHY (E-1268), STORHY (E-1142) & NanoHy (E-1484), Hybrid carbon materials for hydrogen storage (2005-2011, NCSR Demokritos, Greece). Principal investigators: Dr. T. Steriotis-Dr. A. Stubos-Dr. G. Charalampopoulou
- HYCONES (STRP 032970), Separation and surface modification of carbon nanocones (2005-2011, NCSR Demokritos, Greece). Principal investigators: Dr. T. Steriotis-Dr. A. Stubos-Dr. G. Charalampopoulou
- THALES research grant # 377278 (600.000 Euro from the Greek Ministry of Education), Aristotle University of Thessaloniki, Chemistry Department: Advanced nanocomposite materials-polymer reinforcement by silica and carbon nanostructures. Principal investigator: Prof. K. Triantafyllides
- THALES research grant # 80790 (600.000 Euro from the Greek Ministry of Education), University of Ioannina, Physics Department: Hybrid micro- and mesoporous materials for environmental applications. Principal investigator: Prof. Y. Deligiannakis
- Research associate in Regional Centre of Advanced Technologies and Materials (RCPTM), Department of Physical Chemistry, Palacky University, Olomouc (Czech Republic) (http://www.rcptm.com/research-divisions/carbon-nanostructures-and-biomacromolecules/) (2012-2019) (formal collaboration at Universities level, 25/5/2012)
- Magnetic nanoparticles for the assessment of oil tanks (research grant # 81872, The Petroleum Institute Khalifa University of Science & Technology), Materials Science & Engineering, University of Ioannina, Greece 2015-2020. Principal investigator: Prof. D. Gournis

- SEMI-WEB, ΕΣΠΑ «ΕΡΕΥΝΩ-ΔΗΜΙΟΥΡΓΩ-ΚΑΙΝΟΤΟΜΩ» 2020-2023. Principal investigator: Prof. M. Karakassides (University of Ioannina, Department of Materials Science and Engineering)
- DEMIGOD, ΕΣΠΑ «ΕΡΕΥΝΩ-ΔΗΜΙΟΥΡΓΩ-ΚΑΙΝΟΤΟΜΩ» 2020-2023. Principal investigator: Prof. D. Gournis (University of Ioannina, Department of Materials Science and Engineering)
- Eco-Bio-H2-FCs, ΕΣΠΑ «ΕΡΕΥΝΩ-ΔΗΜΙΟΥΡΓΩ-ΚΑΙΝΟΤΟΜΩ» 2020-2023. Principal investigator: Prof. I. Yentekakis (University of Crete, ELKE)

***Scientific collaborations*:**

Collaborations with laboratories in Greece (University of Ioannina, University of Patras, NCSR Demokritos) and abroad (Cornell University USA, RCPTM Czech Republic)

***Visiting scientists*:**

- Mrs. K. Hola (15/10/2012-16/11/2012, 1 month) from RCPTM, Olomouc (Czech Republic)
- Dr. J. Perman (15/9/2014-15/11/2014, 2 months) from RCPTM, Olomouc (Czech Republic)
- Dr. M. Gawande (25/5/2015-21/6/2015, 1 month) from RCPTM, Olomouc (Czech Republic)
- Dr. P. Dallas (9/7/2016-12/7/2016, 4 days) from Department of Materials, Oxford University (UK)

***Oral presentations*:**

- "Carbon materials", invited seminar lecture for Materials Science & Engineering, University of Ioannina (2009)
- "Functional carbonaceous materials: synthesis, characterization and properties", Panhellenic conference on solid-state physics and materials science, Ioannina 26/9-29/9 (2010) Greece
- "Functional carbonaceous materials: synthesis, characterization and properties", NANOCON 2010, Olomouc 12/10-14/10 (2010) Czech Republic (invited speaker)
- "Carbon allotropes", NANOCON 2011, Brno 21/9-23/9 (2011) Czech Republic
- "Photoluminescent carbon dots", NANOCON 2013, Brno 16/10-18/10 (2013) Czech Republic
- "Carbon materials for environmental applications", NANOCON 2014, Brno 5/11-7/11 (2014) Czech Republic
- "Carbon allotropes", Seminar courses-Section IV, Physics Department, University of Ioannina, Ioannina 4/3 (2016) Greece
- "Carbon sorbents", 7th Panhellenic Symposium on Porous Materials, University of Ioannina, Ioannina 2/6-4/6 (2016) Greece (invited speaker & chairs)
- "Physics in Chemistry", Department lecture on welcome reception of 1st year undergraduates, Physics Department, University of Ioannina, Ioannina 1/10 (2018) Greece
- "Carbon applications", Seminar courses of the Physics Department, University of Ioannina, Ioannina 15/3 (2019) Greece
- "Hypergolic synthesis of carbon nanomaterials", Seminar courses of the Physics Department, University of Ioannina, Ioannina 26/3 (2021) Greece
- "A material world", Department lecture on welcome reception of 1st year undergraduates, Physics Department, University of Ioannina, Ioannina 3/10 (2022) Greece

- "Carbon science and technology: the case of pencil", Seminar courses of the Physics Department, University of Ioannina, Ioannina 19/5 (2023) Greece
- "Elements & Periodic Table", Seminar courses conducted by the students' Physics Society of Ioannina (PSI), Physics Department, University of Ioannina, Ioannina 1/6 (2023) Greece
- "Relativistic gold", Department lecture on welcome reception of 1st year undergraduates, Physics Department, University of Ioannina, Ioannina 2/10 (2023) Greece

***Conference proceedings (4)*:**

- "Shape fabrication of cotton-derived inorganic hollow ribbons", A. B. Bourlinos, N. Boukos, D. Petridis, T. Tsakalakos, et al. (eds), Chapter 2: Synthesis of nanostructures, pp. 111-116, Nanostructures: Synthesis, Functional Properties and Applications, NATO Science Series II: Mathematics, Physics and Chemistry-vol. 128, 2003 Kluwer Academic Publishers
- "High quality, low cost continuous poly-GaN film on Si and glass substrates produced by spin coating", H. Wu, A. Bourlinos, E. P. Giannelis, M. G. Spencer, Materials Research Society Symposium Proceedings 2005, vol. 831, E8.2.1-6
- "Electron spin resonance in magnetic nanoparticles: effects of temperature and interparticle interactions", N. Noginova, F. Chen, A. Andreyev, J. McClure, E. P. Giannelis, A. B. Bourlinos, V. A. Atsarkin, Materials Research Society Symposium Proceedings 2007, vol. 984, 0984-MM05-03
- "NMR and spin relaxation in systems with magnetic nanoparticles", T. Weaver, N. Noginova, M. King, A. B. Bourlinos, Materials Research Society Symposium Proceedings 2007, Vol. 984, 0984-MM07-19

***Reviewer in international journals*:**

Reviewer in about 40 international scientific journals of the publishing houses ACS, Wiley, Elsevier, RSC, Springer, MDPI

***Administration*:**

Significant administrative contribution to the Department of Physics, UoI (Vice Head 2022-2024, Director of Section IV 2020-2022, Chair of Committees)

***Scientific instrument operator*:**

X-ray diffraction unit (XRD), Institute of Materials Science, NCSR Demokritos (1999-2002)

***Memberships*:**

Association of Greek Chemists (EEX), American Chemical Society (ACS)

***Patents (3)*:**

1. "Functionalized nanostructures with liquid-like behavior", Giannelis, E. P.; Bourlinos, A. B., US Patent 9,034,371 (2015)
2. "Group III nitride coatings and methods", Wu, H.; Spencer, M. G.; Giannelis, E. P.; Bourlinos, A. B., US Patent 7,772,288 (2010)

3. "Carbon materials for hydrogen storage", Bourlinos, A. B.; Steriotis, T. A.; Stubos, A.; Miller, M. A., US Patent 9,440,850 (2016)

***Publications (peer-reviewed journals) (153)*:**

1. "First synthesis of 2D materials by hypergolic reactions and evaluation of their dispersions for ink formulation: hexagonal boron nitride and fluorinated carbon nanosheets", Chalmpes, N.; Bourlinos, A. B.; Alsmaeil, A. W.; Aljarrah, A. S.; Salmas, C. E.; Karakassides, M. A.; Giannelis, E. P., Materials Research Express 2024 (in press)

2. "Intriguing prospects of a novel magnetic nanohybrid material: ferromagnetic FeRh nanoparticles grown on nanodiamonds", Ziogas, P.; Bourlinos, A. B.; Chatzopoulou, P.; Dimitrakopulos, G. P.; Kehagias, T.; Markou, A.; Douvalis, A. P., Metals 2022, vol. 12, 1355 (20 pages)

3. "New precursors towards the hypergolic synthesis of inorganic materials with peculiar morphologies", Bourlinos, A. B., Journal of Nanotechnology Research 2022, vol. 4, pp. 111-116

4. "Isolation, characterization and hydrogen sulfide H_2S sorption properties at room temperature of magnetite sludge from radiator", Ziogas, P.; Douvalis, A. P.; Bourlinos, A. B.; Papachristodoulou, C.; Chalmpes, N.; Karakassides, M. A.; Giannakas, A. E.; Salmas, C. E., Journal of Nanotechnology Research 2022, vol. 4, pp. 97-110

5. "Graphene nanobeacons with high-affinity pockets for combined, selective, and effective decontamination and reagentless detection of heavy metals", Panáček, D.; Zdražil, L.; Langer, M.; Šedajová, V.; Baďura, Z.; Zoppellaro, G.; Yang, Q.; Nguyen, E. P.; Álvarez-Diduk, R.; Hrubý, V.; Kolařík, J.; Chalmpes, N.; Bourlinos, A. B.; Zbořil, R.; Merkoçi, A.; Bakandritsos, A.; Otyepka, M., Small 2022, vol. 18, 2201003 (13 pages)

6. "Graphene oxide-cytochrome c multilayered structures for biocatalytic applications: decrypting the role of surfactant in Langmuir-Schaefer layer deposition", Chalmpes, N.; Patila, M.; Kouloumpis, A.; Alatzoglou, C.; Spyrou, K.; Subrati, M.; Polydera, A. C.; Bourlinos, A. B.; Stamatis, H.; Gournis, D., ACS Applied Materials & Interfaces 2022, vol. 14, pp. 26204-26215

7. "From waste tea to carbon rocket fuels through a piranha solution-mediated carbonization treatment", Asimakopoulos, G.; Moschovas, D.; Avgeropoulos, A.; Bourlinos, A. B.; Tantis, I.; Šedajová, V.; Tomanec, O.; Salmas, C. E.; Gournis, D.; Karakassides, M. A., Journal of Nanotechnology Research 2022, vol. 4, pp. 31-44

8. "Hypergolic materials synthesis: a review", Bourlinos, A. B.; Chalmpes, N.; Gournis, D.; Karakassides, M. A., Journal of Nanotechnology Research 2022, vol. 4, pp. 59-96

9. "Use of a hybrid porous carbon material derived from expired polysaccharides snack/iron salt exhibiting magnetic properties, for hexavalent chromium removal", Baikousi, M.; Moustaklis, K.; Karakassides, A.; Asimakopoulos, G.; Moschovas, D.; Avgeropoulos, A.; Bourlinos, A. B.; Douvalis, A. P.; Salmas, C. E.; Karakassides, M. A., Polysaccharides 2022, vol. 3, pp. 326-346

10. “Biomass waste carbonization in piranha solution: a route to hypergolic carbons?”, Chalmpes, N.; Baikousi, M.; Giousis, T.; Rudolf, P.; Salmas, C. E.; Moschovas, D.; Avgeropoulos, A.; Bourlinos, A. B.; Tantis, I.; Bakandritsos, A.; Gournis, D.; Karakassides, M. A., Micro 2022, vol. 2, pp. 137-153

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