

PERSONAL INFORMATION

Name **Dr. Panagiotis Dallas**

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EXPERIENCE

October 2018 – present **Hellenic Foundation for Research and Innovation Fellow, NCSR Demokritos**

9/2021-present **Secondary School Teacher (chemistry)**

11/2013 – 9/2018 PDRA, Department of Materials, University of Oxford, UK

9/2016-6/2017 Lecturer, Department of Materials, University of Oxford, United Kingdom

6/2010 – 10/2013 PDRA, Materials Science and Engineering, Cornell, Ithaca NY, USA

5/2009-2/2010 Scientific Worker, Palacky University, Olomouc, Czech Republic

2007-2008 Military Service in the Greek Army

11/2002-7/2007 & 9/2008-4/2009 PhD Fellow & Research Associate, NCSR Demokritos, Greece

EDUCATION

2008 PhD, Chemistry Department, University of Athens

2004 MSc, Chemistry Department, University of Athens

2002 BSc, Chemistry Department, University of Ioannina

GRANTS AS PRINCIPAL INVESTIGATOR.

1. Hellenic Foundation for Research and Innovation, grant number 1468, 9/2018-present.

FELLOWSHIPS.

1. PhD Fellowship awarded by the National Center for Scientific Research “Demokritos”. 2002-2007

PARTNER.

1. UK Research and Innovation (2019-present); Principal Investigator.: Dr.Jan Mol, QMUL, UK.

ACADEMIC SUPERVISOR OF RESEARCHERS, TECHNICIANS AND STUDENTS.

1. **Mrs Panagiota Bika (PhD student, NCSR Demokritos & National and Kapodistrian University of Athens). 5/2019-present**
2. **Mrs Androniki Vrettou (Research Assistant/technician, NCSR Demokritos). 2/2021-8/2021**
3. Mrs Michelle Van (Part II student, University of Oxford), 2016
4. Mrs Vashti Cambell (internship, Cornell University, USA), summer 2012

GRADUATE & POST GRADUATE TEACHING EXPERIENCE.

2011-2013: Mentor and Supervisor, Integrative Graduate Education and Research Traineeship (IGERT) and “Research experience for undergraduates” programs of National Science Foundation, Cornell University, USA;
2015-2016: Academic supervisor of Part II students, Oxford;
2016-2017: Lecturer. Elementary Quantum Theory and Bonding, Department of Materials, University of Oxford.

COLLABORATIONS WITH INDUSTRIAL PARTNERS.

2013: Ames Goldsmith. Scaled up synthesis of silver nanoparticles.;
2011-2013: Aramco Services Company. Development of carbon dioxide thickeners for Enhanced Oil Recovery and oil tracers.
2018: Designer Carbon Materials. Scaled up synthesis of fullerenes.
2018-2022: Amen New Technologies.

RESEARCH INTERESTS.

- Covalent organic frameworks
- Nanocomposite materials
- Photoluminescent materials for sensing applications
- Decomposition of pollutants
- Carbon dioxide reduction & sequestration

REVIEWER IN INTERNATIONAL JOURNALS.

ACS Appl.Mater.Int., Langmuir, Nanoscale, Applied Organometallic Chemistry, Materials Chemistry & Physics, Journal of Magnetism and Magnetic Materials, Carbohydrate Polymers, Journal of Composite Materials.

PUBLICATIONS.

BOOKS AND BOOK CHAPTERS (5).

1. "Generation of Polymers and Nanomaterials at Liquid-Liquid Interfaces: Application to Crystalline, Light Emitting and Energy Materials". Panagiotis Dallas, Elsevier, 2020
2. "Magnetic properties of endohedral fullerenes: applications and perspectives" P.Dallas, R.Harding, S.Cornes, S.Sihna, Ilija Rasovic, S.Zhou, E.A.Laird, K.Poryfrakis. "21st Century Nanoscience-A Handbook" Edited by Prof.Klaus Sattler. Taylor and Francis 2020.
3. "Polymers and Nanomaterials from Liquid-Liquid Interfaces: Synthesis, Self-Organization and Applications "; Panagiotis Dallas. Smithers Rapra, April 2017.
4. "Endohedral metallofullerenes: optical properties and biomedical applications" P.Dallas, I.Rašović, G.Rogers, K.Porfyrakis. "Carbon nanomaterials sourcebook" Taylor & Francis Publisher, Editor: Klaus Sattler 2016, 255-271
5. "Nanostructured materials for environmentally conscious applications" P.Dallas, A.Kelarakis, E.P.Giannelis "Sustainable Nanotechnology and the Environment" ACS Symposium Book Series 2013, 1124, 59-72

ORIGINAL RESEARCH ARTICLES (37).

6. "Photocatalytic reduction of CO₂ over iron-modified g-C₃N₄ photocatalysts." M. Edelmannová, M. Reli, K. Kočí, I. Papailias, N. Todorova, T. Giannakopoulou, P. Dallas, E. Devlin, N. Ioannidis, C. Trapalis. **Photochem** **2021**, 1, 462-476.
7. "An insight study into the parameters altering the emission of a covalent triazine framework". P. Bika, V. Osokin, T. Giannakopoulou, N. Todorova, M. Li, A. Kaidatzis, R.A. Taylor, C. Trapalis, P. Dallas. **J.Mater.Chem.C.** **2021**, 9, 13770
8. "Electrochemical Deposition of Highly Hydrophobic Perfluorinated Polyaniline Film for Biosensor Applications". E. Tomšík, P. Dallas, I. Šeděnková, J. Svoboda, Martin Hrubý. **RSC Advances**, **2021**, 11, 18852.
9. "Photocatalytic H₂ evolution, CO₂ reduction and NO_x oxidation by highly exfoliated g-C₃N₄." N. Todorova, I. Papailias, T. Giannakopoulou, Nikolaos Ioannidis, N. Boukos, P. Dallas, M. Edelmannova, M. Reli, K. Koci, C. Trapalis. **Catalysts.** **2020**, 10, 1147.
10. "Torus Shaped g-C₃N₄ by Flame Spray Pyrolysis" I. Papailias, N. Todorova, T. Giannakopoulou, N. Ioannidis, P. Dallas, D.Dimotikali, C.Trapalis. **Applied Catalysis B: Environmental**, **2020**, 268, 118733
11. "Electrochemically active water repelling perfluorinated polyaniline films" P.Dallas, E.N. Tomšík, R.S.Jones, E.M.Smith, A.Xiao, N.Grobert, K.Porfyrakis. **Chem.Phys.** **2020**, 528, 110540

12. "Detecting with singlet oxygen sensor green the photosensitization from fullerenes and their dyads with gold nanoparticles" P.Dallas, P.Q.Velasco, M. Lebedeva, K. Porfyrakis. **Chem.Phys.Lett.** **2019**, 730, 130
13. "Assembly and Interaction of Polyaniline Chains: Impact on Electro- and Physical-Chemical Behavior" E.N. Tomšík, O. Kohut, I. Ivanko, M. Pekárek, I. Bieloshapka, P. Dallas. **J.Phys.Chem.C.** **2018**. 122, 8022-8030
14. "CF₂-bridged C₆₀ dimers and their optical transitions" P.Dallas, S.Zhou, S.Cornes, H.Niwa, Y.Nakanishi, T.Puchtler, Y.Kino, R.A.Taylor, H.Shinohara, K.Porfyrakis. **ChemPhysChem.** **2017**, 18, 3540.
15. "Long Stokes shifts and vibronic couplings in perfluorinated polyanilines" P.Dallas*, I.Rašović, T.Puchtler, R.A.Taylor, K.Porfyrakis. **Chem.Commun.** **2017**, 53, 2602-2605.
16. "Ultra-stiff large-area carpets of carbon nanotubes" S.S.Meysami, P.Dallas, J. Britton, J.G Lozano, A.T Murdock, C.Ferraro, E.S.Gutierrez, N.Rijnveld, P.Holdway, K.Porfyrakis, N.Grobert. **Nanoscale** **2016**, 8, 11993-12001.
17. "Mapping and Tuning the Fluorescence of Perfluorinated Polyanilines Synthesized through Liquid-Liquid interfaces" P.Dallas*, I.Rašović, K.Porfyrakis. **J.Phys.Chem.B.** **2016**, 120(13), 3441-3454
18. "Classification of carbon nanostructure families occurring in a chemically activated arc discharge reaction".P.Dallas, S.S.Meysami, N.Grobert, K.Porfyrakis **RSC Advances** **2016**, 6, 24912-24920
19. "Charge separated states and singlet oxygen generation of Mono and Bis Adducts of C₆₀ and C₇₀" P.Dallas*, G.Rogers, B.Reid, R.Taylor, H.Shinohara, A.Briggs, K.Porfyrakis. **Chem.Phys.** **2016**, 465, 28-39
20. "Redox-dependent Franck-Condon blockade and avalanche transport in a graphene-fullerene nanoelectromechanical oscillator" C.S.Lau, H.Sadeghi, G.Rogers, S.Sangtarash, P. Dallas, K.Porfyrakis, J.Warner, C.Lambert, A.G.Briggs, **J.Mol. Nano Letters.** **2016**, 16(1), 170-176
21. "Self-suspended permanent magnetic FePt ferrofluids" P.Dallas, A.Kelarakis, R.Sahore, F.J.DiSalvo, S.Livi, E.P.Giannelis. **J.Coll.Int.Sci.** **2013**, 407, 1-7
22. "Formation mechanism of carbogenic nanoparticles with dual photoluminescence emission" M.Krysmann, A.Kelarakis, P.Dallas, E.P.Giannelis. **J.Am.Chem.Soc.** **2012**, 134(2), 747-750
23. "Magnetic nanoparticles for tunable microwave metamaterials" N.Noginova, Q.L. Williams, P.Dallas, E.P.Giannelis. **Proceedings of SPIE - The International Society for Optical Engineering** **2012**, 8455, art.no.845531
24. "Electrogenerated chemiluminescence from carbon dots" L.Sun, T.H.Teng, Md.H.Rashid, M.Krysmann, P.Dallas, Y.Wang, B.R.Hyun, A.C.Bartnik, G.Malliaras, F.W.Wise, E.P.Giannelis, **Materials Research Society Symposium Proceedings** **2011**, 1284, 131-136
25. "Pyrolytic formation of a carbonaceous solid for heavy metal adsorption" A.B.Bourlinos,

- M.A.Karakassides, P.Stathi, Y.Deligiannakis, R.Zboril, P.Dallas, T.A.Steriotis, A.K.Stubos, C.Trapalis. **J.Mater.Sci.** **2011**, 46, 975-982
26. "Effect of Surface Modification on Fluorescence and Morphology of CdSe Nanoparticles Embedded in 3D Phosphazene-Based Matrix: Nanowire-like Quantum Dots" K.Siskova, M.Kubala, P.Dallas, D.Jancik, A.Thorel, P.Ilik, R.Zboril. **J.Mater.Chem.** **2011**, 21, 1086-1093
27. "Fullerol ionic liquids" N.Fernandes, P.Dallas, R.Rodriguez, A.B.Bourlinos, V.Georgakilas, E.P.Giannelis. **Nanoscale** **2010**, 2, 1653-1656
28. "Cornet-like phosphotriazine/diamine polymer as reductant and matrix for the synthesis of silver nanocomposites with antimicrobial activity" P.Dallas*, R.Zboril, A.B. Bourlinos, D.Jancik, D.Niarchos, A.Panacek, D.Petridis. **Macromol. Mater. Eng.** **2010**, 295(2), 108 - featured on the front cover of Vol.295, Issue 2.
29. "Magnetically controllable silver nanocomposite with multifunctional phosphotriazine matrix and high antimicrobial activity". P.Dallas*, J.Tucek, D.Jancik, M.Kolar, A.Panacek, R.Zboril. **Adv.Funct.Mater.** **2010**, 20(14), 2347-2354.
30. "Organic functionalization of graphenes" V.Georgakilas, A.B.Bourlinos, R.Zboril, T.Steriotis, P.Dallas, A.Stubos, C.Trapalis. **Chem.Commun.** **2010**, 46, 1766-1768.
31. "Polypyrrole/MWNT nanocomposites synthesized through interfacial polymerisation" V.Georgakilas, P.Dallas, Ch.Trapalis, D.Niarchos. **Synth.Metals** **2009**, 159, 632-636
32. "Silver nanoparticles and graphitic carbon through thermal decomposition of a silver/acetylenedicarboxylic salt" P.Dallas, A.B.Bourlinos, Ph.Komninou, M.Karakassides, D.Niarchos. **Nanoscale Res. Lett.** **2009**, 4, 1358-1364.
33. "One step solid state synthesis of capped γ -Fe₂O₃ nanocrystallites" R.Zboril, A.Bakandritsos, M.Mashlan, V.Tzitzios, P.Dallas, Ch.Trapalis, D.Petridis. **Nanotechnology** **2008**, 19, 096602095610
34. "Synthesis and characterization of 2-D and 3-D covalent networks derived from triazine central cores and bridging aromatic diamines" P.Dallas*, A.B.Bourlinos, D.Petridis, N.Boukos, K.Papadokostaki, D.Niarchos, N.Guskos. **Polymer** **2008**, 49(5), 1137-1144
35. "Synthesis of tunable sized capped magnetic iron oxide nanoparticles highly soluble in organic solvents" P.Dallas, A.B. Bourlinos, D. Petridis, D. Niarchos. **J. Mater. Sci.** **2007**, 42, 4996-5002
36. "Characterization, magnetic and transport properties of polyaniline synthesized through interfacial polymerization" P.Dallas, D.Stamopoulos, N.Boukos, V.Tzitzios, D.Niarchos, D.Petridis. **Polymer** **2007**, 48, 3162-3169

37. "Silicone-functionalized carbon nanotubes for the production of new carbon based fluids" A.B.Bourlinos, V.Georgakilas, N.Boukos, P.Dallas, Ch.Trapalis, E.P.Giannelis. **Carbon** **2007**, 45, 1583-1585
38. "Preparation of water-dispersible carbon nanotubes-silica hybrid" A.B.Bourlinos, V.Georgakilas, R.Zboril, P.Dallas. **Carbon** **2007**, 45 (10), 2136-2139
39. "Interfacial polymerization of pyrrole and in situ synthesis of polypyrrole/silver nanocomposites" P.Dallas, D.Niarchos, D.Vrbanic, N.Boukos, St.Pejovnik, Ch.Trapalis, D.Petridis. **Polymer** **2007**, 48, 2007-2013
40. "Synthesis and characterization of a π -conjugate, covalent network derived from condensation polymerization of the 4,4'-bipyridine-cyanuric chloride couple" A.B.Bourlinos, P.Dallas, Y.Sanakis, D.Stamopoulos, Ch.Trapalis, D.Niarchos. **Eur.Pol.J.** **2006**, 42, 2940-2948
41. "Characterization, electrical and magnetic properties of polyaniline/maghemite nanocomposites" P.Dallas, N.Moutis, E.Devlin, D.Niarchos, D.Petridis. **Nanotechnology** **2006**, 17, 5019-5026
42. "Synthesis, characterization and thermal properties of polymer/iron oxide nanocomposites" P.Dallas, V.Georgakilas, D.Niarchos, Ph.Komninou, Th.Kehagias, D.Petridis. **Nanotechnology** **2006**, 17, 2046-2053
43. "Crystal Structure and Solid-State Reactivity of a Cd (II) Polymeric Complex with Acetylenedicarboxylic Acid" St.Skoulika, P.Dallas, M.G.Siskos, Y.Deligiannakis, A.Michaelides. **Chem.Mater.** **2003**, 15, 4576-4582

REVIEW ARTICLES AND EDITORIALS (4)

44. "Recent Advances in Covalent Organic Frameworks for Heavy Metal Removal Applications". M-A. Gatou, P. Bika, T. Stergiopoulos, P. Dallas, E.A. Pavlatou. **Energies** **2021**, 14, 3197
45. "Sensors for Environmental Monitoring" L.Fu, P.Dallas, V.K. Sharma, K. Zhang. **Journal of Sensors** **2016**, Editorial.
46. "Interfacial polymerization of conductive polymers: generation of polymeric nanostructures in a 2-D space" P.Dallas*, V.Georgakilas. **Adv.Coll.Int.Sci.** **2015**, 224, 46-61
47. "Silver polymeric nanocomposites as advanced antimicrobial agents: classification, synthetic paths, applications and perspectives" P.Dallas, V.Sharma, R.Zboril. **Adv.Coll.Int.Sci.** **2011**, 166, 119-135

CONFERENCE PRESENTATION WITH PARTICIPATION OR PARTICIPATION OF DR. DALLAS' STUDENTS

1. "Permanent magnetic ferrofluids: FePt functionalized with ionic liquids". Invited (oral) presentation in the 243rd American Chemical Society Meeting, San Diego CA, USA, 24-29 March 2012.

2. “2-D and 3-D triazine based polymers and their silver and magnetic composites” oral presentation in NANOCON, Czech Republic, 20-22 October 2009.
3. “ π -conjugate, covalent layered networks derived from cyanuric chloride and certain aromatic diamines” poster presentation at the 47th Microsymposium Advanced polymer materials for photonics and electronics” Prague, Czech Republic, 15-19 July 2007.
4. “Interfacial polymerization of pyrrole and aniline. In situ synthesis of silver/polypyrrole nanocomposites” poster presentation at the 45th Microsymposium Structure and dynamics of selforganized macromolecular systems Prague, Czech Republic, 9-13 July 2006.
5. “Preparation of ferrofluids and the effect of the organic molecules absorption in the magnetic properties of magnetite nanoparticles” oral presentation at the 6th Ferrofluid Workshop, Saarbrucken, Germany, 20-22 July 2005
6. “Study of the electrical and structural properties of polyaniline/magnetite nanocomposites” oral presentation at the IV Symposium of science and technology of nanomaterials in Slovenia, Jožef Stefan Institute, Ljubljana, Slovenia, 24-25 October, 2005.
7. “Crystal Architecture of Cd(II) coordination polymers with unsaturated dicarboxylic acids” poster presentation at the 4th Conference of Chemistry Department, Ioannina, Greece, 18-21 May 2001
8. “A covalent triazine framework of tunable emission for sensor applications” EMRS (European Materials Research Society), Strasbourg, France. May 31-June 3, 2021.
9. “A redox active triazine framework for photocatalytic applications” Acac2020 (Athens Conference on Advances in Chemistry), Greece. From March 10-14, 2021.

SELECTED SEMINARS.

- Chemistry Department, Florida Institute of Technology, Μελβούρνη, ΗΠΑ, 6 Σεπτεμβρίου 2011.
Τίτλος: “Synthesis of functional noble metal-polymer nanocomposites”.
- Chemistry Department, Nagoya University, Ιαπωνία. 27 Οκτωβρίου 2014. Τίτλος: “Hybrid organic-inorganic nanomaterials”
- Εθνικό Ίδρυμα Ερευνών, 5 Απριλίου 2019. «Nitrogen bridged 1D, 2D, 3D polymeric materials: electronic transport, redox activity, electrochromism and fluorescence»