**PERSONAL INFORMATION** 



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| **EXPERIENCE**    **10/2018 – present**  **9/2021-present**  11/2013 – 9/2018    9/2016-6/2017  6/2010 – 10/2013  5/2009-2/2010  2007-2008  11/2002-7/2007 &  9/2008-4/2009 |  | |
|  | **Research Associate, NCSR Demokritos**  **Secondary School Teacher**  PDRA, Department of Materials, University of Oxford, UK    Lecturer, Department of Materials, University of Oxford, UK    PDRA, Materials Science and Engineering, Cornell, Ithaca NY, USA    Scientific Worker, Palacky University, Olomouc, Czech Republic    Military Service in the Greek Army    PhD Fellow & Research Associate, NCSR Demokritos, Greece |
| **EDUCATION**    2008PhD, Chemistry Department, University of Athens  2004MSc, 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.



**ΔΗΜΟΣΙΕΥΣΕΙΣ (49)**

**ΒΙΒΛΙΚΑ ΚΑΙ ΚΕΦΑΛΑΙΑ ΒΙΒΛΙΩΝ (5)**

* 1. “Generation of Polymers and Nanomaterials at Liquid-Liquid Interfaces: Application to Crystalline, Light Emitting and Energy Materials”. Panagiotis Dallas, Εlsevier, **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**.

* 1. “Polymers and Nanomaterials from Liquid-Liquid Interfaces: Synthesis, Self-Organization and Applications “; Panagiotis Dallas. Smithers Rapra, April **2017**.
  2. “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
  3. “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

**ΠΡΩΤΟΤΥΠΕΣ ΕΡΕΥΝΗΤΙΚΕΣ ΔΗΜΟΣΙΕΥΣΕΙΣ (40)**

1. “Exploring seebeck-coefficient fluctuations in endohedral-fullerene, single-molecule junctions.” A.K. Ismael, L. Rincon-Garcıa, C. Evangeli, P. Dallas, T. Alotaibi, A.A. Al-Jobory, G. Rubio-Bollinger, K. Porfyrakis, N.s Agrait, C.J. Lambert. **Nanoscale Horizons 2022**, DOI: 10.1039/d1nh00527h.
2. "Copper coordination and the induced morphological changes in covalent organic frameworks" P.Bika, N.Ioannidis, M.A. Gatou, Y. Sanakis, P. Dallas\*. **Langmuir 2022**, 38, 3082-3089.
3. “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.

1. “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
2. “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.

1. “Photocatalytic H2 evolution, CO2 reduction and NOx oxidation by highly exfoliated g-C3N4.” N.

Todorova, I. Papailias, T. Giannakopoulou, Nikolaos Ioannidis, N. Boukos, P. Dallas, M. Edelmannova, M. Reli, Κ. Koci, C. Trapalis. **Catalysts 2020**, 10, 1147.

1. “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

1. “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

1. “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
2. “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

1. “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.

1. “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.
2. “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.
3. “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
4. “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
5. “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

1. "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
2. “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
3. “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
4. “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
5. “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

1. “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

1. “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
2. “Fullerol ionic liquids” N.Fernandes, P.Dallas, R.Rodriguez, A.B.Bourlinos, V.Georgakilas, E.P.Giannelis. **Nanoscale 2010**, 2, 1653-1656
3. “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.
4. “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.
5. “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.

1. “Polypyrrole/MWNT nanocomposites synthesized through interfacial polymerisation” V.Georgakilas, P.Dallas, Ch.Trapalis, D.Niarchos. **Synth.Metals 2009**, 159, 632-636
2. “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.
3. “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

1. “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
2. “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
3. “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
4. “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
5. “Preparation of water-dispersible carbon nanotubes-silica hybrid” A.B.Bourlinos, V.Georgakilas, R.Zboril, P.Dallas. **Carbon 2007**, 45 (10), 2136-2139
6. “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

1. “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
2. “Characterization, electrical and magnetic properties of polyaniline/maghemite nanocomposites” P.Dallas, N.Moutis, E.Devlin, D.Niarchos, D.Petridis. **Nanotechnology 2006**, 17, 5019-5026
3. “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
4. “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

**ΑΡΘΡΑ ΑΝΑΣΚΟΠΗΣΗΣ (4)**

1. “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

1. “Sensors for Environmental Monitoring” L.Fu, P.Dallas, V.K. Sharma, K. Zhang. **Journal of Sensors 2016**, Editorial.
2. “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
3. “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

**ΠΑΡΟΥΣΙΑ ΣΕ ΣΥΝΕΔΡΙΑ**

* 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

**ΕΠΙΛΕΓΜΕΝΑ ΣΕΜΙΝΑΡΙΑ**

- Chemistry Department, Florida Institute of Technology, Μελβούρνη, ΗΠΑ, 6/9/2011. “Synthesis of functional noble metal-polymer nanocomposites”.

* + Chemistry Department, Nagoya University, Ιαπωνία. 27/10/2014. “Hybrid organic-inorganic nanomaterials”
  + National Hellenic Research Foundation, 5/4/2019. «Nitrogen bridged 1D, 2D, 3D polymeric materials: electronic transport, redox activity, electrochromism and fluorescence»