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Associate Prof. – Αναπληρωτής Καθηγητής

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Studies/Professional activity – Σπουδές/Επαγγελματική πορεία

1993: Bachelor in Chemistry/Univ. Ioannina - Πτυχίο Χημείας, Πανεπιστήμιο Ιωαννίνων

2001: PhD in Chemistry/Univ. Ioannina - Διδακτορική Διατριβή, Τμήμα Χημείας, Πανεπιστήμιο Ιωαννίνων

2002-2004: Postdoctoral scientist, Dipartimento di Scienze Pharmaceutiche, Trieste, Italy - Μεταδιδακτορικός ερευνητής, Τμήμα Φαρμακευτικών Επιστημών, Πανεπιστήμιο Τεργέστης, Ιταλία

2004-2013: Adjunct teaching member, Univ. Patras, GR - Διδάσκων ΠΔ 407/80 στα Τμήματα Επιστήμης Υλικών και Χημείας, Πανεπιστήμιο Πατρών

2006-present: Collaborating member, Institute of Chemical Engineering Sciences, Patras, GR - Συνεργαζόμενο μέλος, Ινστιτούτο Επιστημών Χημικής Μηχανικής, Ρίο Πάτρας (ITE/ΙΕΧΜΗ)

2014-2019: Assist. Prof., Dept Chemistry, Univ. Ioannina - Επίκουρος Καθηγητής Τομέα Φυσικοχημείας του Τμήματος Χημείας Πανεπ. Ιωαννίνων

2019-present: Assoc. Prof., Dept Chemistry, Univ. Ioannina - Αναπληρωτής Καθηγητής Τομέα Φυσικοχημείας του Τμήματος Χημείας Πανεπ. Ιωαννίνων

Research interests - Ερευνητικά ενδιαφέροντα

- Colloidal stability study of nanostructured materials - Μελέτη κολλοειδούς σταθερότητας αιωρημάτων νανοδομών
- Chemical functionalization/doping of nanostructured materials - Χημική τροποποίηση νανοδομημένων υλικών
- Development of multifunctional hybrids with polymeric matrix - Ανάπτυξη πολυλειτουργικών σύνθετων υλικών με πολυμερική μήτρα
- Synthesis of hybrids in energy conversion applications – Σύνθεση υβριδικών υλικών για εφαρμογές μετατροπής ενέργειας

Teaching – Διδασκαλία μαθημάτων (2014 – present)

Lab courses of Physical Chemistry I / Εργαστήριο Φυσικοχημείας Ι

Lab courses of Physical Chemistry II / Εργαστήριο Φυσικοχημείας II
Spectroscopy, spectrometry and applications / «Φασματοσκοπία, φασματομετρία και εφαρμογές» 7^{ου} εξαμήνου
Chemistry of nanomaterials and applications / «Χημεία νανοϋλικών και εφαρμογές» 7^{ου} εξαμήνου
Principles of spectroscopy / «Αρχές Φασματοσκοπίας» 5^{ου} εξαμήνου.

Selected publications - Λίστα επιλεγμένων δημοσιεύσεων

1. "Water-soluble carbon nanotubes by redox radical polymerization" **D. Tasis**, K. Papagelis, M. Prato, I. Kallitsis, C. Galiotis, *Macromolecular Rapid Communications* **2007**, 28, 1553-1558.
2. "Chemical oxidation of multi walled carbon nanotubes" V. Datsyuk, M. Kalyva, K. Papagelis, J. Parthenios, **D. Tasis**, A. Siokou, I. Kallitsis, C. Galiotis, *Carbon* **2008**, 46, 833-840.
3. "Carbon nanotube-fluorenevinylene hybrids: synthesis and photophysical properties" J. Mikroyannidis, K. Papagelis, M. Fakis, **D. Tasis**, *Chemical Physics Letters* **2009**, 483, 241-246.
4. "Carbon nanotube-polymer composites: chemistry, processing, mechanical and electrical properties" Z. Spitalsky, **D. Tasis**, K. Papagelis, C. Galiotis, *Progress in Polymer Science*, **2010**, 35, 357-401.
5. "Current progress on the chemical modification of carbon nanotubes" N. Karousis, N. Tagmatarchis, **D. Tasis**, *Chemical Reviews*, **2010**, 110, 5366-5397.
6. "Functionalized graphene – poly(vinyl alcohol) nanocomposites: physical and dielectric properties" I. Tantis, G. C. Psarras, **D. Tasis**, *Express Polymer Letters* **2012**, 6, 283-292.
7. "Efficient exfoliation of graphene sheets in binary solvents" **D. Tasis**, K. Papagelis, P. Spiliopoulos, C. Galiotis, *Materials Letters* **2013**, 94, 47-50.
8. "Study of the thermal reduction of graphene oxide and of its application as electrocatalyst in quasi-solid state dye-sensitized solar cells in combination with PEDOT" A. Nikolakopoulou, **D. Tasis**, L. Sygellou, V. Dracopoulos, C. Galiotis, P. Lianos, *Electrochimica Acta* **2013**, 111, 698-706.
9. "Enhancement of power conversion efficiency of dye-sensitized solar cells by co-sensitization of zinc-porphyrin and thiocyanate-free ruthenium(II)-terpyridine dyes and graphene modified TiO₂ photoanode" G. D. Sharma, D. Daphnomili, K. S. V. Gupta, T. Gayathri, S. P. Singh, P. A. Angaridis, T. N. Kitsopoulos, **D. Tasis**, A. G. Coutsolelos, *RSC Advances* **2013**, 3, 22412-22420.
10. "Improved power conversion efficiency by insertion of RGO-TiO₂ composite layer as optical spacer in polymer bulk heterojunction solar cells" G. D. Sharma, M. L. Keshtov, A. R. Khokhlov, **D. Tasis**, C. Galiotis, *Organic Electronics* **2014**, 15, 348-355.
11. "Dispersion of graphene in organic solvents and their use for improving efficiency of dye- and quantum dot-sensitized solar cells" A. Nikolakopoulou, **D. Tasis**, L. Sygellou, P. Lianos, *Electrochimica Acta*, **2014**, 139, 54-60.
12. "The effect of thermal reduction on the water vapor permeation in graphene oxide membranes" K. S. Andrikopoulos, G. Bounos, **D. Tasis**, L. Sygellou, V. Drakopoulos, G. A. Voyiatzis, *Advanced Materials Interfaces*, **2014**, 1, 1400250 (p. 1-8).
13. "Ionizable star copolymer-assisted graphene phase transfer between immiscible liquids: organic solvent/water/ionic liquid" M.-T. Popescu, **D. Tasis**, C. Tsitsilianis, *ACS Macro Letters*, **2014**, 3, 981-984.
14. "Effect of the reduction process on the field emission performance of reduced graphene oxide cathodes" L. Sygellou, G. Viskadourous, C. Petridis, E. Kymakis, C. Galiotis, D. Tasis, E. Stratakis, *RSC Advances*, **2015**, 5, 53604-53610.
15. "Colloidal stabilization of graphene sheets by ionizable amphiphilic block copolymers in various media" M.-T. Popescu, **D. Tasis**, K. Papadimitriou, S. Gkermppoura, C. Galiotis, C. Tsitsilianis, *RSC Advances*, **2015**, 5, 89447-89460.

16. “Co–N doped reduced graphene oxide used as efficient electrocatalyst for dye sensitized solar cells” M. Belekoukia, A. Ploumistos, L. Sygellou, E. Nouri, **D. Tasis**, P. Lianos, *Solar Energy Materials and Solar Cells*, **2016**, 157, 591-598.
17. “Introduction of Graphene Oxide as Buffer Layer in Perovskite Solar Cells and the Promotion of Soluble n-Butyl-substituted Copper Phthalocyanine as Efficient Hole Transporting Material” E. Nouri, Y.-L. Wang, Q. Chen, J.-J. Xu, G. Paterakis, V. Dracopoulos, Z.-X. Xu, **D. Tasis**, M. Reza Mohammadi, P. Lianos, *Electrochimica Acta*, **2017**, 233, 36-43.
18. “N-Doped graphene/PEDOT composite films as counter electrodes in DSSCs: Unveiling the mechanism of electrocatalytic activity enhancement” G. Paterakis, D. Raptis, A. Ploumistos, M. Belekoukia, L. Sygellou, M. S. Ramasamy, P. Lianos, **D. Tasis**, *Applied Surface Science*, **2017**, 423, 443-450.
19. “Recent progress on the synthesis of graphene-based nanostructures as counter electrodes in DSSCs based on iodine/iodide electrolytes” **D. Tasis**, *Catalysts* **2017**, 7, 234 (19 pages).
20. “A novel mild method for surface treatment of carbon fibres in epoxy-matrix composites” N. Koutroumanis, A. C. Manikas, P. N. Pappas, F. Petropoulos, L. Sygellou, **D. Tasis**, K. Papagelis, G. Anagnostopoulos, C. Galiotis, *Composites Science and Technology* **2018**, 157, 178-184.
21. “Co-N doped reduced graphene oxide as oxygen reduction electrocatalyst applied to Photocatalytic Fuel Cells” D. Raptis, A. Ploumistos, E. Zagoraiou, E. Thomou, M. Daletou, L. Sygellou, **D. Tasis**, P. Lianos, *Catalysis Today* **2018**, 315, 31-35.
22. “Template synthesis of defect-rich MoS₂-based assemblies as electrocatalytic platforms for hydrogen evolution reaction” A. Kagkoura, I. Tzanidis, V. Dracopoulos, N. Tagmatarchis, **D. Tasis**, *Chem. Commun.* **2019**, 55, 2078-2081.
23. “Rapid microwave-assisted synthesis of CdS/Graphene/MoS_x tunable heterojunctions and their application in photocatalysis” I. Tzanidis, F. Bairamis, L. Sygellou, K. S. Andrikopoulos, A. Avgeropoulos, I. Konstantinou, **D. Tasis**, *Chem. Eur. J.* **2020**, 26, 6643-6651.
24. “Investigation of electronic properties and chemical interactions of graphene-MoS_x composites” L. Sygellou, I. Tzanidis, **D. Tasis**, *Appl. Surf. Sci.* **2020**, 517, 146188.
25. “Doping-Induced Stacking Transition in Trilayer Graphene: Implications for Layer Stacking Manipulation” N. Delikoukos, **D. Tasis**, A. Michail, J. Parthenios, E. Koukaras, K. Papagelis, *ACS Appl. Nano Mater.* **2020**, ASAP (DOI: 10.1021/acsanm.0c02400).

Chapters in books – Κεφάλαια σε βιβλία

1. Chapter title: “Carbon nanotubes” L. Vaccari, **D. Tasis**, A. Goldoni, M. Prato, Τίτλος βιβλίου: *Nanostructures – Fabrication and Analysis* Editor: Hitoshi Nejo, Εκδοτικός οίκος: SPRINGER, Nanoscience and Technology Series, **2007**, Chapter 5, p.151-215.
2. Chapter title: “DFT studies about the interaction of carbon nanotubes with various chemical species” A. Chrissanthopoulos, **D. Tasis**, Τίτλος βιβλίου: *DFT calculations on fullerenes and carbon nanotubes* Editors: V. Basiuk, S. Irle, Εκδοτικός οίκος: RESEARCH SIGNPOST, **2008**, Chapter 10, p.391-411 (INVITED).
3. Chapter title: “Supramolecular nanocomposites” C. Tsitsilianis, **D. Tasis**, C. Galiotis, Τίτλος βιβλίου: *White book : Polymer nanoscience and nanotechnology, a european perspective* Editor: European Network of Excellence on Nanostructured and Multifunctional Polymer Based Materials and Nanocomposites, **2008**, Chapter 2, p. 21-53.
4. Chapter title: “Carbon nanotube-filled polymer composites” **D. Tasis**, K. Papagelis, Τίτλος βιβλίου: *Polymer composites – Volume 2: Nanocomposites* Editors: S. Thomas, K. Joseph, S. K. Malhotra, K. Goda, M. S. Sreekala, Εκδοτικός οίκος: WILEY-VCH, **2013**, Chapter 10, p. 219-247. (INVITED).
5. Chapter title: “Chemical and optical aspects of supported graphene” **D. Tasis**, C. Galiotis, K. Papagelis, Τίτλος βιβλίου: *Graphene Science Handbook – Volume 3: Electrical and Optical Properties* Editors: M. Aliofkhazraei, N. Ali, W. I. Milne, C. S. Ozkan, S. Mitura, J. L. Gervasoni, Εκδοτικός οίκος: CRC Press (Taylor & Francis Group – USA), **2016**, Chapter 23, p. 381-394.
6. Chapter title: “Noncovalent methodologies for the preparation of metal-free nanocarbons for catalysis” A. Stergiou, N. Karousis, **D. Tasis**, Τίτλος βιβλίου: *Metal-free Functionalized*

Carbons in Catalysis: Synthesis, Characterization and Applications (Catalysis Series) Editors:
A. Villa, N. Dimitratos, Εκδοτικός οίκος: RSC, **2018**, Chapter 2, p. 29-66.