

CURRICULUM VITAE

Updated: 28/9/2023

Surname : Gournis

Forename : Dimitrios

Nationality : Greek

Sex: Male

Marital status: married (1 child)

Place of birth: Athens (Greece)

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Education – Professional Experience

- 08/23-today Full Professor, School of Chemical and Environmental Engineering (SCEE), Technical University of Crete (TUC), Chania, Greece
- 05/14-08/23 Full Professor, Department of Materials Science and Engineering (DMSE), University of Ioannina (UoI), Greece
- 10/09-05/14 Associate Professor, Department of Materials Science and Engineering, University of Ioannina, Greece
- 09/08-02/09 Visiting Professor, Zernike Institute for Advanced Materials, University of Groningen (RuG), the Netherlands
- 04/05-10/09 Assistant Professor (*tenure*), Department of Materials Science and Engineering, University of Ioannina, Greece
- 11/04-05/05 Research Associate, Materials Science Centre, University of Groningen (RuG), the Netherlands
- 11/99-05/04 Assistant Professor (*fixed term contract*), Department of Materials Science and Engineering, University of Ioannina, Greece
- 03/99-02/00 Postdoctoral research associate, Institute of Materials Science NCSR “Demokritos”, Greece.
- 1998 Ph.D. in Materials Chemistry, at the Department of Chemical Engineering, Faculty of Materials Science and Technology, National Technical University of Athens.
- 03/93-09/97 Postgraduate Student, Institute of Physical Chemistry, NCSR “Demokritos”, Greece.
- 1992 First Degree (B.Sc.) in Chemistry, University of Ioannina, Greece.

Research Interests and Activities

D. Gournis is an experimental synthetic chemist working in the area of layered and nanoporous materials. His research activities/interests concern the chemistry of phyllosilicates (2D) materials [in particular inorganic layered structures, clay-based materials (clays, pillared clays, organo-clays, LDHs), carbon layered structures, TMDs, germanane, MXenes, etc], carbon nanostructures [carbon nanotubes, fullerenes, graphene, graphite oxide, carbon dots, molecular diamonds], hybrid organic-inorganic nanocomposites, mesoporous materials, metallic (magnetic or semiconducting) nanoparticles and biocatalysts.

Synthetic procedures: intercalation reactions, sol-gel, hydrothermal synthesis, Catalytically Chemical Vapor Deposition (CCVD), solid state reactions, Langmuir-Blodgett.

Characterization techniques: powder XRD; FTIR, Raman, UV-Vis, EPR and Mossbauer spectroscopies, DTA/DSC/TGA, porosity measurements, AFM and SEM microscopy.

- Head (2005-2023) and founder of the *Layered & Nanoporous Materials Group (LNM-Group)*, <http://www.materials.uoi.gr/ccl/LNM-About.html>) part of the Ceramics and Composites Laboratory

(CCL) at DMSE of UoI. LNM unit participates in the Nanomedicine and Nanobiotechnology Research Group (<https://nanombr.ac.uoi.gr/>) of University of Ioannina, a multi-disciplinary research group dedicated to the application of nanotechnology and nanomaterials to biology/biotechnology, pharmacology and (patho-) physiology.

- Member (2020-2023) of the University Research Center of Ioannina» (URCI), Institute of Materials Science and Computing (IMSC, <https://urci.unit.uoi.gr/imsc>) and Institute of Environment and Sustainable Development (IESD, <https://urci.unit.uoi.gr/iesd/gr/index.html>).

- Member (2023-today) of the Laboratory of Physical Chemistry & Chemical Processes (PCCP laboratory, <https://www.pccplab.tuc.gr>) at SCEE of TUC (Director Prof. I.V. Gentekakis).

- Affiliated faculty (2023-today) of the Institute of GeoEnergy, Foundation for Research and Technology - Hellas (FORTH, <https://www.ig.forth.gr/>).

Teaching Experience

10/99-07/23 Tutor in the Department of Materials Science and Engineering, University of Ioannina, Ioannina, Greece. *46 full semester teaching*. Courses: Chemistry Lab (1st yr), Materials Lab I & II (2nd/3rd yr), Chemistry of Materials – Layered & Nanoporous Materials (4th yr), Chemical Processes (3rd yr), Bioceramics (5th yr), Special Topics of Ceramics (5th yr), etc.

9/02-07/23 *40 full semester teaching* in Post-graduate programs “Chemistry and Technology of Materials” (Depts Materials Science & Engineering, Chemistry and Physics, Univ. Ioannina), “Bioinorganic Chemistry” (Depts Chemistry and Medicine, Univ. Ioannina), and “Advanced Materials” (Dept Materials Science & Engineering, Univ. Ioannina). Courses: Advanced Materials, Nanotechnology, Biocatalysts and biomimetic materials, clay minerals etc.

Participation in Funded Projects / Collaborations

Participation as Principal Investigator (12), main researcher (19) or Program coordinator (4) in 35 funded European and National (Greek) programs: **Active:** (i) Flagship Actions (2023-2025) “Advanced Nanostructured Materials for Sustainable Growth: Green Energy Production/Storage, Energy Saving and Environmental Remediation (GREENMAT)”, budget UoI 600,000 € (Total 2,456,404 €, GSRT-Greece); (ii) HFRI-Basic Research Financing Action (2023-2026) “Innovative design of stable, efficient and in situ regenerable nanocatalysts for CO₂ recycling by CO₂ methanation and CO₂ reforming by methane processes (StableCO₂Nanocat)”, budget UoI 180,000 € (Total 400,000 €, HFRI); (iii) HFRI-Basic Research Financing Action (2023-2026) “Green and Sustainable Photochemical Upcycling of Plastic Waste and Biobased Polymers to High-Added Value Chemicals (PhotoUpPlas)”, budget TUC 115,000 € (Total 400,000 €, HFRI); (iv) Research-Create-Innovate II (2020-2023) “Design and development of a sweat-based glucose monitoring graphene nanodevice (closed-loop) with controlled transdermal nanoemulsion release for hypoglycemic drug delivery” budget UoI 150,080 € (Total 901,930 €, GSRT-Greece) (v) Research-Create-Innovate II (2020-2023) “Development and pilot scale demonstration of an innovative, effective and eco-friendly process for the production of clean hydrogen and electrical power generation from biogas” budget UoI 102,000 € (Total 1,000,000 €, GSRT-Greece); (vi) Special Actions: Industrial Materials (2020-2023) “Advanced aluminosilicate and magnesia refractories of high efficiency using nanotechnology” 260,000 k€ (GSRT-GR); (vii) Research-Create-Innovate II (2020-2023) “Advanced energy upgrading building components containing phase change composite and/or ceramic foams with electromagnetic shielding properties” 240,000 € (GSRT-GR). **Past:** (i) FP7-NMP-2007-LARGE-1 (2008-2012) “Carbon Nanotube Confinement Strategies to Develop Novel POlymer Matrix COmposites” (POCO), 340,200 € (Total 5,524,450 €, EU) [CP-IP 213939-1]; (ii) Heraclitus II (2010-2013) “Novel nanoporous materials based on graphene: synthesis, characterization and study of properties” 45.000 € (Ministry of Education,- Greece); (iii)

RTN (2002-2006) “Composites of Augmented Strength: Study of Intercalates of Uniquely Structured Clays” (CASSIUS-CLAYS), 260.000 € (Total: 1.380.000 €, EU) [RTN2-2001-00517]; (iv) PENED-2003 (2005-2008) "Development of novel polymer/clay nanocomposites with improved mechanical properties and low transmission", 110.880 € (GSRT-Greece) [03ED924]; (v) PENED-2003 (2005-2008) "Study of hydrogen adsorption in nanomaterials for fuel cell applications", 43.850 € (Total: 168.750 €, GSRT-Greece) [03ED548]; (vi) IKYDA2005 (2006-2007) "Magnetic hetero-nanostructures for thermally assisted magnetic recording" 10.000 € (IKY-Greek & DAAD-Germany); (vii) Cooperation (2011-2014) "Application of novel inorganic nanostructures for the development of polymer nanocomposites with improved properties" (NanoFill), 135,000 € (Total 572,560 €, GSRT-Greece); (viii) FP7-PEOPLE-2011-IRSES (2012-2015) “Magnetic Nanoparticles and Thin Films for Spintronic Applications and High Performance Permanent Magnets” (NanoMag), 31,500 € (Total: 468,300 €); (ix) Thalís (2012-2015) “Design of novel nanoporous materials for hydrogen storage” (HydroStore), 150,000 € (Total: 521,739 €, Min. Educ.-Greece); (x) Thalís (2012-2015) “High performance nanocomposite materials: reinforcement of polymers with advanced carbon and silica nanostructures” (Nanocomp), 170,000 € (Total: 521,739 €, Min. Educ.-Greece), (xi) Inter. Res. Grant –Petroleum Institute, UAE (2015-2018) "Magnetic Nanoparticles (MNPs) for Reservoir Characterization" (MNPs), 402,000 US\$ (Total 2,622,000 US\$, ADNOC- U.A.E.); (xii) Inter. Res. Grant –Petroleum Institute, UAE (2016-2020) " Novel, Highly Selective Nanocomposite Adsorbents for High Capacity CO₂ Capture from Tail Gas and Cost-Effective Regeneration for EOR Use", 160,000 US\$ (Total 1,203,000 US\$, ADNOC- U.A.E.); (xiii) Research-Create-Innovate (2018-2023) “A novel process for the efficient and eco-friendly valorization of biogas and CO₂ emissions: complete conversion to ethylene” 235,000 € (Total 1,000,000 €, GSRT-Greece); (xiv) Research-Create-Innovate (2018-2023) “Production of innovative high energy efficiency pipes for underfloor heating-cooling systems” 58,950.10 € (Total 712,750.81 €, GSRT-Greece); (xv) Research-Create-Innovate (2018-2023) “Self-healing and self-sensing nano-composite conservation mortars” 130,406.27 € (Total 755,539.92 €, GSRT-Greece);...as well as, 2 EPET II, 1 EPAN, 2 PYTHAGORAS, 2 PENED, et al. Moreover, participation in 5 funded Educational programs as tutor/instructor.

Honors – Scholarships – Refereeing – Editorial - Memberships

- **Associate Editor** of *Frontiers in Materials* (specialty section: *Carbon-based Materials*; IF: 3.2, since 2014)
- **Member of the Editorial board** of the journals: (i) *Molecules* (Section Editor in ‘Materials Chemistry’, IF: 4.6, since 2018) (ii) *Nanomaterials* (Section Editor in ‘2D and Carbon Nanomaterials’, IF: 5.3 since 2019) and (iii) *Materials Futures* (IOP publishing, since 2021).
- **Member of the board** (2016-2018) of the *Hellenic Foundation for Research and Innovation (HFRI)*, elected representative of University of Ioannina)
- **Director** of (i) *interdepartmental post-graduate (MSc) program “Chemistry and Technology of Materials”* of the University of Ioannina (2018-2022) and (ii) *post-graduate (MSc) program “Advanced Material Technologies”* of the DMSE of University of Ioannina (2022-2023).
- **Referee** in >80 journals, e.g. *Langmuir*, *Chem. Mater.*, *ACS Nano*, *Small*, *Nature Commun.*, *Sci. Rep.*, *Carbon*, *J. Phys. Chem.*, *Adv. Funct. Mater.*, *Chem. Commun.*, *New J. Chem.*, *J. Mater. Chem.*, *J. Mol. Cat. A*, *J. Phys. Chem. Solids*, *RSC Advances*, *Diamond Rel. Mater*, *Clays Clay Miner*, *Chem. Phys. Lett.*, *J. Solid State Chem.*, etc
- **Referee in research proposals** e.g. *EU*: FET, Pathfinder; *USA*: ACS-PRF; *Greece*: Min. Educ., Gen. Secretat. Res. Techn., State Scholarship Found, HFRI, Institutional projects (e.g. «K. Karatheodoris» Univ. Patras, NCSR “D”, Univ. Crete, etc); *Croatia*: UKF’s programs; *Italy*: MIUR programs (PRIN, Futuro in Ricerca), VQR etc; *Romania*: NRC programs; *Cyprus*: Res. Prom. Found programs; *Czech Republic*: GACR programs; *Portugal*: SR&TD etc.
- **Referee** of papers in International **Conferences** (e.g. 4th IMMS 2004, Cape Town, South Africa, 1-4 May, 2004 etc)

- **Editor of Special Topic** ‘Carbon Superstructures: From Synthesis to Applications’ in *Frontiers in Materials* (co-eds. V. Georgakilas, G. Froudakis, January 2018)
- **Guest Editor of Special Issues:** (i) ‘Nanomaterials in Catalysis Applications’ in *Catalysts* (IF 3.6, co-eds. I.V. Yentekakis, M.A. Karakassides, <https://www.mdpi.com/si/27897>), (ii) ‘Chemistry and Physics of Low-Dimensional Materials’ in *Molecules* (co-eds. P. Rudolf, R. Macovez, <https://www.mdpi.com/si/43709>).
- **Member of the scientific committee** in 6 Conferences (e.g. 34th ECIS, Athens, Sept. 2020)
- Two **teaching scholarships** as experienced researcher in UPC, Barcelona (2012) and Univ. Calabria, Italy (CNISM, 2006).
- **Administrative work** (since 2005): Participation as faculty member in various administrative bodies of the DMSE/UoI and SCEE/TUC, competition committees, electoral bodies and advisory committees. Responsible for purchasing, receiving and installing large research units (AFM/MFM, LB, high-pressure gas sorption systems)
- **Member** of the American Chemical Society (2012-2018), Hellenic Chemical Association (since 1992), Clay Minerals Society (CMS) –U.S.A. (1998-2001)
- **Research Scholarship** from the NSRF for the entire period of the Ph.D. thesis (1993-1998). Admission after introductory examinations.

Advisor - Examiner

- **Supervisor (promotor) in 12 PhD theses** (*10 accomplished*) [T. Tsoufis, 2005-2009; P. Xidas, 2005-2009¹; A. Enotiadis, 2007-2011; E. Diamanti, 2009-2014; D. Giasafaki, 2009-2013²; A. Rossos, 2011-2014, M. Subrati, 2015-2020; N.Karouta, 2017-2022; N. Chalmpes, 2018-2021; M. Papaioannou, 2018-2022³; V. Sakavitsi, 2019-today, A. Kaloudi, 2022-today], **Co-promotor in 8 PhD Theses** (*8 accomplished*) [K. Spyrou, 2008-2012 (RUG, NL with Prof. Dr. P. Rudolf); A. Tomou, 2007-2013 (UoI, GR with Prof. I. Panagiotopoulos); G. Potsi, 2012-2016⁴ (*Joint PhD* of UoI with RUG, NL with Prof. Dr. P. Rudolf); P. Zygouri, 2012-2016 (*Joint PhD* of UoI with RUG, NL with Prof. Dr. P. Rudolf); A. Kouloumpis, 2013-2017 (*Joint PhD* of UoI with RUG, NL with Prof. Dr. P. Rudolf); E. Thomou, 2016-2021³ (*Joint PhD* of UoI with RUG, NL with Prof. Dr. P. Rudolf); F. Yang, 2017-2021³ (*Joint PhD* of UoI with RUG, NL with Prof. Dr. P. Rudolf); T. Giouisis, 2017-2023³ (*Joint PhD* of UoI with RUG, NL with Prof. Dr. P. Rudolf)], **30 Master (MSc) theses** (*29 accomplished*) [K. Litina, 2004-2006; T. Tsoufis, 2004-2006; A. Enotiadis, 2006-2009, T. Koliou, 2006-2009 (co-); A. Dimitrakou, 2006-2009 (co-); E. Diamanti, 2008-2011; G. Potsi, 2009-2012; P. Zygouri, 2009-2012; E. Mpletsa, 2010-2012 (co-); A. Kouloumpis, 2010-2013; E. Mouzourakis, 2010-2013; M. Katsiaflaka, 2010-2013; A. Georgiou, 2010-2014; D. Mpergouni, 2011-2016; E. Thomou, 2013-2016; K.-M. Lyra, 2014-2016; T. Giouisis, 2013-2017; E. Skoura, 2014-2017; A.-M. Manoloukou, 2014-2017; N. Karouta, 2015-2017; N. Chalmpes, 2016-2017, K. Ferentinou, 2016-2018; G. Vafri, 2015-2018; A. Sima, 2015-2018; V. Sakavitsi, 2017-2019; D. Mpampatsoulis, 2019-2022; F. Evangelou, 2016-2023; A. Michalopoulou, 2020-2022; A. Kaloudi, 2020-2022; D. Haskou, 2022-today] and **>170 Diploma theses** (2004-today, *accomplished*).
- Member of the evaluation committee in >50 PhD theses (Ioannina, Crete, Agrinio, Athens), >80 master theses, and > 2000 diploma theses.
- External examiner in 9 PhD theses: Dept. Phys., Annalai University, India (C. Manoharan, V.Arumugam, Supervisors: Prof. R. Venkatachalapathy (2) and Prof. A. N. Kannappan, Head of Dept), Zernike Instit. Adv. Mater., Univ. Groningen, NL (Nemanja Miletic. Supervisor Prof. K. Loos; Regis Gengler, suprv. Prof Dr. P. Rudolf), Dept. Physics, University of Calabria, IT (M. Antoniou. Supervisor Prof. R. Agostino), etc.

¹ Research performed in AUTH, Greece (under the supervision of Prof. K. Triantafyllidis)

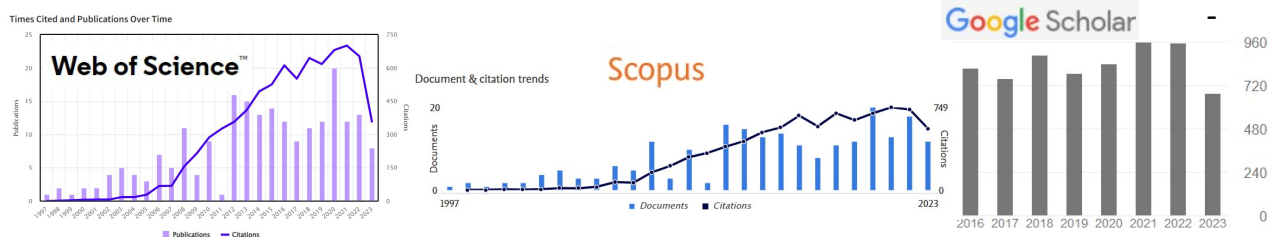
² Research performed in NCSR “Demokritos”, Greece (under the supervision Dr. T. Steriotis)

³ Research performed in NCSR “Demokritos”, Greece (under the supervision Dr. I. Karatasios)

⁴ *Ubbo Emmius sandwich bursary PhD-position between University of Ioannina and University of Groningen*

Publications / Participation to Conferences / Talks / Analysis / Bibliometrics

- Author of **221** international **publications in peer reviewed journals** (25 invited/feature articles): *JACS* 3, *Nano Letters* 3, *Angewante Chem. Int. Ed.* 2, *Small* 3, *ACS Nano* 1, *Nature Comm.* 1, *Adv. Funct. Mater.* 3, *Chem. Eng. J.* 1, *2D Mater.* 1, *Trends Biotechnol.* 1, *Chem. Mater.* 5, *Nanoscale* 4, *NPG Asia Mater.* 1, *Langmuir* 7, *J. Mater. Chem.* 3, *Carbon* 11, *Chem. Eur. J.* 5, *J. Mater. Chem. C.* 1, *ACS Appl. Mater. Interfac.* 1, *ACS Appl. Nano Mater.* 2, *J. Phys. Chem. C* 5, *Bioresour. Technol.* 2, *J. Phys. Chem. B* 2, *Phys. Chem. Chem. Phys.* 2, *ACS Omega* 3, *Energ. Convers. Manage.* 1, *Appl. Mater. Today* 3, etc
 - Citations **8,482** / **7,054** without self-citations (Scopus) -28/9/2023 [WoS citations 7,810; Google Scholar 10,570]
 - **h factor** = **46** – Scopus [WoS: 44; Google Scholar: 51].
 - **i-10 index**: 156 –Google Scholar
 - Total Impact Factor, $\Sigma IF = 1,249.4$ and Mean Impact Factor, **IF/paper = 5.7**
 - In **64** papers corresponding author



- Author of **4 papers** (refereed) in book series (2 invited)
- Author of **5 chapters** (invited and refereed) in international books
- Author of **3 technical reports**
- **4 international patents** (WO 2011/009889, PCT/GR2019/000092)
- Author or Co-author in **7 books** of undergraduate courses in Materials Science (*in Greek*)
- Author of **83 publications in conference proceedings**
- **>200 oral or poster presentations** at international and national conferences.
- **41 invited talks** in conferences (24) and institutions (17)
- Member of the **organizing committee in 7 conferences** ("Magnetic Nanoparticles: Challenges & Future Prospects", 18-23/6/2007, Lorentz Center, Leider, the Netherlands; HTC2009, 6-9/5/2009, Athens, Greece; "XXVI PanHellenic Conf. Solid State Phys. & Mater. Sci.", 26-29/9/2010; 4th PanHellenic Conf. Green Chemistry & Sustainable Growth, Ioannina, 30/10-1/11/2014; etc).

Publications (in refereed journals)

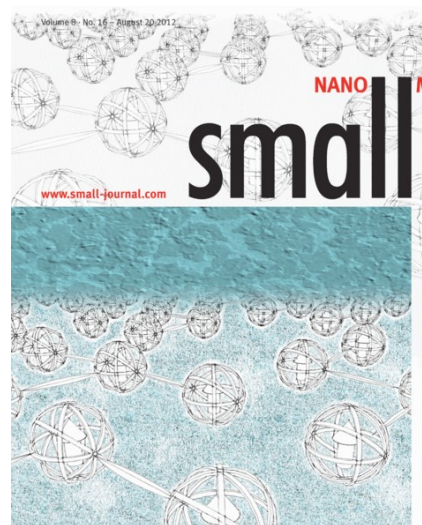
1. M. A. Karakassides,* D. Petridis, and **D. Gournis**. Infrared Reflectance Study of Thermally treated Li/Cs-Montmorillonites. *Clays and Clay Minerals*. (1997) Vol. 45, No. 5, p. 649-658.
2. A. Szabó, **D. Gournis**, M. A. Karakassides, and D. Petridis*. Clay-(aminopropyl)ethoxy silane compositions. *Chemistry of Materials*. (1998) Vol. 10, No. 2, p. 639-645.
3. D. Petridis,* **D. Gournis**, and M. A. Karakassides. The Chemistry of Organofunctionalized Silicon Cubanes in Swelling Smectites. *Molecular Crystals and Liquid Crystals*. (1998) Vol. 311, p. 345-350.
4. M. A. Karakassides,* **D. Gournis** and D. Petridis. An infrared reflectance study of Si-O vibrations in thermally treated alkali-saturated montmorillonites. *Clay Minerals*. (1999) Vol. 34, No. 3, p. 429-438.
5. M. A. Karakassides,* **D. Gournis**, A. Simopoulos, and D. Petridis. A Mössbauer and Infrared Study of Heat Treated Nontronite. *Clays and Clay Minerals*. (2000) Vol. 48, No.1, p. 68-76
6. **D. Gournis**,* A. M. Mantaka, M. A. Karakassides, and D. Petridis. Effects of gamma-irradiation on Clays and Organoclays: A Mössbauer and XRD study. *Physics and Chemistry of Minerals*. (2000) Vol. 27, No. 7, p. 514-521.
7. **D. Gournis**,* A. M. Mantaka, M. A. Karakassides, and D. Petridis. Ionizing Radiation Induced Defects in Smectite clays. *Physics and Chemistry of Minerals*. (2001) Vol. 28, No.4, p. 285-290.

8. V. I. Georgakilas, **D. Gournis** and D. Petridis*. Organo-clay derivatives in the synthesis of macrocycles. *Angewandte Chemie International Edition*. (2001) Vol. 40, No.22, p. 4286-4288 (+Support. Info.).
9. **D. Gournis**,* M.A. Karakassides and D. Petridis. Formation of hydroxyl radicals catalyzed by clay surfaces. *Physics and Chemistry of Minerals*. (2002) Vol. 29, No. 2, p. 155-158.
10. **D. Gournis**, M.A. Karakassides, N. Boukos, T. Bakas and D. Petridis*. Catalytic synthesis of carbon nanotubes on clay minerals. *Carbon*. (2002) Vol. 40, No. 14, p. 2641-2646. [article was selected as Hot Paper by Alchemist Weekly Bulletin, Vol. 5, Iss. 45 (11 Nov 2002)]
11. **D. Gournis**,* M. Louloudi,* M.A. Karakassides, C. Kolokytha, K. Mitopoulou and N. Hadjiliadis*. Heterogeneous clay-manganese(II) oxidation catalysts. *Materials Science and Engineering C*. (2002) Vol. 22, No. 1, p. 113-116.
12. **D. Gournis**,* Y. Deligiannakis, M. A. Karakassides, S. Un, N. Ioannidis and D. Petridis. Stability study of tyrosinate radical in a restricted phyllosomorphous medium. *Langmuir*. (2002) Vol. 18, No. 25, p. 10024-10029.
13. A.B. Bourlinos, M.A. Karakassides,* **D. Gournis**, V. Georgakilas and A. Moukarika. A novel route towards iron- and chromium-containing MCM-41 materials. *Chemistry Letters*. (2003) Vol. 32, No. 1, p. 38-39.
14. M. A. Karakassides,* **D. Gournis**, A. B. Bourlinos, T. Bakas and P. Trikalitis. Magnetic Fe₂O₃-Al₂O₃ composites prepared by a modified wet impregnation method. *Journal of Materials Chemistry*. (2003) Vol. 13, No. 4, p. 871-876.
15. A. B. Bourlinos, **D. Gournis**, D. Petridis,* T. Szabó, A. Szeri and I. Dékány. Graphite oxide: chemical reduction to graphite and surface modification with primary aliphatic amines and aminoacids. *Langmuir*. (2003) Vol. 19, No. 15, p. 6050-6055.
16. V. Georgakilas, **D. Gournis**, A. Bourlinos, M.A. Karakassides and D. Petridis*. Clays as host matrix in the synthesis of organic macrocycles. *Chemistry, A European Journal*. (2003) Vol. 9, No. 16, p. 3904-3908.
17. R. Venkatachalapathy,* **D. Gournis**, C. Manoharan, S. Dhanapandian and K. Deenadayalan. Application of FTIR and Mössbauer spectroscopy in the analysis of some South Indian Archaeological Potteries. *Indian Journal of Pure and Applied Physics*. (2003) Vol. 41, No. 11, p. 833-838.
18. V. Georgakilas, **D. Gournis**, M. A. Karakassides, A. Bakandritsos and D. Petridis*. Organic derivatization of single-walled carbon nanotubes by clays and intercalated derivatives. *Carbon*. (2004) Vol. 42, No. 4, p. 865-870.
19. **D. Gournis** and G. Floudas*. Hairy plates: polyethylene-*b*-polyisoprene copolymers in the presence of laponite clay. *Chemistry of Materials*. (2004) Vol. 16, No. 9, p. 1686-1692.
20. **D. Gournis**,* V. Georgakilas, K. Kordatos, M. A. Karakassides, T. Bakas and M. Prato,* M. Fanti and F. Zerbetto*. Incorporation of fullerene derivatives into smectite clays: A new family of Organic-Inorganic nanocomposites. *Journal of the American Chemical Society*. (2004) Vol. 126, No. 25, p. 8561-8568 (+Suppl. Info.).
21. R. Venkatachalapathy,* **D. Gournis**, C. Manoharan, S. Dhanapandian and T. Deenadayalan. FTIR and Mössbauer spectroscopic studies of archaeological potteries from Nathikudi, Tamil Nadu. *Indian Journal of Physics*. (2004) Vol. 78, No. 12, p. 1371-1375.
22. V. Georgakilas,* V. Tzitzios, **D. Gournis** and D. Petridis*. Attachment of magnetic nanoparticles on carbon nanotubes and their soluble derivatives. *Chemistry of Materials*. (2005) Vol. 17, No. 7, p. 1613-1617 (+Support. Info.).
23. E. J. M. Vertelman, E. Maccallini, **D. Gournis**, P. Rudolf, T. Bakas, J. Luzon, R. Broer, A. Pugzlys, T. T. A. Lummen, P. H. M. van Loosdrecht and P. J. van Koningsbruggen*. The Influence of Defects on the Electron Transfer and Magnetic Properties of Rb_xMn[Fe(CN)₆]_y·zH₂O. *Chemistry of Materials*. (2006) Vol. 18, No. 7, p.1951-1963 (+Support. Info.).
24. A. Tomou, **D. Gournis**, I. Panagiotopoulos,* Y. Huang, G. Hadjipanayis, and B. Kooi. Weak ferromagnetism and exchange biasing in cobalt oxide nanoparticle systems. *Journal of Applied Physics*. (2006) Vol. 99, No. 12, p. 123915 (-5).
25. **D. Gournis**,* L. Jankovič, E. Maccallini, D. Benne, P. Rudolf,* J-F. Colomer, C. Sooambar, V. Georgakilas, M. Prato,* M. Fanti, F. Zerbetto,* G. H. Sarova, and D. M. Guldi*. Clay-fulleropyrrolidine nanocomposites. *Journal of the American Chemical Society*. (2006) Vol. 128, No. 18, p. 6154-6163 (+Support. Info.).
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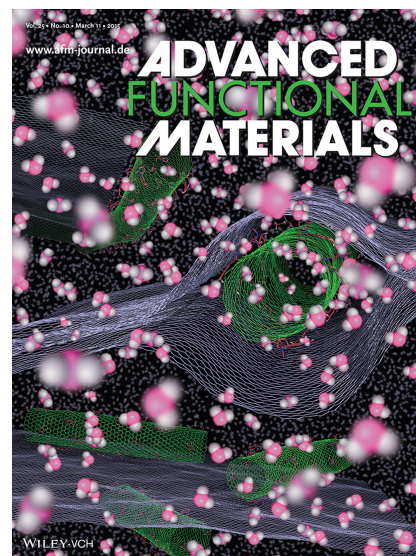
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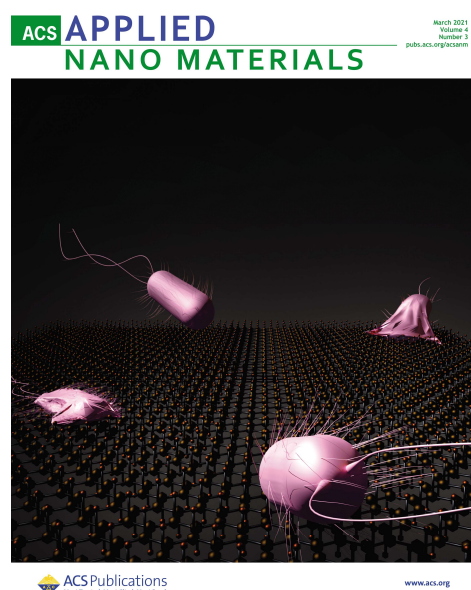
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Patents

1. “Functional nanoporous materials for gas storage applications” *Applicant*: Innova – Technology Solutions srl, Chieti (Italy). *Inventors*: G. Froudakis, Heraklion (GR); P. Trikalitis, Heraklion (GR); **D. Gournis**, Ioannina (GR); R. G. Agostino, Rende (IT). WO 2011/009889 (27.01.2011).
2. “Fluid flow monitoring in hydrocarbon reservoirs using magnetic nanoparticles” *Applicant*: Khalifa University of Science and Technology, Abhu Dhabi (UAE). *Inventors*: S. A. Alkhazraji, Abhu Dhabi (UAE); V. Tzitzios, Ag. Paraskevi (GR); G. Papavassiliou, Ag. Paraskevi (GR); M. Karagianni, Ag. Paraskevi (GR); A. Anastasiou, Ag. Paraskevi (GR); S. Orfanides, Ag. Paraskevi (GR); M. Fardis, Ag. Paraskevi (GR); **D. Gournis**, Ioannina (GR) and M. Subrati, Ioannina (GR). Publication/Patent Number: WO2021136949A1 (publication date: 2021-07-08) Application Number: PCT/GR2019/000092 Filing Date: 2019-12-30. <https://www.patentguru.com/search?q=WO2021136949A1>.
3. “Encapsulated systems for the development of self-healing building materials”. *Inventors*: I. Karatasios, S. Papaioannou, M. Amenta, **D. Gournis** and V. Kilikoglou. (2022) PCT Application number PCT/EP2022/055650 (under review DK02EP01VK).
4. “Encapsulated systems for the development of self-healing building materials”. *Inventors*: I. Karatasios, S. Papaioannou, M. Amenta, **D. Gournis** and V. Kilikoglou. (2021) EPO application number EP21161152.0.