



CURRICULUM VITAE
Dr. Evangelos P. Favvas

PERSONAL INFORMATION

First name / Surname Evangelos P. Favvas
E-mail e.favvas@inn.demokritos.gr
Skype [e_favvas](#)
Nationality Hellenic
Date of birth 18 January 1978
Gender Male
Work Address Institute of Nanoscience and Nanotechnology (INN), NCSR "Demokritos", Aghia Paraskevi, Attica, P.C. 153 41, Greece
Telephone (Office) +30 210 650 3658
Telephone (Lab) +30 210 650 3981
Mobile +30 693 230 2922

WORK EXPERIENCE

Dates February 2017 – today
Occupation or position held Senior Researcher
Main activities and responsibilities Preparation, characterization and evaluation performance of membranes and adsorbate materials for energy and environmental applications. Supervising of *M.Sc.* and *Ph.D.* students, writing and participation of research proposals and projects respectively
Name and address of employer Membranes and Materials for Environmental Separations Laboratory, Institute of Nanoscience and Nanotechnology, NCSR "Demokritos", Aghia Paraskevi, Attica, Greece
Type of business or sector Research and Development

Dates May 2002 - February 2017
Occupation or position held Research Collaborator (2002 – 2007) & Research Officer (2007 – 2017)
Main activities and responsibilities Development of polymeric and inorganic membranes for gas separation applications – characterization of porous materials
Name and address of employer Membranes and Materials for Environmental Separations Laboratory, Institute of Physical Chemistry, NCSR "Demokritos", Aghia Paraskevi, Attica, P.C. 153 41, Greece
Type of business or sector Research and Development

Dates 2004 – 2007 & 2012 – today
Occupation or position held Visitor Researcher
Main activities and responsibilities Study of fluid condensation phenomena into porous media using *in situ* adsorption with small angle x-ray scattering experiment – characterization of nanoporous materials using WAXS/SAXS and microscopy techniques (SEM, AFM)
Name and address of employer Hephaestus Lab., Dpt of Chemistry, International Hellenic University (IHU), Kavala, P.C. 654 04, Greece
Type of business or sector Research and Development

Dates 2012 - 2016
Occupation or position held Visitor Researcher
Main activities and responsibilities Study of the mechanical properties of polymer based nanocomposite materials
Name and address of employer Department of Mechanical Engineering, Hellenic Mediterranean University, Herakleion, P.C. 710 04, Greece
Type of business or sector Research and Development

EDUCATION

| | |
|--|--|
| University | National and Kapodistrian University of Athens, Department of Chemistry |
| Dates | 22 November 2004 - 03 May 2010 |
| Title of qualification awarded | Ph.D. Degree |
| Dissertation | Gas Separation Study on Polymeric and Carbon Hollow Fibers Membranes (DOI: 10.12681/eadd/25350) |
| Grade | «Excellent» |
| International Standard Classification of Education (ISCED) | 8 |
| University | National and Kapodistrian University of Athens, Department of Chemistry |
| Dates | October 2002 - October 2004 |
| Title of qualification awarded | M.Phil. Degree (2 years), Postgraduate Programme «Polymer Science and Applications» |
| Dissertation | Study of permeance – selectivity properties of polymeric and carbon polyimide based hollow fiber membranes |
| Grade | «Excellent – 9.44» |
| International Standard Classification of Education (ISCED) | 7 |
| University | Kavala Institute of Technology, Department of Petroleum Engineering |
| Dates | March 1998 – May 2002 |
| Title of qualification awarded | Degree of Petroleum Engineer |
| Grade | «Very Good – 8.00» |
| International Standard Classification of Education (ISCED) | 6 |

RESEARCH ACTIVITIES – MEMBERSHIPS

- **Research activities:** Porous materials, membranes (*polymeric and inorganic*) and nanocomposites materials for environmental & energy applications, gas separations and storage, x-ray and neutron scattering, adsorption, fuel technology.
- Participation in 21 International and National research projects (FP6, FP7, Horizon 2020, Thalys, Marie–Curie, Archimedes, Interreg etc)
- Coordinator of 4 research projects
- Supervising of 2 PhD Students (*in progress*) and co-supervising of 11 Master and PhD students
- Review Editor in Advanced Clean Fuel Technologies, Frontiers
- Topic Editor, Nanomaterials Journal (02/2019 – today, I.F. 4.034)
- Member of the editorial board of the Journal of Membrane and Separation Technology
- Member of the editorial board of the Int. Journal of Membrane Science and Technology
- Member of the editorial board of the Journal of Engineering Science and Technology Review
- Guest Editor of Special Issue "*Membranes for Carbon Dioxide Separation/Capture applications*", Journal of Membrane and Separation Technology
- Guest Editor of Special Issue "*Materials and membranes for hydrogen separation/purification processes*" International Journal of Hydrogen Energy (April 2021).
- Guest Editor of Special Issue "*Membranes for Carbon Dioxide Separation/Capture applications*" J. Membr. Separ. Technol. (June 2016).
- Guest Editor of Special Issue "*Membrane technology for CO₂ containing-gaseous streams treatment and valorization and for environmental protection*" Int. J. Greenh. Gas Control. (2022, *in progress*).
- Guest Editor of Special Issue "*Hybrid Porous Nanomaterials for Energy and Environment*" Nanomaterials (2022, *in progress*).
- Referee in several international scientific journals (*J. Membr. Separ. Techn., J. Engin. Sci. Tech. Review, Applied Water Science, Fibers and Polymers, Sci. Iranica, J. Appl. Polym. Sci., Separ. Sci. & Technology, Separ. Purif. Techn., J. Membr. Sci., Chem. Engin. J., Langmuir, etc*)
- Member of 4 Faculty staff election committees in International Hellenic University (from 2017 until today)
- Member of the Society of Petroleum Engineers (**SPE**)

FURTHER QUALIFICATIONS

Extensive laboratory experience in:

1. Gravimetric Analysis (IGA-Rubotherm) – Differential Scanning Calorimetry (DSC) – Thermal Gravimetric Analysis (TGA), X-ray diffraction (XRD)
2. Experimental experience in small/wide angle x-ray scattering systems (WAXS/SAXS) and neutron centers (1. Laboratoire Léon Brillouin, Bât 563 CEA Saclay, France & 2. Instrument V1 - Helmholtz-Zentrum Berlin für Materialien und Energie (HZB), Germany)
3. Scanning electron microscopy (FE-JEOL-JSM-7401F & JEOL-JSM-6390LV)
4. Characterization and evaluation of polymeric and inorganic membranes using:
 - I. Flow systems/Selectivity apparatus
 - II. Adsorption techniques (low & high pressures)
 - III. Permeability apparatus (for liquids and gases at pressures up to ~70 bar)

PUBLICATIONS IN PEER REVIEWED JOURNALS

(Scopus ID: 16024473400)


(ORCID ID: <https://orcid.org/0000-0003-3369-8364>)

1. E. P. Favvas*, G. C. Kapantaidakis, J. W. Nolan, A. Ch. Mitropoulos and N. K. Kanellopoulos "Preparation, characterization and gas permeation properties of carbon hollow fiber membranes based on Matrimid® 5218 precursor", *J. Mater. Proc. Tech.* 186, **2007**, 102–110.
2. E. K. Chatzidaki, E. P. Favvas*, S. K. Papageorgiou, N. K. Kanellopoulos and N. V. Theophilou "New Polyimide – Polyaniline Hollow Fibers: Synthesis, Characterization and behavior in Gas Separation", *Europ. Polym. J.* 43, **2007**, 5010–5016.
3. A. Labropoulos, G. E. Romanos, G. I. Pilatos, N. K. Kakizis, E. P. Favvas and N. K. Kanellopoulos, "Investigating the evolution of N₂ transport mechanism during the post treatment of silica membranes by application of a cyclic chemical vapor deposition method", *Microp. Mesop. Mater.* 110, **2008**, 11–24.
4. S. F. Nitodas, E. P. Favvas, G. E. Romanos, M. A. Papadopoulou, A. Ch. Mitropoulos and N. K. Kanellopoulos "Synthesis and Characterization of Hydrogen Selective Silica-based Membranes", *J. of Porous Materials* 15, **2008**, 551–557.
5. E. P. Favvas*, E. P. Kouvelos, G. E. Romanos, G. I. Pilatos, A. Ch. Mitropoulos and N. K. Kanellopoulos "Characterization of highly selective microporous carbon hollow fiber membranes prepared from a commercial co-polyimide precursor", *J. of Porous Materials* 15, **2008**, 625–633.
6. E. P. Favvas* and A. Ch. Mitropoulos "What is spinodal decomposition?", *J. Engin. Sci. Tech. Review* 1, **2008**, 25–27.
7. G. E. Romanos*, O. C. Vangeli, K. L. Stefanopoulos, E. P. Kouvelos, S. K. Papageorgiou, E. P. Favvas and N. K. Kanellopoulos "Methods of evaluating pore morphology in hybrid organic-inorganic porous materials", *Microp. Mesop. Mater.* 120, **2009**, 53–61.
8. E. P. Favvas, A. A. Sapolidis, K. L. Stefanopoulos*, G. E. Romanos, N. K. Kanellopoulos, E. K. Kargiotis and A. Ch. Mitropoulos "Characterisation of carbonate rocks by combination of scattering, porosimetry and permeability techniques", *Microp. Mesop. Mater.* 120, **2009**, 109–114.
9. Sergios K. Papageorgiou*, Evangelos P. Kouvelos, Evangelos P. Favvas, Andreas A. Sapolidis, George E. Romanos, Fotios K. Katsaros, "Metal carboxylate interactions in metal alginate complexes studied with FTIR spectroscopy", *Carbohydrate Research* 345, **2010**, 469–473.
10. Sergios K. Papageorgiou*, Evangelos P. Favvas, Andreas A. Sapolidis, George E. Romanos and Fotios K. Katsaros, "Facile synthesis of carbon supported copper nanoparticles from alginate precursor with controlled metal content and catalytic NO reduction properties", *J. Hazardous Materials* 189, **2011**, 384–390.
11. E. P. Favvas*, G. E. Romanos*, S. K. Papageorgiou, F. K. Katsaros, A. Ch. Mitropoulos and N. K. Kanellopoulos "A Methodology for the morphological and physicochemical characterisation of asymmetric carbon hollow fiber membranes", *J. Membr. Sci.* 375, **2011**, 113–123.
12. E. P. Favvas*, K. L. Stefanopoulos and A. Ch. Mitropoulos "A simple equation for accurate mesopore size calculations", *Microp. Mesop. Mater.* 145, **2011**, 9–13.
13. S. K. Papageorgiou*, F. K. Katsaros, E. P. Favvas, G. E. Romanos, C. P. Athanasekou, K. G. Beltsios, O. I. Tziella and P. Falaras*, "Alginate Fibers as Photocatalyst immobilizing agents applied in hybrid Photocatalytic/Ultrafiltration Water treatment processes", *Water Research* 46, **2012**, 1858–1872.
14. Evangelia G. Deze, Sergios K. Papageorgiou*, Evangelos P. Favvas, Fotis K. Katsaros, "Porous alginate aerogel beads for effective and rapid heavy metal sorption from aqueous solutions:

- Effect of porosity in Cu²⁺ and Cd²⁺ ion sorption*", Chem. Engin. J. 209, **2012**, 537–546.
15. Constantinos G. Tsanaktsidis*, Stavros G. Christidis, Evangelos P. Favvas*, "A novel method for improving the physicochemical properties of diesel and jet fuel using polyaspartate polymer additives", Fuel 104, **2013**, 155–162.
 16. E. P. Favvas*, K. L. Stefanopoulos, S. K. Papageorgiou, A. Ch. Mitropoulos "In situ small angle x-ray scattering and benzene adsorption in carbon hollow fiber membranes", Adsorption 19, **2013**, 225–233.
 17. E. P. Favvas*, K. L. Stefanopoulos, A. Vairis, J. W. Nolan, K. D. Joensen and A. Ch. Mitropoulos, "In situ SAXS investigation of dibromomethane adsorption in ordered mesoporous silica", Adsorption 19, **2013**, 331–338.
 18. Constantinos G. Tsanaktsidis, Evangelos P. Favvas*, Athanasios A. Scaltsoyiannes, Stavros G. Christidis, Elisabeth X. Katsidi, Apostolos V. Scaltsoyiannes "Natural resins and their application in antifouling fuel technology Part I: Improving the physicochemical properties of diesel fuel using natural resin polymers as a removable additives", Fuel Proc. Techn. 114, **2013**, 135–143.
 19. E. P. Favvas*, S. K. Papageorgiou, K. L. Stefanopoulos, J. W. Nolan and A. Ch. Mitropoulos, "Effect of air gap on gas permeance/selectivity performance of BTDA-TDI/MDI co-polyimide hollow fiber membranes", J. Appl. Polym. Sci. 130, **2013**, 4490–4499.
 20. Nikos Heliopoulos, Sergios K. Papageorgiou*, Angeliki Galeou, Evangelos P. Favvas, Fotios K. Katsaros, Kostas Stamatakis "Effect of Copper and Copper Alginate treatment on wool fabric. Study of textile and Antibacterial Properties", Surf. Coatings Techn. 235, **2013**, 24–31.
 21. Evangelos P. Favvas*, Stephanos F. Nitodas, Andreas Stefopoulos, Konstantinos L. Stefanopoulos, Sergios K. Papageorgiou and Athanasios Ch. Mitropoulos, "High Purity Multi-Walled Carbon Nanotubes: Preparation, Characterization and Performance as Filler Materials in co-polyimide Hollow Fiber Membranes", Separ. Purif. Technol. 122, **2014**, 262–269.
 22. Sandra M. Miranda, George Em. Romanos*, Vlassis Likodimos, Rita R.N. Marques, Evangelos P. Favvas, Fotios K. Katsaros, Konstantinos L. Stefanopoulos, Vítor J.P. Vilar, Joaquim L. Faria, Polycarpus Falaras, Adrián M.T. Silva, "Pore structure, interface properties and photocatalytic efficiency of hydration/dehydration derived TiO₂/CNT composites", Applied Catalysis B: Environmental, 147, **2014**, 65–81.
 23. Evangelos P. Favvas*, Konstantinos L. Stefanopoulos, John W. Nolan, Sergios K. Papageorgiou, Athanasios Ch. Mitropoulos, Didier Lairez, "Mixed Matrix Hollow Fiber Membranes with enhanced gas permeation properties" Separ. Purif. Technol. 132, **2014**, 336–345.
 24. Constantinos G. Tsanaktsidis, Evangelos P. Favvas*, George T. Tzilantonis, Apostolos V. Scaltsoyiannes, "A new fuel (D-BD-J) from conventional diesel, biodiesel and JP8 blending", Fuel Proc. Techn. 127, **2014**, 66–71.
 25. Evangelos P. Favvas*, "Carbon dioxide permeation study through carbon hollow fiber membranes at pressures up to 55 bar", Separ. Purif. Technol. 134, **2014**, 158–162.
 26. Evangelos P. Favvas*, Constantinos G. Tsanaktsidis, George T. Tzilantonis, Stavros G. Christidis, "H₂O removal from diesel and JP8 fuels: A comparison study between synthetic and natural dehydration agents", J. Engin. Sci. Tech. Review 7 (4), **2014**, 104–108.
 27. Evangelos P. Favvas*, Nikolaos S. Heliopoulos, Sergios K. Papageorgiou, Athanasios Ch. Mitropoulos, George C. Kapantaidakis, Nick K. Kanellopoulos, "Helium and hydrogen selective carbon hollow fiber membranes: the effect of pyrolysis isothermal time", Separ. Purif. Technol. 142, **2015**, 176–181.
 28. Nikolaos S. Heliopoulos, Aggeliki Galeou, Sergios K. Papageorgiou*, Evangelos P. Favvas, Fotios K. Katsaros, Kostas Stamatakis, "Novel method for the determination of antibacterial properties of materials and surfaces based on chlorophyll a fluorescence measurements", J. Microbiol. Methods 112, **2015**, 49–54.
 29. E. P. Favvas, K. L. Stefanopoulos*, A. Ch. Mitropoulos, N. K. Kanellopoulos, "In situ SAXS study of dibromomethane adsorption on MCM-41", Microp. Mesop. Mater. 209, **2015**, 122–125.
 30. A. K. Christoforidis, A. Lazaridou, S. Orfanidis, S. K. Papageorgiou*, E. P. Favvas, A. Ch. Mitropoulos, "Study of Cu(II) removal by *Cystoseira crinitophylla* biomass in batch and continuous flow biosorption" Chem. Engin. J. 277, **2015**, 334–340.
 31. Evangelos P. Favvas*, Evangelos P. Kouvelos, Sergios K. Papageorgiou, Constantinos G. Tsanaktsidis, Athanasios Ch. Mitropoulos "Characterization of natural resin materials using water adsorption and various advanced techniques", Appl. Phys. A-Mater. 119, **2015**, 735–743.
 32. A. C. Mitropoulos, K. L. Stefanopoulos, E. P. Favvas, E. F. Vansant, N. Hankins* "On the Formation of Nanobubbles in Vycor Porous Glass During Desorption of Halogenated Hydrocarbons", Scientific Reports 5, **2015**, 10943.

33. Constantinos G. Tsanaktsidis, Evangelos P. Favvas*, George T. Tzilantonis, Stavros G. Christidis, Elissavet Ch. Katsidi, Apostolos V. Scaltsoyiannes, "Water removal from Biodiesel/Diesel Blends and Jet Fuel using Natural Resin", *Canad. J. Chem. Engin.* 99, **2015**, 1812–1818.
34. G. Romanos*, L.M. Pastrana-Martínez, T. Tsoufis, C. Athanasekou, E. Galata, F. Katsaros, E. Favvas, K. Beltsios, E. Siranidi, P. Falaras, V. Psycharis, A.M.T. Silva*, "A facile approach for the development of fine-tuned, self-standing graphene oxide membranes and their gas and vapor separation performance", *J. Membr. Sci.* 493, **2015**, 734–747.
35. N. D. Alexopoulos*, E. P. Favvas*, A. Vairis, A. Ch. Mitropoulos, "MWCNTs composite resin materials: A mechanical and electrical approach" *J. Engin. Sci. Tech. Review* 8(4), **2015**, 7–14.
36. Nikolaos S. Heliopoulos, Angeliki Galeou, Sergios K. Papageorgiou, Evangelos P. Favvas, Fotios K. Katsaros, Kostas Stamatakis, "Modified in situ antimicrobial susceptibility testing method based on cyanobacteria chlorophyll a fluorescence", *J. Microbiol. Methods* 121, **2016**, 1–4.
37. Evangelos P. Favvas*, Constantinos G. Tsanaktsidis, Andreas A. Sapolidis, George T. Tzilantonis, Sergios K. Papageorgiou, Athanasios Ch. Mitropoulos, "Clinoptilolite: A natural zeolite material, structural characterization and performance evaluation on its dehydration properties of hydrocarbon-based fuels", *Microp. Mesop. Mater.* 225, **2016**, 385–391.
38. E. P. Favvas*, K. L. Stefanopoulos*, A. A. Stefopoulos, S. F. Nitodas, A. Ch. Mitropoulos, D. Lairez, "Phenol functionalized MWCNTs: A dispersion study into polar solvents by Small Angle Neutron Scattering", *Colloid Surface A* 496, **2016**, 94–99.
39. Evangelos P. Favvas*, "CO₂ permeation behavior through carbon membranes: A short review of the progress during the last decade" *J. Membr. Separ. Technol.* 5, **2016**, 3–15.
40. Evangelos P. Favvas*, George E. Romanos, Fotios K. Katsaros, Konstantinos L. Stefanopoulos, Sergios K. Papageorgiou, Athanasios Ch. Mitropoulos, Nick K. Kanellopoulos, "Gas permeance properties of asymmetric carbon hollow fiber membranes at high feed pressures", *J. Nat. Gas Sci. Eng.*, 31, **2016**, 842–851.
41. Evangelos P. Favvas*, Konstantinos L. Stefanopoulos, Nikolaos Ch. Vordos, George I. Drosos, Athanasios Ch. Mitropoulos, "A study of the structural properties of calcium sulfate bone graft substitute cements", *Materials Research* 19, **2016**, 1108–1113.
42. C. Athanasekou, L.M. Pastrana-Martínez, T. Tsoufis, G. Romanos*, E. Favvas, A. Mitropoulos, V. Psycharis, F. Katsaros, A.M.T. Silva*, "Pore structure and vapor separation efficiency of pristine GO membranes derived from facile filtration of GO suspensions" *J. Membr. Sci.* 522, **2017**, 303–315.
43. A. C. Mitropoulos*, E. P. Favvas*, K. L. Stefanopoulos, E. F. Vansant, "Scanning of adsorption hysteresis in situ with small angle x-ray scattering", *Plos One*, **2016**, 11(10): e0164636, doi:10.1371/journal.pone.0164636.
44. Nikolaos D. Alexopoulos*, Filippos D. Gegitsidis, Stavros K. Kourkoulis, Evangelos P. Favvas*, "Mechanical behavior of MWCNTs based mixed-matrix polymeric and carbon hollow fiber membranes", *Separ. Purif. Technol.* 183, **2017**, 21–31.
45. Evangelos P. Favvas*, Fotios K. Katsaros, Sergios K. Papageorgiou, Andreas A. Sapolidis, Athanasios Ch. Mitropoulos, "A Review of the Latest Development of Polyimide based Membranes for CO₂ Separations", *React. Funct. Polym.* 120, **2017**, 104–130.
46. G.V. Belessiotis, K.G. Papadokostaki, E.P. Favvas, E.K. Efthimiadou, S. Karellas, "Preparation and investigation of distinct and shape stable paraffin/SiO₂ composite PCM nanospheres", *Energy Convers. Manag.*, 168, **2018**, 382–394.
47. Alessandro Melicchio* and Evangelos P. Favvas*, "Preparation and characterization of graphene oxide as a candidate filler material for the preparation of mixed matrix polyimide membranes", *Surf. Coat. Technol.* 349, **2018**, 1058–1068.
48. A. Michalopoulou, E.P. Favvas, A.C. Mitropoulos, P. Maravelaki, V. Kilikoglou, I. Karatasios, "A comparative evaluation of bottom-up and top-down methodologies for the synthesis of calcium hydroxide nanoparticles for the consolidation of architectural monuments", *Materials Today: Proceedings*, 5, **2018**, 27425–27433.
49. R. Kosheleva*, A. Varoutoglou, G. Bomis, G.Z. Kyzas, E.P. Favvas, A.Ch. Mitropoulos*, "A rotating sample cell for in-situ measurements of adsorption with X-rays", *Rev. Sci. Instruments*, 89, **2018**, 123113.
50. G.Z. Kyzas*, G. Bomis, R. Kosheleva, E.K. Efthimiadou, M. Kostoglou, E.P. Favvas, A.C. Mitropoulos, "Nanobubbles effect on heavy metal ions adsorption by activated carbon", *Chem. Engin. J.*, 356, **2019**, 91–97.
51. E.P. Favvas*, N.S. Heliopoulos, E. Devlin, D.S. Karousos*, S.K. Papageorgiou, D. Petridis, G. N. Karanikolos*, "Mixed Matrix Polymeric and Carbon Hollow Fiber Membranes with Magnetic

Iron-Based Nanoparticles and their Application in Gas Mixture Separation", Mater. Chem. Phys., 223, **2019**, 220-229.

52. Linfeng Lei, Arne Lindbråthen, Magne Hillestad, Marius Sandru, Evangelos Favvas, Xuezhong He, "Screening Cellulose Spinning Parameters for Fabrication of Novel Carbon Hollow Fiber Membranes for Gas Separation", Ind. Eng. Chem. Res., 58, **2019**, 13330–13339.
53. Elisavet D. Michailidi, George Bomis, Athanasios Varoutoglou, George Z. Kyzas, George Mitrikas, Eleni K. Efthimiadou, Athanasios Ch. Mitropoulos, Evangelos P. Favvas*, "Bulk nanobubbles: Production and investigation of their formation/stability mechanism", J. Colloid Interface Sci., 564, **2020**, 371–380 (**On the journal cover**). 
54. Ioannis Floros, Evangelos Kouvelos, Georgios Pilatos, Evangelos Hadjigeorgiou, Evangelos Favvas, Andreas Sapalidis*, Enhancement of flux performance in PTFE membranes for direct contact membrane distillation, Polymers, 12, **2020**, 345 (13).
55. Anastasia Michalopoulou*, Elisavet Michailidi, Evangelos Favvas, Noni-Pagona Maravelaki, Vassilis Kilikoglou, Ioannis Karatasios, Comparative evaluation of the morphological characteristics of nanolime dispersions for the consolidation of architectural monuments, Int. J. Archit. Herit., 14, **2020**, 994-1007.
56. Stéphan Barbe*, Moriz Berger, Roxanne Egnstler, Andrés Dieste, Leonardo Clavijo, Evangelos Favvas, Andreas Sapalidis, "One-step Preparation of Bilayered Films from Kraft Lignin and Cellulose Acetate to Mimic Tree Bark", Eur. J. Wood and Wood Prod., **2020**, <https://doi.org/10.1007/s00107-020-01537-6>.
57. M. Vengatesan, M.A. Wahab, S. Kuppireddy, G. Kakosimos, O. Abdalla, E. Favvas, D. Reinalda, F. Geuzebroek, A. Abdala, G. Karanikolos*, "Metal-Organic Framework - Based Mixed Matrix Membranes for Carbon Dioxide Separation: Recent Advances and Future Directions", Frontier in Chemistry, **2020**, doi: 10.3389/fchem.2020.00534.
58. Andreas A. Sapalidis*, Panagiotis I. Karantzis, Achilles Vairis, Stéphan Barbe, Stephanos Nitodas, Evangelos P. Favvas*, "A study of reinforcement effect by MWCNTs into BTDA–TDI/MDI (P84) polyimide flat sheet membranes", Polymers 12(6), **2020**, 1381.
59. Linfeng Lei, Arne Lindbråthen, Xiangping Zhang, Evangelos P. Favvas, Marius Sandru, Magne Hillestad, Xuezhong He*, "Preparation of Highly CO₂ Selective Carbon Molecular Sieve Membranes for High Pressure Natural Gas Sweetening", J. Membr. Sci., 614, **2020**, 118529.
60. Dionysios S. Karousos, Linfeng Lei, Arne Lindbråthen, Andreas A. Sapalidis, Evangelos P. Kouvelos, Xuezhong He*, Evangelos Favvas*, "Cellulose-based carbon hollow fiber membranes for high-pressure mixed gas separation of CO₂/CH₄ and CO₂/N₂", Separ. Purif. Technol., 253, **2020**, 117473.
61. George Z. Kyzas*, Evangelos P. Favvas, Margaritis Kostoglou, Athanasios C. Mitropoulos, "Batch adsorption process without agitation by using bulk nanobubbles", Colloid Surface A, 607, **2020**, 125440.
62. T. Esser, T. Wolf, T. Schubert, J. Benra, S. Forero, G. Maistros, S. Barbe, G.V. Theodorakopoulos, D.S. Karousos, A.A. Sapalidis and E.P. Favvas*, "CNTs based cellulose acetate membranes: an optimization study of the filler materials dispersion method and its investigation by using impedance spectroscopy", Nanomaterials, 11(2), 280, **2021**, 1-21.
63. Z.S. Metaxa*, A. Tolkou, S. Efstathiou, A. Rahdar, E.P. Favvas, A.C. Mitropoulos, G.Z. Kyzas*, "Nanomaterials in cementitious composites: An update" Molecules, 26, **2021**, 1430.
64. Evangelos P. Favvas*, George Z. Kyzas, Eleni K. Efthimiadou, Athanasios Ch. Mitropoulos, "Production methods of Bulk NBs, stability mechanisms and applications", Curr. Opin. Colloid Interface Sci., Invited Review, 54, **2021**, 101455.
65. Anastasios Gotzias*, Andreas Sapalidis, Evangelos Favvas, "Hydrogen Adsorption Simulations in Isomorphous Borohydride and Imidazolate Frameworks: Evaluations using Interpolation", Int. J. Hydrog. Energy, 46, **2021**, 19778–19787.
66. Vasanth Kumar Kannuchamy*, Kiran Kumar Ramisetty, Renuka Devi Krishnaraj, Rama Krishna Gamidi, Claire Heffernan, Andrew Stewart, Jian Guo, Srinivas Gadipelli, Dan Brett, Evangelos P. Favvas, Ake Rasmuson, "Pure curcumin spherulites from impure solution via non-classical crystallization", ACS Omega 6,37, **2021**, 23884–23900.
67. E.G. Deze*, M.D. Bareka, D.S. Karousos, A.A. Sapalidis, E.P. Favvas*, "Mesoporous silica based copper catalytic materials for potential deNO_x application: synthesis and characterization", Materials Today: Proceedings, **2021**, in press, <https://doi.org/10.1016/j.matpr.2021.02.548>
68. Ruben Hammerstein, Tim Schubert, Gerd Braun, Tobias Wolf, Stéphan Barbe, Antje Quade and Evangelos P. Favvas, "Mixed matrix Cellulose Acetate Supported Membranes for Gas Separation Applications", Membranes, **2022**, 12, 87.
69. K.L. Stefanopoulos, E.P. Favvas, G.N. Karanikolos, W. Alameri, V. Kelessidis, T. Youngs, D. Bowron, "Monitoring the CO₂ Enhanced Oil Recovery Process at the Nanoscale: An In-Situ Neutron Scattering Study", Energy Advances, **2022**, in press, <https://doi.org/10.1039/D1YA00058F>
70. G.V. Theodorakopoulos*, D.S. Karousos*, K.G. Mansouris, A.A. Sapalidis, E.P. Kouvelos, E.P.

Favvas*, "GNPs based Polyimide/Pebax dual-layer mixed matrix hollow fiber membranes for CO₂/CH₄ and He/N₂ separations", Int. J. Greenh. Gas Control, **2022**, in press, <https://doi.org/10.1016/j.ijggc.2022.103588>

BOOK CHAPTERS & BOOKS

BOOK CHAPTERS

1. Evangelos P. Favvas* and Sergios K. Papageorgiou, Chapter 11th: "Polyaniline: A Promising Precursor Material for Membrane Technology Applications", in book entitled "Trends in Polyaniline Research", pp. 261–286, ISBN: 978-1-62808-424-5, Nova Science Publishers, Inc., **2013**, New York, U.S.A.
2. Evangelos P. Favvas*, Chapter 5th: "Nanomaterials and their applicability as membranes' fillers", in book entitled "Innovations in Nanomaterials", pp. 105–154, ISBN: 978-1-63483-548-0, Nova Science Publishers, Inc., **2015**, New York, U.S.A.
3. Evangelos P. Favvas*, Alberto Figoli, Roberto Castro-Munoz, Vlastimil Fila, Xuezhong He, Chapter 1st: "Polymeric membrane materials for CO₂ separations", in book entitled "Current Trends and Future Developments on (Bio-) Membranes", 1st Edition, "Carbon Dioxide Separation/Capture by Using Membranes", pp. 3–50, Paperback ISBN: 9780128136454, Elsevier, **2018**, Amsterdam, Netherlands.
4. Elisavet D. Michailidi*, George Bomis, Athanasios Varoutoglou, Eleni K. Efthimiadou, Athanasios Ch. Mitropoulos, Evangelos P. Favvas*, Chapter 6th: "Fundamentals and Applications of Nanobubbles", in book entitled "Advanced low-cost separation techniques in interface science: Opportunities and new challenges", Interface Science and Technology, **30**, **2019**, 69–99.
5. Evangelos P. Favvas*, Sotirios P. Kaldis, Xuezhong He, Chapter 6: "Carbon membranes for natural gas sweetening", in book entitled "Carbon Dioxide Separation/Capture by Using Membranes", Eds: X. He and I. Kumakiri, 1st Edition, pp. 79 – 113, ISBN 9781138333376, CRC publisher, **2021**, Abington, UK.
6. George Z. Kyzas*, Evangelos P. Favvas, Athanasios C. Mitropoulos, "Nanohybrid graphene-based materials for advanced wastewater treatment: Adsorption and membrane technology", in book entitled "Membrane desalination: from the nanoscale to real world applications", Editor: A.A. Sapalidis, pp. 91–123, ISBN 9780367030797, CRC Press/Taylor and Francis Group, **2021**, Abington, UK.

BOOKS

7. Angelo B. Basile and Evangelos P. Favvas (Editors), Current Trends and Future Developments on (Bio-) Membranes, 1st Edition, "Carbon Dioxide Separation/Capture by Using Membranes", Elsevier Publisher, **2018**, Paperback ISBN: 9780128136454, Amsterdam, Netherlands.
8. Evangelos P. Favvas and Angelo B. Basile (Editors), Current Trends and Future Developments on (Bio-) Membranes, 1st Edition, "Modern Approaches in Membrane Technology", Elsevier Publisher, **2022**, in progress.

PATENTS

1. A. Ch. Mitropoulos, E. P. Favvas, K. L. Stefanopoulos, "A method for evaluation of nanobubbles into a porous media", I.P.O. (Industrial Property Organization), Patent No: 1008522 (**2015**).
2. Z. S. Metaxa, E. P. Favvas, S. Kourkoulis, "A smart sensor based on cement nanomaterials for the real time investigation and the prediction of the defects on the cement based constructions", (Industrial Property Organization), Patent No: 1009512 (**2019**).
3. George Karanikolos, Evangelos P. Favvas, Nikolaos S. Heliopoulos, Sergios K. Papageorgiou, "Gas Separation Membranes under Magnetic Field", WO 2019/012317A1, World Intellectual Property Organization, January 17, **2019** (Filled also as: Karanikolos et al., MEMBRANE GAS SEPARATION UNDER MAGNETIC FIELD US Patent, No: 2020/0338496 A1, 29 October **2020**).
4. D. Karousos, A. Sapalidis, G. Karanikolos, E. Favvas, "Magnetic-Based Determination of Sorption Separation Factor for Binary Gas Mixtures", USPTO No. 63/078,364, Filed on September 15, **2020**.
5. D. Karousos, A. Sapalidis, G. Karanikolos, E. Favvas, "Magnetic Swing Absorption", USPTO No. 63/078,433, Filed on September 15, **2020**.

CONFERENCES

1. E.P. Favvas*, G.C. Kapantaidakis, N.K. Kanellopoulos, "Preparation and Identification of Carbon Hollow Fiber Membranes for Gas Separations and Hydrogen Production Applications", First National Conference on Hydrogen Technologies: "Research – Development – Applications". Hellenic Hydrogen Society, National and Kapodistrian University of Athens, September 30 - October 2, **2004**, Athens, Greece
2. E.P. Favvas*, G.C. Kapantaidakis, A.Ch. Mitropoulos, N.K. Kanellopoulos, "Preparation and Gas

Permeation/Separation study of Matrimid® 5218 Polyimide Hollow Fibers on Industrial Interesting Gases", Fifth National Chemical Engineering Conference, May 26–28, **2005**, Thessalonica, Greece

3. E.P. Favvas*, G.C. Kapantaidakis, N.K. Kanellopoulos, "*Effect of carbonization process on the structure and the gas permeation properties of polyimide hollow fiber membranes*", Diffusion Fundamentals I, Basic Principles of Theory, Experiment and Application, September 22–24, **2005**, Leipzig Germany
4. E.P. Favvas*, G.C. Kapantaidakis, A.Ch. Mitropoulos, N.K. Kanellopoulos, "*Preparation and Characterization of carbon hollow fiber membranes from Matrimid® 5218 Polyimide precursors*", 2^o Hellenic Symposium of Porous Materials, NCSR "Demokritos", September 29–30, **2005**, Athens, Greece
5. L.V. Massaras, I.K. Mertzaniides, E.P. Favvas, A.Ch. Mitropoulos, E.K. Kargiotis "*Phenomena influencing massive-scale hydraulic fracturing of porous sandstone rock formations*", 2^o Hellenic Symposium of Porous Materials, NCSR "Demokritos", 29–30 September **2005**, Athens, Greece
6. S. Nitodas, E. Favvas*, A. Mitropoulos, N. Kanellopoulos, "*Development of a Membrane with Chemical Vapor Deposition for Use in Hydrogen Separation* ", Second National Conference on Hydrogen Technologies: "*Research – Development – Applications*". Hellenic Hydrogen Society, AUTH, CERTH, GSRT, October 20–22, **2005**, Thessalonica, Greece
7. A. Labropoulos, G.E. Romanos, G.I. Pilatos, N.K. Kakizis, E.P. Favvas, N.K. Kanellopoulos, "*Investigating the evolution of N₂ transport mechanism during the post treatment of silica membranes by application of a cyclic chemical vapor deposition method*", Eleventh International Conference on Properties and Phase Equilibria, PPEPPD, May 20–25, **2007**, Hersonissos, Crete, Greece
8. E.P. Favvas*, S.K. Papageorgiou, A.A. Sapalidis, E.P. Kouvelos, N.K. Kanellopoulos, A.Ch. Mitropoulos, "*Preparation and Characterization of hydrogen selective microporous carbon hollow fiber membranes prepared from a commercial BTDA-TDI/MDI co-polyimide*", Sixth National Chemical Engineering Conference, May 31– June 2, **2007**, Athens, Greece
9. E.P. Favvas*, S.K. Papageorgiou, A.A. Sapalidis, G.I. Pilatos, G.E. Romanos, E.P. Kouvelos, A.Ch. Mitropoulos, N.K. Kanellopoulos, "*SiC Hollow Fiber Membranes for Gas Separation Applications*" 3rd International Workshop on IN-Situ Study and DEvelopment of Processes Involving PORous Solids (INSIDE-PORes), September 24–26, **2007**, ALICANTE, SPAIN
10. S.F. Nitodas, E.P. Favvas*, G.E. Romanos, A. Vairis, A.Ch. Mitropoulos, "Preparation and characterization of a composite aluminium/silica membrane for gas separation application", 3rd Hellenic Symposium of Porous Materials, CERTH, November 1–2, **2007**, Thessalonica, Greece
11. E.P. Favvas*, A.A. Sapalidis, G.E. Romanos, K.L. Stefanopoulos, A.Ch. Mitropoulos, E.K. Kargiotis, "Characterization of shale rocks from Cavala gulf", 3rd Hellenic Symposium of Porous Materials, CERTH, November 1–2, **2007**, Thessalonica, Greece
12. A.I. Labropoulos, G.E. Romanos, G.I. Pilatos, N.K. Kakizis, E.P. Favvas, N.K. Kanellopoulos, "The evolution of permeation properties of composite ceramic membranes with manyfold chemical vapor deposition cycles", 3rd Hellenic Symposium of Porous Materials, CERTH, November 1–2, **2007**, Thessalonica, Greece
13. L.V. Massaras, I.K. Mertzaniides, E.P. Favvas, A.Ch. Mitropoulos, E.K. Kargiotis, "*Fracture Entry Friction and Dilatancy: Major Advances on the Design, Placement and Analysis of Propped Hydrofrac Treatments*", STIMtech 2008 Conference, February **2008**, Mumbai, India
14. E.P. Favvas*, G.E. Romanos, S.K. Papageorgiou, A.A. Sapalidis, F.K. Katsaros, A.Ch. Mitropoulos, N.K. Kanellopoulos "*High pressure gas permeability of carbon hollow fiber membranes*", 1st International Workshop NAPEN 2008 "NANoPorous materials in ENergy and ENvironment", October 12–15, **2008**, Chania – Crete, Greece
15. E.P. Favvas*, K.L. Stefanopoulos, N.K. Kanellopoulos, A.Ch. Mitropoulos, "*Characterization of carbon membranes using benzene adsorption in conjunction with SAXS*" 4th Panellinic Symposium of Porous Materials, FORTH/ICE-HT & University of Patras, October 22–23 **2009**, Patra, Greece
16. N. Heliopoulos, E. Favvas, S. Papageorgiou, D. Petridis, N. Kanellopoulos, "*Study of the effect of magnetic field on gas separation performance of magnetic nanocomposite polymeric and carbon hollow fiber membranes*", 8th Hellenic Polymer Society Symposium, October 24–29, **2010**, Hersonissos, Crete
17. E.P. Favvas*, N.S. Heliopoulos, S.K. Papageorgiou, F.K. Katsaros, A.Ch. Mitropoulos, N.K. Kanellopoulos, "*The pyrolysis conditions effect on structure and properties of P84 based carbon*

hollow fiber membranes", 9th International Symposium on the Characterisation of Porous Solids - COPS IX, 5–9 June, **2011**, Dresden, Germany

18. S.K. Papageorgiou, E.P. Favvas*, P.G. Tatsiou, F.K. Katsaros, N.K. Kanellopoulos, "*Preparation and characterization of alginate based porous hollow fiber membranes*", 9th International Symposium on the Characterisation of Porous Solids - COPS IX, 5–9 June, **2011**, Dresden, Germany
19. E.P. Favvas*, K.L. Stefanopoulos, A.Ch. Mitropoulos, N.K. Kanellopoulos, "*Structural characterization of microporous carbon hollow fiber membranes by in situ SAXS during C₆H₆ adsorption*", 9th International Symposium on the Characterisation of Porous Solids - COPS IX, 5–9 June, **2011**, Dresden, Germany
20. S.K. Papageorgiou, E.P. Favvas, A.A. Sapolidis, G.E. Romanos, F.K. Katsaros, "Synthesis of alginate based carbon/ metal nanoparticles composite with controlled metal content and catalytic properties", 9th International Symposium on the Characterisation of Porous Solids - COPS IX, 5–9 June, **2011**, Dresden, Germany
21. E.P. Favvas*, K.L. Stefanopoulos, A.Ch. Mitropoulos, "A new simple equation for the mesopores size calculation" 5^o Panellinic Symposium of Porous Materials, University of Crete, 30 June – 1 July **2011**, Heracleio, Crete, Greece
22. K. Tsanakidis, S. Christidis, E. Favvas and G. Tzilantonis, "Development of hydrophilic polymers for the fuel properties improvement" 21^o Panellinic Conference in Chemistry, 9–12 December **2011**, Thessalonica, Greece
23. E.P. Favvas*, K.L. Stefanopoulos, S.K. Papageorgiou, J.W. Nolan, A.Ch. Mitropoulos, "*In situ small angle x-ray scattering and benzene adsorption on polymer-based carbon hollow fiber membranes*", Eighth International Symposium Effects of Surface Heterogeneity in Adsorption and Catalysis on Solids, 27th–31st August, **2012**, Krakow, Poland
24. E.P. Favvas*, K.L. Stefanopoulos, A. Vairis, J.W. Nolan, A.Ch. Mitropoulos, "*CH₂Br₂ in situ adsorption with saxs performance on mesoporous SBA-15 and MCM-41 ordered silica materials*", Eighth International Symposium Effects of Surface Heterogeneity in Adsorption and Catalysis on Solids, 27th–31st August, **2012**, Krakow, Poland
25. S.K. Papageorgiou, F.K. Katsaros, E.P. Favvas, G.Em. Romanos,; N.K. Kanellopoulos, P.Falaras, "*Alginate/TiO₂ Photocatalytic Hollow Fiber Membranes for NO Decomposition in Flow Through Membrane Reaction Applications*", 7th European Meeting on Solar Chemistry and Photocatalysis: Environmental Applications - SPEA7, 17th–20th June, Proc. pp 454-455, **2012**, Porto, Portugal
26. Evangelos P. Favvas*, Stephanos F. Nitodas, Konstantinos L. Stefanopoulos, Sergios K. Papageorgiou and Athanasios C. Mitropoulos, "*High Purity Multi-Walled Carbon Nanotubes: Preparation, Characterization and Performance as Filler Materials in co-polyimide Hollow Fiber Membranes*", 11th International Conference on the Fundamentals of Adsorption (FOA), 19th–24th May, **2013**, Baltimore, USA
27. Evangelos P. Favvas*, Konstantinos L. Stefanopoulos, Nikolaos Ch. Vordos and Athanasios Ch. Mitropoulos, "*In situ SAXS study of adsorption in porous glass including hysteresis scanning measurements*", 11th International Conference on the Fundamentals of Adsorption (FOA), 19th–24th May, **2013**, Baltimore, USA
28. Evangelos P. Favvas*, Kostas Stamatakis, Nikolaos Heliopoulos, Sergios K. Papageorgiou and Nick K. Kanellopoulos, "*Enhance of hydrogen production from Chlamydomonas reinhardtii algae using membrane technology*", International Conference of Photosynthesis, 5th–9th June, **2013**, Baku Azerbaijan
29. E.P. Favvas*, K.L. Stefanopoulos, S.F. Nitodas, A.A. Stefopoulos, A.Ch. Mitropoulos, "*Morphology of carbon nanotubes dispersed in solvents and into polymer and carbon membranes: A SANS study*", International Conference on Neutron Scattering, 8th–12th July, **2013**, Edinburgh, UK
30. E.P. Favvas*, K.L. Stefanopoulos, N.Ch. Vordos, G.I. Drosos, A.Ch. Mitropoulos, "*Characterization of calcium sulfate bone graft substitutes by porosimetry methods*", 6th Panhellenic Conference of Porous Materials, 9th–10th September, **2013**, Cavala, Greece
31. E.P. Favvas*, K.L. Stefanopoulos, J.W. Nolan, A.A. Stefopoulos, S.F. Nitodas, A.Ch. Mitropoulos, D. Lairez, "*Preparation and characterization of nanocomposite MWCNTS/P84 hollow fiber membranes*", 6th Panhellenic Conference of Porous Materials, 9th–10th September, **2013**, Cavala, Greece
32. E.P. Favvas*, K.L. Stefanopoulos, N.Ch. Vordos, A.Ch. Mitropoulos, "*Dibromomethane*

- adsorption on mcm-41 by in situ saxs*", 6th Panhellenic Conference of Porous Materials, 9th–10th September, **2013**, Cavala, Greece
33. J.W. Nolana, D. Gkika, N. Vordos, E.P. Favvas, A. Ch. Mitropoulos, "*The NANOCAPILLARY Software for Analysis, Simulation and Cataloging of Small Angle X-Ray Scattering data*", 6th Panhellenic Conference of Porous Materials, 9th–10th September, **2013**, Cavala, Greece
 34. K.D. Karakosta, E.P. Favvas*, E. P. Kouvelos, N.C. Kokkinos, A.Ch. Mitropoulos, R. Nickolov, "A study of domain theory on Vycor glass", 6th Panhellenic Conference of Porous Materials, 9th–10th September, **2013**, Cavala, Greece
 35. Evangelia G. Deze, Sergios K. Papageorgiou, Evangelos P. Favvas, Fotis K. Katsaros, "*Porous alginate aerogel beads for effective and rapid heavy metal sorption from aqueous solutions*", 6th Panhellenic Conference of Porous Materials, 9th–10th September, **2013**, Cavala, Greece
 36. D.A. Gkika, P. Cool, E.F. Vansant, J.W. Nolan, N. Vordos, E.P. Favvas, A.Ch. Mitropoulos, "*How much do nanomaterials cost?*", 6th Panhellenic Conference of Porous Materials, 9th–10th September, **2013**, Cavala, Greece
 37. A. Scaltsoyiannes, C. Tsanaktsidis, D. Mitras, E. Katsidi, E. Favvas, M. Tsaktsira, "Pine resin and liquid fuels (*diesel*) Cloning-identification of finest genotypes of Aleppo pine (*pinus halepensis mill*) selected for resin production", 16^o Conference of the Hellenic Forestry Society, 6th–9th October, **2013**, Thessalonica, Greece
 38. Achilleas Vairis, Nikolaos D. Alexopoulos, Evangelos P. Favvas, Stephanos Nitodas, "*Strain sensing of glass fiber reinforced coupons by using carbon nanotube CNT doped resin*", ASME 2013– International Mechanical Engineering Congress & Exposition, 15th–21st November, **2013**, San Diego – CA, USA.
 39. Evangelos P. Favvas*, Athanasios Ch. Mitropoulos, Nick K. Kanellopoulos, "*CO₂ permeability through carbon hollow fiber membranes. From atmospheric pressure up to 56 bar*", IICBE, 17th – 18th March, **2014**, Dubai, United Arab Emirates.
 40. E. P. Favvas*, K. L. Stefanopoulos, J. W. Nolan, A. Ch. Mitropoulos, "*Mixed Matrices MWCNTs/Carbon Hollow Fiber Membranes: Preparation and Characterization*", COPS-X, 11th – 14th May, **2014**, Granada, Spain.
 41. E. P. Favvas*, K. L. Stefanopoulos, N. Ch. Vordos, A. Ch. Mitropoulos, "*In situ CH₂Br₂ adsorption and SAXS measurements in MCM-41*", COPS-X, 11th – 14th May, **2014**, Granada, Spain.
 42. E. P. Favvas*, Athanasios Ch. Mitropoulos, Nick K. Kanellopoulos, "*Helium recovery from natural gas sources using carbon hollow fiber membrane*", 13th International Conference on Inorganic Membranes, 6th – 9th July, **2014**, Brisbane, Australia.
 43. Z. S. Metaxa, E. P. Favvas, C. Mercader, F. Poulin, N. D. Alexopoulos, "*A preliminary study on the development of graphene/cement based nanocomposites*", 39th Solid Mechanics Conference (SOLMECH 2014), 1st – 5th September **2014**, Zakopane, Poland.
 44. F. D. Gegitsidis, N. D. Alexopoulos, E. P. Favvas, S. K. Kourkoulis, "*The effect of multi-wall carbon nanotubes addition on the performance of P84 co-polyimide hollow fiber membranes*", 30th Panhellenic Conference on Solid-State Physics and Materials Science, 21st – 24th, September **2014**, Heraklion, Crete, Greece.
 45. A. N. Talarou, Z. S. Metaxa, N. D. Alexopoulos, E. P. Favvas, C. Mercader, "*Effective dispersion of nano graphene platelets in cementitious materials*", 30th Panhellenic Conference on Solid-State Physics and Materials Science, 21st – 24th, September **2014**, Heraklion, Crete, Greece.
 46. A. Ch. Mitropoulos, K. L. Stefanopoulos, E. P. Favvas, N. C. Kokkinos, E. Vansant, N. P. Hankins, "*Formation of nanobubbles on fractal vycor glass surface*", Smart and Green Interfaces Conference – 2015, March 30th - April 1st **2015**, Belgrade, Serbia.
 47. K. Dimos, M. K. Antoniou, Ch. Tampaxis, E. P. Favvas, P. N. Trikalitis, Th A. Steriotis, D. Gournis, "*Porous carbon materials for gas storage*", Intern. Conference on Advances in Composite Materials and Structures, 13th – 15th April **2015**, Istanbul, Turkey.
 48. E. P. Favvas*, K. L. Stefanopoulos, A. A. Stefoopoulos, S. F. Nitodas, A. Ch. Mitropoulos, D. Lairez, "*Dispersion study of functionalized MWCNTs into different polar solvents by SANS*", 7th International Workshop 'Characterization of Porous Materials: from Angstroms to Millimeters' (CPM-7), 3rd – 6th May **2015**, Delray Beach, Florida, USA.
 49. C. Tsanaktsidis, E. P. Favvas, A. Scaltsoyiannes, S. Christidis, G. Tzilantonis, A. Scaltsoyiannes, "Development of a new fuel using natural products" 12^o Conference of Chemistry, Greece-Cyprus, 8th–10th May **2015**, Thessaloniki, Greece.
 50. P. Karantzis, E. P. Favvas*, A. A. Sapalidis, A. Vairis, N. D. Alexopoulos, A. Ch. Mitropoulos, "A

study of MWCNTs reinforcement in P84 polyimide films", 4th International Symposium Frontiers in Polymer Science, 20 – 22 May **2015**, Riva del Garda, Italy.

51. N. Ch. Vordos*, J. W. Nolan, E. P. Favvas, S. Touloupidis, S. Giannakopoulos, C. Kalaitzis, A. Ch. Mitropoulos, "*Nano – Structure Characterization of Kidney Stones and Scanning Hysteresis Loop*", 5th International Colloids Conference, 21st - 24th June **2015**, Amsterdam, The Netherlands.
52. A. Ch. Mitropoulos*, E. P. Favvas, K. L. Stefanopoulos, "*A study on theorem-6 of Everett's domain theory*", 5th International Colloids Conference, 21st-24th June **2015**, Amsterdam, The Netherlands.
53. Ilona Lazaridou, Nikolaos Alexopoulos*, Evangelos Favvas, Markos Petousis, Achilles Vairis, "*Fatigue mechanical behavior of MWCNT reinforced GFRP composites under the presence of artificial defects*" 20th International Conference on Composite Materials (ICCM20), 19th – 24th July **2015**, Copenhagen, Denmark.
54. S.P. Kaldis*, G. Kapantaidakis, E.P. Favvas*, D.E. Koutsonikolas, V.T. Zaspalis, "*Assessment of Polymeric, Carbon and Ceramic Membranes Integration in IGCC Process for H₂ Production and CO₂ Capture*" 4th Conference on Carbon Dioxide as Feedstock for Fuels, Chemistry and Polymers, 29th – 30rd September **2015**, Haus der Technik (HDT), Essen, Germany.
55. F. D. Gegitsidis, N. D. Alexopoulos*, E. P. Favvas* and S. K. Kourkoulis, "*Effect of carbon nanotubes addition on the mechanical performance of co-polyimide hollow fiber membranes*", Inter. Conf. "Science in Technology", SCiTE-2015, 05th – 07th November **2015**, Athens, Greece.
56. R.I. Kosheleva*, E.P. Favvas, T.D Karapantsios, A.Ch. Mitropoulos, "*Adsorption in conjunction with SAXS under the influence of a rotational field*", Smart and Green Interfaces Conference 2016, 04th – 06th May **2016**, Athens, Greece.
57. E.D. Michailidi*, R.I. Kosheleva, E.P. Favvas*, A.C. Mitropoulos, "*Determination and comparison of size and stability of Nanobubbles produced by two different generators*", Smart and Green Interfaces Conference 2016, 04th – 06th May **2016**, Athens, Greece.
58. Nikolaos S. Heliopoulos*, Angeliki Galeou, Sergios K. Papageorgiou*, Evangelos P. Favvas, Fotios K. Katsaras, Evangelos Gogolides, Angeliki Tserepi, Kosmas Ellinas, Dionysia Kefallinou, Kostas Stamatakis, "*An in situ antimicrobial susceptibility testing method based on cyanobacterial chlorophyll a fluorescence*", 12th Workshop on Cyanobacteria, Arizona State University Campus, May 19th – 22th, **2016** Tempe, Arizona, USA.
59. A.A. Moutzouroglou, R.I. Kosheleva*, E.D. Michailidi, E.P. Favvas, A.Vairis, A.Ch. Mitropoulos, "*Interpreting research efforts on nanomaterials*", 7th Panhellenic Confer. Porous Materials, 2nd–4th June, **2016**, Ioannina, Greece.
60. A. Th. Varoutoglou*, G. A. Bomis, T. Merou, G. Varsamis, E. K. Karapatzak, E. D. Michailidi, R. I. Kosheleva, E. P. Favvas, A. Ch. Mitropoulos, "*Flow of nanobubbles through porous media: the effect on plant growth*", 7th Panhellenic Confer. Porous Materials, 2nd–4th June, **2016**, Ioannina, Greece.
61. E.P. Favvas*, K.L. Stefanopoulos, A.A. Stefopoulos, A.Ch. Mitropoulos, D. Lairez, "*Small-angle neutron scattering from phenol-functionalized multi-wall carbon nanotubes in NMP and DMSO solutions*", 7th Panhellenic Confer. Porous Materials, 2nd–4th June, **2016**, Ioannina, Greece.
62. E. D. Michailidi, R.I. Kosheleva, G. Bomis, A. Varoutoglou, E. P. Favvas*, A. Ch. Mitropoulos, "*Nanobubbles production by different devises*", 7th Panhellenic Confer. Porous Materials, 2nd–4th June, **2016**, Ioannina, Greece.
63. R. I. Kosheleva*, E. P. Favvas, A. Th. Varoutoglou, G. A. Bomis, T. D. Karapantsios, A. Ch. Mitropoulos, "*On the adsorption capacity of nanoporous materials under the influence of a rotational field*", 7th Panhellenic Confer. Porous Materials, 2nd–4th June, **2016**, Ioannina, Greece.
64. E.P. Favvas*, K.L. Stefanopoulos, N.D. Alexopoulos, A.A. Stefopoulos, A.Ch. Mitropoulos, "*Mixed matrix MWCNTs/Polyimide hollow fiber membranes: MWCNTs dispersion investigation by SANS, gas permeability performance and mechanical tests*", 5th International Symposium Frontiers in Polymer Science, 17–19 May **2017**, Seville, Spain.
65. A. Michalopoulou*, E. P. Favvas, A. Ch. Mitropoulos, P. Maravelaki, V. Kilikoglou, I. Karatasios, "*A comparative evaluation of bottom-up and top-down methodologies for the synthesis of calcium hydroxide nanoparticles for the consolidation of architectural monuments*", 11^o Panhellenic Chemical Engineering Conference, 25–27, May **2017**, Thessaloniki, Greece.
66. R. Kosheleva*, G. Kyzas, E. Favvas, T. Karapantsios, M. Kostoglou, A. Mitropoulos, "*Comparison of adsorption properties of two different activated carbons for liquid and gas phase adsorbates*", 11^o Panhellenic Chemical Engineering Conference, 25–27, May **2017**, Thessaloniki, Greece.
67. E. Michailidi, G. Mtrikas, M. Krokidis, E.P. Favvas, E.K. Efthimiadou, "*Evaluation of NBs@Air and NBs@O₂ affection on biological systems: Study of ROS induced cell toxicity*", Athens Conference on Advances in Chemistry, 30th October – 02nd November **2018**, Athens, Greece.

68. E. Michailidi, E.K. Efthimiadou, E.P. Favvas*, "A novel hydrodynamic method for bulk nanobubbles production; characterization and evaluation of wetting properties", Athens Conference on Advances in Chemistry, 30th October – 02nd November **2018**, Athens, Greece.
69. T. Esser*, T. Wolf, T. Schubert*, S. Barbe, J. Benra, E.P. Favvas, "CO₂ separation by means of mixed matrix materials based on Nano-Carbon Materials" NanoCarbon 2019, 26th and 27th of February 2019, Würzburg, Germany.
70. I. Floros, A. Sapolidis*, G. Pilatos, E. Favvas, E. Chatzigeorgiou, "Preparation of polymeric membranes with targeted hydrophobicity for applications in desalination through membrane distillation process" 12^o Panellenic Conference of Chemical Engineering, 29 – 31 May **2019**, Athens, Greece.
71. M. Pachoulis, A.A. Sapolidis, C. Tsanaktsidis, E.P. Favvas*, "Study of Cu²⁺ from liquid phase by using attapulgite natural mineral" 12^o Panellenic Conference of Chemical Engineering, 29 – 31 May **2019**, Athens, Greece.
72. T. Esser, T. Wolf, T. Schubert, J. Benra, S. Forero, G. Maistros, A.A. Sapolidis, E.P. Favvas*, "Nanocarbon-based cellulose acetate membranes for CO₂ separation applications" 12^o Panellenic Conference of Chemical Engineering, 29 – 31 May **2019**, Athens, Greece.
73. Linfeng Lei*, Arne Lindbråthen, Magne Hillestad, Marius Sandru, Xiangping Zhang, Evangelos P. Favvas, Xuezhong He, "Cellulose-based carbon hollow fiber membranes for CO₂ removal from natural gas", Trondheim CCS Conference, CO₂ capture and Storage, 17–19 of June **2019**, Trondheim, Norway.
74. A. Michalopoulou*, E. Michailidi, E.P. Favvas, P. Maravelaki, V. Kilikoglou, I. Karatasios, "Comparative evaluation of the morphological and rheological characteristics of nanolime dispersions for the consolidation of architectural monuments", 5th Historic Mortars Conference HMC 2019, Pamplona, 19th-21st June, **2019**, Spain.
75. E.D. Michailidi, E.K. Efthimiadou, A.C. Mitropoulos, E.P. Favvas*, "A novel method of bulk nbs production: evaluation of the physicochemical properties", 6th International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems (6th IC4N), 30 June – 03 July **2019**, Corfu, Greece.
76. D. Karousos*, A.A. Sapolidis, E.P. Kouvelos, E.P. Favvas, "6th International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems (6th IC4N), 30 June – 03 July **2019**, Corfu, Greece.
77. Linfeng Lei*, Arne Lindbråthen, Magne Hillestad, Marius Sandru, Xiangping Zhang, Evangelos P. Favvas, Xuezhong He*, "Cellulose-developed Carbon Molecular Sieving Hollow Fiber Membranes for Gas Separation", ECCE12, The 12th European Congress of Chemical Engineering, 15-19 of September **2019**, Florence, Italy.
78. D. Karousos, G. Maistros, G. Theodorakopoulos, S. Forero, A.A. Sapolidis, T. Schubert, E.P. Favvas*, "Nanocarbon-based polyimide CO₂ Selective Hollow Fiber Membranes: a Dispersion Study of embedded filler materials by using impedance spectroscopy", 69th Canadian Chemical Engineering Conference (EECE), 20-23 October **2019**, Halifax, Canada.
79. Z.S. Metaxa, E.P. Favvas, A.C. Mitropoulos, "Dispensing carbon nanomaterials facilitating aqueous air nanobubble solutions for use in cement based materials", 19th International Conference on Experimental Mechanics, July 5-9, **2020**, Kraków, Poland.
80. E.G. Deze*, D.S. Karousos, A.A. Sapolidis, E.P. Favvas*, "Mesoporous Silica based copper catalytic materials: Synthesis, Characterization & deNO_x Evaluation", 17th International Conference on Nanosciences & Nanotechnologies (NN20), 7-10 July **2020**, Thessaloniki, Greece
81. K. Mansouris*, G. Theodorakopoulos, D. Karousos, A.A. Sapolidis, E. Efthimiadou, E.P. Favvas*, "Ternary phase diagrams of polyimide/solvent/non-solvent systems", Athens Conference on Advances in Chemistry (ACAC2020), 10 -14 March, **2021**, Athens, Greece.
82. M. Pahoulis, A.A. Sapolidis*, E.P. Kouvelos, A.Ch. Mitropoulos, G.K. Kyzas, E.P. Favvas*, "Study of Cu²⁺ and dyes removal by palygorskite in batch and continuous flow processes", International conference on water and energy (ICWE'2021), 25–27 May **2021**, Chlef, Algeria.
83. G.V. Theodorakopoulos*, D.S. Karousos, A.A. Sapolidis, S. Forero, T. Schubert, E.P. Favvas*, "Pebax/Polyimide dual-layer hollow fiber membranes for gas separation applications", Euromembrane **2021**, 28 November – 02 December, Copenhagen, Denmark.
84. G.V. Theodorakopoulos*, D.S. Karousos, A.A. Sapolidis, S. Forero, T. Schubert, E.P. Favvas*, "Towards to green chemistry: comparative study of effective composite hollow fiber membranes preparation for CO₂ separation", Euromembrane **2021**, 28 November – 02 December, Copenhagen, Denmark.
85. E.P. Favvas*, A.A. Sapolidis**, E.P. Kouvelos, G.K. Kyzas, A.C. Mitropoulos, "Nanobubbles' effect on Desalination via Direct Contact Membrane Distillation", Euromembrane **2021**, 28 November – 02 December, Copenhagen, Denmark.