

## **Konstantinos L. Stefanopoulos – Curriculum Vitae**

**Family Name:** Stefanopoulos

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### **Education**

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| 1990 | Diploma of Physics, University of Athens  |
| 1994 | Ph.D. in Physics, Department of Pure & Applied Physics, University of Salford, UK (Supervisor: D.K. Ross) |

### **Current Position**

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| 2015- | Researcher grade A' (Research Director) at Institute of Nanoscience & Nanotechnology, NCSR "Demokritos" |
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### **Previous Positions**

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| 1997-2001 | Collaborating Researcher at MESL-Membranes & porous Materials for Environmental Separations, Institute of Physical Chemistry, NCSR "Demokritos" |
| 2001      | Researcher at Berlin Neutron Scattering Center (Hahn Meitner Institut), Berlin, Germany   |
| 2006-2015 | Researcher at Institute of Physical Chemistry, NCSR "Demokritos"  |

### **Teaching**

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| 2002-2008 | Educational staff of Hellenic Open University, School of Science and Technology, at "Studies in Natural Sciences"<br>Teaching course: FYE-14, " <i>Introduction to Natural Sciences</i> " |
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### Organising Activities

- 2004-2005 Member of the organising committee for the 2<sup>nd</sup> Hellenic Symposium of Porous Materials, Athens, 29-30 September 2005
- 2007-2008 Member of the organising committee for the 1<sup>st</sup> International Workshop on NAnoPorous Materials in ENergy and Environment (NAPEN), Chania, Crete, 11-16 October 2008
- 2008-2014 Member of the Coordinating Council of Education of NCSR "Demokritos" for the organisation of the annual Summer Schools

### Awards-Distinctions

- 2011 American Chemical Society (ACS)  
Certificate of Appreciation presented to Dr. Konstantinos Leonidas Stefanopoulos. NCSR Demokritos, for his valuable contribution and dedicated service in the peer review of manuscripts submitted to ACS Journals
- 2016 American Physical Society (APS)  
The following article:  
K.L. Stefanopoulos, F.K. Katsaros, Th.A. Steriotis, A.A. Sapalidis, M. Thommes, D.T. Bowron and T.G.A. Youngs, "*Anomalous Depletion of Pore-Confined Carbon Dioxide upon Cooling below the Bulk Triple Point: An In Situ Neutron Diffraction Study*", **Physical Review Letters** 116 (2016) 025502  
has been highlighted by the editors as an Editors' Suggestion
- 2022 Royal Society of Chemistry (RSC)  
The following article:  
K.L. Stefanopoulos, E.P. Favvas, G.N. Karanikolos, W. Alameri, V.C. Kelessidis, T.G.A. Youngs and D.T. Bowron, "*Monitoring the CO<sub>2</sub> Enhanced Oil Recovery Process at the Nanoscale: An In Situ Neutron Scattering Study*", **Energy Advances**, 2022, DOI: 10.1039/D1YA00058F  
has been selected by the editor as an advance article and will be highlighted on the front cover of the journal
- 2017- Member of the Facility Access Panel for peer-reviewing neutron scattering experimental proposals at ISIS Pulsed Neutron & Muon Source, STFC Rutherford Appleton Laboratory, Oxfordshire, UK

### Other scientific activities

Reviewer in more than 20 journals amongst with Environmental Science: Nano, Environmental Science & Technology, Energy & Fuels, Carbon, Langmuir, Applied Physics A, The Journal of Physical Chemistry, Journal of Applied Crystallography

### **Research Interests**

- Structural studies of nanoporous materials mainly by neutron scattering methods
- Investigation of structural and thermodynamic properties of fluids confined in nanopores mainly by neutron scattering methods with applications to carbon dioxide sequestration and enhanced oil recovery
- Neutron-based irradiation combined with photomedicine techniques for cancer therapy

### **Current international collaborations**

- ISIS Neutron and Muon Source, STFC Rutherford Appleton Laboratory, Didcot, Oxfordshire, UK (Dr D. Bowron and Dr T. Youngs)
- SINQ: The Swiss Spallation Neutron Source, Paul Scerrer Institut (PSI), Villigen, Switzerland (Dr P. Trtik)
- IFE, Institute for Energy Technology, Kjeller, Norway (Dr G. Helgesen, Dr K. Knudsen, Dr B. Hauback)
- Oslo University Hospital, Oslo, Norway (Dr T. Theodossiou, Dr K. Berg, Dr M. Grigalavicius)
- Khalifa University, Abu Dhabi, UAE (Dr G. Karanikolos, Dr W. Alameri, Dr V. Kelessidis)

### **Funding**

Participation in more than 10 National, European and International research projects

Collaboration with European Neutron Facilities for proposing and performing neutron scattering experiments after successful proposal evaluation via TMR, 6<sup>th</sup> and 7<sup>th</sup> Framework Programs

Currently, he is principal investigator for NCSR "Demokritos"

- for a Horizon H2020-FETOPEN project FRINGE - *Fluorescence and Reactive oxygen Intermediates by Neutron Generated electronic Excitation as a foundation for radically new cancer therapies*
- for an International project CIRA - *Maximizing Recovery in CO<sub>2</sub>-EOR by a Holistic, Bottom-Up, and Multi-Scale Experimental and Simulation Approach involving Machine Learning Optimization* in collaboration with Khalifa University, Abu Dhabi, UAE

### **Publications/Conferences/Supervision**

- >60 publications in international peer-reviewed journals amongst with Physical Review Letters, Physical Review B, Environmental Science & Technology, Carbon, Chemical Communications, Scientific Reports (>1050 citations, h-index: 20)
- 5 book/encyclopaedia chapters, 3 monographs and 2 patents

- >80 presentations in National and International conferences of which 6 invited talks
- Supervision (co-supervision) of PhD theses:
  - P.K. Makri, "*Characterisation of porous glass filters*", Department of Chemistry, National and Kapodistrian University of Athens (2006)
  - E.P. Favvas, "*Gas Separation Study on Polymeric and Carbon Hollow Fibers Membranes*", Department of Chemistry, National and Kapodistrian University of Athens (2010)
  - A. Perdikaki, "*Growth of functional hybrid systems of nanoparticles for environmental and biological systems*", School of Chemical Engineering, National Technical University of Athens (2016)

### **Publications in international peer-reviewed journals**

1. J.C. Li, D.K. Ross, L.D. Howe, K.L. Stefanopoulos, J.P.A. Fairclough, R.Heenan and K. Ibel, "*Small-angle neutron-scattering studies of the fractal-like network formed during desorption and adsorption of water in porous materials*", **Physical Review B**, 49 (1994) 5911-5917.
2. D.K. Ross, K.L. Stefanopoulos, K.S. Forcey and I. Iordanova, "*Small Angle Neutron Scattering Studies of H(D) Trapping on Dislocations in Metals*", **Zeitschrift für Physikalische Chemie**, 183 (1994) 29-37.
3. A.Ch. Mitropoulos, N.K. Kanellopoulos, K.L. Stefanopoulos and R.K. Heenan, "*Scattering by curved and fractal surfaces*", **Journal of Colloid and Interface Science**, 203 (1998) 229-230.
4. G.Ch. Charalambopoulou, Th.A. Steriotis, A.Ch. Mitropoulos, K.L. Stefanopoulos, N.K. Kanellopoulos and A.Ioffe, "*Investigation of water sorption on porcine stratum corneum by very small angle neutron scattering*", **Journal of Investigative Dermatology**, 110 (1998) 988-990.
5. A.Ch. Mitropoulos, K.L. Stefanopoulos and N.K. Kanellopoulos, "*Coal studies by small angle x-ray scattering*", **Microporous and Mesoporous Materials**, 24 (1998) 29-39.
6. K.L. Stefanopoulos, G.E. Romanos, A.Ch. Mitropoulos, N.K. Kanellopoulos and R.K. Heenan, "*Characterization of porous alumina membrane by adsorption in conjunction with SANS*", **Journal of Membrane Science**, 153 (1999) 1-7.
7. D.K. Ross, K.L. Stefanopoulos and M. Kemali, "*The use of small angle neutron scattering in the study of hydrogen trapping at defects in metals*", **Journal of Alloys and Compounds**, 293 (1999) 346-350.
8. K.L. Stefanopoulos, G.Ch. Charalambopoulou, Th.A. Steriotis, A.Ch. Mitropoulos, N.K. Kanellopoulos, A.Th. Papaioannou and A. Ioffe, "*Investigation of temperature effect on porcine stratum corneum by very small angle neutron scattering*", **Journal of Controlled Release**, 64 (2000) 346-347.

9. K.L. Stefanopoulos, K. Beltsios, P.K. Makri, Th.A. Steriotis, A.Ch. Mitropoulos and N.K. Kanellopoulos, "*Characterization of the flow properties in Vycor by combining dynamic and scattering techniques*", **Physica B**, 276 (2000) 477-478.
10. E.S. Kikkinides, T.A. Steriotis, A.K. Stubos, K.L.Stefanopoulos, A.Ch. Mitropoulos and N.K. Kanellopoulos, "*Structural Characterisation and applications of ceramic membranes for gas separations*", **Studies in Surface Science and Catalysis**, 128 (2000) 429-438.
11. G.Ch. Charalambopoulou, Th.A. Steriotis, K.L. Stefanopoulos, A.Ch. Mitropoulos and N.K. Kanellopoulos, and U. Keiderling, "*Investigation of lipid organization on stratum corneum by water absorption in conjunction with neutron scattering*", **Physica B**, 276 (2000) 530-531.
12. F.K Katsaros, T.A. Steriotis, K.L. Stefanopoulos, N.K. Kanellopoulos, A.Ch. Mitropoulos, M. Meissner and A. Hoser, "*Neutron diffraction study of adsorbed CO<sub>2</sub> on a carbon membrane*", **Physica B**, 276 (2000) 901-902.
13. P.K Makri, K.L Stefanopoulos, A.Ch. Mitropoulos, N.K. Kanellopoulos and W. Treimer, "*Study on the entrapment of mercury in porous glasses by neutron scattering in conjunction with mercury porosimetry*", **Physica B**, 276 (2000) 479-480.
14. E.S. Kikkinides, M.E. Kainourgiakis, K.L. Stefanopoulos, A.Ch. Mitropoulos, A.K. Stubos and N.K. Kanellopoulos, "*Combination of small angle scattering and three-dimensional stochastic reconstruction for the study of adsorption-desorption processes in Vycor porous glass*", **Journal of Chemical Physics**, 112 (2000) 9881-9887.
15. G.Ch. Charalambopoulou, Th.A. Steriotis, K.L. Stefanopoulos, A.K. Stubos, N.K. Kanellopoulos, A.Ch. Mitropoulos and T. Haus, "*Membrane Neutron Diffraction: A Promising Technique for Stratum Corneum Structural Studies*", **Journal of Controlled Release**, 72 (2001) 307-309.
16. K.L. Stefanopoulos, "*Combination of Adsorption with Small Angle Scattering for Characterizing Porous Media*", **Current Topics in Colloid and Interface Science**, 5 (2002) 237-249.
17. E.S. Kikkinides, K.L. Stefanopoulos, Th.A. Steriotis, A.Ch. Mitropoulos, N.K. Kanellopoulos and W. Treimer, "*Combination of SANS and 3D Stochastic Reconstruction Techniques for the Study of Equilibrium and Dynamic Properties of Nanostructured Materials*", **Applied Physics A**, 74 (2002) 954-956.
18. G.K. Charalambopoulou, Th.A. Steriotis, T. Hauß, K.L. Stefanopoulos and A.K. Stubos, "*A Neutron Diffraction Study of Hydration Effect on Stratum Corneum*", **Applied Physics A**, 74 (2002) 1245-1247.
19. Th.A. Steriotis, K.L. Stefanopoulos, A.Ch. Mitropoulos, N.K. Kanellopoulos, A. Hoser and M. Hofmann, "*Structural Studies of Supercritical CO<sub>2</sub> in Confined Space*", **Applied Physics A**, 74 (2002) 1333-1335.

20. A. Christoforides, N. Kanellopoulos, A. Mitropoulos, K. L. Stefanopoulos and K. Tarchanides, "Characterization of controlled pore glasses by small angle x-ray scattering and evaluation of the scattering data by the indirect Fourier transformation method", **Studies in Surface Science and Catalysis**, 144 (2002) 769-774.
21. K.L. Stefanopoulos, A.Ch. Mitropoulos, E.S. Kikkinides, N.K. Kanellopoulos and A. Christoforides, "Study of the Macroporosity of Vycor Porous Glass by Combining Scattering and Permeability Techniques", **Applied Physics A**, 74 (2002) 1336-1338.
22. Th.A. Steriotis, K.L. Stefanopoulos, U. Keiderling, A. De Stefanis and A.A.G. Tomlinson, "Characterisation of Pillared Clays by Contrast-Matching Small-Angle Neutron Scattering", **Chemical Communications**, 20 (2002) 2396-2397.
23. A. De Stefanis, A.A.G. Tomlinson, Th.A. Steriotis, K.L. Stefanopoulos and U. Keiderling, "Nanostructures of the montmorillonite-derived restructured clays K10<sup>®</sup>, HMO and the Mg<sup>2+</sup> exchanged analogue Mg-HMO. A SANS, N<sub>2</sub> sorption and XRPD study", **Journal of Materials Chemistry**, 13 (2003) 1145-1148.
24. H. Gamari-Seale, I.O. Troyanchuk, D. Khalyavin, K.L. Stefanopoulos and J. Hernandez-Velasco, "Neutron-powder diffraction study of Nd<sub>0.92</sub>Ca<sub>0.08</sub>MnO<sub>3</sub>", **Physica B**, 350 (2004) 19-21.
25. A. De Stefanis, A.A.G. Tomlinson, Th.A. Steriotis, K.L. Stefanopoulos and U. Keiderling, "Nanostructural Characterization of Catalysts by SANS", **Physica B**, 350 (2004) 521-524.
26. Th. A. Steriotis, K.L. Stefanopoulos, N.K. Kanellopoulos, A.Ch. Mitropoulos and A. Hoser, "The structure of adsorbed CO<sub>2</sub> in carbon nanopores; A neutron diffraction study", **Colloids and Surfaces A**, 241 (2004) 239-244.
27. K.L. Stefanopoulos, Th.A. Steriotis, A.Ch. Mitropoulos, N.K. Kanellopoulos and W. Treimer, "Characterization of Porous materials by combining Mercury Porosimetry and Scattering Techniques", **Physica B**, 350 (2004) 525-527.
28. H. Gamari-Seale, O. Troyanchuk, D. Khallyavin, K.L. Stefanopoulos and J. Hernandez-Velasco, "Magnetic structure of Nd<sub>0.92</sub>Ca<sub>0.08</sub>MnO<sub>3</sub>", **Journal of Magnetism and Magnetic Materials**, 272-276 (2004) 483-484.
29. H. Gamari-Seale, I.O. Troyanchuk, M.V. Bushinsky, K.L. Stefanopoulos and J. Hernandez-Velasco, "The effect on highly Cr-substituted manganite Nd<sub>0.6</sub>Ca<sub>0.4</sub>(Mn<sub>0.5</sub>Cr<sub>0.5</sub>)O<sub>3</sub>", **Acta Physica Polonica A**, 105 (2004) 81-86.
30. E.S. Kikkinides, K.L. Stefanopoulos, Th.A. Steriotis, A.Ch. Mitropoulos and N.K. Kanellopoulos, "Characterisation of nanostructured materials by combination of neutron scattering and 3D stochastic reconstruction techniques", **Studies in Surface Science and Catalysis**, 160 (2006) 415-422.

31. H. Gamari-Seale, I.O. Troyanchuk, A.P. Sazonov, K.L. Stefanopoulos and D.M. Toebbens, "Structure and magnetic order in  $La_{0.7}Ca_{0.3}Mn_{0.5}Co_{0.5}O_3$  and  $La_{0.8}Sr_{0.2}Mn_{0.5}Co_{0.5}O_3$  perovskites", **Physica B**, 403 (2008) 2924-2929.
32. Th.A. Steriotis, K.L. Stefanopoulos, F.K. Katsaros, R. Gläser, A.C. Hannon and J.D.F. Ramsay, "In situ neutron diffraction study of adsorbed carbon dioxide in a nanoporous material: Monitoring the adsorption mechanism and the structural characteristics of the confined phase", **Physical Review B**, 78 (2008) 115424-1-10.
33. 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", **Microporous and Mesoporous Materials**, 120 (2009) 53-61.
34. E.P. Favvas, A.A. Sapalidis, K.L. Stefanopoulos, G.E. Romanos, N.K. Kanellopoulos, E.K. Kargiotis and A. Ch. Mitropoulos, "Characterization of carbonate rocks by combination of scattering, porosimetry and permeability techniques", **Microporous and Mesoporous Materials**, 120 (2009) 109-114.
35. A.P. Sazonov, I.O. Troyanchuk, H. Gamari-Seale, V.V. Sikolenko, K.L. Stefanopoulos, C. Nikolaidis and Y. Atanassova, "Neutron diffraction study and magnetic properties of  $La_{1-x}Ba_xCoO_3$  ( $x = 0.2$  and  $0.3$ )", **Journal of Physics: Condensed Matter**, 21 (2009) 156004 (9pp).
36. K. Mergia, K.L. Stefanopoulos, N. Ordás and C. García-Rosales, "A comparative study for the porosity of doped graphites by small angle neutron scattering, nitrogen adsorption and helium pycnometry", **Microporous and Mesoporous Materials**, 134 (2010) 141-149.
37. O.C. Vangeli, G.E. Romanos, K.G. Beltsios, D. Fokas, E.P. Kouvelos, K.L. Stefanopoulos and N.K. Kanellopoulos, "Grafting of Imidazolium Based Ionic Liquid on the Pore Surface of Nanoporous Materials-Study of Physicochemical and Thermodynamic Properties", **Journal of Physical Chemistry B**, 114 (2010) 6480-6491.
38. K.L. Stefanopoulos, G.E. Romanos, O.C. Vangeli, K. Mergia, N.K. Kanellopoulos, A. Koutsoubas and D. Lairez, "Investigation of Confined Ionic Liquid in Nanostructured Materials by a Combination of SANS, Contrast-Matching SANS, and Nitrogen Adsorption", **Langmuir**, 27 (2011) 7980-7985.
39. E.P. Favvas, A.Ch. Mitropoulos and K.L. Stefanopoulos, "A simple equation for accurate mesopore size calculations", **Microporous and Mesoporous Materials**, 145 (2011) 9-13.
40. K.L. Stefanopoulos, Th.A. Steriotis, F.K. Katsaros, N.K. Kanellopoulos, A.C. Hannon and J D F Ramsay, "Structural study of supercritical carbon dioxide confined in nanoporous silica by in situ neutron diffraction", **Journal of Physics: Conference Series**, 340 (2012) 012049 (7pp).
41. G.E. Romanos, K.L. Stefanopoulos, O.C. Vangeli, K. Mergia, K.G. Beltsios, N.K. Kanellopoulos and D. Lairez, "Investigation of Physically and Chemically Ionic Liquid

*Confinement in Nanoporous Materials by a Combination of SANS, Contrast-Matching SANS, XRD and Nitrogen Adsorption*", **Journal of Physics: Conference Series**, 340 (2012) 012087 (13pp).

42. F.K. Katsaros, Th.A. Steriotis, K.L. Stefanopoulos, N.K. Kanellopoulos, A.C. Hannon and J.D.F. Ramsay, "*Structural characterisation of subcritical carbon dioxide confined in nanoporous carbon by in situ neutron diffraction*", **Journal of Physics: Conference Series**, 340 (2012) 012046 (9pp).
43. K. Mergia, K.L. Stefanopoulos, M. Martinez-Escandell and P. Strunz, "Porosity determination in doped graphites using small-angle neutron scattering measurements", **Journal of Physics: Conference Series**, 340 (2012) 012102 (7pp).
44. A.V. Perdikaki, O.C. Vangeli, G.N. Karanikolos, K.L. Stefanopoulos, K.G. Beltsios, P. Alexandridis, N.K. Kanellopoulos and G.Em. Romanos, "*Ionic liquid-modified porous materials for gas separation and heterogeneous catalysis*", **Journal of Physical Chemistry C**, 116 (2012) 16398-16411.
45. E.P. Favvas, K.L. Stefanopoulos, S.K. Papageorgiou and A.C. Mitropoulos, "*In situ small angle X-ray scattering and benzene adsorption on polymer-based carbon hollow fiber membranes*", **Adsorption**, 19 (2013) 225-233.
46. E.P. Favvas, K.L. Stefanopoulos, A. Vairis, J.W. Nolan, K.D. Joensen and A.C. Mitropoulos, "*In situ SAXS investigation of dibromomethane adsorption in ordered mesoporous silica*", **Adsorption**, 19 (2013) 331-338.
47. E.P. Favvas, S.K. Papageorgiou, J.W. Nolan, K.L. Stefanopoulos and A.C. Mitropoulos, "*Effect of air gap on gas permeance/selectivity performance of BTDA-TDI/MDI copolyimide hollow fiber membranes*", **Journal of Applied Polymer Science**, 130 (2013) 4490-4499.
48. S.M. Miranda, G.E. Romanos, V. Likodimos, R.R.N. Marques, E.P. Favvas, F.K. Katsaros, K.L. Stefanopoulos, V.J.P. Vilar, J.L. Faria, P. Falaras and A.M.T. Silva, "*Pore structure, interface properties and photocatalytic efficiency of hydration/dehydration derived TiO<sub>2</sub>/CNT composites*", **Applied Catalysis B: Environmental**, 147 (2014) 65-81.
49. E.P. Favvas, S.F. Nitodas, A.A. Stefanopoulos, S.K. Papageorgiou, K.L. Stefanopoulos and A.C. Mitropoulos, "*High purity multi-walled carbon nanotubes: Preparation, characterization and performance as filler materials in co-polyimide hollow fiber membranes*", **Separation & Purification Technology** 122 (2014) 262-269.
50. E.P. Favvas, K.L. Stefanopoulos, J.W. Nolan, S.K. Papageorgiou and A.C. Mitropoulos and D. Lairez, "*Mixed matrix hollow fiber membranes with enhanced gas permeation properties*", **Separation & Purification Technology**, 132 (2014) 336-345.
51. E.P. Favvas, K.L. Stefanopoulos, A.C. Mitropoulos and N.K. Kanellopoulos, "*In situ SAXS study of dibromomethane adsorption on MCM-41*", **Microporous Mesoporous Materials**, 209 (2015) 122-125.



52. A.C. Mitropoulos, K.L. Stefanopoulos, E.P. Favvas, E. Vansant and N.P. Hankins, "On the formation of nanobubbles in vycor porous glass during the desorption of halogenated hydrocarbons", **Scientific Reports**, 5 (2015) 10943 (12 pp).
53. K.L. Stefanopoulos, F.K. Katsaros, T.A. Steriotis, A.A. Sapalidis, M. Thommes, D.T. Bowron and T.G.A. Youngs, "Anomalous Depletion of Pore-Confined Carbon Dioxide upon Cooling below the Bulk Triple Point: An in Situ Neutron Diffraction Study", **Physical Review Letters**, 116 (2016) 025502 (6 pp).
54. A.Ch. Mitropoulos, E.P. Favvas, K.L. Stefanopoulos and E.F. Vansant "Scanning of Adsorption Hysteresis In Situ with Small Angle X-Ray Scattering", **PLOS ONE**, 11(10) (2016) e0164636 (19 pp).
55. E.P. Favvas, K.L. Stefanopoulos, A.A. Stefopoulos, S.F. Nitodas, A.Ch. Mitropoulos and D. Lairez, "Phenol functionalized MWCNTs: A dispersion study into polar solvents by Small Angle Neutron Scattering", **Colloid Surface A: Physicochemical & Engineering Aspects**, 496 (2016) 94–99.
56. Evangelos P. Favvas, George E. Romanos, Fotios K. Katsaros, Konstantinos L. Stefanopoulos, Sergios K. Papageorgiou, Athanasios Ch. Mitropoulos and Nick K. Kanellopoulos, "Gas permeance properties of asymmetric carbon hollow fiber membranes at high feed pressures", **Journal of Natural Gas Science and Engineering**, 31 (2016) 842-851.
57. Evangelos P. Favvas, Konstantinos L. Stefanopoulos, Nikolaos Ch. Vordos, George I. Drosos and Athanasios Ch. Mitropoulos, "A study of the structural properties of calcium sulfate bone graft substitute cements", **Materials Research**, 19 (2016) 1108–1113.
58. K.L. Stefanopoulos, T.G.A. Youngs, R. Sakurovs, L.F. Ruppert, J. Bahadur and Y.B. Melnichenko, "Neutron Scattering Measurements of Carbon Dioxide Adsorption in Pores within the Marcellus Shale: Implications for Sequestration", **Environmental Science & Technology**, 51 (2017) 6515–6521.
59. D.S. Karousos, A.I. Labropoulos, O. Tzialla, K. Papadokostaki, M. Gjoka, K.L. Stefanopoulos, K.G. Beltsios, B. Iliev, T.J.S. Schubert and G.E. Romanos, "Effect of a cyclic heating process on the CO<sub>2</sub>/N<sub>2</sub> separation performance and structure of a ceramic nanoporous membrane supporting the ionic liquid 1-methyl-3-octylimidazolium tricyanomethanide", **Separation and Purification Technology**, 200 (2018) 11–22.
60. Ch. Tampaxis, Th.A. Steriotis, F.K. Katsaros, A.A. Sapalidis, T.G.A. Youngs, D.T. Bowron and K.L. Stefanopoulos, "Enhanced Densification of CO<sub>2</sub> Confined in the Pores of a Carbon Material: an in Situ Total Neutron Scattering Study." **Journal of Surface Investigation: X-ray, Synchrotron and Neutron Technique**, 14 (2020) 221-224.
61. K.L. Stefanopoulos, Ch. Tampaxis, A.A. Sapalidis, F.K. Katsaros, T.G.A. Youngs, D.T. Bowron and Th.A. Steriotis, "Total neutron scattering study of supercooled CO<sub>2</sub> confined in an ordered mesoporous carbon", **Carbon**, 167 (2020) 296-306.

62. K.L. Stefanopoulos, E.P. Favvas, G.N. Karanikolos, W. Alameri, V.C. Kelessidis, T.G.A. Youngs and D.T. Bowron, "Monitoring the CO<sub>2</sub> Enhanced Oil Recovery Process at the Nanoscale: An In Situ Neutron Scattering Study", **Energy Advances**, 2022, DOI: 10.1039/D1YA00058F.

### **Monographs**

1. K.L. Stefanopoulos, "Combination of Adsorption with Small Angle Scattering for Characterizing Porous Media", **Current Topics in Colloid and Interface Science**, 5 (2002) 237-249.
2. K.L. Stefanopoulos, "Double Crystal Diffractometers with Bent Perfect Crystals for Ultra Small-Angle and Small-Angle Neutron Scattering Applications", DEMO 2003/3, July 2003, NCSR "DEMOKRITOS".
3. K.L. Stefanopoulos, "Neutron scattering methods for investigating the structural properties of porous materials and pore-confined fluids", **Hellenic Neutron Association Newsletter (HENA)**, 6 (2020) 2-7.

### **Book-Encyclopaedia Chapters**

1. Th.A. Steriotis, K.L. Stefanopoulos, A.Ch. Mitropoulos, and N.K. Kanellopoulos, "Membrane Characterisation by Combination of Static and Dynamic Techniques", In "Recent Advances in Gas Separation by Microporous Ceramic Membranes" edited by N.K. Kanellopoulos, 1<sup>st</sup> ed., Elsevier Science, Amsterdam, **Membrane Science and Technology Series** 6 (2000) 1-34.
2. A.Ch. Mitropoulos, K.L. Stefanopoulos and N.K. Kanellopoulos "Porous Media: Characterization of, by combining dynamic and equilibrium techniques", edited by A. Hubbard, Marcel Dekker, NY, in **Encyclopedia of Surface and Colloid Science**, (2002) 942-953.
3. K. Beltsios, Th.A. Steriotis, K.L. Stefanopoulos and N.K. Kanellopoulos, "Membrane Science and Technology", edited by K.S.W. Sing, J. Weitkamp and F. Schüth, Wiley-VCH, Germany, in **Handbook of Porous Solids** (2002) 2281-2433.
4. G.Ch. Charalambopoulou, Th.A. Steriotis, K.L. Stefanopoulos, E.S. Kikkinides and A.K. Stubos, "The combination of neutron scattering techniques for the study of hydration of porcine stratum corneum", edited by R. Marks, J-L. Lévêque and R. Voegeli, Taylor & Francis, London, in **The Essential Stratum Corneum**, (2002).
5. G. Karanikolos, F.K. Katsaros, G.E. Romanos, K.L. Stefanopoulos and N.K. Kanellopoulos, "The Combination of In Situ and Ex Situ Techniques for Monitoring and Controlling the Evolution of Nanostructure of Nanoporous Materials", edited by N. Kanellopoulos, in **Nanoporous Materials: Advanced Techniques for Characterization, Modeling, and Processing**, Taylor & Francis Group, (2011) 165-220.

## **Patents**

1. A. Mitropoulos, A. Vairis and K. Stefanopoulos "*Accessory for mercury porosimetry instrument*", **Greek Patent**, ΔΕ 1003538/1-3-2001.
2. A. Mitropoulos, A. Vairis and K. Stefanopoulos "*Method and device for creation of nanobubbles in a porous medium* ", **Greek Patent**, ΔΕ 1008522/17-6-2015.