

Curriculum Vitae

Dr. George Romanos

Researcher grade A

Institute of Nanoscience and Nanotechnology
National Center for Scientific Research “Demokritos”

SEPTEMBER 2016

A. Personal data

Name: George Romanos
Place and date of birth: Athens / 16th of May 1969
Married - 3 children
Address: Kountouriotou 18, 15562, Cholargos, Athens, Greece
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B. Studies

1995 - 2000 PhD in Inorganic Chemistry from the National Technical University of Athens, School of Chemical Engineering
1988-1994 Diploma in Chemical Engineering, February 1994
National Technical University of Athens, School of Chemical Engineering
Grade: (7,1/10)

C. Academic Career

1996-2001 Assistant researcher in the Institute of Physical Chemistry
National Center for Scientific Research "Demokritos",
Participation in the following projects:

1) EPET II E724 "Synthesis of Quartz Membranes with Plasma Treatment and CVD for Gas and Liquid Phase Separations". Partners: HERACKLES-E.K.E.T. SA (Cement Company), ATLANTIS SA, VIANA SA (Filters Manufacturing), Ministry of Agriculture Research Center (Public Research), LAVA-BIOR SA (Cement Company), NCSR "Demokritos".

2) Joule JOE-CT95-0008 "Optimal Massive Gas Injection Conditions for Oil Recovery Enhancement". Partners: Institute Francais du Petrole (France), IFE (Norway), NCSR "Demokritos" (Hellas).

3) FAIR CT98-4416, (BIONANOPACK): "Biodegradable nanocomposite food packaging", Partners: NCSR "Demokritos" (Hellas), TNO-ITT (The Netherlands), CNR-IPT (Italy), Biop Biopolymer GmbH (Germany), Laviosa Chimica Mineralia Spa (Italy), Ortobell Srl (Italy), INSTM (Italy).

2006-2010 *Researcher Grade C - Institute of Physical Chemistry*
2010-2014 *Researcher Grade B - Institute of Nanoscience and Nanotechnology.*
2015-today *Researcher Grade A - Institute of Nanoscience and Nanotechnology.*

D. Research activities

- Development of Silica microporous membranes for gas separation.
- Development of hybrid membranes and porous materials (ceramic/ionic liquids) and evaluation of their performance in catalytic and gas separation applications.
- Development of hybrid membranes (ceramic/alginate polymer) and evaluation of their performance in water treatment applications.
- Development of TiO₂ membranes with CVD and evaluation of photodegradation activity.
- Development of TiO₂/MWCNTs hybrids and application in photocatalytic degradation of pollutants in water.
- Development of Carbon Nanotube Membranes for gas separation and water treatment.
- Development of Graphene Oxide Membranes for gas separation and water treatment.

E. Other information

Number of publications in peer reviewed journals:.....	90
Presentations in conferences:.....	35
Book chapters:.....	6
European Patents:.....	1
Citations (March 2016):	1160
h-Index	19

F. Coordinator of European and National Projects.

- 1) Coordinator of the European Project: IOLICAP, “Novel IONic LIquid and supported ionic liquid solvents for reversible CAPture of CO₂”, FP7-Energy, Grant agreement no: 283077 (DURATION 12/2011-02/2016), Total budget: 5,770,719.00€, **NCSR budget: 1,048,161.00€.**
- 2) Coordinator of the National Project: 11ΣYN_8_936, NOVEL Technologies ON the implementation of CCS, (ESPA 2007-2011, SYNERGASIA 2011, (DURATION 11/2013-06/2015)), total budget 683,165.00€, **NCSR budget: 124,300.00€**, Partners: CERTH/CPERI, NTUA, AMBIO S.A., SINARTIA.
- 3) Principal Investigator of the International Project: Novel, Highly Selective Nanocomposite Adsorbents for High Capacity CO₂ Capture from Tail Gas and Cost Effective Regeneration for EoR use. Total budget: 1,203,000 USD, NCSR budget: US \$ **253,000.00**, duration: 01/04/2016-31/03/2019.

G. Participation in European projects

1. Clean Water-227017 Water Detoxification Using Innovative vi-Nanocatalysts FP7-ENV-NMP-2008-2: Nanotechnologies for water treatment

2. CERAMEM GRD2-2000-30372 “Ceramic Membranes for Olefin-Paraffin Separations”.
3. BRITE-EURAM BRPR-CT96-0313 “Development and Testing of Zeolite Membranes for Gas Separations”.
4. PROTOP (EVK3-CT-2-2-30004) Craft-1999-71938 “Production of Tensioactives from Oleaginous Plants Chains and Polysaccharides from Ulva”
5. COBRA G1st-CT-2000-50195 “Low Energy Consumptive Liquid and Supercritical CO₂ Recycling”
6. VISLATEX (BRITE-EURAM BRPR CT98-0646) “Visible light curable latex and heavily pigmented coating systems”

H. Participation in National projects

1. ARISTEIA II “Desalination by Solar Powered Membrane Distillation: Material and Process Optimization”, SolMeD, Coordinator Em. Mathioulakis, Budget 250,000.00€, (DURATION 2014-2015).
2. Greece-China Collaboration “Development of Ionic Liquid based selective adsorbents and membranes for the flue gas and carbon dioxide PURification with novel hybrid adsorbent-mEmbrane process”-IOLIPURE, Coordinator: SINARTIA, Scientific responsible for NCSR D: A. Sapalidis, NCSR D budget 225,000.00€, (DURATION 2013-2015).

I. Doctoral theses supervised:

- 1) O. C. Vangeli (2014). In collaboration with the Materials Science and Engineering Department, University of Ioannina. G. Romanos was amongst the 3 members of the Selection Committee.
- 2) Ch. P. Athanasekou (2012). In collaboration with the School of Chemical Engineering, National Technical University of Athens. G. Romanos amongst the 7 members of the Selection Committee.
- 3) G. Pilatos (2014). In collaboration with the School of Chemical Engineering, National Technical University of Athens. G. Romanos was amongst the 7 members of the Selection Committee.
- 4) Eleni Androulaki (2014). In collaboration with the Department of Materials Science and Technology, University of Crete. G. Romanos amongst the 7 members of the Selection Committee.
- 5) Anna Perdikaki (2016). In collaboration with the School of Chemical Engineering, National Technical University of Athens. G. Romanos was amongst the 7 members of the Selection Committee.
- 6) Marios Tsigonias (2016), In collaboration with the Greek Open University, School of Applied Arts, G. Romanos was amongst the 3 members of the Selection Committee.

J. Master theses supervised:

- 1) O. Tzialla (2014). In collaboration with the Materials Science and Engineering Department, University of Ioannina. G. Romanos was amongst the 3 members of the Selection Committee.

2) X. Papatryfon (2014). In collaboration with the Materials Science and Engineering Department, University of Ioannina. G. Romanos was amongst the 3 members of the Selection Committee.

3) Evdokia Galata (2015). In collaboration with the Materials Science and Engineering Department, University of Ioannina. G. Romanos is amongst the 3 members of the Selection Committee.

K. Doctoral and Master theses in progress:

One (1) Doctoral thesis (Mr. Pangiotis Kastanidis) in progress in collaboration with the School of Chemical Engineering, National Technical University of Athens.

Two (2) Master theses (Mr. Vangelis Balis and Mr. George Kakosimos) in progress in collaboration with the Materials Science and Engineering Department, University of Ioannina.

L. Other Activities

1) Reviewer: Journal of Physical Chemistry Letters, Journal of Membrane Science, Microporous and Mesoporous Materials, Journal of Porous Materials, Journal of Hazardous Materials, Journal of Physical Chemistry B, Journal of Physical Chemistry C, Thin Solid Films, Desalination, Separation and Purification Reviews, Applied Catalysis B Environmental, Applied Surface Science, Applied Physics A, Catalysis Communications, Chemical Engineering Journal, Fluid Phase Equilibria, Environmental Science & Technology, Energy & Fuels, International Journal of Thermophysics, Ionics.

2) Vice president of the Scientific Advisory Board of the Institute of Nanoscience and Nanotechnology, (2013-today).

3) Member of the Scientific Advisory Board of the Institute of Physical Chemistry, (2010-2012).

4) Depute Responsible for Education of the Institute of Physical Chemistry, (2010-2012).

5) Member of the Board of Financial affairs of the National Center for Scientific Research "Demokritos"

Publications

92. Metal loaded nanoporous silicas with tailor-made properties through hyperbranched polymer assisted templating approaches, E.G. Deze, A. Papavasiliou, S.K. Papageorgiou, F.K. Katsaros, E.P. Kouvelos, G.E. Romanos, N. Boukos, Q. Xin, J.L. Nyalosaso, P. Cool, Microporous and Mesoporous Materials 235 (2016) 107-119

91. Graphene-based materials via benzidine-assisted exfoliation and reduction of graphite oxide and their electrochemical properties, E.C. Vermisoglou, T. Giannakopoulou, G. Romanos, N. Boukos, V. Psycharis, C. Lei, C. Lekakou, D. Petridis, C. Trapalis, *Applied Surface Science* xxx (2016) xxx–xxx, [dx.doi.org/10.1016/j.apsusc.2016.08.079](https://doi.org/10.1016/j.apsusc.2016.08.079)
90. Physically bound and chemically grafted activated carbon supported 1-hexyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide and 1-ethyl-3-methylimidazolium acetate ionic liquid absorbents for SO₂/CO₂ gas separation, D.S. Karousos, O.C. Vangeli, C.P. Athanasekou, A.A. Sapalidis, E.P. Kouvelos, G.Em. Romanos, N.K. Kanellopoulos, *Chemical Engineering Journal*, 306, 2016, 146-154.
89. Photocatalytic Degradation of Hexavalent Chromium Emerging Contaminant via Advanced Titanium Dioxide Nanostructures C. Athanasekou, G.Em. Romanos, S.K. Papageorgiou, G. Manolis, F. Katsaros, P. Falaras, *Chemical Engineering Journal* (2016), doi: <http://dx.doi.org/10.1016/j.ccej.2016.06.033>
88. Tubular C/Cu decorated gamma-alumina membranes for NO abatement Yakoumis, Iakovos; Theodorakopoulos, George; Papageorgiou, Sergios K.; Romanos, George E.; et al.. *Journal of Membrane Science* 515 (2016) 134–143.
87. Gas permeance properties of asymmetric carbon hollow fiber membranes at high feed pressures
Favvas, Evangelos P.; Romanos, George Em.; Katsaros, Fotios K.; et al. *JOURNAL OF NATURAL GAS SCIENCE AND ENGINEERING*, 31 2016, 842-851.
86. Novel Inverse Supported Ionic Liquid Absorbents for Acidic Gas Removal from Flue Gas
D. S. Karousos, E. Kouvelos, A. Sapalidis, K. Pohako-Esko, M. Bahlmann, P. S. Schulz, P. Wasserscheid*, E. Siranidi, O. Vangeli, P. Falaras, N. Kanellopoulos, and G. Em. Romanos*, *INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH* , 55 (19) 2016 5748-5762.
85. Porous carbons from ionic liquid precursors confined within nanoporous silicas, Tzialla, O., Kakosimos, G., Athanasekou, C., Galata, E., Romanos, G.E., Pilatos, G., Zubeir, L.F., Kroon, M.C., Iliev, B., Schubert, T.J.S., Beltsios, K.G., *Microporous and Mesoporous Materials*, 223, 2016, 163-175.
84. Design and optimization of a photocatalytic reactor for water purification combining optical fiber and membrane technologies, Dimitrios A. Athanasiou, George Em. Romanos, Polycarpos Falaras, *Chemical Engineering Journal* xxx (2015) xxx–xxx, [dx.doi.org/10.1016/j.ccej.2015.11.080](https://doi.org/10.1016/j.ccej.2015.11.080)
83. A study on natural clinoptilolite for CO₂ / N₂ gas separation Dionysios S. Karousos, Andreas A. Sapalidis, Evangelos P. Kouvelos, George Em. Romanos and Nickolaos K. Kanellopoulos, *Separation Science and Technology*, 51, 2016, 83-95
82. Efficient CO oxidation in an ionic liquid-modified, Au nanoparticle loaded membrane contactor Anna V. Perdikaki, Anastasios I. Labropoulos, Eirini Siranidi, Ioannis Karatasios, Nikos Kanellopoulos, Nikos Boukos, Polycarpos Falaras, Georgios N. Karanikolos, Georgios

81. Development of a novel experimental apparatus for hydrate equilibrium measurements, Panagiotis Kastanidis, George E. Romanos, Vasileios K. Michalis, Ioannis G. Economou, Athanassios K. Stubos, Ioannis N. Tsimpanogiannis, FLUID PHASE EQUILIBRIA Volume: 424 Special Issue: SI Pages: 152-161 Published: SEP 25 2016

80. **Carbon Nanotube Selective Membranes** with Subnanometer, Vertically Aligned Pores, and Enhanced Gas Transport Properties, Labropoulos, A., Veziri, C., Kapsi, M., Pilatos, G., Likodimos, V., Tsapatsis, M., Kanellopoulos, N.K., Romanos, G.E., Karanikolos, G.N., Chemistry of Materials, 2015, 27, 8198-8210.

79. Non-activated high surface area expanded graphite oxide for supercapacitors, E.C. Vermisoglou, T. Giannakopoulou, G.E. Romanos, N. Boukos, M. Giannouri, C. Lei, C. Lekakou, C. Trapalis, Applied Surface Science 358 (2015) 110-121

78. Effect of hydrothermal reaction time and alkaline conditions on the electrochemical properties of reduced graphene oxide, E.C. Vermisoglou, T. Giannakopoulou, G. Romanos, M. Giannouri, N. Boukos, C. Lei, C. Lekakou, C. Trapalis, Applied Surface Science, 358 (2015) 100-109

77. “A facile approach for the development of fine-tuned self-standing **graphene oxide membranes** and their gas and vapor separation performance”, G. Romanos*, L. M. Pastrana-Martínez, T. Tsoufis, C. Athanasekou, E. Galata, F. Katsaros, E. Favvas, K. G. Beltsios, E. Siranidi, P. Falaras, V. Psycharis, A.M.T.Silva, Journal of Membrane Science 493 (2015) 734–747.

76. I. S. Molchan, G. E. Thompson, P. Skeldon, R. Lindsay, J. Walton, E. Kouvelos, G. Em. Romanos, P. Falaras, A. G. Kontos, M. Arfanis, E. Siranidi, L. F. Zubeir, M. C. Kroon, J. Klöckner, B. Iliev and T. J. S. Schubert, Microscopic study of the corrosion behaviour of mild steel in ionic liquids for CO₂ capture applications, RSC Adv., 2015, 5, 35181–35194

75. Solubility and diffusivity of CO₂ in the ionic liquid 1-butyl-3-methylimidazolium tricyanomethanide ([bmim][TCM]) within large pressure range (0.01 to 10 MPa), Lawien F. Zubeir, George E. Romanos, Boyan Iliev, Maaïke C. Kroon, Journal of Chemical & Engineering Data. 2015, 60 (6), pp 1544–1562.

74. **Ceramic photocatalytic membranes** for water filtration under UV and visible light. Chrysoula P. Athanasekou, Nikolaos G. Moustakas, Sergio Morales-Torres, Luisa M. Pastrana-Martínez, José L. Figueiredo, Joaquim L. Faria, Adrián M.T. Silva, José M. Dona-Rodríguez, George Em. Romanos, Polycarpos Falaras, Applied Catalysis B: Environmental 178 (2015) 12–19

73. Ionic liquids for carbon dioxide capture and conversion By: Stiemke, Frank M.; Iliev, Boyan; Kloeckner, Jessica; Schubert, Thomas J. S.; Romanos, George; Kroon, Maaïke, ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY Volume: 247 Meeting Abstract: 199-ENFL Published: MAR 16 2014.

72. CO₂ Capture by Novel Supported Ionic Liquid Phase systems consisting of Silica nanoparticles encapsulating Amine Functionalized Ionic Liquids. George Em. Romanos*, Peter S. Schulz, Matthias Bahlmann, Peter Wasserscheid, Andreas Sapalidis, Fotios K.

Katsaros, Chrysoula Athanasekou, Konstantinos Beltsios, N. K. Kanellopoulos, J. Phys. Chem. C 2014, 118, 24437–24451

71. Tailor-made graphite oxide-DAB poly(propylene imine) dendrimer intercalated hybrids and their potential for efficient CO₂ adsorption T. Tsoufis, F. Katsaros, Z. Sideratou, G. Romanos, O. Ivashenko, P. Rudolf, B.J. Kooi, and M.A. Karakassides. Chem. Commun., 2014, 50, 10967-10970

70. “CO₂ Capture Efficiency, Corrosion Properties, and Ecotoxicity Evaluation of Amine Solutions Involving Newly Synthesized Ionic Liquids” Xenophon L Papatryfon, Nikolaos S Heliopoulos, Igor S Molchan, Lawien F Zubeir, Nathan D Bezemer, Michael K Arfanis, Athanassios G. Kontos, Vlassis Likodimos, Boyan Iliev, George Em. Romanos*, Polycarpos Falaras, Konstantinos Stamatakis, Konstantinos Beltsios, Maaïke C. Kroon, George E. Thompson, Jessica Klöckner, and Thomas J. S. Schubert, Ind. Eng. Chem. Res. 2014, 53, 12083–12102.

69. Experimental investigation of the transport mechanism of several gases during the CVD post-treatment of nanoporous membranes, A.I. Labropoulos, C.P. Athanasekou, N.K. Kakizis, A.A. Sapalidis, G.I. Pilatos, G.E. Romanos, N.K. Kanellopoulos, Chemical Engineering Journal 255 (2014) 377–393

68. Phase behavior and permeability of Alkyl-methyl-imidazolium tricyanomethanide **Ionic Liquids supported in nanoporous membranes**. Ourania Tziolla, Anastasios Labropoulos, Athanasia Panou, Meropi Sanopoulou, Evaggelos Kouvelos, Chrysoula Athanasekou, Konstantinos Beltsios, Vlassis Likodimos, Polycarpos Falaras, George Romanos, Separation and Purification Technology 135 (2014) 22–34

67. “CO₂ captured in zeolitic imidazolate frameworks: Raman spectroscopic analysis of uptake and host-guest interactions”, Athanassios G. Kontos, Vlassis Likodimos, Charitomeni M. Veziri, Evangelos Kouvelos, Nikolaos Moustakas, Georgios N. Karanikolos, George Em. Romanos, Polycarpos Falaras, ChemSusChem, 7, (2014) 1696–1702.

66. ‘**Prototype composite membranes of partially reduced graphene oxide/TiO₂** for photocatalytic ultrafiltration water treatment under visible light’ Chrysoula P. Athanasekou, Sergio Morales-Torres, Vlassis Likodimos, George Em. Romanos*, Luisa Pastrana-Martinez Polycarpos Falaras, Joaquim L. Faria, José L. Figueiredo, Adrián M.T. Silva. Applied Catalysis B: Environmental, 2014, 158-159, 361-372

65. “Corrosion behaviour of mild steel in 1-alkyl-3-methylimidazolium tricyanomethanide ionic liquids for CO₂ capture applications” Igor S. Molchan, George E. Thompson, Robert Lindsay, Peter Skeldon, Vlassis Likodimos, George Em. Romanos, Polycarpos Falaras, Gabriela Adamova, Boyan Iliev and Thomas J. S. Schubert . RSC Adv., 2014, 4, 5300-5311.

64. “Controlled surface functionalization of multiwall carbon nanotubes by HNO₃ hydrothermal oxidation”, Vlassis Likodimos, Theodore A. Steriotis, Sergios K. Papageorgiou, George Em. Romanos, Rita R.N. Marques, Raquel P. Rocha, Joaquim L. Faria, Manuel F.R. Pereira, José L. Figueiredo, Adrián M.T. Silva, Polycarpos Falaras, Carbon, 2014, 69, 311-326

63. “One-step, in situ growth of unmodified graphene – magnetic nanostructured composites”, George Pilatos, Eleni C. Vermisoglou, Anna Perdikaki, Eamon Devlin, George S. Pappas, George E. Romanos, Nikos Boukos, Tatiana Giannakopoulou, Christos Trapalis, Nick K. Kanellopoulos, Georgios N. Karanikolos, Carbon 66 (2014) 467 –475.

62. “Reduced graphene oxide/iron carbide nanocomposites for magnetic and supercapacitor applications”, E.C. Vermisoglou, E. Devlin, T. Giannakopoulou, G. Romanos, N. Boukos, V. Psycharis, C. Lei, C. Lekakou, D. Petridis, C. Trapalis, *Journal of Alloys and Compounds* 590 (2014) 102–109
61. “Pore structure, interface properties and photocatalytic efficiency of hydration/dehydration derived TiO₂/CNT composites”, 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, Polycarpos Falaras, Adrián M.T. Silva, *Applied Catalysis B: Environmental* 147 (2014) 65– 81
60. “Visible light active **TiO₂ photocatalytic filtration membranes** with improved permeability and low energy consumption” Moustakas, N.G., Katsaros, F.K., Kontos, A.G., Romanos, G.E., Dionysiou, D.D., Falaras, P. *Catalysis Today* Volume 224, 2014, Pages 56-69
59. “**Zeolite Imidazolate Framework–Ionic Liquid Hybrid Membranes** for Highly Selective CO₂ Separation”, O. Tzialla, Ch. Veziri, X. Papatryfon, K.G. Beltsios, A. Labropoulos, B. Iliev, G. Adamova, T.J.S. Schubert, M.C. Kroon, M. Francisco, L.F. Zubeir, G.E. Romanos,* and G. N. Karanikolos, *J. Phys. Chem. C* 2013, 117, 18434–18440.
58. “Alkyl-methylimidazolium Tricyanomethanide Ionic Liquids under Extreme Confinement onto **Nanoporous Ceramic Membranes**” A. I. Labropoulos, G. Em. Romanos*, E. Kouvelos, P. Falaras, V. Likodimos, M. Francisco, M. C. Kroon, B. Iliev, G. Adamova, and Thomas J. S. Schubert, *J. Phys. Chem. C* 2013, 117, 10114–10127
57. “Enhanced CO₂ Capture in Binary Mixtures of 1-Alkyl-3-methylimidazolium Tricyanomethanide Ionic Liquids with Water” George E. Romanos*, Lawien F. Zubeir, Vlassis Likodimos, Polycarpos Falaras, Maaike C. Kroon, Boyan Iliev, Gabriela Adamova, and Thomas J. S. Schubert, *J. Phys. Chem. B* 2013, 117, 12234–12251
56. “Hybrid Ultrafiltration/**Photocatalytic Membranes** for Efficient Water Treatment” G. E. Romanos,* C. P. Athanasekou, V. Likodimos, P. Aloupogiannis, and P. Falaras, *Ind. Eng. Chem. Res.* 2013, 52, 13938–13947.
55. “Ionic liquid redox electrolytes based on binary mixtures of 1-alkyl-methylimidazolium tricyanomethanide with 1-methyl-3-propylimidazolium iodide and implication in dye-sensitized solar cells”. Maria Bidikoudi, Thomas Stergiopoulos, Vlassis Likodimos, Georgios Em. Romanos, Maria Francisco, Boyan Iliev, Gabriela Adamova Thomas J. S. Schubert and Polycarpos Falaras, *J. Mater. Chem. A*, 2013,1, 10474-10486
54. Photocatalytic behaviour of nanocarbon–TiO₂ composites and immobilization into hollow fibres Luisa M. Pastrana-Martínez, Sergio Morales-Torres, Sergios K. Papageorgiou, Fotis K. Katsaros, George E. Romanos, José L. Figueiredo, Joaquim L. Faria, Polycarpos Falaras, Adrián M.T. Silva, *Applied Catalysis B: Environmental* 142– 143 (2013) 101– 111.
53. “Ionic liquids for CO₂ capture” Stiemke, F., Adamová, G., Iliev, B., Schubert, T.J.S., Romanos, G., Kroon, M. (Conference Paper), *Technical Proceedings of the 2013 NSTI Nanotechnology Conference and Expo, NSTI-Nanotech 2013* Volume 3, 2013, Pages 705-707
52. “Inorganic–organic core–shell titania nanoparticles for efficient visible light activated photocatalysis”, N.G. Moustakas, A.G. Kontos, V. Likodimos, F. Katsaros, N. Boukos, D. Tsoutsou, A. Dimoulas, G.E. Romanos, D.D. Dionysiou, P. Falaras, *Applied Catalysis B: Environmental* 130– 131 (2013) 14– 24.

51. Few layer graphenes decorated with silver nanoparticles (Conference Paper), Vermisoglou, E., Todorova, N., Pilatos, G., Romanos, G., Likodimos, V., Boukos, N., Lei, C., Markoulidis, F., Lekakou, C., Trapalis, C., 15th European Conference on Composite Materials: Composites at Venice, ECCM 2012; Venice; Italy; 24 June 2012 through 28 June 2012; Code 106145

50. "Very efficient **composite titania membranes** in hybrid ultrafiltration/photocatalysis water treatment processes" C.P. Athanasekou G.E. Romanos, F.K. Katsaros, K. Kordatos, V. Likodimos, P. Falaras, *Journal of Membrane Science* 392– 393 (2012) 192– 203.

49. "Double-side active **TiO₂-modified nanofiltration membranes** in continuous flow photocatalytic reactors for effective water purification". G.Em. Romanos*, C.P. Athanasekou, F.K. Katsaros, N.K. Kanellopoulos, D.D. Dionysiou, V. Likodimos, P. Falaras, *Journal of Hazardous Materials* 211– 212 (2012) 304– 316.

48. "Alginate fibers as photocatalyst immobilizing agents applied in hybrid **photocatalytic/ultrafiltration** water treatment processes", S.K. Papageorgiou, F.K. Katsaros, E.P. Favvas, G. Em. Romanos, C.P. Athanasekou, K.G. Beltsios, O.I. Tzialla, P. Falaras, *Water Research* 46 (2012) 1858-1872.

47. "Alginate based materials in environmental applications: From metal sorption to advanced catalytic and membrane processes" (Chapter) Papageorgiou, S.K. , Romanos, G.E., Katsaros, F.K. *Alginates: Production, Types and Applications 2012*, Pages 61-95.

46. "Composite hydroxyapatite/TiO₂ materials for photocatalytic oxidation of NOx", T. Giannakopoulou, N. Todorova, G. Romanos, T. Vaimakis, R. Dillert, D. Bahnemann, C. Trapalis, *Materials Science and Engineering B* 177 (2012) 1046–1052.

45. "Ionic Liquid-Modified Porous Materials for Gas Separation and Heterogeneous Catalysis", Anna V. Perdikaki, Olga C. Vangeli, Georgios N. Karanikolos, Konstantinos L. Stefanopoulos, Konstantinos G. Beltsios, Paschalis Alexandridis, Nick K. Kanellopoulos, and George Em. Romanos*, *J. Phys. Chem. C* 2012, 116, 16398–16411.

44. "Investigation of Physically and Chemically Ionic Liquid Confinement in Nanoporous Materials by a Combination of SANS, Contrast-Matching SANS, XRD and Nitrogen Adsorption", G E Romanos*, K L Stefanopoulos, O C Vangeli, K Mergia, K G Beltsios, N K Kanellopoulos and D Lairez, *Journal of Physics: Conference Series* 340 (2012) 012087, doi:10.1088/1742-6596/340/1/012087.

43 "Implication of composite photocatalysts incorporating carbon-based nanomaterials with potential use in drinking water treatment: Mechanical and chemical stability" Author(s): Han, C (Han, Changseok); Pelaez, M (Pelaez, Miguel); Likodimos, V (Likodimos, Vlassis); Romanos, GE (Romanos, George E.); Falaras, P (Falaras, Polycarpos); Dionysiou, DD (Dionysiou, Dionysios D.) ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY Volume: 242 Meeting Abstract: 378-ENVR Published: AUG 28 2011

42. "Investigation of Confined Ionic Liquid in Nanostructured Materials by a Combination of SANS, Contrast-Matching SANS, and Nitrogen Adsorption" Konstantinos L. Stefanopoulos, George E. Romanos, Olga C. Vangeli, Konstantina Mergia, Nick K. Kanellopoulos, Alexandros Koutsoubas, and Didier Lairez, *Langmuir* 2011, 27, 7980–7985

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40. “Magnetic carbon nanotubes with particle- free surfaces and high drug loading capacity », Eleni C Vermisoglou, George Pilatos, George E Romanos, Eamon Devlin, Nick K Kanellopoulos and Georgios N Karanikolos, *Nanotechnology* 22 (2011) 355602
39. “A methodology for the morphological and physicochemical characterisation of asymmetric **carbon hollow fiber membranes**”, E.P. Favvas, G.E. Romanos*, S.K. Papageorgiou, F.K. Katsaros, A. Ch. Mitropoulos, N.K. Kanellopoulos, *Journal of Membrane Science* 375 (2011) 113–123.
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