### *NCSR “Demokritos”, December 2021*

###  Cirriculum Vitae

### George E. Romanos

 Research Director

**Personal Data**

***Date of birth***: 16-05-1969

***Place of birth***: Athens

***Parentage:*** Apiranthos, Naxos.

***Marital Status***: Married with Penelope Asiatidou, three (3) children: Anna-2003,

Emmanuel-2005, Dimitrios-2010.

***Place of residence***: Kountouriotou 18, 155 62 Cholargos Attikis, Tel: +30210-6544614

***Place of work***: Institute of Nanoscience and Nanotechnology, NCSR "Demokritos", 153 10,

 Aghia Paraskevi Attikis

 ***Tel***: +30210-6503972, ***Fax***: +30210-6511766,

 ***e-mail***: g.romanos@inn.demokritos.gr

 ***Mobile phone:*** +306936900092

**Studies**

|  |  |
| --- | --- |
| 1988-1994 | Diploma in Chemical Engineering, February 1994, National Technical University of Athens, School of Chemical Engineering, “Grade 7,06” |
| 1995-2000 | PhD in Physical Chemistry from the National Technical University of Athens, School of Chemical Engineering “Grade 10” |

**Foreign Languages**

 English, French

**Academic Career – Employment Experience**

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| 1995-1998 | Post-Graduate Fellow, Institute of Physical Chemistry, NCSR“Demokritos” |
| 1996-2000 | Assistant of Research, Institute of Physical Chemistry, NCSR“Demokritos” |
| 2000-2001 | Collaborative Researcher – Post doc in contract - Institute of Physical Chemistry, NCSR“Demokritos” |
| 2006-2010 | Researcher Grade C - Institute of Physical Chemistry, NCSR“Demokritos” |
| 2010-2012  | Researcher Grade B - Institute of Physical Chemistry, NCSR“Demokritos” |
| 2012-2014 | Researcher Grade B – Institute of Advanced Materials, Physicochemical Processes, Nanotechnology and Microsystems, NCSR“Demokritos” |
| 2014-2015 | Researcher Grade B – Institute of Nanoscience and Nanotechnology, NCSR“Demokritos” |
| 2015-today | Researcher Grade A – Institute of Nanoscience and Nanotechnology, NCSR“Demokritos” |

**Managerial experience–Research Leadership and Administration**

1. Member of the Financial Committee of NCSR “Demokritos” (2015-2016).
2. Membrer of the Committee of Competitive Projects & Exploitation of Research Results. NCSR “Demokritos” (2013).
3. Member of the Coordinating Committee of the Energy Platform, established by the Greek Secretariat of Research to define the R&D priorities for Greece in the Energy Sector (2014-2020).
4. Evaluator of Proposals (External Expert) for ACT (Accelerating CCS Technologies) invited by the Research Council of Norway– (ACT is a collaboration of research and innovation funding organisations from nine European countries. Their collaboration takes the shape of an ERA NET Cofund under the Horizon 2020 program of the European Commission (EC)).
5. Member of the Scientific Advisory Board of the Institute of Physical Chemistry, NCSR “Demokritos” (2009-2012).
6. Member of the Scientific Advisory Board of the Institute of Advanced Materials, Physicochemical Processes, Nanotechnology and Microsystems, NCSR “Demokritos” (2012-2014).
7. Member of the Scientific Advisory Board of the Institute of Nanoscience and Nanotechnology, NCSR “Demokritos” (2016-2018).
8. Organiser of the presentation and presenter of the Programe «Nanostructured, Self-Assembled and Complex Materials– Membranes» as representative of 10 Reserachers in the International according to the law (Ν. 1514/1985) evaluation of the Research Centers under the supervision of the Greek General Secretariat for Research and Technology (2014).
9. Coordinator of the European Project “Iolicap”, FP7 (2011-2016).
10. Coordinator of the National Project Collaboration 2011, 11-SYN-8\_936, Novelties on CCS (2013-2015).
11. Member of the evaluation / selection committee for Researchers of the Institute of Nuclear & Radiological Sciences & Technology, Energy & Safety (I.N.RA.S.T.E.S.) NCSR “Demokritos” (2016).
12. Member of the evaluation / selection committee for the recruital of scientific staff in Researcher position, at the Institute of Nuclear & Radiological Sciences & Technology, Energy & Safety (I.N.RA.S.T.E.S.) NCSR “Demokritos” (2016).
13. Responsible for Educational Program of the Institute of Physical Chemistry, NCSR “Demokritos” (2010-2012).
14. Member of the evaluation / selection committee for Researchers of the Institute of Chemical Engineering Sciences, FORTH-ICE-HT, Patras-Greece (2016).
15. Principal organiser of the International Conference: European Conference on Carbon dioxide Capture and Storage, CCS2013, May 28-29, 2013, Antwerp, Belgium (120 participants).
16. Principal organiser of the International Forum: 1st International Forum on Recent developments of CCS Implementation , March 26-27, 2015, Athens, Greece (80 participants).
17. Member of the Organisation Committee of the 2nd  Panhellenic Symposium of Porous Materials, NCSR “Demokritos” September (29-30) 2005.
18. Member of the Scientific Committee of the 7th Panhellenic Symposium of Porous Materials, Ιoannina-Greece (2-4/06-2016).
19. Member of the Scientific Committee of the 22nd Panhellenic Conference on Chemistry, Thessaloniki-Greece (2-4/12-2016).
20. Member of the Organisation Committee of the International Conference, Diffusion Fundamentals III. Athens August 2009.
21. Member of the Organisation Committee, 1st International Workshop NAPEN 2008, Chania Greece, 12-15 October 2008.
22. Principal Organiser of the Workshop “CO2 Capture Technologies” in the framework of the 2nd Hellenic Forum for Science, Innovation and Technology (NCSR “Demokritos” July 2014).
23. Reviewer in Scientific Journals: 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.

**Scientific Activities**

**Α1. Publications**

Α.1 Publications in Peer Reviewed Journals 119

Α.2

Α.2.1 Proceedings of International Conferences with Reviewers 5

Α.2.2 Publications in Proceedings of Greek Conferences with Reviewers 22

##### Α.2.3 Book of Abstracts of International Conferences with Reviewers 41

**Α1.1 Citations**  **3515**  **(Scopus)**

**Α1.2 *h -index*  33 (Scopus)**

##### Β. Scientific and Higher Education text and books (Documentation and Educational Material in general)

##### Β.1 Book Chapters 8

##### C. Educational Experience or equivalent in recognized Research Institutes.

***C.1******Teaching in Pre-and Post-Graduate courses.***

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| --- | --- |
| 1995-1998 | Inorganic Chemistry Lab (1st year), School of Chemical Engineering NTUA, Athens. |
| 1995-1998 | Lab of Physical methods of Analysis (2nd year), School of Chemical Engineering NTUA, Athens. |
| 1995-1998 | Lab of Advanced Inorganic Chemistry (4th year), School of Chemical Engineering NTUA, Athens. |

***C.2 Employment in recognized Research Centers***

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| --- | --- |
| 1995-1998 | Lab of Analytical and Inorganic Chemistry, School of Chemical Engineering NTUA, Athens – Membranes and Materials for Environmental Separations Laboratory, Institute of Physical Chemistry, NCSR “Demokritos” (Research Fellow-PhD Candidate) |
| 1996-2000 | Institute of Physical Chemistry, NCSR “Demokritos” (Assistant Researcher) |
| 2000-2001 | Institute of Physical Chemistry, NCSR “Demokritos” (Collaborating Researcher, in contract) |
| 2006-today | (Researcher)Institute of Physical Chemistry, NCSR “Demokritos” Institute of Advanced Materials, Physicochemical Processes, Nanotechnology and Microsystems, NCSR “Demokritos”Institute of Nanoscience and Nanotechnology, NCSR “Demokritos” |

# Patents

1. Photocatalytic purification device (P. Falaras, G. Romanos, P. Aloupogiannis), EP2409954, published on 25/01/2012.

**Fellowships-Achievements-Prizes**

1995-98 Post-Graduate Fellowship from NCSR “Demokritos” (4 years, for PhD thesis)

2010 Two members of my Research Group are elected in Professor positions in Greek and International Universities1

2014 Member of the Research Group awarded with **Alternative Water Resources Prize, PSIPW International Prize for Water Award**, Riyadh, Saudi Arabia ([www.psipw.org](http://www.psipw.org))

2013 Best poster competition award for the poster with title “Ionic Liquid modified Zeolite Imidazolate Framework (ZIF-69) membranes for energy efficient CO2 separation from coal fired power plants”, Veziri, Ch.; Karanikolos, G.; Romanos, G.E.; Iliev, B.; Adamova, G.; Schubert, T. J.S.; Kontos, A.G.; Likodimos, V.; Falaras, P., International Congress on Materials and Renewable Energy (MRE 2013) 1-3 July, Athens, Greece.

2010 Figure from the manuscript “A Closer Look Inside Nanotubes: Pore Structure Evaluation of Anodized Alumina Templated Carbon Nanotube Membranes through Adsorption and Permeability Studies”, By Georgios Pilatos, Eleni C. Vermisoglou, Georgios E. Romanos\* *et al.,* Adv. Funct. Mater. 2010, 20, 1–11. Was selected as cover page for the relevant volume of Advanced Functional Materials.

2011 “A promising method against cancer”, Daily Newspaper "Cathimerini", 24 September 2011, for the work with the title: “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

<http://www.fee.org.gr/health-news-blog/288-cancer-nanotechnology-chemotherapy.html>

*1Dr. Vlassis Likodimos, elected as Assistant Professor / Physics Department, University of Athens, Greece;*

*Dr. George Karanikolos elected as Assistant Professor Chemical Engineering, The Petroleum Institute Abu Dhabi*

**Research Experience**

***Research Interests***: nanoporous materials and membranes, adsorption and separation in the gaseous and liquid phase, photocatalysis.

Dr. G. E. Romanos is member of the Institute’s program “Nanochemistry and Nanomaterials” and principal member of the Lab “Membranes and Materials for Environmental Separations” at the Institute of Nanoscience and Nanotechnology of NCSR “Demokritos” (Group of 22 scientists).

* Intense research activity in the domains of nanotechnology, environment and energy, with significant contribution in the development of advanced and novel materials, solvents (Ionic Liquids) and technologies for the capture of CO2.
* Focus on the development of ultrathin layered, photocatalytic membranes (photocatalysis and processes), photoelectrochemical processes for the conversion of CO2 to fuels, processes for the capture of CO2 based on solid and liquid adsorbents. Large experience in functional nanocomposite materials (polymeric membranes with carbon nanotube and graphene based fillers for gas separation and desalination).

More information: <https://inn.demokritos.gr/en/>

**Significant contribution in the nomination of Young Researchers and in the exploitation and application of research results.**

# Post-doc researchers supervised: Dr. Marta Pedrosa 2017 (LCM – Laboratory of Catalysis and Materials, Department of Chemical Engineering, Faculty of Engineering. University of Porto), Dr. Sergio Morales Torres -2012 (LCM – Laboratory of Catalysis and Materials, Department of Chemical Engineering, Faculty of Engineering. University of Porto), Δρ. George Karanikolos (2013-2014), Dr. Vlassis Likodimos (2014-2016), Dr. Irini Siranidi (2014-2015), Dr. George Kritikos (2014-2015), Dr. Olga Vangeli(2013-2014), Dr. Anastasios Labropoulos (2013-2014), Dr. Ch. Veziri (2013-2014, 2016-2017), Dr. Theodore Tsoufis (2016-2017), Dr. N. Panopoulos (2016-2017).

# Two (2) of the supervised Post docs are currently Professors in Greek Universities and Universities abroad. (Dr. Vlassis Likodimos, Assistant Professor / Physics Department, University of Athens, Greece; Dr. George Karanikolos, Assistant Professor Chemical Engineering, The Petroleum Institute Abu Dhabi.

* My Research Group has designed and implemented in collaboration with a Greek Construction Company (N&G Goliopoulos S.A.) and the Public Power Corporation S.A. (power provider in Greece) the larger Greek Unit for the capture of CO2 (20 ton/day) from the thermoelectric, lignite burning power plant of Megalopolis-Greece (THS IV-Megalopolis-Greece).

# Education Activities (PhDs-MSCs-Training)

# PhDs Supervision

1. Supervision of the PhD thesis and participant in the 3-membered Election Committee of Dr. M Tsigonias. Greek Open University. Title: «Holistic and environmental packaging development: development and study of materials and technologies for the environmental demands of the printing and packaging industry.». Defense: 2016
2. Supervision of the PhD thesis and participant in the 7-membered Election Committee of Dr. C. Athanasekou. School of Chemical Engineering NTUA Athens Greece. Title: «Chemical modification of ceramic membranes for environmental applications». Defense: 2012.
3. Supervision of the PhD thesis and participant in the 7-membered Election Committee of Dr. G. Pilatos. School of Chemical Engineering NTUA Athens Greece. Title: «Synthesis and modification of graphitic nanostructures and composites for the production of adbanced technology products. Defense: 2013.
4. Supervision of the PhD thesis and participant in the 7-membered Election Committee of Dr. Eleni Androulaki, Department of Materials science and Technology, University of Crete Title: «Molecular Simulation of Ionic Liquids for Environment-Friendly Technological Applications». Defense 2014.
5. Supervision of the PhD thesis and participant in the 7-membered Election Committee of Dr. O. Vangeli (Chemist), Department of Materials Science and Engineering, University of Ioannina. Title: «Ionic Liquid Modified Adsorbents and Membranes for Separation and Catalysis». Defense: 2013.
6. Supervision of the PhD thesis and participant in the 7-membered Election Committee of Dr. A. Perdikaki (Chemist), School of Chemical Engineering NTUA Athens Greece. Title: “ Growth of functional hybrid systems of nanoparticles for environmental and biological systems”. Defense 2016
7. Supervision of the PhD thesis and participant in the 3-membered Election Committee of Mr. Panagiotis Kastanidis (MSc), PhD candidate, School of Chemical Engineering NTUA Athens Greece. Title: «Experimental and theoretical study of inhibition or promotion of hydrates formation for applications of high industrial interest». (In Progress).
8. Supervision of the PhD thesis and participant in the 3-membered Election Committee of Ms. O. Tzialla (MSc), Department of Materials Science and Engineering, University of Ioannina. (Defense 2019).
9. Supervision of the PhD thesis and participant in the 7-membered Election Committee of Ms. L. Gkoura, NATIONAL TECHNICAL UNIVERSITY OF ATHENS SCHOOL OF CHEMICAL ENGINEERING DEPARTMENT I: DEPARTMENT OF CHEMICAL SCIENCES. (Defense July 2019).
10. Supervision of the PhD thesis and participant in the 7-membered Election Committee of Mr. Mohammed Subrati. Title: Synthesis and Characterization of Magnetic Nanoparticles for Applications in the Oil and Gas Industry. Department of Materials Science and Engineering, University of Ioannina Defense January 2020.
11. Supervision of the PhD thesis and participant in the 3-membered Election Committee of Ms. E. Galata (MSc), PhD candidate in the School of Chemical Engineering NTUA Athens Greece. (In Progress).
12. Supervision of the PhD thesis and participant in the 3-membered Election Committee of Mr. George Theodorakopoulos, PhD candidate in the School of Chemical Engineering NTUA Athens Greece. (In Progress).
13. Supervision of the PhD thesis and participant in the 3-membered Election Committee of Mr. Leonidas Spyrogiannopoulos, PhD candidate in the School of Chemical Engineering NTUA Athens Greece. (In Progress).

Master Theses Supervision

1. Supervision of the MSc (2012-2013) of Ms O. Tzialla, University of Ioannina, Intersectorial Master Program «Chemistry and Technology of Materials» Title: “Ionic Liquid Membranes for CO2 separation”. Defense 2013.
2. Supervision of the MSc (2012-2013) of Mr. X. Papatryfon, University of Ioannina, Intersectorial Master Program «Chemistry and Technology of Materials» Title: “Development of Physicochemical Process for CO2 Capture and Release with Gas/Liquid contact and exploitation of Ionic Liquids as new CO2 capture solvents”. Defense 2013.
3. Supervision of the MSc (2014-2015) of Ms. E. Galata, University of Ioannina, Intersectorial Master Program «Chemistry and Technology of Materials» Title: “Development and study of composite nanostructured carbon membranes for gas separation”. Defense 2015.
4. Supervision of the MSc (2016-2017) of Mr. E. Balis, University of Ioannina, Intersectorial Master Program «Chemistry and Technology of Materials» Title: “ Development and characterisation of PVDF and PVDF-HFP hollow fibers with the method of Direct Contact Membrane Distillation” Defense 2017.
5. Supervision of the MSc (2016-2017) of Mr. G. Kakosimos, University of Ioannina, Intersectorial Master Program «Chemistry and Technology of Materials» (Defence 2018).

**Lectures in International Conferences, Workshops and Fora.**

1. “Study of ionic liquid confinement into the pores of ordered nanoporous silicas” G.E. Romanos (Oral), National Center for Scientific Research, Greece, 1st International Conference on Ionic Liquids in Separation and Purification Technology : ILSEPT : Sitges, Spain, 4-7 September 2011.
2. EuroNanoForum 2009, Prague 2-5 June, Parallel Session: Nanotechnology for clean Water: Water Detoxification Using Innovative vi-Nanocatalysts, Workshop: CleanWater-227017 Water Detoxification Using Innovative vi-Nanocatalysts, Press Briefings: Nanotechnology for clean Water: Water Detoxification Using Innovative vi-Nanocatalysts.
3. “Clean Water”, Joint Dissemination Workshop of the nano4water cluster, 26 October 2010, Aachen, Germany.
4. "Ionic liquid-modified nanoporous materials for gas separation and heterogeneous catalysis" Dr. G. Romanos (NCSRD-MESL), Nano 2012 (XI International Conference on Nanostructured Materials), August 26th-31th in Rhodes Island, Greece.
5. EXPERIMENTAL INVESTIGATION OF NEW IONIC LIQUID SOLVENTS REPLACING AMINES IN SCRUBBING / STRIPING UNITS FOR CO2 CAPTURE, G. Romanos, European CCS conference (28-29 May 2013, Antwerp, Belgium).
6. IOLICAP project introduction, G. Romanos, European CCS conference (28-29 May 2013, Antwerp, Belgium).
7. ZEOLITE IMIDAZOLATE FRAMEWORK - IONIC LIQUID HYBRID MEMBRANES FOR CO2 SEPARATION, G. Romanos, European CCS conference (28-29 May 2013, Antwerp, Belgium).
8. Structural and photocatalytic properties of hybrids consisting of TiO2 and carbon nanotubes, G. Romanos, 13th INTERNATIONAL CONFERENCE ENVIRONMENTAL SCIENCE AND TECHNOLOGY, 5-7 September, Athens, Greece
9. Ceramic membranes in hybrid photocatalysis/ultrafiltration processes, G. Romanos 13th INTERNATIONAL CONFERENCE ENVIRONMENTAL SCIENCE AND TECHNOLOGY, 5-7 September, Athens, Greece.
10. Development of Titania Decorated Multi Wall Carbon Nanotubes with CVD techniques, G. Romanos, 3rd International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems, (3rd IC4N), 26-29 June 2011, Herakleion (GR).
11. Iolicap Project Results George Romanos (NCSR Demokritos, Greece), International Forum on Recent Developments of CCS Implementation, Athens 16-17 December 2015.
12. Opening: Welcome and Introduction by IoLiCAP P.I., Dr. G. Romanos (NCSRD, Greece) International Forum on Recent Developments of CCS Implementation – 26th-27th March 2015 – Athens, Greece.
13. On the Use of Ionic Liquids in Order to Inhibit/Promote CO2 Hydrates, George Romanos (NCSRD, Greece) International Forum on Recent Developments of CCS Implementation – 26th-27th March 2015 – Athens, Greece.
14. Ionic Liquids for CO2 capture, George Romanos, CO2TRACCS – BLACK SEA ERA.NET project, International Workshop, 2013 May 13, Athens, Greece, National Technical University of Athens.
15. Ionic Liquids as new solvents for CO2 capture, Dr G. Romanos, Senior Researcher, Institute of Nanoscience and Nanotechnology, NCSR “Demokritos”, Greece - Project FP7 IOLICAP, 2nd Hellenic Forum for Science and Technology, 30/06-4/07/2014, NCSR “Demokritos”, Athens, Greece.
16. Mercury porosimetry in pharmaceutical technology, Dr G. Romanos, Senior Researcher, Institute of Nanoscience and Nanotechnology, NCSR “Demokritos”, Greece, 2nd Hellenic Forum for Science and Technology, 30/06-4/07/2014, NCSR “Demokritos”, Athens, Greece.
17. G. Romanos. Kick-Off Meeting for ENV and GIE LIFE17 projects, 6-7 November 2018, Brussels (invitation by EASME to represent LIFE17 ENV/GR/000387 - LIFE PureAgroH2O)
18. G. Romanos, P. Falaras, E. Markellou, E. Georgaki, D. Kizis and E. Karanasios. “POLLUTANT PHOTO-NF REMEDIATION OF AGRO-WATER”. 5th International Conference on Small and Decentralized Water and Wastewater Treatment Plants, August 26-29 2018, Thessaloniki, Greece (G. Romanos Oral)
19. G. Romanos, Oral: «Τεχνολογίες CCS/U», Ημερίδα Διαβούλευσης, Εθνική Επιτροπή για την Ενέργεια και το Κλίμα, Eρευνα και Καινοτομικές Εφαρμογές Τεχνολογιών Απεξάρτησης από τον Άνθρακα – ΑΠΕ, Τεχνολογίες Η2, CCS/U, 2018, Πέμπτη 29 Νοεμβρίου 2018, Τεχνόπολη Δήμου Αθηναίων (@INNOVATHENS powered by Samsung), Γκάζι.
20. G. Romanos, LifepureagroH2O – Innovative photocatalytic nanofiltration technology for pollutant removal and water reuse of agro-industrial effluents, Water Reuse Europe, Knowledge Exchange Event, Lille, France 21 Oct. 2019.
21. G. Romanos. Innovative photocatalytic nanofiltration technology for micropollutants abatement and water reuse of Agro-industrial effluents-LIFE PureAgroH20, Innovative Technologies for Wastewater Treatment and Water Reuse in Food Industry, Athens 17th January 2020.
22. G. Romanos. “Innovative photocatalytic nanofiltration technology for pollutant removal and water reuse of agro-industrial effluents-LIFE17 ENV/GR/000387 LIFE Pure AgroH2O”, LIFE WASTE-WATER TREATMENT PLATFORM MEETING, Making Water Fit for LIFE. January 29th and 30th 2020, Barcelona, Spain

**Visits in labs abroad**

1. University of Erlangen, 2 days for collaboration with the group of Chemical Processes Technology (CRT group) of Prof. P. Wasserscheid and 2 days with the group of Advanced Optical Methods for Analysis of Prof. Andreas Paul Froba. (2014)
2. Technical University Eindhoven, 2 days for collaboration with the group of Separations Technology of Prof. Maaike Kroon (2013).
3. SINTEF (Trondheim). 7 days (2005). Implementation of oil & gas permeability experiments in cores under conditions of very high pressure and temperature.
4. Rutherford Appleton Laboratory, Chilton, Didcot, Oxfordshire, UK, 6, (2000). 7 days for the implementation of SANS experiments in porous alumina.
5. Laboratoire Leon Brillouin, CEA/CNRS UMR 12, CEA-Saclay, 91191 Gif-sur-Yvette Cedex, France, 5 days for the implementation of SANS experiments in hybrid systems of porous silica with Ionic Liquids. (2011).

**Funding**

As coordinator:

* 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€, NCSRD budget: 1,048,161.00€.
* Coordinator of the National Project: 11ΣΥΝ\_8\_936, NOVEL TechnologIES ON the implementation of CCS, (ESPA 2007-2011, SYNERGASIA 2011, (DURATION 11/2013-06/2015)), total budget 683,165.00€, NCSRD budget: 124,300.00€, Partners: CERTH/CPERI, NTUA, AMBIO S.A., SINARTIA.
* 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, NCSRD budget: US $ 253,000.00, duration: 01/04/2016-31/03/2019.
* Coordinator of the Proposal, Horizon 2020 (ISIB-06-2015) with title “Innovative photoelectrocatalystS and phOtoanodes based on 3-Dimensional, “BLAck TiO2”- pillared graphene derivatives, applied into intensified CO2 capture and photocatalytic conversion processes”, marked with 14/15 and put in the reserve list for funding.

**As participant:**

* **HORIZON 2020**, Project ZEOCAT-3D, GRANT AGREEMENT NUMBER 814548 **Scientific Responsible for NCSR**,— Budget for NCSRD 423750€.
* LIFE Environment and Resource Efficiency project application, **LIFE17 ENV/GR/000387**, Pollutant Photo-NF remediation of Agro-Water, LIFE PureAgroH2O. **Scientific Responsible for NCSR**,— Budget for NCSRD 784363€, EU contribution 470618€.
* Contribution in the preparation of Research Infrastructure Proposal “National Nanotechnology and Nanoscience Infrastructure (Nano-GR)” of the Institute of Nanoscience and Nanotechnology, which was marked with 20/20. Accepted for funding with total budget of 4M€ (Project number 5002772)
* FP7-NMP, Water Detoxification Using Innovative vi-Nanocatalysts, CLEAN WATER, NCSRD budget 570.000 € .
* FP7-NMP, Development of NEXT Generation cost efficient automotive catalysts (Contract no 280890), NCSRD budget 680000€.
* National Project, Scientific Excellence ΙΙ, “SolMeD-Desalination by Solar Powered Membrane Distillation: Material and Process Optimization”, ARISTEIA, GSRT, 65 K€.
* 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 NCSRD: A. Sapalidis, NCSRD budget 225,000.00€, (DURATION 2013-2015).
* CERAMEM GRD2-2000-30372 “Ceramic Membranes for Olefin-Parafin Separations”.
* ΒRITE-ΕURAM BRPR-CT96-0313 “Development and Testing of Zeolite Membranes for Gas Separations”.
* PROTOP (EVK3-CT-2-2-30004) Craft-1999-71938 “Production of Tensioactives from Oleaginous Plants Chains and Polysaccharides from Ulva”.
* COBRA G1st-CT-2000-50195 “Low Energy Consumptive Liquid and Supercritical CO2 Recycling”.
* VISLATEX (BRITE-EURAM BRPR CT98-0646) “Visible light curable latex and heavily pigmented coating systems”
* ΕPΕΤ ΙΙ 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”.
* Joule JOE-CT95-0008 “Optimal Massive Gas Injection Conditions for Oil Recovery Enhancement”. Partners: Institute Francais du Petrole (France), IFE (Norway), NCSR “Demokritos” (Hellas).
* 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).

## International Collaboration

Peter Wasserscheid (University of Erlangen), Peter Schulz (University of Erlangen), Andreas Paul Froba (University of Erlangen), Paul Cobden (ECN, the Netherlands), Haroun Mahgerefteh (UCL (London)), D.D. Dionysiou (Cincinatti, USA), Α. Silva (Porto, Portugal), J. Dona Rodriguez (Las Palmas, Spain), Hequet (Ecole des Mines Nantes, France), E. Kantilaftis (Osmosistemi, Fano, IT), P. Aloupogiannis (IRT, London, UK), G. Thompon (Manchester, UK), Boyan Iliev (Iolitec), R. Sainz (NanoInnova Spain), Maaike kroon (TU/e the Netherlands, Petroleum Institute Abu Dhabi).

**Companies**

BASF (Dr. Maria Franscisco Casal), Evonik (Dr. Gabriela Adamova), Iolitec (Dr. Boyan Iliev), Titan S.A. (Dr. Marios Katsiotis), Public Power Corporation S.A. (Mr. C. Papapavlou), NanoInnova (Dr. Raquel Sainz), Petkim Petrochemicals (Dr. Gurbuz Comak).

**Α. Published Research Work**

**Α.1 Publications in International Journals with Reviewers**

**Α.1 Papers in International refereed journals (Dr. G. Romanos)**

119. A diamino-functionalized silsesquioxane pillared graphene oxide for CO2capture

Open AccessmThomou, E., Sakavitsi, V., Angeli, G.K., (...), Gournis, D., Rudolf, P. RSC Advances 11(23), 2021, pp. 13743-13750.

118. Structuring efficient photocatalysts into bespoke fiber shaped systems for applied water treatment Theodorakopoulos, G.V., Romanos, G.E., Katsaros, F.K., Beazi-Katsioti, M., Falaras, P. 2021 Chemosphere 277, 2021, 130253

117. Singh, S., Varghese, A.M., Reddy, K.S.K., Romanos, G.E., Karanikolos, G.N. Polysulfone Mixed-Matrix Membranes Comprising Poly(ethylene glycol)-Grafted Carbon Nanotubes: Mechanical Properties and CO2 Separation Performance, Industrial and Engineering Chemistry Research, 2021, 60(30), pp. 11289–11308.

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