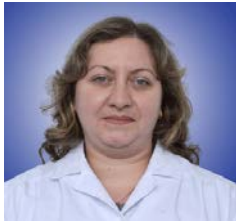





## PERSONAL INFORMATION

## Cristina Antonela Banciu



 National Institute for Research & Development in Electrical Engineering ICPE - Advanced Research Bucharest

 +40 213467231 / 103  +40 745046988

 [cristina.banciu@icpe-ca.ro](mailto:cristina.banciu@icpe-ca.ro); [crisbanciu@yahoo.com](mailto:crisbanciu@yahoo.com)

Sex Female | Date of birth 30/12/1976 | Nationality Romanian

## WORK EXPERIENCE

 2015-present **Technological development engineer II**

National Institute for Research & Development in Electrical Engineering ICPE - Advanced Research Bucharest, Splaiul Unirii, no. 313, code 030138

- Researches in the field of obtaining of carbon nanotubes and graphenes by chemical vapour deposition method, obtaining of carbon fibers from PAN precursor, obtaining of nanofibers from PAN precursor, PAN/CNT composite, Polystyrene, Polyvinyl Chloride, PMMA by electrospinning method.

**Business or sector** Research and Development

 2008-2015 **Senior researcher III**

National Institute for Research & Development in Electrical Engineering ICPE - Advanced Research Bucharest, Splaiul Unirii, no. 313, code 030138

- Researches in the field of obtaining of carbon nanotubes and graphenes by chemical vapour deposition method, obtaining of carbon fibers from PAN precursor, obtaining of nanofibers from PAN precursor or PAN/CNT composite by electrospinning method.
- Preparation of porous monolith carbon composites with carbon fibers.
- Preparation and characterization of classical carbonaceous materials with improved performances and advanced carbonaceous materials (carbon/carbon composites with mesophase matrix).
- Composites with polymer matrix and carbonic functional phase.
- Activated carbon obtained by chemical activation of carbon mesophase.

**Business or sector** Research and Development

 2006-2008 **Junior researcher**

National Institute for Research & Development in Electrical Engineering ICPE - Advanced Research Bucharest, Splaiul Unirii, no. 313, code 030138

- Researches in the field of preparation and characterization of classical carbonaceous materials with improved performances and advanced carbonaceous materials (carbon/carbon composites with mesophase matrix).
- Composites with polymer matrix and carbonic functional phase.
- Activated carbon obtained by chemical activation of carbon mesophase.

**Business or sector** Research and Development

 2004-2006 **Assistant junior researcher**

National Institute for Research & Development in Electrical Engineering ICPE - Advanced Research Bucharest, Splaiul Unirii, no. 313, code 030138

- Researches in the field of preparation and characterization of classical carbonaceous materials with improved performances and advanced carbonaceous materials (carbon/carbon composites with mesophase matrix, composites carbon/iron oxides).
- Composites based on carbon mesophase and various types of nanoparticles.
- Composites with polymer matrix and carbonic functional phase.

Business or sector Research and Development

2002-2004 **Assistant junior researcher**

SC ICPE - Advanced Research SA Bucharest, Splaiul Unirii, no. 313, code 030138

- Researches in the field of preparation and characterization of classical carbonaceous materials with improved performances and advanced carbonaceous materials (carbon/carbon composites with mesophase matrix, composites carbon/iron oxides).
- Composites based on carbon mesophase and various types of nanoparticles.
- Composites with polymer matrix and carbonic functional phase.

Business or sector Research and Development

2001-2002 **Diplomat chemical engineer**

SC ICPE - Advanced Research SA Bucharest, Splaiul Unirii, no. 313, code 030138

- Researches in the field of preparation and characterization of classical carbonaceous materials with improved performances and advanced carbonaceous materials (carbon/carbon composites with mesophase matrix, composites carbon/iron oxides).
- Composites based on carbon mesophase and various types of nanoparticles.

Business or sector Research and Development

**EDUCATION AND TRAINING**

2003-2012 **PhD**

EQF level 8

„Politehnica” University of Bucharest, Faculty of Applied Chemistry and Material Science

- Post-graduate studies in engineering studies - thesis title “Carbon Composites”

2000-2001 **Diploma of master in chemistry**

EQF level 7

„Politehnica” University of Bucharest, Faculty of Applied Chemistry and Material Science

- Computer application in chemical and biochemical engineering

1995-2000 **Diploma of chemical engineer**

EQF level 6

„Politehnica” University of Bucharest, Faculty of Applied Chemistry and Material Science

- Organic Chemical Technology

**PERSONAL SKILLS**

Mother tongue(s) Romanian

Other language(s)

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2
Replace with name of language certificate. Enter level if known.				

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user  
[Common European Framework of Reference for Languages](#)

Communication skills

- good communication skills gained through my experience to communicate with team members as project responsible
- experience in multidisciplinary and multinational teams acquired in the research projects

**Organisational / managerial skills**

- Coordination and management of Experimental Demonstration Project "Dye Sensitized Solar Cells With Integrated 3D Graphene Structures (Acronym DSSC-WIDGET)" (2017-2018) - responsible for a team of 15 people
- Coordination and management of Basic Program "Filters based on polymeric micro/nanofibers obtained by electrospinning" (2016-2017) - responsible for a team of 17 people
- Coordination and management of Basic Program "Device of detection and adsorption of CO<sub>2</sub>" (2009-2015) - responsible for a team of 20 people
- Experience in organizing workshops and conferences

**Digital competence**

## SELF-ASSESSMENT

Information processing	Communication	Content creation	Safety	Problem solving
Independent user	Independent user	Independent user	Independent user	Independent user

Levels: Basic user - Independent user - Proficient user  
[Digital competences - Self-assessment grid](#)

- A good familiarity with instruments Microsoft Office (Word, Excel, PowerPoint)
- Elementary knowledge of application Origin
- Elementary knowledge of applications CorelDRAW and Pinnacle Studio

**Driving licence** Category B, since 1996

**ADDITIONAL INFORMATION**
**Publications**

- C. Banciu, A. Bara, E. Chitanu, M. Lungulescu, I. Ion, L. Leonat, "Filtering membranes based on electrospun expanded polystyrene/ $\beta$ -cyclodextrin fibers", Published in: 10th International Symposium on Advanced Topics in Electrical Engineering (ATEE), March 23-25, 2017, Bucharest, Romania, IEEE, p. 223-226, DOI: 10.1109/ATEE.2017.7905084.
- Elena Chitanu, Adela Bara, Delia Patroi, Virgil Marinescu, Maria Mirela Codescu, Cristina Banciu, "PAN/ZnO composite electrospun fibers for UV shielding applications", Published in: 10th International Symposium on Advanced Topics in Electrical Engineering (ATEE), March 23-25, 2017, Bucharest, Romania, IEEE, p. 227-230, DOI: 10.1109/ATEE.2017.7905098.
- C. Banciu, M. Lungulescu, A. Băra, L. Leonat, A. Teişanu, „3D graphene network investigation by Raman spectroscopy”, Optoelectronics And Advanced Materials–Rapid Communications, vol. 11, no. 5-6, p. 368–372, 2017.
- Băra A., Banciu C., Marinescu V., Morari C., Pătroi D., "Influence of Fe Catalyst Morphology on the Growing of Carbon Nanotubes", In: Sontea V., Tiginyanu I. (eds) 3rd International Conference on Nanotechnologies and Biomedical Engineering. IFMBE Proceedings, Springer, Singapore, vol. 55, p. 205–208, 2016, DOI: 10.1007/978-981-287-736-9\_51.
- A. Bara, E. Chitanu, C. Banciu, V. Marinescu, V. Tsakiris, „Polyacrylonitrile-based electrospun fibers”, Published in: 9th International Symposium on Advanced Topics in Electrical Engineering (ATEE), May 7-9, 2015, Bucharest, Romania, IEEE, p. 250-253, DOI: 10.1109/ATEE.2015.7133776.
- C. Banciu, A. Bara, G. A. Rîmbu, A. Teişanu, L. Leonat, "Electrically renewable carbon fibers composites for CO<sub>2</sub> adsorption", Optoelectronics and Advanced Materials-Rapid Communications, vol. 9, no. 9-10, p. 1160-1163, 2015.
- Adela Bara, Virgil Marinescu, Elena Chitanu, Cristina Banciu, Florentina Clîcînschi, "Influence of process parameters on the morphology of polyacrylonitrile electrospun fibers", Industria Textila, no. 4, p. 232-239, 2015.

- Paula Prioteasa, Virgil Marinescu, Adela Bara, Mihai Iordoc, Teisanu Aristofan, Cristina Banciu, Viorica Meltzer, "Electrodeposition of polypyrrole on carbon nanotubes/Si in the presence of Fe catalyst for application in supercapacitors", Chemistry Magazine, vol. 66, no. 6, p. 820-824, 2015.
- Bara, A., Banciu, C., Bondar, A. M., Patroi, E. A., Patroi, D., "Carbon Mesophase-based Composites with Electro-Magnetic Properties", Chemistry Magazine, vol. 64, issue 2, p. 174-181, 2013.
- W. Kappel, A. Bara, C. Banciu, M. M. Codescu, C. Morari, E. A. Patroi, E. Manta, "Composites materials with applications in electromagnetic protection", Optoelectronics and Advanced Materials-Rapid Communications, vol. 4, no. 12, p. 2097-2102, 2010.
- C. Banciu, A. Bara, I. Ion, D. Patroi, G. Sbârcea, "Structural and functional properties of porous carbon fiber composites", Optoelectronics and Advanced Materials-Rapid Communications, vol. 4, no. 11, p. 1647-1650, 2010.
- C. Banciu, A. Bara, I. Ion, D. Patroi, L. Leonat, "Chemical activation of mesocarbon microbeads", Optoelectronics and Advanced Materials-Rapid Communications, vol. 4, no. 11, p. 1717-1720, 2010.

#### Books

- Banciu Cristina, "Porous carbon composites", Publishing house Printech, Bucharest, ISBN 978-606-521-916-8, 2012.

#### Projects

- Experimental Demonstration Project - "Dye Sensitized Solar Cells With Integrated 3D Graphene Structures (DSSC-WIDGET)" (2017-2018) - Project coordinator
- Experimental Demonstration Project - "Textile filtering media with fibrous polymeric layers obtained by electrospinning (FILTER)" (2017-2018) - Member of research team
- Core Program – "Filters based on polymeric micro/nanofibers obtained by electrospinning" (2016-2017) - Project coordinator
- MNT ERA NET Project – „Mini-supercapacitors technology, based on hybrid CNT/CNF - electroactive polymer networks" (2012-2014) - Member of research team
- Program for Research-Development-Innovation for Space Technology and Advanced Research – STAR – "Advanced composite structures for space applications" (2012-2015) - Member of research team
- Core Program - "Device for detection and adsorption of CO<sub>2</sub>" (2009-2011) - Project coordinator
- PNCDI II – „Advanced composite structures for aerospace and transport industry – SUPERSOLID" (2007-2010) - Member of research team
- Bilateral Cooperation Romania – IUCN Dubna – „Obtaining and characterization of 3D graphene networks", Theme no. 04-4-1121-2015/2017 (2016-2017) - Project coordinator
- Bilateral Cooperation Romania – IUCN Dubna – „Obtaining and characterization of 3D graphene networks", Theme no. 04-4-1121-2015/2017 (2015-2016) - Project coordinator
- Bilateral Cooperation Romania – IUCN Dubna - „Electrospun polymeric nanocomposite fibers with different functionalities", Theme no. 04-4-1121-2015/2017 (2015-2016) - Member of research team
- „Planar heater based on electroconductive carbon fibres designed for satellite thermal management", contract ESA AO/1-7557/13/NL/SC (2014-2016) - Member of research team
- Bilateral Cooperation Romania – IUCN Dubna – „Preparation and characterization of CNT/polymer composites and micro(nano) composite fibers for sensing applications", Theme no. 04-4-1069-2009/2014 (2014-2015) - Member of research team

#### Conferences

- C. Banciu, A. Băra, E. Chițanu, V. Marinescu, G. Sbârcea, I. Ion, „The effect of process parameters on the electrospun polystyrene fiber", "8th Texteh International Conference", 19-20 October 2017, Bucharest, Romania
- E. Chitanu, A. Bara, C. Banciu, M. Lungulescu, V. Marinescu, „Study of electrospun cellulose acetate fibers", "8th Texteh International Conference", 19-20 October 2017, Bucharest, Romania
- Cristina Banciu, Adela Bara, Marius Lungulescu, Virgil Marinescu, Elena Chitanu, Gabriela Sbarcea, „Three-Dimensional Graphene Structures Preparation and Characterization", 5th International Conference On Powder Metallurgy And Advanced Materials RoPM-AM2017, 16-21 September 2017, Cluj-Napoca, Romania

- E. Chitanu, C. Banciu, G. Sbarcea, V. Marinescu, A. Bara, "Hydrothermal Synthesis and Characterization of Hybrid ZnO/3D Graphene Structures", "The Conference 20th Romanian International Conference on Chemistry and Chemical Engineering (RICCCE)", 6-9 September 2017, Poiana Brasov, Romania
- C. Banciu, A. Bara, M. Lungulescu, V. Marinescu, A. Teisanu, „The influence of processing conditions on the structure and properties of 3D graphene”, 28th International Conference on Diamond and Carbon Materials, 3-7 September 2017, Goteborg, Sweden
- L.M. Veca, F. Nastase, C. Banciu, C. Pachi, R. Popa, T. Sandu, C. Romanitan, A. Dinescu, „Macroporous hybrids of ZnO and 3D graphene: a new material for electrode technologies”, 28th International Conference on Diamond and Carbon Materials, 3-7 September 2017, Goteborg, Sweden
- C. Banciu, A. Bara, E. Chitanu, M. Lungulescu, I. Ion, L. Leonat, "Filtering membranes based on electrospun expanded polystyrene/ $\beta$ -cyclodextrin fibers", The 10th International Symposium on ADVANCED TOPICS IN ELECTRICAL ENGINEERING, 23-25 March 2017, Bucharest, Romania
- E. Chitanu, A. Bara, D. Patroi, V. Marinescu, M. M. Codescu, C. Banciu, "PAN/ZnO composite electrospun fibers for UV shielding applications", The 10th International Symposium on ADVANCED TOPICS IN ELECTRICAL ENGINEERING, 23-25 March 2017, Bucharest, Romania
- C. Banciu, A. Bara, M. Lungulescu, L. Leonat, "Graphene network investigation by Raman spectroscopy", 3rd International Conference on Analytical Chemistry ROICAC 2016, 28-31 August 2016, Iasi, Romania
- A. Bara, C. Banciu, V. Marinescu, C. Morari, D. Patroi, "Influence of Fe catalyst morphology on the growing of carbon nanotubes", 3rd International Conference on Nanotechnologies and Biomedical Engineering, 23-26 September 2015, Chisinau, Republic of Moldova
- A. Bara, E. Chitanu, C. Banciu, V. Marinescu, V. Tsakiris, "Polyacrylonitrile-based Electrospun Fibers", The 9th International Symposium on ADVANCED TOPICS IN ELECTRICAL ENGINEERING, 7-9 May 2015, Bucharest, Romania
- C. Banciu, A. Bara, L. Leonat, D. Patroi, "Carbon fiber composites for CO<sub>2</sub> adsorption", 11th International Conference on Carbon Dioxide Utilization - ICCDU XI, 27-30 June 2011, Dijon, France
- A. Bara, C. Banciu, D. Patroi and C. Panaitescu, "Influence of CNTs addition on the mesophase development in petroleum pitch. An optical microscopy study", 62nd Meeting of the International Committee for Coal And Organic Petrology (ICCP), Abstracts, p. 90-92, 26 September - 2 October 2010, Belgrad, Serbia

#### Honours and awards

- Gold medal at International Exhibition of Inventions PRO INVENT 2017, Cluj-Napoca, Romania for the patent "Supercapacitor with gel electrolyte", authors Iordoc Mihai Nicolae, Teisanu Aristofan Alexandru, Bara Adela, Prioteasa Paula Ionela, Banciu Cristina Antonela
- Gold medal at International Exhibition of Inventions PRO INVENT 2017, Cluj-Napoca, Romania for the patent "Composite material for structural elements in space vehicles with shielding properties from ionizing and electromagnetic radiation", authors Teisanu Aristofan Alexandru, Bara Adela, Iordoc Mihai Nicolae, Prioteasa Paula Ionela, Caramitu Alina Ruxandra, Mitrea Sorina, Banciu Cristina Antonela
- Silver medal at International Exhibition of Inventions Geneva 2017 for the patent "Supercapacitor with gel electrolyte", authors Iordoc Mihai Nicolae, Teisanu Aristofan Alexandru, Bara Adela, Prioteasa Paula Ionela, Banciu Cristina Antonela
- Gold medal at International Exhibition of Inventions PRO INVENT 2016, Cluj-Napoca, Romania for the patent "The process for obtaining a carbon-carbon composite", authors Bara Adela, Banciu Cristina, Patroi Delia, Leonat Lucia Nicoleta, Rimbu Gimi Aurelian
- Special award at International Exhibition of Inventions PRO INVENT 2016, Cluj-Napoca, Romania for the patent "The process for obtaining a carbon-carbon composite", authors Bara Adela, Banciu Cristina, Patroi Delia, Leonat Lucia Nicoleta, Rimbu Gimi Aurelian
- Silver medal at International Exhibition of Inventions Geneva 2016 for the patent "Porous carbon materials with carbon fibers and process for their obtaining", authors Banciu Cristina, Bara Adela, Patroi Delia, Leonat Lucia

- Gold medal at International Competition Brussels EUREKA 2015 for the patent "The process for obtaining a carbon-carbon composite", authors Bara Adela, Banciu Cristina, Patroi Delia, Leonat Lucia Nicoleta, Rimbu Gimi Aurelian
- Silver medal at "INVENTIKA 2010" for the patent "Carbonic composite material for conductive pastes", authors: Adela Bara, Cristina Banciu, Ana-Maria Bondar

#### Memberships

- Member of professional associations: Romanian Society of Carbonic Materials, Romanian Society of Magnetic Materials, Romanian Alliance for Hydrogen and Fuel Cells - H2FC-RO, Romanian Ceramic Society

#### Courses and Certifications

- Certificate obtained at "Introduction course in documents elaboration of quality and environment management system", June 7th 2002
- Participation to the course "Elaboration of a business plan", The Chamber of Commerce and Industry of Romania and Bucharest, January 2003
- Training in the frame of NATO Science for Peace 974214 Project, at Leeds University, Materials Department (20 June - 03 July 2004), tutor: Prof. Brian Rand, referring to study of some characterization techniques (optical microscopy, atomic force microscopy, transmission electron microscopy and scanning electron microscopy).
- Certificate obtained at "Entrepreneurship competences Course", July 26th 2011
- Certificate of Training on First Nano EasyTube 2000 System for Carbon Nanotube and Graphene Chemical Vapor Deposition, August 10th 2011
- Certificate obtained at "Project Manager Course", 04-10th June 2015

#### Patents

- C. Banciu, A. Bara, D. Patroi, L. Leonat, "Porous carbon materials with carbon fibers and process for their obtaining", OSIM Patent no. 127500 / 29.04.2016;
- A. Bara, C. Banciu, D. Patroi, G.A. Rimbu, "A process for producing a carbon-carbon type composite", OSIM Patent no. 126305 / 28.08.2015;
- Rimbu Gimi, Borbath Istvan, Boros Tiberiu, Iordache Iulian, Teisanu Alexandru, Radu Vasilescu-Mirea, Iordoc Mihai, Bara Adela, Banciu Cristina, "Electroconductive material based on epoxy resins and conductive fillers for fuel cells", OSIM Patent no. 127059 / 30.04.2014;
- Adela Bara, Cristina Banciu, Ana Maria Bondar, "Composition based on petroleum pitch and carbon nanotubes, and process for obtaining", OSIM Patent no. 125532 B1 / 30.06.2011;
- Adela Bara, Cristina Banciu, Ana Maria Bondar, "Carbonic nanocomposite material, for conductive pastes", OSIM Patent no. 122996 B1 / 30.06.2010;
- Cristina Banciu, Gimi A. Rimbu, Ana Maria Bondar, Elena Enescu, Ioan Stamatina, "Carbonic nanocomposite material", OSIM Patent no. 122293 B1 / 30.03.2009.

1<sup>st</sup> February 2018

