Europass Curriculum Vitae

Personal information

First name(s) / Surname(s)	**Anca FILIMON**
Address(es)	Al. O. Teodoreanu Street 16, Iasi, Romania
Telephone(s)	+40 232 217 454 Mobile: +40 724 638 409
Fax	+40 232 211 299
E-mail	afilimon@icmpp.ro, capataanca@yahoo.com
Date/place of birth	November 7, 1977 / Comanesti, Romania
Nationality/Status	Romanian/Married, 1 child

Work experience

Dates	2018-present
Occupation or position held	Scientific Researcher III
Main activities and responsibilities	Polymer materials with smart properties; Micro- and nanomodelling studies for membrane technology; new high-performance polymer materials for applications as membranes in different fields (biomedical, environmental) Leader of a specialized research group in characterization of the macromolecular compounds in solution/solid states Projects coordinator
Name and address of employer	"Petru Poni" Institute of Macromolecular Chemistry, Physical Chemistry of Polymers Department
Type of business or sector	Research
Dates	2011-2018
Occupation or position held	Scientific Researcher
Main activities and responsibilities	Interdisciplinary researches for theoretical and experimental substantiations of the processes and technologies at nano-, micro- and macro-scales Leader of a specialized research group in characterization of the macromolecular compounds in solution and solid states Projects coordinator
Name and address of employer	"Petru Poni" Institute of Macromolecular Chemistry, Physical Chemistry of Polymers Department
Type of business or sector	Research
Dates	2009-2011
Occupation or position held	Scientific Researcher
Main activities and responsibilities	Temporary interruption of research activity – maternity leave
Name and address of employer	Petru Poni" Institute of Macromolecular Chemistry, Physical Chemistry of Polymers Department
Dates	2008-2009
Occupation or position held	Scientific Researcher
Main activities and responsibilities	Basic/applied research in polymer science - development of new strategies to achieve the complex architectures with well-defined functionality and various applications
Name and address of employer	"Petru Poni" Institute of Macromolecular Chemistry, Physical Chemistry of Polymers Department

Type of business or sector	Research
Dates	2005-2008
Occupation or position held	Research Assistant
Main activities and responsibilities	Fundamental research in polymer science: - physical-chemical characterization of some complex polymer systems by different experimental techniques -thermodynamics of multicomponent polymer systems in solution/solid states
Name and address of employer	"Petru Poni" Institute of Macromolecular Chemistry, Physical Chemistry of Polymers Department
Type of business or sector	Research
Dates	2004-2005
Occupation or position held	Trainee Research Assistant
Main activities and responsibilities	Fundamental research in polymer science
Name and address of employer	"Petru Poni" Institute of Macromolecular Chemistry, Physical Chemistry of Polymers Department
Type of business or sector	Research

Education and training

Dates	2003-2009
Title of qualification awarded	Doctor in Chemistry
Principal subjects/occupational skills covered	Polymer's conformation in solution under the influence of the solvent, concentration and temperature/ extramural PhD student
Name and type of organisation providing education and training	Romanian Academy, "Petru Poni" Institute of Macromolecular Chemistry, Iasi
Dates	2002-2004
Title of qualification awarded	Master Degree
Principal subjects/occupational skills covered	Theoretical and experimental aspects concerning polysulfones behavior in the solution
Name and type of organisation providing education and training	"Al. I. Cuza" University of Iasi, Faculty of Chemistry Section: Dynamics and analysis of chemical systems
Dates	1998-2002
Title of qualification awarded	Bachelor Degree in Chemistry and Physics
Name and type of organisation providing education and training	"Al. I. Cuza" University of Iasi, Faculty of Chemistry Section: Physical Chemistry
Dates	1992-1996
Title of qualification awarded	High School
Name and type of organisation providing education and training	"Spiru Haret" Moinesti, Bacau Section: Mathematical Physics

Personal skills and competences

Mother tongue(s)	Romanian
Other language(s)	English and French
Social skills and competences	Team spirit and good communication Communication skills for the public of different degrees of educational development

Organisational skills and competences	Managerial competencies at project level (3 as project leader; 4 as member)/institutional (leader of a research group, the guidance of some PhD students; bachelor/master project co-coordonator)
Technical skills and competences	Trained to use the following instruments: - Schott viscometer (investigation of conformational changes of multicomponent polymeric systems in dilute solution); - Bohlin CS50 rheometer (study of viscoelasticity and flow behavior of semi-concentrated polymer solutions); - Zeiss interferometer, echilibrium dialysis, and refractometer (study of refractive index, refractive index increment of the polymer in solvent mixtures, and preferential adsorption coefficients); - InoLab 740 Multimeter (study of ionic transport processes developed in ternary systems); - Osmometer with membranes (study of interactions - intra- and intermolecular, electrostatic - and associations between polymer chains and solvent); - Electro-Spinner STARTER KIT V2 (fabrication fibrous polymeric scaffolds by the electrospinning technique).
Computer skills and competences	Windows OS, MS Office, SciFinder, HyperChem, specific softwares for mathematical simulations.
Additional information	Member of the Romanian Chemical Society (since 2005) Member of Romanian Society of Rheology (since 2009) Over 45 papers for ISI journals, books (as author/co-author or editor) (4) and book chapters (20) National and international conferences (over 100 - as author and/or speaker) Total number of citations (without self-citations): 148 Hirsch Index according to Web of Science: 11 Coordinator of national research projects or member in project team: 7 (3 project leader) Evaluator projects (2017 – national, 2018-2019 – international) Reviewer of prestigious scientific journals (over 50, e.g., J. Membr. Sci., Colloids Surf. B-Biointerfaces, Int. J. Polym. Sci., Carbohydr. Polym., Biomedicines, Pharmaceutics, Polymers, Materials, Coatings etc.)
Annexes	List of papers List of projects

List of ISI publications (2005-2021)

1. Influence of Substitution Degree to the Optical Properties of Chloromethylated Polysulfone, S. Ioan, A. Filimon, E. Avram, J. Macromol. Sci. Part. B: Phys., 2005, 44, 129-135.
2. Influence of the Degree of Substitution on the Solution Properties of Chloromethylated Polysulfone, S. Ioan, A. Filimon, E. Avram, J. Appl. Polym. Sci., 2006, 101, 524-531.
3. Conformational and Viscometric Behavior of Quaternized Polysulfone in Dilute Solution, S. Ioan, A. Filimon, E. Avram, Polym. Eng. Sci., 2006, 46, 828-835.
4. Contribution of Chain Ends and Chain Stiffness on the Solution Properties of Polysulfone, A. Filimon, E. Avram, S. Ioan, Polym.-Plast. Technol. Eng., 2007, 46, 251-256.
5. Effects of Chemical Structure and Plasma Treatment on the Surface Properties of Polysulfones, S. Ioan, A. Filimon, E. Avram, G. Ioanid, e-Polymers, ISSN 1618– 7229, 2007, no. 031, 1-13.
6. Influence of Mixed Solvents and Temperature on the Solution Properties of Quaternized Polysulfones, A. Filimon, E. Avram, S. Ioan, J. Macromol. Sci. Part B: Phys., 2007, 46, 503-520.
7. Properties of Some Poly(siloxane)s for Optical Applications, C. E. Brunchi, A. Filimon, M. Cazacu, S. Ioan, High Performance Polymers, 2009, 21(1), 31-47.
8. Specific Interactions in Ternary System Quaternized Polysulfones/Mixed Solvent, A. Filimon, E. Avram, S. Ioan, Polym. Eng. Sci., 2009, 49, 17-25.
9. Surface Properties and Antibacterial Activity of Quaternized Polysulfones, A. Filimon, E. Avram, S. Dunca, I. Stoica, S. Ioan, J. Appl. Polym. Sci., 2009, 112(3), 1808-1816.
10. Effect of Alkyl Radical on the Conformational Properties of Polysulfones with Quaternary Groups, A. Filimon, R. M. Albu, E. Avram, S. Ioan, J. Macromol. Sci. Phys. Part B: Phys., 2010, 49, 207-217.

11. Impact of Association Phenomena on the Thermodynamic Properties of Modified Polysulfones in Solutions, A. Filimon, R. M. Albu, E. Avram, S. Ioan, J. Macromol. Sci. Phys. Part B: Phys., 2013, 52, 545–560.
12. Structure-Rheology Relationship in Complex Quaternized Polysulfones/Solvent/Nonsolvent Systems, A. Filimon, E. Avram, S. Ioan, Polym. Bull., 2013, 70, 1835–1851.
13. Origin of Rheological Behavior and Surface/Interfacial Properties of Some Semi-Alicyclic Polyimides for Biomedical Applications, S. Ioan, A. Filimon, C. Hulubei, I. Stoica, S. Dunca, Polym. Bull., 2013, 70, 2873–2893.
14. Rheological and Morphological Characteristics of Multicomponent Polysulfone/Poly(vinyl alcohol) Systems, A. Filimon, E. Avram, I. Stoica, Polym. Int., 2014, 63, 1856-1868.
15. Ionic Polymers Based on Quaternized Polysulfones: Hydrodynamic Properties of Polymer Mixtures in Solution, A. Filimon, A. M. Dobos, E. Avram, S. Ioan, Pure Appl. Chem., 2014, 86, 1871-1882.
16. Surface and Interface Properties of Functionalized Polysulfones: Cell-Material Interaction and Antimicrobial Activity, A. Filimon, E. Avram, S. Dunca, Polym. Eng. Sci., 2015, 55, 2184-2194.
17. Synthesis, Characterization, and Solution Behavior of Pullulan Functionalized with Tertiary Amino Groups, M. Constantin, I. Asmarandei, A. Filimon, Gh. Fundueanu, High Perform. Polym., 2015, 27, 625–636.
18. Maximizing Performance of the Membranes Based on Quaternized Polysulfones/Polyvinil Alcohol for Biomedical Applications: Rheologica Investigations, A. Filimon, R. M. Albu, E. Avram, World Academy of Science, Engineering and Technology International Journal of Chemical, Molecular, Nuclear, Materials and Metallurgical Engineering, 2015, 9(6), 764-767.
19. Blends Based on Ionic Polysulfones with Improved Conformational and Microstructural Characteristics: Perspectives for Biomedical Applications, A. Filimon, R. M. Albu, I. Stoica, E. Avram, Compos. B: Eng., 2016, 93, 1-11.
20. Optical and Electronic Properties of Quaternized Polysulfone/Polyvinyl Alcohol Blends in Relation to Structure of the Polymers, L. I. Buruiana, E. Avram, V. E. Musteata, A. Filimon, Mater. Chem. Phys., 2016, 177, 442–454.
21. Electrospun Fibers Containing Cationic Quaternary Ammonium Derivatives with Antibacterial Activity, A. Filimon, E. Avram, N. Olaru, F. Doroftei, S. Dunca, Proceeding of EHB (International Conference on E-Health and Bioengineering), Art. No. 7391562, 2016, doi: 10.1109/EHB.2015.7391562.
22. Impact of Surface Properties of Blends Based on Quaternized Polysulfones on Modeling and Interpretation the Interactions with Blood Plasma, A. M. Dobos, A. Filimon, E. Avram, G. E. Ioanid, Proceeding of EHB (International Conference on E-Health and Bioengineering), Art. No. 7391423, 2016, doi:10.1109/EHB.2015.7391423.
23. Ionic Transport Processes in Polymer Mixture Solutions Based on Quaternized Polysulfones, A. Filimon, A.M. Dobos, E. Avram, J. Chem. Thermodyn., 2017, 106, 160–167.
24. Control of Surface Properties of Charged Polysulfone/Cellulose Acetate Phthalate Films with Implications in Water Treatment, M.-D. Onofrei, A. Filimon, I. Stoica, Rom. Rep. Phys., 2017, 69(4), Art. No. 713, 1-10.
25. Predictive Methods of Some Optoelectronic Properties for Blends Based on Quaternized Polysulfones, A. M. Dobos, A. Filimon, Chem. Phys., 2017, 498–499, 1-6.
26. Quaternized Polysulfones-Based Blends: Surface Properties and Performance in Life Quality and Environmental Applications, A. Filimon, I. Stoica, M. D. Onofrei, A. Bargan, S. Dunca, Polym. Test., 2018, 71, 285-295.
27. New Perspectives on Development of Polysulfones/Cellulose Derivatives based Ionic-Exchange Membranes: Dielectric Response and Hemocompatibility Study, A. Filimon, A.M. Dobos, V. Musteata, Carbohydr. Polym., 2019, Art. No. 115300, 226.
28. A.M. Dobos, A. Filimon, A. Bargan, M.F. Zaltariov, New Approaches for the Development of Cellulose Acetate/Tetraethyl Orthosilicate Composite Membranes: Rheological and Microstructural Analysis, J. Mol. Liq., 2020, Art. No. 113129, 309.
29. A. Filimon , N. Olaru, F. Doroftei, A. Coroaba, S. Dunca Processing of Quaternized Polysulfones Solutions as Tool in Design of Electrospun Nanofibers: Microstructural Characteristics and Antimicrobial Activity, J. Mol. Liq., 2021, Art. No. 115664, 330.
30. L. Lupa, A. Filimon, A. Popa, S. Dunca, Development of Adsorbent Materials Based on Functionalized Copolymers with Future Applications as Antibacterial Agent in Life Quality and Environmental Field, React. Funct. Polym., 2021, Art. No. 104845, 161.

Books

1. Structural Features of High Performance Polymers with Biomedical Applications, Anca Filimon, PIM – CNCSIS Bucuresti, ISBN: 978-606-13-2643-3, 2015.
2. SMART MATERIALS: Integrated Design, Engineering Approaches, and Potential Applications, Ed. Anca Filimon, Apple Academic Press, Taylor and Francis Group, ISBN: 13: 978-1-351-16796-3 (eBook); 13: 978-1-77188-687-1, 2018.

Book chapters

1. S. Ioan, A. Filimon
   Biocompatibility and Antimicrobial Activity of Some Quaternized Polysulfones, in: A Search for Antibacterial Agents/Book 2, Ed. InTech, ISBN: 978-953-51-0724-8, 2012, Ch. 13, pg. 249-274.
2. E. Avram, A. Filimon
   Aromatic Linear Polysulfones with Pendant Functional Groups, in: Functionalized Polysulfones: Synthesis, Characterization, and Applications, Ed. Taylor and Francis, CRC Press, ISBN: 978-148-22-5554-6, 2015, Ch. 2, pg. 3-35.
3. A. Filimon
   Mathematical Models and Numeric Simulations of Specific Interactions in Solutions of Modified Polysulfones, in: Functionalized Polysulfones: Synthesis, Characterization, and Applications, Ed. Taylor and Francis, CRC Press, ISBN: 978-148-22-5554-6, 2015, Ch. 3, pg. 37-96.
4. A. Filimon, R. M. Albu, S. Ioan
   Structure-Properties Relationships of Functionalized Polysulfones, in: Functionalized Polysulfones: Synthesis, Characterization, and Applications Ed. Taylor and Francis, CRC Press, ISBN: 978-148-22-5554-6, 2015, Ch. 4, pg. 97-123.
5. A. Filimon, S. Ioan
   Antimicrobial Activity of Polysulfone Structures, in: Functionalized Polysulfones: Synthesis, Characterization, and Applications, Ed. Taylor and Francis, CRC Press, ISBN: 978-148-22-5554-6, 2015, Ch. 9, pg. 255-280.
6. A. Filimon
   Perspectives of Conductive Polymers Toward Smart Biomaterials for Tissue Engineering, in: Conducting Polymers, Ed. InTech, ISBN 978-953-51-2690-4, 2016, Ch. 6, pg. 119-143.
7. A. Filimon
   Conformational Restructuration of Ionic Polysulfones in Solution: Perspectives towards Smart Biomaterials, in: Solution Chemistry: Advances in Research and Applications, Ed. Nova Science Publishers Inc., ISBN: 978-1-53613-102-4, 2018, Ch. 5, pg. 133-158.
8. A. Popa, A. Filimon, L. Lupa
   Polysaccharide-based Ionic Polymer Metal Composite Actuators, Ionic Polymer Metal Composites for Sensors and Actuators, Ed. Springer, ISBN-13: 978-3030137274, 2019, Ch. 2, pg. 19-34.
9. A. M. Dobos, A. Filimon
   Role of Metal Ion Implantation on Ionic Polymer Metal Composite Membranes, in: Ionic Polymer Metal Composites for Bending Actuator Applications, Ed. Springer, ISBN-13: 978-3030137274, 2019, Ch. 4, pg. 53-73.
10. A. Filimon, A. M. Dobos, O. Dumbrava, A. Popa
    Application of Electrospun Materials in Bioinspired Systems in: Electrospun Materials and their Allied Applications, Ed. Wiley, ISBN: 978-1-119-65486-5, 2020, Ch. 11, pg. 307-351.
11. A. M. Dobos, M. D. Onofrei, A. Filimon
    Sustainable Eco-Friendly Polymer-Based Membranes Used in Water Depollution for Life Quality Improvement, in Green Polymer Chemistry and Composites: Pollution Prevention and Waste Reduction, Ed. CRC Press Taylor and Francis Group, New York, ISBN: 9781771889377, 2021, Ch. 12, pg. 225-268.

List of projects

1. **CERES no 69/2002 (Additional Act no 3/2004):** "*Polymers with special architectures. Synthesis, characterization, properties, new fields of use*" (member in project team)
2. **CEEX no 6948/2006-2008 no. 54/2006**: "*Integrated multifunctional technology for the conservation of the national cultural heritage*" (member in project team)
3. **CNCSIS no 104 GR/2007-2008**: "*Properties of polymers with special architectures for biomedical applications*" (member in project team)
4. **PN-II-RU-TD-2007-2: CNCSIS-TD 2007-2009/no. 489/2007:** "*Conformation of polymers in solution under the influence of solvent, concentration and temperature*" (project leader)
5. **PN-II-ID-PCE-2011-3-0937/ 2011-2014 / CNCSIS-PCE, no. 302/05.10.2011:** "*Complex systems based on polymers containing alicyclic structures for high performance materials"* (member in project team)
6. **PN-II-RU-TE-2012-3-0143/ 2013-2016, no 62/2013:** *"High performance polymeric biomaterials based on functionalized polysulfones with medical applications"* (project leader)
7. **PN-III-P2-2.1-PED-2019-3013/ no. 310PED/2020**, *"New "green" technology for advanced water treatment based on functionalized polysulfones/ionic liquids membranes" (GreenTechMembr),* (project leader)

July 2021