



Europass

Curriculum Vitae

Personal information

First name(s) / Surname(s) **DENIS MIHAELA PANAITESCU**

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Nationality Romanian

Date of birth

Gender Feminine

Work experience

Dates 2014 - present

Occupation or position held senior researcher (first degree)

Main activities and responsibilities

- Preparation and surface modification of cellulose nanofibers;
- Preparation and characterization of nanocomposites from aliphatic polyesters and nanocellulose

Name and address of employer

National Institute of Research and Development in Chemistry and Petrochemistry, ICECHIM

Type of business or sector

Research & Development (in engineering sciences)

Dates 2001 – 2013

Occupation or position held senior researcher (second degree)

Main activities and responsibilities

- Isolation and characterization of cellulose micro- and nanofibers from different renewable resources;
- Obtaining and characterization of biodegradable polymer nanocomposites with cellulose micro- and nanofibers;
- Preparation and characterization of polymer nanocomposites based on polyolefins, polyamides or thermoplastic elastomers and nanofillers;

Name and address of employer

National Institute of Research and Development in Chemistry and Petrochemistry, ICECHIM

Type of business or sector

Research & Development (in engineering sciences)

Dates 1990 - 2001

Occupation or position held senior researcher (third degree)

Main activities and responsibilities

- Preparation and characterization of polymer composites based on ABS, polyethylene, polypropylene, epoxy and conductive fillers;
- Preparation and characterization of conductive polymers and composites, development of new materials for electrical engineering; polymer composites with EMI shielding.

Name and address of employer

Chemical Research Institute ICECHIM

Type of business or sector

Research & Development (in engineering sciences)

Dates 1982 - 1990
 Occupation or position held chemical engineering/research assistant
 Main activities and responsibilities

- Designing PVC compounds with high impact and thermal resistance;
- Study of compatibility in polymer alloys; physical and rheological characterization of polymers for extrusion-thermoforming

 Name and address of employer Chemical Research Institute ICECHIM
 Type of business or sector Research & Development (in engineering sciences)

Dates 1980-1982
 Occupation or position held chemical engineer
 Main activities and responsibilities Compounds with polybutadiene and natural rubber: processing and characterization.
 Name and address of employer U. Chimice Romane
 Type of business or sector Products from rubber

Education and training

Dates 1996 – 2001
 Title of qualification awarded PhD Diploma
 Principal subjects/occupational skills covered *Polymer composites with enhanced electrical conductivity – PhD Thesis*
 Name and type of organisation providing education and training University Politehnica of Bucharest, Electrotechnical Faculty, Materials for Electrical Engineering Division

Dates 1975-1980
 Title of qualification awarded Engineer Diploma
 Principal subjects/occupational skills covered Technology of macromolecular compounds, polymer characterization
 Name and type of organisation providing education and training University Politehnica of Bucharest, Faculty of Industrial Chemistry, Technology of Macromolecular Compounds

Personal skills and competences

Mother tongue(s) **Romanian**

Other language(s) **English, French**

Self-assessment European level (*)	Understanding		Speaking				Writing			
	Listening	Reading	Spoken interaction		Spoken production					
French	C2	Mastery	C2	Mastery	C2	Mastery	C2	Mastery	C2	Mastery
English	C2	Mastery	C2	Mastery	C1	Proficient user	C1	Proficient user	C2	Mastery

(*) *Common European Framework of Reference for Languages*

Technical skills and competences	<p>Development and modernization of two laboratories: one laboratory of Polymer Processing and one for Polymer Characterization</p> <p>Over 20 years experience in the polymer composites and nanocomposites preparation and characterization</p> <p>Isolation and characterization of cellulosic micro- and nanostructures</p> <p>Development of new technological solutions for polymer composites processing</p> <p>Biodegradable materials based on renewable fillers for packaging industry</p> <p>New polymer nanocomposites with inorganic fillers for electrical applications</p> <p>Characterization of nanocomposite materials through different techniques like: AFM, contact angle, mechanical characterization</p> <p>Characterization by Peak Force QNM – AFM technique</p>
Computer skills and competences	<p>Word, Excel, Power Point, ChemWin, specific soft for Instron Testing Machine, specific soft for Contact Angle Measurements Apparatus, soft for MultiMode AFM Microscope.</p>
Other skills and competences	<p>Scientific skills:</p> <p>Graduation of a course of project management</p>
Driving licence	-
Additional information	<ul style="list-style-type: none"> • Member of the Chemical Romanian Society (SchR, 2007) • Reviewer for international journals: Cellulose, Industrial Crops and products, Carbohydrate Polymers, RSC Advances, Journal of Applied Polymer Science, Bioresources
Annexes	Annex 1- List with the most relevant publications in the last 5 years

ANNEX 1

1. I. Chiulan, D. M. Panaitescu, E.-R. Radu, S. Vizireanu, V. Sătulu, B. Biță, R. A. Gabor, C. A. Nicolae, M. Raduly, V. Rădițoiu, Influence of TEMPO oxidation on the properties of ethylene glycol methyl ether acrylate grafted cellulose sponges, **Carbohydrate Polymers**, 272, 2021, 118458
2. Panaitescu, D.M., Nicolae, C.A., Melinte, V., ...Oprea, M., Buruiana, T. Influence of microfibrillated cellulose and soft biocomponent on the morphology and thermal properties of thermoplastic polyurethanes, **Journal of Applied Polymer Science**, 2021, 138(37), 50951
3. Radu, E.-R., Panaitescu, D.M., Nicolae, C.-A., ...Fierăscu, R., Chiulan, I. The Soil Biodegradability of Structured Composites Based on Cellulose Cardboard and Blends of Polylactic Acid and Polyhydroxybutyrate, **Journal of Polymers and the Environment**, 2021, 29(7), 2310–2320
4. Panaitescu, D.M., Trusca, R., Gabor, A.R., Nicolae, C.A., Casarica, A. Biocomposite foams based on polyhydroxyalkanoate and nanocellulose: Morphological and thermo-mechanical characterization, **International Journal of Biological Macromolecules**, 2020, 164, pp. 1867–1878
5. Frone, A.N., Nicolae, C.A., Eremia, M.C., ...Damian, C.M., Panaitescu, D.M. Low molecular weight and polymeric modifiers as toughening agents in poly(3-hydroxybutyrate) films, **Polymers**, 2020, 12(11), 2446
6. Panaitescu, D.M., Fierascu, R.C., Gabor, A.R., Nicolae, C.A. Effect of hemp fiber length on the mechanical and thermal properties of polypropylene/SEBS/hemp fiber composites, **Journal of Materials Research and Technology**, 2020, 9(5), 10768–10781
7. Panaitescu, D.M., Vizireanu, S., Stoian, S.A., Nicolae C.A., Gabor A.R., Damian C.M., Trusca R., Carpen, L.G., Dinescu, G. Poly(3-hydroxybutyrate) modified by plasma and TEMPO-oxidized celluloses, **Polymers** 2020, 12(7), 1510
8. Oprea, M., Panaitescu, D.M., Nicolae, C.A., Trusca, R., Casarica, A. Nanocomposites from functionalized bacterial cellulose and poly(3-hydroxybutyrate-co-3-hydroxyvalerate) **Polymer Degradation and Stability** 2020, 179, 109203
9. Frone, A.N., Panaitescu, D.M., Nicolae C.A., Gabor A.R., Trusca R., Casarica A., Stanescu P.A., Baci D.D., Salageanu A. Bacterial cellulose sponges obtained with green cross-linkers for tissue engineering, **Materials Science and Engineering C**, 2020, 110, 110740
10. Panaitescu, D.M., Nicolae, C.A., Gabor A.R., Trusca R. Thermal and mechanical properties of poly(3-hydroxybutyrate) reinforced with cellulose fibers from wood waste, **Industrial Crops and Products**, 2020, 145, 112071
11. Fierascu, I., Fierascu, R.C., Stirban, A., Panaitescu D.M., Nicolae C.A., Raditoiu V., Zgarciu M.S., Leahu A.C. Chemical and mineral characterization of Romanian book paper materials (XVII–XIXth century), **Microchemical Journal**, 2020, 152, 104307
12. Frone, A.N., Batalu, D., Chiulan, I., Oprea M., Gabor A.R., Nicolae C.A., Raditoiu V., Trusca R., Panaitescu D.M. Morpho-structural, thermal and mechanical properties of PLA/PHB/Cellulose biodegradable nanocomposites obtained by compression molding, extrusion, and 3d printing, **Nanomaterials**, 2020, 10(1), 51
13. Chiulan, I., Panaitescu, D.M., Radu, E.-R., Frone A.N., Gabor R.A., Nicolae C.A., Jinescu G., Tofan, V., Chinga-Carrasco, G. Comprehensive characterization of silica-modified silicon rubbers, **Journal of the Mechanical Behavior of Biomedical Materials** 2020, 101, 103427
14. Frone, A.N., Panaitescu, D.M., Chiulan, I., Gabor, A.R., Nicolae, C.A., Oprea, M., Ghiurea, M., Gavrilescu, D., Puitel, A.C. Thermal and mechanical behavior of biodegradable polyester films containing cellulose nanofibers **Journal of Thermal Analysis and Calorimetry** 2019, 138(4), 2387-2398 DOI: 10.1007/s10973-019-08218-4;
15. Stoian S.A., Gabor, A.R., Albu A.M., Nicolae, C.A., Raditoiu V., Panaitescu, D.M., Recycled polypropylene with improved thermal stability and melt processability, **Journal of Thermal Analysis and Calorimetry** 2019, 138(4), 2469-2480
16. Zaharescu, T., Dumitru, A., Marinescu, V., Panaitescu, D., Sbarcea, G. Radiochemical stability and lifetime of HDPE-based flexible composite filled with Ce-doped PbZrTiO₃, **Journal of Thermal Analysis and Calorimetry**, 2019, 138(4), 2419-2428
17. D. M. Chipara, D. M. Panaitescu, K. Lozano, R. A. Gabor, C. A. Nicolae, M. Chipara, Raman spectroscopy and molecular bases of elasticity: SEBS-graphite composites, **Polymer** 2019, 176, 74-88.

18. D. M. Panaitescu, Z. Vuluga, C. G. Sanporean, C. A. Nicolae, A. R. Gabor, R. Trusca, High flow polypropylene/SEBS composites reinforced with differently treated hemp fibers for injection molded parts, **Composites Part B: Engineering** 2019, 174, 107062
19. A.N. Frone, D.M. Panaitescu, I. Chiulan, C.A. Nicolae, A. Casarica, A.R. Gabor, R. Trusca, C.M. Damian, V. Purcar, E. Alexandrescu, P.O. Stanescu, Surface treatment of bacterial cellulose in mild, eco-friendly conditions, **Coatings** 8(6) 2018, 221.
20. Panaitescu, D.M., Vizireanu, S., Nicolae, C.A., Frone A.N., Nicolae C.A., Casarica A., Carpen, L.G., Dinescu, G. Treatment of nanocellulose by submerged liquid plasma for surface functionalization, **Nanomaterials** 2018, 8(7),467
21. Panaitescu, D.M., Ionita, E.R., Nicolae, C.A., Gabor, A.R., Ionita, M.D., Trusca, R., Lixandru, B.E., Codita, I., Dinescu, G., Poly(3-hydroxybutyrate) Modified by Nanocellulose and Plasma Treatment for Packaging Applications, **Polymers** 2018, 10 (11), 1249.
22. D. M. Panaitescu, R. Au. Gabor, C. A. Nicolae, A. C. Parau, C. Vitelaru, V. Raditoiu, M. Chipara, Block Copolymer Elastomer with Graphite Filler: Effect of processing conditions and silane coupling agent on the composite properties, **Polymers** 2018, 10(1), 46.
23. I. Chiulan, A. N. Frone, Denis Mihaela Panaitescu, C. A. Nicolae, R. Trusca, Surface properties, thermal, and mechanical characteristics of poly(vinyl alcohol)-starch-bacterial cellulose composite films, **Journal of Applied Polymer Science** 2018, 135(6),45800
24. S. Vizireanu, D. M. Panaitescu, C. A. Nicolae, A. N. Frone, I. Chiulan, M. D. Ionita, V. Satulu, L. G. Carpen, S. Petrescu, R. Birjega, G. Dinescu, Cellulose defibrillation and functionalization by plasma in liquid treatment, **Scientific Reports**, 8, 15473 (2018)
25. Panaitescu, D.M.; Frone, A.N.; Chiulan, I.; Nicolae, C.A.; Trusca, R.; Ghiurea, M.; Gabor, A.R.; Mihailescu, M.; Casarica, A.; Lupescu, I., Role of bacterial cellulose and poly (3-hydroxyhexanoate-co-3-hydroxyoctanoate) in poly (3-hydroxybutyrate) blends and composites. **Cellulose** 2018, 25, 5569–5591.
26. I. Chiulan, A. N. Frone, C. Brandabur, D. M. Panaitescu, Recent Advances in 3D Printing of Aliphatic Polyesters, **Bioengineering** 2018, 5(1), 2
27. Panaitescu, D.M., Lupescu, I., Frone, A.N., Chiulan, I., Nicolae, C.A., Tofan, V., Stefaniu, A., Somoghi, R, Trusca, R. Medium chain-length polyhydroxyalkanoate copolymer modified by bacterial cellulose for medical devices. **Biomacromolecules** 2017, 18, 3222–3232.
28. Vizireanu, S., Ionita, M.D., Ionita, R.E., Stoica S., Teodorescu C. M., Husanu M. A. Apostol N.G., Baibarac M., Panaitescu, D., Dinescu, G. Aging phenomena and wettability control of plasma deposited carbon nanowall layers, **Plasma Processes and Polymers** 2017, 14(11),1700023
29. Dima, S.-O., Panaitescu, D.-M., Orban, C., Ghiurea M., Doncea S.M., Fierascu R.C., Nistor C.L., Alexandrescu E., Nicolae C.A., Trică B., Moraru, A., Oancea, F. Bacterial nanocellulose from side-streams of kombucha beverages production: Preparation and physical-chemical properties, **Polymers** 2017, 9(8), 374
30. Frone, A.N., Chiulan, I., Panaitescu, D.M., Cristian A. N., Ghiurea, M., Galan, A.-M. Isolation of cellulose nanocrystals from plum seed shells, structural and morphological characterization, **Materials Letters** 2017, 194, 160-163.
31. Panaitescu, D.M., Frone, A.N., Chiulan, I., Gabor, R.A., Spataru, I.C., Cășărică A., Biocomposites from polylactic acid and bacterial cellulose nanofibers obtained by mechanical treatment. **BioResources** 2017, 12 (1), 662-672.
32. Petcu C, Purcar V, Spătaru CI, Alexandrescu E, Șomoghi R, Trică B, Nițu SG, Panaitescu DM, Donescu D, Jecu ML.The Influence of New Hydrophobic Silica Nanoparticles on the Surface Properties of the Films Obtained from Bilayer Hybrids. **Nanomaterials** (Basel). 2017 Feb 20;7(2).
33. Panaitescu, D.M.; Nicolae, C.A.; Frone, A.N.; Chiulan, I.; Stanescu, P.O.; Draghici, C.; Iorga, M.; Mihailescu, M., Plasticized poly(3-hydroxybutyrate) with improved melt processing and balanced properties. **Journal of Applied Polymer Science** 2017, 134, 44810.