Curriculum Vitae – Cristian Peptu, PhD

1. Academic background:

2004-2011 PhD in chemistry at "Gh. Asachi" Technical University of Iasi, Iasi, Romania – thesis entitled "Synthesis of biodegradable model copolymers and their characterization at molecular level through mass spectrometry" defended on 31.01.2011;

2003 - 2004 Haut-Alsace University, Ecole Nationale Superieure de Chimie, Mulhouse, France – Master(DEA) Degree in Macromolecular Chemistry;

1996 - 2002 University of Medicine and Pharmacy, Faculty of Bioengineering, Iasi, Romania – Bioengineer Degree in Biomaterials and Prosthetics;

2. Work experience:

2019 - present	**Researcher at Institute of Macromolecular Chemistry "Petru Poni", Iasi, Romania.** Working areas: mass spectrometry characterization of polymers; supramolecular chemistry (inclusion complexes based on cyclodextrins and cyclodextrin derivatives); organic and polymer chemistry – synthesis and characterization.
2016 - 2019	**Marie Curie Fellow at Polymer Institute of Slovak Academy of Sciences - 3 years** Project number 1628/03/02; Acronym – CYCLOCORE Work: synthesis and characterization of polymer modified cyclodextrins.
2014 - 2015	**Postdoctoral researcher - WP leader** **Liposomal-cyclodextrin based formulations for transdermal pain therapy (NANODERMA)** **PN-II-PT-PCCA-2013-4-2210, contract number 276/2014** Institute of Macromolecular Chemistry "Petru Poni", Iasi, Romania. Experience: Design and preparation biocompatible and efficient polyester modified cyclodextrins; formulation of lidocaine encapsulated into modified cyclodextrins
2011-2013	**Principal investigator**

	Cyclodextrins – a "green chemistry" route to aliphatic polyesters **CNCS – UEFISCDI, project number PN-II-RU-PD-2011-3-0127** Institute of Macromolecular Chemistry "Petru Poni", Iasi, Romania. Experience: Synthesis of cyclodextrin-oligoesters and characterization through mass spectrometry and NMR
2009 - 2015	**Researcher – responsible for the mass spectrometry laboratory** Institute of Macromolecular Chemistry "Petru Poni", Iasi, Romania. Working areas: liquid chromatography mass spectrometry characterization of polymers; supramolecular chemistry (inclusion complexes based on cyclodextrins and cyclodextrin derivatives); organic and polymer chemistry.
2006 - 2009	**Marie Curie fellowship in the frame of POLYMS project.** **Full employment as researcher at "Jan Dlugosz" University of Czestochowa, Poland for 33 months.** **Secondment at Akzo Nobel Chemicals, Arnhem, Netherlands for 3 months.** Experience: specially synthesized model copolymers with suitable end groups, required molecular weight and polydispersity; polymer characterization through classical methods like GPC, NMR and MALDI-TOF-MS techniques; ESI-MS multistage analysis of the copolymers to gather insight in the fundamentals of the fragmentation processes; liquid chromatography with mass spectrometry detection for copolymer analysis
2004 -2006	**PhD student** **"Gh. Asachi"Technical University of Iasi, Iasi**, Romania. Experience: synthesis and characterization of functional siloxane polymers and copolymers
2003 - 2004	**DEA student - industrial scholarship** **Ecole Nationale Superieure de Chimie, Mulhouse**, France. Experience: chemistry of colloids; nanoparticles synthesis; characterization of polymers.

3. Track record of grants and funding;

Academic grants as Principal Investigator

- Awarded in 2016 a Marie Curie Fellowship as part of the SASPRO Programme of Slovak Academy of Sciences (Grant Agreement No.: 1628/03/02-b). Part of the research funding was received from the People Programme (Marie Curie Actions) European Union's Seventh Framework Programme under REA grant agreement No. 609427 - value of 193000 Euro - 2016-2019.
- Cyclodextrins – a “green chemistry” route to aliphatic polyesters CNCS – UEFISCDI Romania, project number PN-II-RU-PD-2011-3-0127, 68000 Euro, 2011-2013, Institute of Macromolecular Chemistry “Petru Poni”, Iasi, Romania.

4. Research stays abroad

Short stays: October - December 2019 – research stay in Alger, Algeria;March – May 2011, 2012, 2013 - Postdoctoral stays at Polish Academy of Sciences, Centre of Polymer and Carbon Materials, Zabrze, Poland; experience: synthesis and characterization of polyesters.
Long stays: 2003-2004 industrial scholarship, Mulhouse, France; 2006-2009 – Marie Curie Early stage training fellowship – Czestochowa, Poland; 2016-2019 - Marie Curie Postdoctoral Fellowship, Bratislava, Slovakia.

5. Papers list

1. **Peptu, C.,** M. Danchenko, Ľ. Škultéty and J. Mosnáček Structural Architectural Features of Cyclodextrin Oligoesters Revealed by Fragmentation Mass Spectrometry Analysis (2018) Molecules 23(9): 2259. (Impact factor - 3.098)
2. Duale, K., M. Zięba, P. Chaber, D. Di Fouque, A. Memboeuf, C. Peptu, I. Radecka, M. Kowalczuk and G. Adamus, Molecular Level Structure of Biodegradable Poly (Delta-Valerolactone) Obtained in the Presence of Boric Acid (2018) Molecules 23(8): 2034. (Impact factor - 3.098)
3. Savin, C.L., **Peptu, C**., Kroneková, Z., Sedlačík, M., Mrlik, M., Sasinková, V., Peptu, C.A., Popa, M., Mosnáček, Polyglobalide-Based Porous Networks Containing Poly(ethylene glycol) Structures Prepared by Photoinitiated Thiol-Ene Coupling (2018) Biomacromolecules, 19 (8), pp. 3331-3342. (Impact factor – 5.246)
4. Rotaru, R., Savin, M., Tudorachi, N., Peptu, C., Samoila, P., Sacarescu, L., Harabagiu, V. Ferromagnetic iron oxide-cellulose nanocomposites prepared by ultrasonication (2018) Polymer Chemistry, 9 (7), pp. 860-868. (Impact factor – 4.927)
5. Rotaru, R., **Peptu, C.,** Samoila, P., Harabagiu, V. Preparation of ferroelectric barium titanate through an energy effective solid state ultrasound assisted method (2017) Journal of the American Ceramic Society, 100 (10), pp. 4511-4518. (Impact factor – 2.956)
6. **Peptu, C.,** Balan-Porcarasu, M., Šišková, A., Škultéty, Ľ., Mosnáček, J. Cyclodextrins tethered with oligolactides – green synthesis and structural assessment (2017) Beilstein Journal of Organic Chemistry, 13, pp. 779-792. (Impact factor – 2.3)
7. Horlescu, P., Stan, C.S., Sutiman, D., Peptu, C., Mita, C. Synthesis, structure and luminescent properties of new Ce(III), Dy(III), Ho(III) and Tm(III) complexes with 2-(1H-

1,2,4-triazol-3-yl)pyridine (2015) Asian Journal of Chemistry, 27 (12), pp. 4461-4466. (Impact factor – NA)

8. Andrei, G., Peptu, C.A., Popa, M., Desbrieres, J., Peptu, C., Gardikiotis, F., Costuleanu, M., Costin, D., Dupin, J.C., Uhart, A., Tamba, B.I. Formulation and evaluation of cefuroxim loaded submicron particles for ophthalmic delivery (2015) International Journal of Pharmaceutics, 493 (1-2), pp. 16-29. (Impact factor – 3.649)
9. Stan, C.S., Peptu, C., Marcotte, N., Horlescu, P., Sutiman, D. Photoluminescent properties of novel Y(III), Sm(III), Eu(III), Gd(III) and Tb(III) complexes with 2-(1H-1,2,4-Triazol-3-yl)pyridine (2015) Inorganica Chimica Acta, 429, pp. 160-167. (Impact factor – 2.264)
10. Horlescu, P., Sutiman, D., Stan, C.S., Mita, C., Peptu, C., Fortuna, M.E., Albu, C. New complexes of 2-(1H-1, 2, 4-triazol-3-yl) pyridine with Co(II), Cd(II), Rh(III), Ions: Synthesis, structure, properties and potential applications (2015) Environmental Engineering and Management Journal, 14 (2), pp. 389-397. (Impact factor – 1.334)
11. Peptu, C., Rotaru, R., Ignat, L., Humelnicu, A.C., Harabagiu, V., Peptu, C.A., Leon, M.-M., Mitu, F., Cojocaru, E., Boca, A., Tamba, B.I. Nanotechnology approaches for pain therapy through transdermal drug delivery (2015) Current Pharmaceutical Design, 21 (42), pp. 6125-6139. (Impact factor – 3.052)
12. Peptu, C.A., Ochiuz, L., Alupei, L., Peptu, C., Popa, M. Carbohydrate based nanoparticles for drug delivery across biological barriers (2014) Journal of Biomedical Nanotechnology, 10 (9), pp. 2107-2148. (Impact factor – 5.068)
13. Peptu, C., Kwiecień, I., Harabagiu, V., Simionescu, B.C., Kowalczuk, M. Modification of β-cyclodextrin through solution ring-opening oligomerization of β-butyrolactone (2014) Cellulose Chemistry and Technology, 48 (1-2), pp. 1-10. (Impact factor – 0.833)
14. **Peptu, C.,** Harabagiu, V. Tandem mass spectrometry characterization of esterified cyclodextrins (2013) Digest Journal of Nanomaterials and Biostructures, 8 (4), pp. 1551-1561. (Impact factor – 0.673)
15. Grebinişan, D., Holban, M.N., Lionte, C., Peptu, C., Şunel, V., Popa, M., Desbrieres, J. Drug-Polymer Conjugates with Tuberculostatic Activity, Based on Poly (N-Vinyl Pyrrolidone-alt-Itaconic Anhydride) and Novel Aminoacid Hydrazides (2013) Polymer - Plastics Technology and Engineering, 52 (12), pp. 1213-1219. (Impact factor – 1.655)
16. Cheptea, C., Holban, M., Peptu, C., Lionte, C., Sunel, V., Popa, M., Desbrieres, J. Synthesis and antimicrobial activity of new amidic derivatives of 5-nitroindazol-1-yl acetic acid encapsulated into alginate/pectin particles (2013) Cellulose Chemistry and Technology, 47 (1-2), pp. 23-29. (Impact factor – 0.833)
17. Moise, M., Sunel, V., Holban, M., Popa, M., Desbrieres, J., Peptu, C., Lionte, C. Double crosslinked chitosan and gelatin submicronic capsules entrapping aminoacid derivatives with potential antitumoral activity (2012) Journal of Materials Science, 47 (23), pp. 8223-8233. (Impact factor – 2.993)
18. Hurjui, I., Cheptea, C., Dascalu, C.F., Hurjui, L., Peptu, C., Sunel, V., Dorohoi, D.O. Optimization reaction of some 1, 4-disubstituted thiosemicarbazides with tuberculostatic activity (2012) Digest Journal of Nanomaterials and Biostructures, 7 (4), pp. 1747-1756. (Impact factor – 0.673)

19. **Peptu, C.,** Van Den Brink, O.F., Harabagiu, V., Simionescu, B.C., Kowalczuk, M., Silberring, J. Molecular level differentiation between end-capped and intramolecular azofunctional oligo(ε-caprolactone) positional isomers through liquid chromatography multistage mass spectrometry (2012) Journal of Polymer Science, Part A: Polymer Chemistry, 50 (12), pp. 2421-2431. (Impact factor – 2.588)
20. Farcas, A., Stoica, I., Stefanache, A., Peptu, C., Farcas, F., Marangoci, N., Sacarescu, L., Harabagiu, V., Guégan, P. Surface properties of conjugated main-chain polyrotaxanes (2011) Chemical Physics Letters, 508 (1-3), pp. 111-116. . (Impact factor – 1.860)
21. Farcas, A., Ghosh, I., Grigoras, V.C., Stoica, I., Peptu, C., Nau, W.M. Effect of rotaxane formation on the photophysical, morphological, and adhesion properties of poly[2,7-(9,9-dioctylfluorene)-alt-(5,5′- bithiophene)] main-chain polyrotaxanes (2011) Macromolecular Chemistry and Physics, 212 (10), pp. 1022-1031. (Impact factor – 2.616)
22. Peptu, C., Nicolescu, A., Peptu, C.A., Harabagiu, V., Simionescu, B.C., Kowalczuk, M. Mass spectrometry characterization of 3-OH butyrated β-cyclodextrin (2010) Journal of Polymer Science, Part A: Polymer Chemistry, 48 (23), pp. 5581-5592. (Impact factor – 2.588)
23. Moise, M., Sunel, V., Profire, L., Popa, M., Desbrieres, J., Peptu, C. Synthesis and biological activity of some new 1,3,4-thiadiazole and 1,2,4-triazole compounds containing a phenylalanine moiety (2009) Molecules, 14 (7), pp. 2621-2631. (Impact factor - 3.098)
24. Adrian, F., Budtova, T., Tarabukina, E., Pinteala, M., Mariana, S., Peptu, C., Harabagiu, V., Simionescu, B.C. Inclusion complexes of γ-cyclodextrin and carboxyl-modified γ-cyclodextrin with C60: Synthesis, characterization and controlled release application via microgels (2009) Journal of Inclusion Phenomena and Macrocyclic Chemistry, 64 (1-2), pp. 83-94. (Impact factor – 1.316)
25. Peptu, C., Harabagiu, V., Simionescu, B.C., Adamus, G., Kowalczuk, M., Nunzi, J.-M. Disperse red 1 end capped oligoesters. Synthesis by noncatalyzed ring opening oligomerization and structural characterization (2009) Journal of Polymer Science, Part A: Polymer Chemistry, 47 (2), pp. 534-547. (Impact factor – 2.588)

6. Book chapters:

1. Chitosan-Based Drug Delivery Systems, 2019, DOI: 10.1002/9781119450467.ch11
   C Peptu, AC Humelnicu, R Rotaru, ME Fortuna, X Patras, M Teodorescu, ... In book: Chitin and Chitosan: Properties and Applications, 259-289
2. Biomass-Derived Polyhydroxyalkanoates: Biomedical Applications DOI: 10.1016/B978-0-444-63774-1.00008-9 In book: Biomass as Renewable Raw Material to Obtain Bioproducts of High-Tech Value, 2018, Pages 271-313. Elsevier, ISBN: 978-044463797-0;978-044463774-1
3. NANOMEDICAL DEVICES FOR TRANSDERMAL DRUG DELIVERY Cristian Peptu* and Leonard Ignat, in Polymeric Nanomedicines, 2013, 671-697 Marcel Popa and Constantin V.Uglea (Eds), 2013, Bentham Science Publishers Ltd. ISBN: 978-1-60805-628-6.