Alexa (Leu) Rebeca

Doctorand

Școala Doctorală „Chimie aplicată și Știința Materialelor", Universitatea Politehnica din București, Domeniul de doctorat: Inginerie Chimică

EXPERIENŢA PROFESIONALĂ

01.2019 - prezent

Asistent de cercetare
Centrul de Cercetări pentru Materiale Polimerice Avansate, Universitatea Politehnica din București
Campus "Polizu" Corp A, Str. Gh. Polizu Nr. 1-7 Sector 1, 011061 București/România

Proiecte:
– PED- Construcții nanocompozite inovative imprimate 3D obținute din resurse marine (alginat, salecan) și argilă naturală cu aplicații specifice în regenerare osoasă – 3D ALSAC (2020-2021)

-Materiale inteligente pentru aplicații medicale (INTELMAT) (2018-2021)

EDUCAŢIE ŞI FORMARE

01.10.2018 – present

Studii Doctorale
Scoala doctorală a Facultății de Chimie Aplicată și Știința Materialelor, UPB
Domeniul: *Inginerie Chimică*

2016 – 2018

Masterat
Universitatea de Medicina si Farmacie Carol Davila Bucuresti
Biofizica Medicala si Biotehnologie Celulara

2012-2016

Inginer Chimist
Facultatea de Chimie Aplicata și Știința Materialelor, Universitatea Politehnica din București, România

Specializarea: *Știința și Ingineria Polimerilor*

Absolvirea Modulului Psiho-pedagogic din cadrul Facultatii de Chimie Aplicata si Știința Materialelor, nivel I

COMPETENTE PERSONALE

Limba(i) maternă(e): Română

Alte limbi străine cunoscute

	INTELEGERE		VORBIRE		SCRIERE
	Ascultare	Citire	Participare la conversaţie	Discurs oral	
Engleza	B1	B1	B1	B1	B1
	Scrieţi denumirea certificatului. Scrieţi nivelul, dacă îl cunoaşteţi.				
Franceza	B1	B1	B1	B1	B1

Niveluri: A1/2: Utilizator elementar - B1/2: Utilizator independent - C1/2: Utilizator experimentat
Cadrul european comun de referinţă pentru limbi străine

Competenţe de comunicare: Sunt o persoană comunicativă, cu dorința de învățare și perfecționare continuă.

Competenţe dobândite la locul de muncă: Sinteza de materiale imprimabile 3D cu aplicații în Medicina Regenerativă și Ingineria Tisulara.
Caracterizarea fizico-chimică a materialelor: UV-VIS, FTIR, RAMAN, Nanoindentare, Unghi de contact

Competenţe informatice: Sunt competentă în utilizarea packetului Microsoft Office™, Orcad, Chemdraw, Opus, Mathcad, Autocad, OriginPro, GraphPad, BioCad, HTML, CSS, Java Script, React

Permis de conducere: Categoria B

INFORMATII SUPLIMENTARE

Publicaţii

1. **R.L. Alexa**, H. Iovu, J. Ghitman, A. Serafim, C. Stavarache, M.M. Marin, R. Ianchis, ***3D-printed gelatin methacryloyl-based scaffolds with potential application in tissue engineering***. Polymers, 2021, 13(5), 727. **(IF 4,967)**

2. **R.L. Alexa**, H. Iovu, B. Trica, C. Zaharia, A. Serafim, E. Alexandrescu, I.C. Radu, G. Vlasceanu, S.Preda, C.M. Ninciuleanu, R. Ianchis, ***Assessment of naturally sourced mineral clays for the 3Dprinting of biopolymer-based nanocomposite inks***, Nanomaterials, 2021, 11(3), 703. **(IF 5.719)**

3. **R.L. Alexa**, H. Iovu, M.C. Nicolae, I.C. Mihaescu, E. Alexandrescu, R. Ianchis, „***3D printing of super concentrated alginate clay ink with potential application in regenerative medicine***", UPB Scientific Bulletin, Series B: Chemistry and Materials, 2021.

4. **R.L. Alexa**, R. Ianchis, D. Savu, M. Temelie, B. Trica, A. Serafim, G.M. Vlasceanu, E. Alexandrescu, S.Preda, H. Iovu, " ***3D Printing of Alginate-Natural Clay Hydrogel-Based Nanocomposites***, Gels, 2021, 7(4), 211. **(IF 4.432)**

5. **R. Leu Alexa**, A. Cucuruz, C.-D. Ghițulică, G. Voicu, L.-R. Stamat, S. Dinescu, G.M. Vlasceanu, C. Stavarache, R. Ianchis, H. Iovu, M. Costache, ***„3D Printable Composite Biomaterials Based on GelMA and Hydroxyapatite Powders Doped with Cerium Ions for Bone Tissue Regeneration***", International Journal of Molecular Sciences, 2022, 23(3), 1841. **(IF 6.208)**

6. **R.L. Alexa**, A. Cucuruz, C.D. Ghițulică, G. Voicu, L.R. Stamat (Balahura), S. Dinescu, G. M. Vlasceanu, H. Iovu, A. Serafim, R. Ianchis, L.T. Ciocan, M. Costache, ***"3D Printed Composite Scaffolds of GelMA and Hydroxyapatite Nanopowders Doped with Mg/Zn Ions to Evaluate the Expression of Genes and Proteins of Osteogenic Markers"***, Nanomaterials, 2022, 12(19), 3420. **(IF 5.719)**

7. M.M. Marin, R. Ianchis, **R. Leu Alexa**, I.C. Gifu, M.G.A. Kaya, D.I. Savu, R.C. Popescu, E. Alexandrescu, C.M. Ninciuleanu, S. Preda, M. Ignat, R. Constantinescu, H. Iovu, ***„Development of New Collagen/Clay Composite Biomaterials***", International Journal of Molecular Sciences, 2022, 23 (10), 401.

8. P. Stanescu, I.C. Radu, **R. Alexa,** A. Hudita, E. Tanasa, J. Ghitman, O. Stoian, A. Tsatsakis, O. Ginghina, C. Zaharia, M. Shtilman, Y. Mezhuev, B. Galateanu, (2021), ***"Novel chitosan and bacterial cellulose biocomposites tailored with polymeric nanoparticles for modern wound dressing development",*** Drug Delivery. 2021, 28, 1932-1950.

9. Marin, M.M.; Albu Kaya, M.; Kaya, D.A.; Constantinescu, R.; Trica, B.; Gifu, I.C.; Alexandrescu, E.; Nistor, C.L.; **Alexa, R.L.**; Ianchis, R. ***Novel Nanocomposite Hydrogels Based on Crosslinked Microbial Polysaccharide as Potential Bioactive Wound Dressings. Materials*** **2023**, *16*, 982. https://doi.org/10.3390/ma16030982

10. Ianchis, R.; **Alexa, R.L***.; Gifu, I.C.; Marin, M.M.; Alexandrescu, E.; Constantinescu, R.; Serafim, A.; Nistor, C.L.; Petcu, C. ***Novel Green Crosslinked Salecan Hydrogels and Preliminary Investigation of Their Use in 3D Printing. Pharmaceutics*** **2023**, *15*, 373. https://doi.org/10.3390/pharmaceutics15020373

11. Marin, M.M.; Gifu, I.C.; Pircalabioru, G.G.; Albu Kaya, M.; Constantinescu, R.R.; **Alexa, R.L.**; Trica, B.; Alexandrescu, E.; Nistor, C.L.; Petcu, C.; Ianchis, R. ***Microbial Polysaccharide-Based Formulation with Silica Nanoparticles; A New Hydrogel Nanocomposite for 3D Printing.*** *Gels* **2023**, *9*, 425. https://doi.org/10.3390/gels9050425

12. Raluca Ianchis, Maria Minodora Marin*, **Rebeca Leu Alexa***, Ioana Catalina Gifu, Elvira Alexandrescu, Gratiela Gradisteanu Pircalabioru, George Mihail Vlasceanu, George Mihail Teodorescu, Andrada Serafim, Silviu Preda, Cristina Lavinia Nistor, and Cristian Petcu **Nanoclay-reinforced alginate/salecan composite inks for 3D printing applications**, International Journal of

Bioprinting, June 2023 https://doi.org/10.36922/ijb.0967

Conferinţe

1. Biopolymer composites for medical applications obtained by 3D printing, **R.L. Alexa**, H. Iovu, J. Ghitman, C. Stavarache, M.M. Marin, Romanian International Conference on Chemistry and Chemical Engineering - RICCCE21

2. Wound dressing based on bacterial cellulose **R. Leu,** I. Radu, P.O. Stanescu, B. Galateanu, A. Hudita, E. Tanasa, G. Jana, H. Iovu, C. Zaharia Romanian International Conference on Chemistry and Chemical Engineering - RICCCE21

3. Novel Biopolymeric Based Composites Inks for Tissue Engineering Application, **R.L. Alexa,** H. Iovu, C. Zaharia, C. Ninciuleanu, B. Trica, E. Alexandrescu, S. Preda, A. Serafim, I.-C. Radu, G. Vlasceanu, L. Miclea, R. Ianchis, EmergeMAT, *3rd INTERNATIONAL CONFERENCE ON EMERGING TECHNOLOGIES IN MATERIALS ENGINEERING*, 29-30 October, Bucharest, Romania, 2020

4. Innovative Hydrogel Based Inks with Application in Tissue Engineering, **R.L. Alexa**, H.Iovu, I.C. Radu, G. Vlasceanu, C.M. Ninciuleanu, E.a Alexandrescu, C. Mihaescu, C. Scomoroscenco, C.L. Nistor, C. Petcu, R. Ianchis, "PRIORITATILE CHIMIEI PENTRU O DEZVOLTARE DURABILA" PRIOCHEM, XVIth Edition, Bucharest, Romania, 2020

5. 3D Printable ink based on alginate and layered silicates, **R.L. Alexa**, H. Iovu, G. Vlasceanu, A. Serafim, E. Alexandrescu, S. Preda, R. Ianchis, NeXT-Chem III, Bucharest, Romania, 2021

6. Scaffolds obtained by 3D Printing based on alginate-clay hybrid nanocomposites, **R.L. Alexa**, H. Iovu, G. Vlasceanu, A. Serafim, E. Alexandrescu, S. Preda, R. Ianchis, Bucharest Polymer Conference 2nd Edition, University POLITEHNICA of Bucharest, Romania, 10 - 11 June, 2021

7. Investigation of crosslinked hydrogels based on Salecan biopolymer, R. Ianchis, C.M. Ninciuleanu, E. Alexandrescu, I.C. Gifu, R. Gabor, C. Mihaescu, C. Scomoroscenco, S. Nitu, C. Nistor, C. Petcu, H. Iovu, **R.L. Alexa,** Bucharest Polymer Conference 2nd Edition, University POLITEHNICA of Bucharest, Romania, 10 - 11 June, 2021

8. Development of New Collagen/Clay Composite Biomaterials, M.M. Marin, **R. Leu**, M.G. Albu Kaya, E. Alexandrescu, S. Preda, H. Iovu, R. Ianchiş, Bucharest Polymer Conference 2nd Edition, University POLITEHNICA of Bucharest, Romania, 10 - 11 June, 2021

9. 3D printing of novel polysaccharide based biomaterials foreseen for biomedical applications, **R.L. Alexa**, I.C. Gifu, C. Ninciuleanu, E. Alexandrescu, C. Scomoroscenco, C.

Mihaescu, S. Burlacu, C.L. Nistor, C. Petcu, H. Iovu, R. Ianchis ***4th International Conference on Emerging Technologies in Materials Engineering*** EmergeMAT, Bucharest, Romania, 4-5 November, 2021

10. Synthesis of platelet rich plasma enriched inorganic advanced material with application in regenerative medicine, **R.L. Alexa**, C. Ninciuleanu, E. Alexandrescu, C. Mihaescu, S. Preda, C.L. Nistor, C. Petcu, H. Iovu, L. Savu, R. Ianchis, 4th International Conference on Emerging Technologies in Materials Engineering EmergeMAT, Bucharest, Romania, 4-5 November, 2021

11. Synthesis and characterization of green crosslinked hydrogels, M.M. Marin, I.C. Gifu, C. Ninciuleanu, E. Alexandrescu, C. Scomoroscenco, S. Burlacu, C.L. Nistor, C. Petcu, H. Iovu, **R.L. Alexa**, R. Ianchis, 4th International Conference on Emerging Technologies in Materials Engineering EmergeMAT, Bucharest, Romania, 4-5 November, 2021

12. APMG 2023 Novel 3D Printed Polysaccharide/Clay Biomaterials, Maria Minodora Marin, Madalina Albu Kaya, Cristina Stavarache, **Rebeca Leu Alexa**, Ioana Catalina Gifu, Elvira Alexandrescu, Silviu Preda, Andrada Serafim, Horia Iovu, Raluca Ianchis

13. ***APMG 2023 3D Printable inks based on GelMA, Alginate and inorganic fillers,***
Rebeca Leu Alexa[1], Horia Iovu[1,3], Raluca Ianchis[2], Andrada Serafim[1], George Mihail Vlasceanu[1]

14. ***15th National Conference of Biophysics, 7-10 september 2018***
Multiparametric Evaluation of Platelets from Chronic Myeloproliferative Neoplasm Patients

15. ***CONGRESS OF THE UNIVERSITY OF MEDICINE AND PHARMACY CAROL DAVILA BUCURESTI,*** **VI edition , 7-9 JUNE 2018**
The Resting Membrane Potential Evaluation of Platelets from Chronic Myeloproliferative Neoplasms Patients
Ist Place - **Young Researcher - Preclinical specialties**

16. The resting membrane potential evaluation of platelets from chronic myeloproliferative neoplasms patients - abstract published in MAEDICA a Journal of Clinical Medicine volume13(16)Supplement 2018

17. Congress of the European Hematology Association **Stockholm, Suedia** , Iunie 14 - 17, 2018 - abstract published_in HemaSphere 2(S1) – 2018, Evaluation of platelet receptor expression in chronic lymphoid leukemia treated with ibrutinib
18. XXXVII World Congress of the International Society of Hematology (ISH 2018), 13-16 september 2018, Vancouver, Canada - The assessment of JAK 2 mutation role in platelet membrane fluidity changes in chronic myeloproliferative neoplasms

Brevete

1. "***Compoziţie şi procedeu de obţinere a unor hidrogeluri pe bază de salecan şi de utilizare a acestora pentru manufacturare aditivă***", R. Ianchiş, **R.L. Alexa**, M.M. Marin, C.I. Gîfu, C.M. Ninciuleanu, E. Alexandrescu, C. Scomoroscenco, S.G. Burlacu, C.I. Mihăescu, C.L. Nistor, C. Petcu, H. Iovu, **A2021-00643/25.10.2021**

2. Compoziţii şi procedeu de obţinere a unor hidrogeluri compozite pe bază de polizaharide naturale şi aplicarea acestora în procesul de imprimare tridimensională, R. Ianchis, M.M. Marin, **R.L. Alexa**, C.I. Gifu, C.M. Ninciuleanu, E. Alexandrescu, C. Scomoroscenco, S.G. Burlacu, C.I. Mihaescu, C.L. Nistor, C. Petcu, H. Iovu, **A 2022-00127/16.03.2022**

Distincţii

1. Chemical Romanian Society Price received at the conference Priorities of Chemistry for a Sustainable Development - PRIOCHEM XVI ed., Bucharest, Romania, 28-30 October (2020) for the work entitled "***Innovative Hydrogel Based Inks with Application in Tissue Engineering"*, R.L. Alexa**, H. Iovu, I.C. Radu, G. Vlasceanu, C.M. Ninciuleanu, E. Alexandrescu, C. Mihaescu, C. Scomoroscenco, C. Nistor, C. Petcu, R. Ianchiş

2. Special price received at the conference ***4th International Conference on Emerging Technologies in Materials Engineering EmergeMAT***, Bucharest, Romania, 4-5 November, (2021) with the work entitled „Synthesis and Characterization of Green Crosslinked Hydrogels", M.M. Marin, I.C. Gifu, C. Ninciuleanu, E. Alexandrescu, C. Scomoroscenco, S. Burlacu, C.L. Nistor, C. Petcu, H. Iovu, **R.L. Alexa**, R. Ianchis

3. Excellence Diploma and Gold Medal received at ***International Salon of Scientific Research, Innovation and Invention, PRO INVENT***, XX Edition, 26-28 octomber (2022) and ***Silver medal*** at Euroinvent 2023, 15th European Exhibition of Creativity and Innovation, Iaşi, Romania, for the work entitled „Compositions and process for obtaining composite hydrogels based on natural polysaccharides and their application in the three-dimensional printing process", R. Ianchiş, M.M. Marin, **R. Leu Alexa**, C.I. Gîfu, C.M. Ninciuleanu, E. Alexandrescu, C.Scomoroscenco, S.G. Burlacu, C.I. Mihăescu, C.L. Nistor, C. Petcu, H. Iovu