A N E X A 4 . 1

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L I S T A
lucrărilor ştiinţifice în domeniul disciplinelor din postul didactic

A. Teza de doctorat Polimeri funcționalizați cu cromofori având utilizări în fotovoltaică, fotonică și medicină (susținută 30 Septembrie 2011 – București)

B. Cărţi si capitole în cărţi publicate în ultimii 10 ani

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C. Lucrări indexate ISI/BDI publicate în ultimii 10 ani

1. Q. M. Al-Bataineh, A. A. Ahmad, A. B. Migdadi, **A. Diacon**, G. Toader, O. Brincoveanu, A. Mocanu, C. Romanitan and C. M. Damian, 2D molybdenum titanium carbide MXene based film for enhanced hydrogen evolution reaction. In *MATERIALS SCIENCE AND ENGINEERING B-ADVANCED FUNCTIONAL SOLID-STATE MATERIALS*, 2026; Vol. 324, 10.1016/j.mseb.2025.118970,WOS:001612834900001.
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D. Lucrări publicate în ultimii 10 anii în reviste şi volume de conferinţe cu referenţi (neindexate)

- Reviste

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- Selecţie cu maximum 20 lucrări în volume de conferinţe

1. Gabriela Toader, Aurel Diacon, Alexandra Mocanu, Livia A. Dinu, Pericle Varasteanu, Oana Brincoveanu, Cosmin Romanitan, Mioara Alexandru, Florina L. Zorila, Celina Damian, Edina Rusen, Raul A.Mitran - Multifunctional MXene–polymer nanocomposites for EMI shielding, soft actuation, and biomedical applications - International Semiconductor Conference, 48th Edition, CAS 2025, 7-11 Octombrie 2025 – Poster
2. Gabriela Toader, Aurel Diacon, Alexandra Mocanu, Livia A. Dinu, Pericle Varasteanu, Oana Brincoveanu, Cosmin Romanitan, Mioara Alexandru, Florina L. Zorila , Celina Damian, Edina Rusen, Raul A.Mitran - MXene-based polymeric nanocomposites: advancing EMI shielding, actuation, and biomedicine – 4th International Conference on Advanced Materials, ICAM-2025, Irbid, Jordan, 21-23 May 2025, Invited oral Presentation
3. Andreea Moldovan, Aurel Diacon, Martino Aldrigo, Sergiu Iordănescu, Alexandra Mocanu, Oana Brincoveanu, Cosmin Romanitan, Traian Rotariu, Edina Rusen, Ana Mihaela Gavrila, Bogdan Trica - Low-swelling hydrogels incorporating Mo-MXenes for EMI shielding applications - - International Semiconductor Conference, 48th Edition, CAS 2025, 7-11 Octombrie 2025 – Poster
4. Andreea MOLDOVAN, Aurel DIACON, Gabriela TOADER, Martino ALDRIGO, Sergiu IORDĂNESCU, Alexandra MOCANU, Oana BRINCOVEANU, Cosmin ROMANITAN, Traian

ROTARIU, Edina RUSEN, Ana Mihaela GAVRILA, Bogdan TRICA, Alexandru MARIN – SEMI-INTERPENETRATED POLYMER NETWORK HYDROGELS WITH Mo-MXenes FOR TUNABLE ELECTROMAGNETIC INTERFERENCE SHIELDING - PRIORITIES OF CHEMISTRY FOR A SUSTAINABLE DEVELOPMENT" PRIOCHEM – XXI – PRIOCHEM 2025 – 15-17 Octombrie 2025, Bucuresti, Romania – POSTER

5. Gabriela TOADER, Aurel DIACON, Alexandra MOCANU, Livia A. DINU, Pericle VARASTEANU, Oana BRINCOVEANU, Cosmin ROMANITAN, Mioara ALEXANDRU, Florina L. ZORILA, Celina DAMIAN, Edina RUSEN, Raul A. Mitran - MXENE–POLYMER NANOCOMPOSITES AS VERSATILE PLATFORMS FOR ADVANCED FUNCTIONAL MATERIALS - PRIORITIES OF CHEMISTRY FOR A SUSTAINABLE DEVELOPMENT" PRIOCHEM – XXI – PRIOCHEM 2025 – 15-17 Octombrie 2025, Bucuresti, Romania – POSTER
6. Andreea Moldovan, Aurel Diacon, Gabriela Toader, Martino Aldrigo, Sergiu Iordănescu, Alexandra Mocanu, Oana Brincoveanu, Cosmin Romanitan, Traian Rotariu, Edina Rusen, Ana Mihaela Gavrila, Bogdan Trica - MXENE–POLYPYRROLE-HYDROGELS AS VERSATILE SOFT MATERIALS FOR EMI SHIELDING - International Chemical Engineering and Material Symposium - SICHEM 2025 Symposium, 6 – 7 November, 2025, Bucureşti Romania
7. Gabriela Toader, Aurel Diacon, Alexandra Mocanu, Livia A. Dinu, Pericle Varasteanu, Oana Brincoveanu, Cosmin Romanitan, Mioara Alexandru, Florina L. Zorila, Celina Damian, Edina Rusen, Raul A. Mitran - ADVANCED MXENE–POLYMER NANOCOMPOSITES AS SOFT MATERIALS FOR EMI SHIELDING, LIGHT-DRIVEN ACTUATION, AND BIOMEDICAL APPLICATIONS - International Chemical Engineering and Material Symposium - SICHEM 2025 Symposium, 6 – 7 November, 2025, Bucureşti Romania
8. Invited Speaker – "Novel facile method for obtaining CdSe/polyaniline/C60 composite material" - AdvPhotoCat-E 2017 – Advances on Photocatalysis, International Workshop 2nd Edition, 14-16 July 2017, Crete, Greece (http://www.photocatalysis-workshop.com/invited-speakers/)
9. Gabriela Toader, Traian Rotariu, Adrian Rotariu, Sorin Esanu, Aurel Diacon, Edina Rusen - New polyurea nanocomposites designed for ballistic protection, Greener and safer energetic and ballistic systems Conference, ENSTA Bretagne, 8-9 noiembrie 2018, Brest, France
10. Gabriela Toader, Traian Rotariu, Daniela Pulpea, Andreea Moldovan, Alice Podaru, Ana Mihaela Gavrila, Mioara Alexandru, Aurel Diacon, Raluca Ginghina, Ovidiu Iorga, Ciprian Sau, POLYMERIC BLENDS DESIGNED FOR SURFACE DECONTAMINATION, 8th International Conference on Materials Science and Technologies" – RoMat 2020, Bucharest, Romania, November 26-27th, 2020
11. Gabriela Toader, Daniela Pulpea, Traian Rotariu, Aurel Diacon, Andreea Moldovan, Alice Podaru, Ciprian Sau, Florentina Alexe, Raluca Ginghina, Mihai Ungureanu, Florin Dirloman, Evaluation of alginate-based formulations suitable for the removal of radionuclides and heavy metals from the contaminated surfaces, Bucharest Polymer Conference 2nd Edition University POLITEHNICA of Bucharest, Romania, 10 - 11 June 2021 A
12. Alice PODARU, Gabriela TOADER, Daniela PULPEA, Traian ROTARIU, Aurel DIACON, Edina RUSEN, Andreea MOLDOVAN, Raluca GINGHINĂ, Florentina ALEXE, Sorina BAJENARU, Ovidiu IORGA, Mihai UNGUREANU, Florin DIRLOMAN, Bogdan PULPEA, Lucia

LEONAT, Film-forming polymeric blends designed for the removal of heavy metals and radionuclides from contaminated surfaces, The International Symposium PRIOrities of CHEMistry for a sustainable development, XVIIth Edition, ICECHIM - Bucharest – ROMANIA October 27 - 29, 2021

13. Alexandra Mocanu, Edina Rusen, Aurel Diacon, Gabriela Isopencu, Gabriel Mustățea, Raluca Șomoghi, Adrian Dinescu – "Antimicrobial properties of polysulfone membranes modified with carbon nanofibers and silver nanoparticles" – Poster, 24-25 October 2019, World Congress on Chemistry, Valencia, Spain
14. Aurel Diacon, Alexandra Mocanu, Cristian Eugen Raducanu, Edina Rusen, Cristina Busuioc, Raluca Somoghi, Bogdan Trica, Adrian Dinescu, "Synthesis and characterization of new carbon/ZnO/Li2O nanocomposites with enhanced photocatalytic activity" – Poster, 4-7 September 2019, Romanian International Conference on Chemistry and Chemical Engineering - RICCCE XXI, Constanta, Romania
15. Aurel Diacon, Edina Rusen, Leona Cristina Nistor, Alexandra Mocanu, "Supported Cu0 nanoparticles catalyst for controlled radical polymerization reaction and block-copolymer synthesis" – Oral presentation, 16-17 April, 2018, ICPST 2018: International Conference on Polymer Science and Technology, Lisbon, Portugal
16. Diacon Aurel, Rusen Edina, Mocanu Alexandra, Nistor Leona-Cristina, "Supported Cu0 nanoparticles catalyst for controlled radical polymerization reaction and block-copolymer synthesis" – Poster presentation, 17-19 May International Symposium Frontiers in Polymer Science, Seville, Spain
17. Rusen Edina, Mocanu Alexandra, Diacon Aurel, Nistor Leona-Cristina, Gavrila Raluca - "CdSe (quantum dots)-graphene oxide system for thiophene polymerization: A new strategy, a new material" – Oral presentation, 13-16 June 2016 - IUPAC - sponsored 16th International Conference Polymers and Organic Chemistry POC -16, Crete, Greece
18. Gabriela Toader, Edina Rusen, Mircea Teodorescu, Aurel Diacon, Paul Stanescu, Traian Rotariu, Adrian Rotariu - New types of polyurea nanocomposites with enhanced mechanical properties (prezentare orală), Greener and safer energetic and ballistic systems (GSEBS 2016), 26-27 mai 2016, București, România
19. Gabriela Toader, Edina Rusen, Mircea Teodorescu, Aurel Diacon, Paul Stanescu, Traian Rotariu, Adrian Rotariu - Novel polyurea polymers with enhanced mechanical properties (prezentare orală), Polymers and Organic Chemistry (POC 2016), 3-6 iunie 2016, Hersonissos, Greece

E. Brevete obţinute în întreaga activitate

E1. I. Călinescu, M. Vînătoru, I. Popa, A. Diacon – *Produs natural complex destinat prevenirii bolilor oculare și cardiovasculare și procedeu de obținere a acestuia*; OSIM RO 138297 A2 – 30/07/2024

E2. I. Călinescu, M. Vînătoru, A. Diacon, P. Chipurici – *Solvent biodegradabil și netoxic pentru extracția principiilor naturale liposolubile*, OSIM RO 133507A0 (B1) – 30/07/2019

E3. I. Călinescu, M. Istrate, N. Scarlat, M. Vînătoru, A. Diacon – *Mască facială de uz medical cu proprietăți biocide (antivirale, antimicrobiene și antifungice) și capacitate de autosterilizare* – OSIM RO 2020 00069 U1 – 29/04/2022

E4. P. Chipurici, I. Călinescu, M. Vînătoru, A. Diacon, N. D. Ignat – *Procedeu pentru obținerea esterilor metilici ai acizilor grași din biomasă algală umedă* – OSIM RO 134128 A0 (B1) – 29/05/2020

E5. E.A.-M. Rusen, A. Diacon, A. Mocanu, M. F. Drăgoescu – *Sinteza poliesterilor nesaturați utilizând deșeuri de PET* – OSIM RO 131874 A2 – 30/05/2017

E6. M. Ionescu, O. Ionescu, E. A. Rusen, G. Toader, A. Diacon – *Obținerea unor noi tipuri de nanocompozite pe bază de poliuree-poliuretan ranforsate cu nanotuburi de carbon și copolimeri ignifugi, destinate protecției balistice* – OSIM RO 138704 A0 – 28/03/2025

E7. H.R. Botiș, A. Sârbu, A. Zaharia, S. V. Dolana, T.V. Iordache, T. Rotariu, F.M. Dîrloman, A. Diacon, G. Toader – *Propulsanți compoziți pe bază de lianți polieterpoliolici* – OSIM RO 138422 A0 – 30/10/2024

E8. O. Dautel, L. Derue, A. Diacon, P. Hudhomme, G. Wantz, B. Pavageau – Procede de preparation d'une couche mince a caractere photovoltaique a heterojonction – Institut National de la Propriete Industrielle Republique Francaise – FR 2996062A1 (B1) – 28/03/2014

E9. O. Dautel, L. Derue, A. Diacon, P. Hudhomme, B. Pavageau, G. Wantz – Method for preparing a photovoltaic thin film heterojunction – US2015179947A1 – 25/06/2015

E10. E.A.-M. Rusen, A. Diacon, A. Mocanu, E. Bacalum, M. Cheregi, V. David, B. Bucur, G.L. Radu – *Polimer imprentat molecular obținut prin polimerizare în masă pentru nitrofurantoină pentru reaalizarea de coloane de extracție în fază solidă și senzori electrochimici* – OSIM RO 133210A2 (B1) – 29/03/2019

Data:24.04.2026 **Semnătura:**

E – Brevete (pentru întreaga activitate)

