



Annex no. 1 – Award request*

1. Candidate

Name: Ion

Previous names (if applicable): Oprișan

First name: Rodica-Mariana

Doctor of the Year (copy of doctor's degree or equivalent to be submitted): 1995

Position: Professor / Ph.D. Supervisor / Director of the Council of Doctoral Studies / Vice-Rector

Institution: Valahia University of Targoviste, Romania

Mobile phone: +40 744 123 456

Email address: ion.rodica@univ.ro

2. "Romanian Research Gala" edition: Edition 2024

3. Award and category for which they apply (individual or research team): Engineering Sciences – "Henri Coanda" Prize – Individual category

4. Team leader, if applicable: -

5. Composition of the research team, if applicable (name of team members, position occupied, year of last diploma awarded): -

6. A description of the most important scientific achievements of the last 5 years (max. 4 pages, A4 format, Times New Roman characters, 12 points, line spacing of 1.5 and margins of 2 cm).**

The structure of this chapter is organized according to the qualitative evaluation criteria, cf. Annex 2 **CI. I**, the undersigned **Prof.univ.dr. Rodica-Mariana Ion**, based on my expertise and experience of 42 years in scientific research and higher education, as one of the best researchers in Romania, with meritorious results at European level, I will present below the evidences of my important achievements from the last five years, according to the imposed criteria.

Exceptional solutions: (1) For the first time in Romania, I introduced the application of advanced materials/hydroxyapatite series nanomaterials in chemical consolidation and biological decontamination of surfaces of historical artifacts and monuments from cultural heritage (patented by EP2626464 (B1) and many OSIM patents (37 OSIM patent applications, 19 granted, 18 patent applications under evaluation and 1 patent application filed with the WIPO international patent office (55 patents in the entire career). **(2) Applied patents:** In my entire career I filed and obtained 55 patents, and in the period imposed in this application (2019-2023) I filed 37 national patents with



MINISTERUL CERCETĂRII, INOVĂRII ȘI DIGITALIZĂRII

OSIM, and one WIPO patent (which has already passed the first scientific evaluation) applicable to various monuments of cultural heritage and not only. Application of these patented results for the conservation and/or restoration of artifacts or monuments with nanomaterials, such as: Corvins' Castle, Hunedoara; The Triumphal Monument Tropaeum Traiani from Adamclisi, Constanta; Roman mosaic, Constanta; The Chalk Churches Cave Ensemble from Basarabi-Murfatlar, Constanta; Palace of Culture, Iasi, through the (3) Based on my exceptional expertise, I teach as a visiting professor at the Faculty of Architecture and Urbanism of the Polytechnic University of Timisoara. (4) Following the implementation of a research project coordinated by me PNII 222/2012: Integrated approach to strengthening historical monuments in chalk through treatments based on nanomaterials - a revolutionary concept; www.chalk-restore.icechim.ro, value: 3,530,000 lei, I contributed to the establishment of a start-up ERCONA RESEARCH SRL, Medias, now led by that company, according to the legislation of research projects, which still operates today, and which, in 2023, ranked first in the top of companies (<https://www.listafirme.ro/ercona-research-srl-32474355/>). (5) During 2019-2022 I worked as a associated researcher at **Universidad Complutense de Madrid (UCM), Spain**, El Instituto de Geociencias (IGEO), Consejo Superior de Investigaciones Cientificas (CSIC), within the TOP Heritage-CM Program, Technologies in Heritage Sciences (S018/NMT-4372); (6) I was editor for *book published by prestigious international publishing house: Advanced Methods and New Materials for Cultural Heritage Preservation Hardcover – May 2, 2019, IntechOpen, by Daniela Turcanu-Carutiu (Editor), Rodica-Mariana Ion (Editor).* <https://www.intechopen.com/books/advanced-methods-and-new-materials-for-cultural-heritage-preservation>.

The candidate's scientific qualifications have exceeded the current state of knowledge in the fields, through: (a) development of a investigations group of museum artifacts, at Valahia University of Targoviste, in the field of *Materials Engineering* (embodied in 22 validated doctoral theses): https://sd.valahia.ro/wp-content/uploads/CV_RM-Ion_UVT_2023-1.pdf; as well as a laboratory "Evaluation and Conservation of Cultural Heritage", at ICECHIM – Bucharest; (b) physico-chemical diagnosis of their original materials from heritage supports (paper, stone, paintings and stuccoes), going beyond the state of knowledge in the field by implementing new restoration method that is based on hydroxyapatite nanomaterials and its derivatives (unique in Romania). (c) *articles published in Journal Citation Reports Q1 indexed journals according to influence score (AIS): 34 articles Q1 and Q2, of which 8 articles Q1 and 26 articles Q2 (after AIS/2022).*

C2. Citations status in Journal Citation Reports indexed journals. A few main author/correspondence author/co-authors of over 325 ISI papers, H=30 (Clarivate), 37 (Google



Scholar). In the last 5 years we have published 35 articles Q1 and Q2, of which 8 papers are classified Q1, the rest Q2 (*initially classified Q1, but after AIS fluctuations, they became Q2*). Number of citations: 2724 citations (<https://scholar.google.ro/citations?hl=en&user=qNitjmsAAAAJ>), 1st place by citations (<https://www.adscientificindex.com/university/University+Valachia+Targoviste>).

Presentation of concrete applications of research results in economy and / or society: diagnosis methods and preservation and / or restoration of monuments surface through composition receipts based on nanomaterials (Corvins' Castle Museum, Hunedoara; The Triumphal Monument Tropaeum Traiani from Adamclisi, Constanta; Roman mosaic, Constanta; The Chalk Churches Cave Ensemble from Basarabi-Murfatlar, Constanta; Palace of Culture, Iasi).

C3. Research funds: National research projects won (2019-2023): (1)PN-III-P2-2.1-PED-2021-3885, 3D technologies and experimental solutions for diagnosis and preservation of cultural heritage, budget-120 000 euros and 8 project members; (2)PN-III-P1-1.2-PCCDI-2017-0476, 2018-2021: New technologies of diagnosis and treatment for conservation and revitalization of archaeological components of national cultural heritage, budget -1500 000 euros and 25 project members; (3)PN-III-P2-2.1-PED-2019-3183, Innovative solutions for the protection and preservation of book and manuscript paper, budget - 120 000 euros and 10 project members. **International research projects (2019-2023): COST UE CA22155:** Network for forest by-products charcoal, resin, tar, potash (EU-PoTaRCh) as WG2 vice-leader and Management Committee. **Research / invited speaker at universities or prestigious international events:** 2019-2022: Associate researcher at Universidad Complutense de Madrid (UCM), Spain, El Instituto de Geociencias (IGEO), Consejo Superior de Investigaciones Científicas (CSIC), within the TOP Heritage-CM Program, Technologies in Heritage Sciences (S018/NMT-4372). Guest speaker at BRAMAT (2019, 2022, 2024), E-MRS (Strasbourg, France, 2020), IMEKO TC-4, Int. Conf. on Metrology for Archaeology and Cultural Heritage, Florence, Italy, 2019.

C4. Professional recognition: European Commission, member of Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) (https://health.ec.europa.eu/scientific-committees/scientific-committee-health-environmental-and-emerging-risks-scheer_en#membership), Expert evaluator at the European Commission (70 projects evaluated at Horizon Europe (HORIZON) - European Research Executive Agency, Italian Ministry of Research, Evaluator for National projects Italy, Catagna Region and Fundacia Bancaria, Baixa, Spain. **International collaborations: Specializations at prestigious universities in Europe: in entire my career:** (a)University of Poznan, Poland (Prof. Danuta Jablonska-Frackowiak), (b)University of Leuven, Hengelhoeff (Prof. Mark Van der Auweraer); (c)Pierre & Marie Curie University, Paris (EU



scholarship, Prof. Gerard Jaouen); (d) Istanbul Technical University (NATO Scholarship, coordinator Prof. Ozer Bekaroglu); (e) Antakia-Hatay University, Turkey (NATO scholarship, coordinator Prof. Keriman Gunaydin). **In the last 5 years:** (a) South African Republic (Prof. Emeritus Tebello Nyokong, Rhodes University, Grahamstown), (b) France (Prof. Fabrice Goubard, CY Cergy Paris Université, Chemistry Dept.), (c) Turkey (Prof. Fabienne Demoulin, TUBITAK, with whom we submitted a new COST project this year), (d) Spain (Prof. Rafael Fort and Dr. Luz Villalba Gomez - Universidad Complutense de Madrid (UCM), Spain), (e) Russian Federation, Dubna (Dr. Sergey Kichanov, Institute of Nuclear Research).

Editorial boards of journals: Editor-in-chief of Scientific Bulletin of Valahia University: Materials and Mechanics, ISSN: 1844-1076; <https://sciendo.com/journal/BSMM?content-tab=editorial>;

Editorial Board Heritage <https://www.mdpi.com/journal/heritage/editors?search=Rodica+Mariana>;

Guest-editor: *Coatings: Syntheses, Properties, and Applications of Organic Dyes and Pigments* https://www.mdpi.com/journal/coatings/special_issues/Synth_Prop_Appl_Org_Dye_Pigment;

Materials: Analytical Characterization of Functionalized Surfaces https://www.mdpi.com/journal/materials/special_issues/Analytical_Functionalized_Surfaces;

Coatings: Science and Technology of Roman Historical Buildings' Coating Materials

https://www.mdpi.com/journal/coatings/special_issues/Sci_Technol_Rom_Hist_Build_Coat_Mater;

National and international sciences: Ambassador of Meritocracy Award in Romania, NGO ECO-EUROPA, Romania; Personality of the Decade Award in Romania, *Laudatio in honorem*, NGO ECO-EUROPA, Romania, Medals at invention salons in Romania: 30 Au, 9 Ag, 2 Bz (Euroinvent, Inventica, ProInvent). **Member of prestigious international professional organizations:** Romanian Chemical Society, EuChemS platform (<http://www.euchems.org/CFECS/location.cfm>), SusChem Platform (http://www.suschem.org/en/_related/links-to-national-platforms-or-contact-points-).

Implications in organizing prestigious international events; BRAMAT (2004-present), PRIOCHEM (2010-present), E-MRS (Strasbourg, France, 2020).

C5. Initiated and formed groups: (a) a research group in the field of archaeometry at Valahia University of Targoviste (10 theses in the field out of a total of 22 doctoral theses validated by the Ministry of Education), with real successes in this field (Ex. Drd/Dr. Grigore (David) Mădălina-Elena, winner of the third prize "Rada Mihalcea" awarded by Cluj-Napoca City Hall), coordinator of ERASMUS PhD students 2022-2023; (b) research group "Evaluation and Conservation of Cultural Heritage" from ICECHIM - Bucharest for physico-chemical and mechanical research on various materials present in heritage pieces (paper, stone, seals and stucco) (<https://icechim.ro/en/rd-groups/g11-evaluation-and-conservation-of-cultural-heritage/>).



7. Narrative curriculum vitae of the "individual" candidate or of each member of the research team, in the case of the "research team" candidate, showing the results of the research activity in the last 5 years, according to the quantitative indicators in Annex no. 2 to the Regulation and the qualitative evaluation criteria set out in Annex no. 3 to the Regulation.

CURICULUM VITAE

Professor Dr. Chim. Rodica-Mariana Ion

Valahia University of Targoviste

I. PROFESSIONAL ACTIVITY:

Positions held: (1) Director CSUD Valahia University of Targoviste (2001-present) / vice-rector / professor Faculty of Materials Engineering and Mechanics, according to the Order of the Minister of Education, Research and Youth nr. 5664/15.12.2003 (2004-present) / PhD supervisor according to Order of the Ministry of Education, Research and Youth 2400/15.10.2007 (207-present). (2) Ministry of Research, Innovation and Digitalization, Consultative College for Research, Development and Innovation (CCCDI), President of Commission 6: Cultural Heritage and Cultural Identity (2021-PRESENT); (3) European Commission, Directorate-General for Health, DG-SANTE, Scientific Committee on Health, Environment and Emerging Risks, Luxembourg (2015–present); (4) Ministry of National Education, National Council for the Recognition of Titles, Diplomas and Certificates (CNATDCU), Materials Engineering Commission (2012-present); (5) ICECHIM, Bucharest: Head of the team „Evaluation and Conservation of Cultural Heritage,, (2018-present), CS1 (2000-present).

II. STUDIES:

UNIVERSITY STUDIES: **LICENSE:** Polytechnic Institute of Bucharest, Faculty of Chemical Technology, Department of Chemistry, Bachelor's Degree in Chemistry, Specialty Physical Chemistry; title of thesis: "Study of magnetic properties of metallic complex materials" (September 1977 - June 1981); **MASTER / Specialization:** Polytechnic Institute of Bucharest, Faculty of Chemical Technology, Department of Chemistry, Specialization Diploma (Master equivalent), 1982, title of dissertation thesis: "Magnetic properties of ferrites". (September 1981-June 198) and Academy of Economic Studies, Bucharest, University Education, graduation diploma June 2010-2011); **PhD:** University of Bucharest, Faculty of Chemistry, PhD Diploma in Chemical Sciences, specialty Molecular Spectroscopy, 1995, Order of the Minister of Education, nr. 142/ 05.06.1995, doctoral thesis title: "Study of porphyrins and metalloporphyrins as biologically active substances",



tutored by prof. dr. Cristina Mandravel (June 1990 - February 1995); **POST-GRADUATE STUDIES:** Practical methods of scientific examination of art and archaeology, Viagrande, Italy (2021); University of Bucharest, Faculty of Chemistry, Post-graduate specialization diploma in the field "Photochemistry". September 1987 - June 1988); University of Bucharest, Faculty of Physics, Post-graduate specialization diploma "Solid State Physics" (September 1988 - June 1989); "Politehnica" University of Bucharest, Faculty of Industrial Chemistry, Specialization Diploma "Analytical methods of characterization of surfaces and films" (September 1994 - June 1995); "Organizational Management", International Institute by Correspondence, Bucharest (January 2000 – June 2000).

III. SCIENTIFIC ACTIVITY:

PUBLICATIONS: 323 publications in ISI journals, Hirsch Index 37 (Google Scholar), 26 (Scopus) and 30 (ISI WEB of Knowledge: <https://www.webofscience.com/wos/author/record/588084,1597608>); 55 national/international patents, 6267 citations (according to Google Scholar), editor of 2 books and author of 6 books, author of 23 book chapters in recognized national and international publishing houses (Springer, Elsevier, Intech, Verlag, etc). 2924 citations **in the last 5 years** (Google Scholar) or 1773 citations after Web of Knowledge (<https://www.webofscience.com/wos/woscc/citation-report/fe8b58f3-05a3-486e-9859-45ee8f555b76-c9787f9a>). **Websites:** Valahia University of Targoviste, IOSUD-CSUD: https://sd.valahia.ro/wp-content/uploads/CV_RM-Ion_UVT_2023-1.pdf;
Google_scholar: https://scholar.google.ro/citations?hl=en&user=qNitjmsAAAAJ&view_op=list_works&sortBy=pubdate;
ORCID: <https://orcid.org/0000-0002-9842-3321>;
ResearchGate: www.researchgate.net/profile/Rodica-Mariana_Ion2;
LinkedIn: <https://ro.linkedin.com/in/rodica-mariana-ion-59582a7>;
Facebook: <https://www.facebook.com/rodicamariana.ion>

BOOKS AND BOOK CHAPTERS

BOOKS (2019-2023):

1. RM Ion, C.Radulescu, Good practice guide, Biblioteka Publishing House, Targoviste; 100 pp, ISBN: 978-606-603-226-1
2. RM Ion, M.Geba, Conservation and restoration of books, manuscripts and documents. Good practice guide, Ed.Palace of Culture, Iasi, 2021, 506 pp, ISBN: 978-606-8547-60-2



BOOK EDITOR: *Advanced Methods and New Materials for Cultural Heritage Preservation Hardcover – May 2, 2019, IntechOpen, by Daniela Turcanu-Carutiu (Editor), Rodica-Mariana Ion (Editor).* <https://www.intechopen.com/books/advanced-methods-and-new-materials-for-cultural-heritage-preservation>

Book chapters:

1. Rodica-Mariana Ion, Ana-Alexandra Sorescu, Alexandrina Nuta, Chapter 16 - Green synthesis of lanthanides and actinides-based nanomaterials, Editor(s): Boris Kharisov, Oxana Kharissova, Handbook of Greener Synthesis of Nanomaterials and Compounds, *Elsevier*, 2021, Pages 355-388, ISBN 9780128224465, <https://doi.org/10.1016/B978-0-12-822446-5.00016-2>.
2. V.Schroder, RM Ion, D.Turcanu, Microscopical methods for the in situ investigation of biodegradation on cultural heritage, in: *Advanced Methods and New Materials for Cultural Heritage Preservation*, InTech, 2019
3. Daniela Turcanu-Carutiu, Rodica-Mariana Ion, Environmental Characteristics of a Dobrudja Famous Archaeological Monument in: *Advanced Methods and New Materials for Cultural Heritage Preservation*, InTech, 2019
4. RM Ion, V. Gurgu, I.A. Bucurica, S. Teodorescu, I.A. Dulama, R.M. Stirbescu, Anca Gheboianu (2019) Digital Scanning and Non-destructive Techniques for Size Recovering and Rehabilitating the Structural Performance of Traditional Stuccoes. In: Duguleană M., Carrozzino M., Gams M., Tanea I. (eds) *VR Technologies in Cultural Heritage. VRTCH 2018. Communications in Computer and Information Science*, vol 904. *Springer, Cham*.

PATENTS: in the last 5 years 37 patents, as follows: 1 WIPO patent application, 8 patents granted and 28 patent applications under evaluation.

Member of Professional Societies:

1. Member of the Romanian Chemical Society;
1. EuCheMS platform (European Association for Chemistry for Life Science)
<http://www.euchems.org/CFFECS/location.cfm>
2. SusChem Platform (European Technology Platform For Sustainable Chemistry)
http://www.suschem.org/en/_related/links-to-national-platforms-or-contact-points-



POSITIONS OF PROFESSOR OR GUEST RESEARCHER

2019-2022: Associate researcher El Instituto de Geociencias (IGEO), Consejo Superior de Investigaciones Científicas (CSIC), Universidad Complutense de Madrid (UCM), Spain, within the TOP Heritage-CM Program, Technologies in Heritage Sciences (S018/NMT-4372).

Experience, relevant to the proposed project, gained in other national/international programs:

International projects

1. 2019-2022: Bilateral Project 04-4-1121-2015/2020, between Valahia University of Targoviste and Joint Institute for Nuclear Research, Dubna, Moscow Region; Protocol 4755-4-2018/2020, Micro-structural and compositional characterization of supports and coating layers on different substrates applied in biomaterials, photoelectrochemicals catalysis and cultural heritage
2. 2023-2027: COST CA 22155: Network for forest by-products charcoal, resin, tar, potash (EU-PoTaRCh): Management Committee si Vice-leader WG2;
3. 2016-2018: A method based on nanomaterials for conservation of paper and wood artifacts, Proiect Romania-Republica Sud-Africana
4. 2018-2022; EU-funded COST Action COMULIS (Correlated Multimodal Imaging in Life Sciences); <https://www.comulis.eu/about-comulis>
5. 2018-2022: COST CA17121 - Correlated Multimodal Imaging in Life Sciences; <https://www.cost.eu/actions/CA17121/#tabs|Name:management-committee>

National projects - Project Manager (selection)

1. PN-III-P2-2.1-PED-2021-3885 3D technologies and experimental solutions for cultural heritage diagnosis and preservation (120 000 euros)
2. PN-III-P1-1.2-PCCDI-2017-0476 / 2018-2020: New diagnostic and treatment technologies for conservation and revitalization of archaeological components of national cultural heritage; <http://icechim-rezultate.ro/proiect.php?id=39> (1 500 000 euros)
3. PN-III-P2-2.1-PED-2019-3183, Innovative solutions for the protection and preservation of book and manuscript paper, budget 600 000 lei (120 000 euros).

Member of the Editorial Boards of some journals

1. Editor-in-chief Scientific Bulletin of Valahia University: Materials and Mechanics, ISSN: 1844-1076. <http://fsim.valahia.ro/sbmm.html/>



2. Member in Editorial Board Heritage; <https://www.mdpi.com/journal/heritage/editors>
3. Guest-Editor Special Issue in [Coatings: Syntheses, Properties, and Applications of Organic Dyes and Pigments](#)
4. Guest-Editor Special Issue in [Materials: Analytical Characterization of Functionalized Surfaces](#)

Areas of scientific competence:

Smart cities, cultural heritage, depollution, pollutants, unconventional methods (photochemistry, photocatalysis) for depollution, nanomedicine, conservation/restoration for different art objects; Scientific preservation, preservation, consolidation and restoration of artifacts and surfaces of architectural buildings of cultural heritage; study of degradation processes of various artifacts and monuments from cultural heritage; introduction and development of new materials (micro- and nanomaterials) and modern processes for preservation and restoration of old cultural heritage artefacts; scientific investigations for diagnosis and authentication of artifacts on various media: stone, ceramics, wood, paper, textiles, etc.; porphyrin and phthalocyanine pigments as pigments in ancient artifacts, as well as their use in photodynamic cancer therapy; photochemistry and reactive oxygen species with applications in medicine and museum studies. The study of artifacts on various supports: Inorganic materials (metals, ceramics, glass, stone and painted objects): cleaning / self-cleaning, desalination, structural repair, strengthening (paints, stone and ceramic coatings), filling, corrosion inhibition, preventive measures. Conservative treatment with nanomaterials.

Organic materials (wood, textiles, vegetable fibres, paper, bone): identification of materials; treatments involving loss compensation, structural repairs, coating removal, wet and dry cleaning, preventive measures.

Modern and contemporary objects, degradation and materials (plastic works, prints, photographs, paintings on canvas, modern paints, solid soaps and mounting parts): treatments, scrapings, structural repairs and additions or consolidations, wet and dry cleaning. Archaeological and architectural monuments (stone structures and sculptures, facades and masonry, masonry, wall paintings, mosaics, bas-reliefs): treatments involving preventive measures, adequate removal of coatings, consolidation, cementation and desalination. Evaluation and Conservation of Cultural Heritage, as a discipline of study, scientific investigation of the degradation stage of artifacts, study of compatibility of materials used for conservation/restoration, monitoring the behavior of materials subjected to these interventions, evaluation of the degradation state of structural elements in various artifacts.



Outstanding scientific achievements:

For the first time in Romania, I introduced the application of advanced materials/nanomaterials from the hydroxyapatite series and its derivatives in the chemical consolidation and biological decontamination of the surfaces of historical artifacts and monuments from cultural heritage. The results were patented through 37 OSIM patent applications, 8 granted, 28 patent applications under evaluation and 1 patent application filed with the WIPO international patent office (55 patents in the entire career).

Application of these results for the purpose of conservation and / or restoration of artifacts or monuments, such as: Corvin Castle Museum, Hunedoara; The Triumphal Monument Tropaeum Traiani from Adamclisi, Constanta; Roman mosaic, Constanta; The Chalk Churches Cave Ensemble from Basarabi-Murfatlar, Constanta; Palace of Culture, Iasi.

Based on my exceptional expertise, besides my basic position at Valahia University of Targoviste, I work as a visiting professor at the Faculty of Architecture and Urbanism of the Polytechnic University of Timisoara; Following the implementation of a research project coordinated by me (PNII - CHALK-RESTORE), I contributed to the establishment of a start-up ERCONA RESEARCH SRL, Medias, now led by that company, according to the legislation of research projects, which still operates today, and which ranked first in the top of companies (<https://www.listafirme.ro/ercona-research-srl-32474355/>). Between 2019-2022 I worked as a research associate at the Universidad Complutense de Madrid (UCM), Spain.

8. List of publications of the "individual" candidate or of each member of the research team, in the case of the "research team" candidate, highlighting the relevant publications of the candidate in the last 5 years and joint publications of the members of a research team in the case of the "research team" candidate. A link to the web page where the candidate's publications can be found is also mentioned.

1. Vermeire, TG, Hoet, P, **Ion, RM**, Krätke, R, Proykova, A, Scott, M, de Jong, WH, Opinion of the Scientific Committee on health, environmental and emerging risks on the safety of titanium dioxide in toys, REGULATORY TOXICOLOGY AND PHARMACOLOGY, 146, 105527, 2024, DOI: 10.1016/j.yrtph.2023.105527 (Q1)
2. **R.-M. Ion***, L. Iancu, R. M. Grigorescu, S. Slamnoiu-Teodorescu, I. D. Dulama, I.A. Bucurica, Degradation Products Assessment of the Wooden Painted Surfaces from a XVIIth Heritage Monastery, Applied Sciences. 2023, 13, 2124. <https://doi.org/10.3390/app13042124>. (Q2)



3. **R.-M. Ion***, V. Diaconu, G. Vasilievici, L. Iancu, R. M. Grigorescu, L.-A. Mîrț, E. Alexandrescu, A. I. Gheboianu, S. Slamnoiu-Teodorescu, Archaeometric Investigations of the Chalcolithic Pottery from Topolița—Neamț County, Romania, *Coatings* 2023, 13, 488, <https://doi.org/10.3390/coatings13030488>. (Q2)
4. L. Iancu, R. M. Grigorescu, **R.-M. Ion***, M. E. David, L. Predoana, A. I. Gheboianu, E. Alexandrescu, New Triple Metallic Carbonated Hydroxyapatite for Stone Surface Preservation, *Coatings* 2023, 13, no. 8: 1469. <https://doi.org/10.3390/coatings13081469>, (Q2)
5. I Baldea, S Danescu, F Tabaran, AG Filip, **R.-M. Ion**, DE Olteanu, ... Inhibition of Survival Mechanisms and Cell Death Induction in Melanoma Following Photodynamic Therapy Mediated by Meso-5,10,15,20-tetrakis-(4-hydroxyphenyl)-porphyrin. *Processes* 2023, 11 (3), 917, <https://doi.org/10.3390/pr11030917>, (Q2)
6. Vermeire, T. G., Hoet, P., **Ion, R.-M.**, Krätke, R., Proykova, A., Scott, M. , de Jong, W. H. and SCHEER, Opinion of the Scientific Committee on health, environmental and emerging risks on the safety of titanium dioxide in toys. *Regulatory Toxicology and Pharmacology*, 2023, 146, 105527, <http://doi.org/10.1016/j.yrtph.2023.105527>, (Q1)
7. M. Râpă, B.N. Spurcaci, **R.M. Ion**, R.M. Grigorescu, R.N. Darie-Niță, L. Iancu, C.-A. Nicolae, A.R. Gabor, E. Matei, C. Predescu, Valorization of Polypropylene Waste in the Production of New Materials with Adequate Mechanical and Thermal Properties for Environmental Protection, *Materials*, 202, 15, 17, 5978, <https://doi.org/10.3390/ma15175978>, (Q2)
8. **R.-M. Ion***, R.M. Grigorescu, L. Iancu, M.E. David, A. Cirstoiu, G.I. Paraschiv, M. Geba, Morphological and Mechanical Properties of Book Cellulose-Based Paper (XXth Century Treated with Hydroxyapatite Nanoparticles, *Heritage*, 2022, 5, 3, 2241-2257, <https://doi.org/10.3390/heritage5030117>, (Q1)
9. ME David, **RM Ion***, RM Grigorescu, L Iancu, M Constantin, RM Stirbescu, AI Gheboianu, Wood Surface Modification with Hybrid Materials Based on Multi-Walled Carbon Nanotubes, *Nanomaterials*, 2022, 12, 1990, <http://doi.org/10.3390/nano12121990>, (Q2)
10. M. E. David, **R.-M. Ion***, R. M. Grigorescu, L. Iancu, A.M. Holban, F. Iordache, A. I. Nicoara, E. Alexandrescu, R Somoghi, S.Teodorescu A. I. Gheboianu, Biocompatible and antimicrobial cellulose acetate-collagen films containing MWCNTs decorated with TiO₂ nanoparticles for potential biomedical applications, *Nanomaterials* 2022, 12, 239. <https://doi.org/10.3390/nano12020239> (Q2)



11. **R-M Ion**, C. E. Rizescu, D. A. Vasile, G. Vasilievici, I. Atkinson, A. Rusu, L. Predoana, F. Miculescu, Layered Double Hydroxides (LDHs) as New Consolidants for Cultural Heritage Masonry, Crystals, 2022, 12, 490, <https://doi.org/10.3390/cryst12040490>, (Q2)
12. **R-M. Ion**, M. G. Barbu, A. Gonciar, G. Vasilievici, A. I. Gheboianu, Sofia Slamnoiu-Teodorescu, M.E. David, L. Iancu, R. M. Grigorescu, 2A Multi-Analytical Investigation of Roman Frescoes from Rapoltu Mare (Romania), Coatings 2022, 12, 530, <https://doi.org/10.3390/coatings12040530>, (Q2)
13. R. M. Grigorescu, P. Ghioca, L. Iancu, M. E. David, **R.-M. Ion**, C.-A., Nicolae, R. Gabor, A., E. R. Radu, M. Ganciarov, B. Spurcaci, E. Alexandrescu, F. Ciuprina, J. Appl. Polym. Sci. 12022, 39 (2), e51469, <https://doi.org/10.1002/app.51469>, (Q2)
14. A. Hudita, B. Galateanu, M. Costache, C. Negrei, R. M. Ion, L. Iancu, O. Ginghina, In Vitro Cytotoxic Protective Effect of Alginate-Encapsulated Capsaicin Might Improve Skin Side Effects Associated with the Topical Application of Capsaicin. Molecules, 2021, 26(5), 1455, <https://doi.org/10.3390/molecules26051455>. (Q2)
15. M. E. David, R-M. Ion, R. M. Grigorescu, L. Iancu, A.M. Holban, A. I. Nicoara, E. Alexandrescu, R Somoghi, M. Ganciarov, G. Vasilievici, A. I. Gheboianu, Hybrid Materials Based on Multi-Walled Carbon Nanotubes and Nanoparticles with Antimicrobial Properties. Nanomaterials, 2021, 11, 1415. <https://doi.org/10.3390/nano11061415> (Q2)
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5. List of research projects won by the candidate and their value.

1. PN-III-P2-2.1-PED-2021-3885, 3D technologies and experimental solutions for diagnosing and preserving cultural heritage, value 600 000 lei (120 000 euros);
2. PN-III-P1-1.2-PCCDI-2017-0476, 2018-2021; New technologies of diagnosis and treatment for conservation and revitalization of archaeological components of national cultural heritage, value 7 500 000 lei (1 500 000 euros);
3. PN-III-P2-2.1-PED-2019-3183, Innovative solutions for the protection and preservation of book and manuscript paper, value 600 000 lei (120 000 euros);

10. List of patents filed and accepted, if applicable (B1 - granted patents, A1-2 - patent applications).

WIPO:

1. Magnetic gel for cleaning painted surfaces, PCT/RO2023/000007/06.09.2023

OSIM:

1. RM Ion, A Nuță, AA Sorescu, RI Bunghez, Skin sunscreen gel and procedure for obtaining and using it. RO131024 (B1) /2019
2. RM Ion, Gh.Nechifor, S.Teodorescu, N.Ion, Filmogenic film with composite polymer for retention of degradation products on pictorial surfaces and procedure for obtaining it, RO 132767 (B1) /2019
3. RM Ion, IR Suica-Bunghez, N.Ion, Gel-paste for desulfatation of calcareous stone surfaces and procedure for obtaining and applying it, RO 131218 (B1) /2020



4. RM Ion, Composition and procedure for restoring pictorial surfaces affected by metal soaps, RO 132714 (B1) / 2020
5. RM Ion, N.Ion, Composition and procedure for cleaning and consolidating architectural elements of heritage buildings, RO 131173 B1 / 2020
6. RM Ion, Ion Nelu, Iancu Lorena, Radu Nicoleta Antifungal composition for restoration/conservation of wood artifacts, and process of use, RO134286A2/2020
7. V Fruth Opreșan, L Todan, L Predoană, I Poenaru, L Aricov, A Leontieș, E Ciobanu, G Petcu, RM Ion, L Iancu, LM Jecu, I Răut, M Călin, Process for obtaining nanocomposite films for the protection of lithic architectural components of cultural heritage RO 134390 B1 / 2020
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9. Ion Rodica Mariana, Ghioca Paul Niculae, Grigorescu Ramona-Marina, Iancu Lorena, David Mădălina-Elena, Ion Nelu Elastomeric film for degradation of antitumor drug waste in photocatalytic reactors RO 135104A2/2021
10. R. M. Ion, L. Iancu, R.M. Grigorescu, M.E. David, N. Ion, Composition of carbonate hydroxyapatite co-substituted with strontium and zinc for the consolidation of heritage objectives. A 135383 A2/ 2021
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12. Ion Rodica Mariana, Marin Laurențiu, Ion Nelu Elastic structure, with antivibration properties and compressive strength, used as flooring in civil and industrial constructions 135326A2/2021
13. Ion Rodica Mariana, Iancu Lorena, Grigorescu Ramona-Marina, David Mădălina-Elena, Ion Nelu Composition of carbonate hydroxyapatite co-substituted with strontium and zinc to strengthen heritage objectives 135383 A2/2021
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24. Ion Rodica Mariana, Ion Nelu, Lorena Iancu, Grigorescu Ramona Marina, David Mădălina Elena, Geba Maria, Composite system with antimicrobial role and oxygen indicator for preservation and conservation enclosures of heritage artifacts A 2022-0380/2022



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26. Ion Rodica Mariana, Rizescu Claudiu Eduard, Ion Nelu, Iancu Lorena, Grigorescu Ramona Marina Waterproof double lamellar ternary hydroxide and antimicrobial activity A 2022-0653/2022
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29. Ion Rodica Mariana, Ion Nelu, Oancea Florin, Iancu Lorena, Grigorescu Ramona Marina, Photochemical bleaching of lignocellulose biomass A 2023- 00015/18.01.2023
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