

# Diseminarea rezultatelor

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## CONFERINTE NATIONALE/INTERNATIONALE

1. R.M. Ion, V. Gurgu, I.A. Bucurica, S. Teodorescu, I. D. Dulama, R. M. Stirbescu, A. Gheboianu, Digital scanning and non-destructive techniques for size recovering and rehabilitating the structural performance of traditional stuccoes, VRTCH'18 – 1st International Conference on VR Technologies in Cultural Heritage, At Brasov (Romania), 29-30 May 2018
2. R.M. Ion, L. Iancu, D. Turcanu-Carutiu, V. Schroder, S. Tincu, C. Roman, N. Ion, I.A. Bucurica, S. Teodorescu, I.D. Dulama, R.M. Stirbescu, A.I. Gheboianu, Traditional building materials and modern restoration products identified at the painted Matia-fresco Loggia, Corvins' Castle, Romania, EGU, Aprilie 2018, Viena.
3. R.M. Ion, L. Iancu, S. Teodorescu, I.D. Dulama, R.M. Stirbescu, A.I. Bucurica, A. Gheboianu, M.L. Ion, Investigation and consolidation studies of different historical Romanian buildings, EMRS Spring Meeting 2018 Symposium CC Cultural Heritage, 18-21.06.2018, Strasbourg, Franta.
4. R.M. Ion et al, X-Ray and scanning electron microscopy archaeometric studies of pigments from mural paints, 18th International Balkan Workshop on Applied Physics and Materials Science, 10-13 Iulie 2018, Constanta.
5. I. Dulama, R.M. Ion et al, Chemical and morphological investigations on painted pottery of Romanian Cultural Heritage, 18th International Balkan Workshop on Applied Physics and Materials Science, 10-13 Iulie 2018, Constanta.

## Cereri brevet

1. R.M. Ion, R.M. Grigorescu, Iancu Lorena, P.N. Ghioca, N. Ion, Compoziții polimerice pentru protecția și conservarea suprafețelor lemnoase și procedeu de aplicare al acestora, cererea de brevet de invenție nr. A 2018 - 00319/08.05.2018

## Premii și diplome

R.M. Ion, Activitate de invenție în domeniul Patrimoniului Cultural, Premiul Special și Cupa pentru Patrimoniu Cultural acordat de Platforma Archeoinvest, Euroinvent, 17-19 Mai 2018, Iasi

## Articole ISI

1. R.M. Ion, S. Tincu, N. Ion, I.A. Bucurica, S. Teodorescu, I.D. Dulama, R.M. Stirbescu, A.I. Gheboianu, C. Radulescu, M.L. Ion, L. Iancu, R.M. Grigorescu, "Archaeometric studies of mural paints from Matia Loggia (Corvins'Castle)", *Romanian Reports in Physics*, 71, 804, 2019.
2. R.M. Ion, L. Iancu, G. Vasilievici, M. E. Grigore, R. E. Andrei, G.-I. Radu, R. M. Grigorescu, S. Teodorescu, I. A. Bucurica, M.-L. Ion, A. I. Gheboianu, C. Radulescu, I. D. Dulama, Ion-Substituted Carbonated Hydroxyapatite Coatings for Model Stone Samples, *Coatings* 2019, 9, 231; doi:10.3390/coatings9040231.
3. M.L. Udrea, R.-M. Ion, Modelling of methylene blue dye adsorption on beech and fir wood sawdust as adsorbent support materials, *Journal of Science and Arts*, 3(48), 2019, pp. 675-686.
4. Radulescu C., Stih C., Ion R.-M., Dulama I.-D., Stanescu S.-G., Stirbescu R. M., Teodorescu S., Gurgu I.-V., Let D.-D., Olteanu L., Stirbescu N.-M., Bucurica I.-A., Olteanu R.-L., Nicolescu C.-M., Seasonal Variability in the Composition of Particulate Matter and the Microclimate in Cultural Heritage Areas, *Atmosphere*, 10(10), 595, 2019 doi:10.3390/atmos10100595 IF = 2.046
5. Bintintan A., Gligor M., Radulescu C., Dulama I.D., Olteanu R.L., Stirbescu R.M., Teodorescu S., Bucurica I.A., Multielemental and Chemical Characterization of Eneolithic Petresti Painted Pottery from Alba Iulia-Lumea Noua archaeological site, Romania, *Analytical Letters*, 52(15), 2348-2364, 2019, IF= 1.248
6. Bintintan A., Gligor M., Dulama I.D., Radulescu C., Stih C., Ion R.M., Teodorescu S., Stirbescu R.M., Bucurica I.A., Pehoiu G., Analysis and Structural Investigations on Early Eneolithic Foeni Painted Pottery from Alba Iulia-Lumea Noua Archaeological Site, *Romanian Journal of Physics*, 64(5-6), Article Number: 903, 2019 IF =1.460
7. Radulescu C., Ion R.-M., Dulama I.-D., Stanescu S.-G., Stirbescu R. M., Teodorescu S., Gurgu I.-V., Let D.-D., Olteanu L., Stirbescu N.-M., Bucurica I.-A., Microclimatic monitoring and environmental impact assessment on heritage materials of Tropaeum Traiani Monument, Adamclisi, *Aerosol and Air Quality Research*, 2020, IF= 2.735

## Articole non-ISI

1. R.-M. Ion, S. Tincu, L. Iancu, R.M Grigorescu, Investigations of the Corvins' Castle towers - an artistic, architectural and technological achievement of the 15th - 17th centuries, *IOP Conferences Series: Materials Science and Engineering* 572 (2019) 012088, doi:10.1088/1757-899X/572/1/012088
2. M.E. Grigore, R.M. Ion, R.M. Grigorescu, L. Iancu. P. Ghioca, E.R. Andrei, G.I. Radu, M.I. Filipescu, A.-A. Sorescu, A. Nuta, S.M. Doncea, Photocatalytic degradation of drugs under light irradiation, *Bulletin of the Transilvania University of Braşov*, Vol. 12 (61) No. 1 – 2019, Series I: Engineering Sciences, <https://doi.org/10.31926/but.ens.2019.12.61.2>.
3. S. Teodorescu, R.M. Ion, R.M. Stirbescu, L. Iancu, R.M. Grigorescu, P. Ghioca, Physico-chemical characterization of wood treated with polymeric systems *Bulletin of the Transilvania University of Braşov*, Vol. 12 (61) No.1–2019, Series I: Engineering Sciences, <https://doi.org/10.31926/but.ens.2019.12.61.4>.

4. M.E. David, R.-M. Ion, L. Iancu, R.M. Grigorescu, R. E. Andrei, G.I. Radu, M.I. Filipescu, A. Nuta, A.-A. Sorescu, Photocatalytic Degradation of Direct Orange Dye under Solar Light. Multidisciplinary Digital Publishing Institute Proceedings, 29(1), 39, 2019.
5. L. Iancu, R-M Ion, R. M. Grigorescu, P.N. Ghioca, M.E. David, R. E. Andrei, G.I. Radu, M.I. Filipescu, R.I. Suica-Bunghez, C. A. Nicolae, R. Somoghi, B. Trica, S. Teodorescu, Surface Consolidation of Model Stone Samples with Carbonated Hydroxyapatite. Multidisciplinary Digital Publishing Institute Proceedings, 29(1), 37, 2019.
6. I. Marina, R.-M. Ion, M. E. David, L. Iancu, R. M. Grigorescu, Investigation of Chromatic Parameters of Some Samples from Constanta Casino. Multidisciplinary Digital Publishing Institute Proceedings, 29(1), 64, 2019.
7. E.R. Andrei, M. David, R. M. Grigorescu, P. Ghioca, L. Iancu, R-M Ion, Z. Vuluga, M. Filipescu, R. Gabor, C.-A Nicolae., B. Spurcaci, L. Marin, Composites Based on Waste Printed Circuit Boards (WPCB) and Waste Polypropylene. Multidisciplinary Digital Publishing Institute Proceedings, 29(1), 15, 2019.
8. P. Ghioca, M. E. David, M. I. Filipescu, R. M. Grigorescu, L. Iancu, R.-M. Ion, R. E. Andrei, R. Gabor, C.-A Nicolae, B. Spurcaci, Composites of Styrene-Butadiene Block Copolymer Reinforced with Waste Printed Circuit Boards (WPCB). Multidisciplinary Digital Publishing Institute Proceedings, 29(1), 19, 2019.
9. G. I. Radu, M. E. David, S. Vasile, R. M. Ion, L. Iancu, R. M. Grigorescu, M. I. Filipescu, Elemental and Corrosion Investigations Performed on Coins from 20<sup>th</sup> Century. Multidisciplinary Digital Publishing Institute Proceedings, 29(1), 41, 2019.
10. M. L. Udrea, V. Trăistaru, A. A. Sorescu, M. E. David, E. R. Andrei, R. M. Ion, Electrical Resistivity and Moisture Content Measurements for Some Concrete Samples. Multidisciplinary Digital Publishing Institute Proceedings, 29(1), 60, 2019.
11. R.I. Suica-Bunghez, L. Iancu, R-M Ion, Antioxidant activity and phytochemical compounds of Capsicum annum. Multidisciplinary Digital Publishing Institute Proceedings, 29(1), 44, 2019.
12. B. Spurcaci, L. Iancu, M. Filipescu, R-M Ion, P. Ghioca, R. Grigorescu, C. Nicolae, R. Gabor, M. Rapa, E. Matei, Polymeric nanofibers manufactured by electrospinning of styrene-ethylene-butylene-styrene (SEBS) composites. Multidisciplinary Digital Publishing Institute Proceedings, 29(1), 84, 2019.
13. B. Spurcaci, L. Iancu, R. E. Andrei, R-M Ion, P. Ghioca, R. Grigorescu, C. Nicolae, R. Gabor, M. Rapa, E. Matei, Nanofibres obtained by electrospinning from thermoplastic elastomer and graphene composites. Multidisciplinary Digital Publishing Institute Proceedings, 29(1), 12, 2019.
14. A. Sorescu, N. Radu, M. Constantin, I. Raut, A. Nuta, R.M. Ion, G. Vasilescu, M.G. Zaharie, Antimicrobial properties of bionanomaterials obtained from vegetable sources, Multidisciplinary Digital Publishing Institute Proceedings, 29(1), 104, 2019.
15. A. A. Sorescu, A. Nuta, I.R. Suica-Bunghez, E.R. Andrei, L. Iancu, R-M. Ion, Green-synthesized silver nanoparticles as multifunctional materials for the degradation of different dyes, Multidisciplinary Digital Publishing Institute Proceedings, 29(1), 9, 2019.
16. D.A. Minea, R.-M. Ion, A. Sorescu, The influence of solvents on the stability of hydroxyapatite. Multidisciplinary Digital Publishing Institute Proceedings, 29(1), 68, 2019.

17. S.F. Vasile, G.-I. Radu, A. Sorescu, M.I. Filipescu, R.-M. Ion, Determination of sulphates in model stones and stones from Corvins' Castle. Multidisciplinary Digital Publishing Institute Proceedings, 29(1), 58, 2019.
18. D.-L. Copilu, A. Maidaniuc, T.-M. Butte, F. Miculescu, G. E. Stan, R.-M. Ion, Studies on Obtaining Porous Hydroxyapatite Structures Using Porogen Agents of Natural Origin. Multidisciplinary Digital Publishing Institute Proceedings, 29(1), 13, 2019.
19. V. Fruth, L. Predoana, I. Poenaru, L. Todan, L. Aricov, M. Ciobanu, L. Jecu, R. Ion, Multifunctional Metal-Oxide-Nanopowder-Polymer Composite Coatings for Stone Built Heritage Conservation. Multidisciplinary Digital Publishing Institute Proceedings, 29(1), 113, 2019.
20. R.-M. Ion, S. Tincu, L. Iancu, R. M. Grigorescu, M.E. Grigore, A.I. Gheboianu, S. Teodorescu, Nanomaterials for conservation of ceramic tiles from Corvins' Castle, Hunedoara, in e-book abstract ed. E. Badea, A. Bernath, "The Cultural Object from Investigation to Restoration", Oscar Print Publishing House, Bucuresti, 2019, ISBN 978-973-668-503-3.

### **Conferinte internationale**

1. Luminita Predoana, Jeanina Pandele Cusu, Simona Petrescu, Silviu Preda, Thermal behaviour of the TiO<sub>2</sub> powders obtained by microwave-assisted sol-gel method, 2nd Journal of Thermal Analysis and Calorimetry Conference (2nd JTACC+V4 2019) June 18-21, 2019 at Budapest, Hungary.
2. Victor Fruth, Luminita Predoana, Iuliana Poenaru, Ligia Todan, Ludmila Aricov, Gabriela Petcu, Hermine Stroescu, Iuliana Radut, Mariana Calin, Luiza Jecu, Multifunctional composite coatings with self-cleaning and antimicrobial properties containing oxide nanopowders, 5<sup>th</sup> Conference of the Serbian Society for Ceramic Materials 5CSCS-2019 11<sup>th</sup> – 13<sup>th</sup> June, 2019
3. Victor Fruth, Iuliana Poenaru, Ligia Todan, Ludmila Aricov, Madalina Ciobanu, Luiza Jecu, Rodica Ion, Luminita Predoana, Composite coatings based on sol-gel MgO or TiO<sub>2</sub> oxide nanopowders for buildings and monuments protection, The XX International Sol-gel Conference, 25-30 august 2019, St. Petersburg, Russia
4. Victor Fruth, Luminita Predoana, Iuliana Poenaru, Ligia Todan, Ludmila Aricov, Madalina Ciobanu, Luiza Jecu, Rodica Ion, Multifunctional Metal-Oxide-Nanopowder-Polymer Composite Coatings for Stone Built Heritage Conservation", PRIOCHEM XV – 2019, Bucuresti, 30 Octombrie - 01 Noiembrie 2019, Romania
5. L. Iancu, R.M. Ion, R. Grigorescu, P. Ghioca, M. Grigore, A. Sorescu, R. Andrei, G. Radu, M. Filipescu, S. Teodorescu, D. Dulama, I. Gheboianu, R. Stirbescu, Stone consolidation with carbonated hydroxyapatite, 11<sup>th</sup> International Conference on Materials Science & Engineering, Bramat, 13-16 martie, 2019, Brasov.
6. A. A. Sorescu, A. Nuta, R. M. Ion, S. G. Nitu, M. Ghiurea, M. Grigore, Organic – inorganic nanomaterials from green synthesized noble metallic nanoparticles and macrocyclic compounds, 11<sup>th</sup> International Conference on Materials Science & Engineering, Bramat 13-16 martie, 2019, Brasov.
7. S. Teodorescu, R. M. Ion, R. M. Stirbescu, L. Iancu, R. M. Grigorescu, P. Ghioca, Physico-chemical characterization of wood treated with polymeric systems 11<sup>th</sup>

International Conference on Materials Science & Engineering, Bramat 13-16 martie, 2019, Brasov.

8. R.-M. Ion, R. M. Grigorescu, L. Iancu, P.N. Ghioca, N. Ion, Polymeric compositions for the protection and conservation of wood surfaces and method of use, Salonul International de Inventica Proinvent, 20-22 martie 2019, Cluj-Napoca.
9. L. Marin, process for obtaining spatial formations with molecules of 20-60 atoms hybridize sp<sup>2</sup> of the fullerene type through electrical pulses discharges in subexcitation mode, using a pyrolytic graphite cathode, Salonul International de Inventica Proinvent, 20-22 martie 2019, Cluj-Napoca.
10. R. M. Ion, N. Ion, L. Iancu, N. Radu, Antifungal composition for restoration/preservation of wood artifacts, and method of use, Salonul International de Inventica Proinvent, 20-22 martie 2019, Cluj-Napoca.
11. R. M. Ion, L. Marin, N. Ion, Antifungal, anti-wear, anti-slipping and photochemical stable used in museums and storage/conservation areas of cultural heritage artifacts and procedure for implementation, Salonul International de Inventica Proinvent, 20-22 martie 2019, Cluj-Napoca.
12. R. M. Ion, N. Ion, Composition and process for cleaning and consolidating architectural elements of heritage buildings, Salonul International de Inventica Proinvent, 20-22 martie 2019, Cluj-Napoca.
13. L. Iancu, R. M. Ion, R. M. Grigorescu, P.N. Ghioca, M. E. Grigore, R. E. Andrei, M. Filipescu, G. Vasilevici, G. Radu, Effectiveness of carbonated hydroxyapatite and their derivatives on stony materials, 9<sup>th</sup> International Conference of the Chemical Societies of the South-East European Countries, 8-11 mai, 2019, Targoviste.
14. R. E. Andrei, R. M. Ion, L. Iancu, R. M. Grigorescu, G. Radu, M. Filipescu, M. E. Grigore, Investigation of chromatic parameters of the stone samples treated with hydroxyapatite derivatives, 9<sup>th</sup> International Conference of the Chemical Societies of the South-East European Countries, 8-11 mai, 2019, Targoviste.
15. M. E. Grigore, R.-M. Ion, A. Ficai, I.L. Ardelean, C. Ilie, R. M. Grigorescu, L. Iancu, R. E. Andrei, G. I. Radu, M. Filipescu, Chitosan/collagen biomaterials with antibacterial properties for wound healing, 9<sup>th</sup> International Conference of the Chemical Societies of the South-East European Countries, 8-11 mai, 2019, Targoviste.
16. I. G. Radu, R.-M. Ion, L. Iancu, R. M. Grigorescu, M. E. Grigore, A. Sorescu, E. R. Andrei, M. I. Filipescu, M. Udrea, Freezing-Thaw Test For Pretreated Hydroxyapatite Brick Models, 9<sup>th</sup> International Conference of the Chemical Societies of the South-East European Countries, 8-11 mai, 2019, Targoviste.
17. V. Trăistaru, A. A. Sorescu, M. L. Udrea, M. Corban, R.-M. Ion, Ions content of some stone samples from Corvins' Castle, Hunedoara, 9<sup>th</sup> International Conference of the Chemical Societies of the South-East European Countries, 8-11 mai, 2019, Targoviste.
18. M. L. Udrea, V. Traistaru, M. Corban, R.-M. Ion, G. Radu, Adsorption of methylene blue dye from industrial effluents using beech and fir wood sawdust as adsorbent support materials, 9<sup>th</sup> International Conference of the Chemical Societies of the South-East European Countries, 8-11 mai, 2019, Targoviste.
19. M. Corban, M. L. Udrea, V. Traistaru, R.-M. Ion, Conservation of wood artifacts using B72 and B67 paraloid, calcium hidroxide and magnesium hidroxide nanoparticles, 9<sup>th</sup> International Conference of the Chemical Societies of the South-East European Countries, 8-11 mai, 2019, Targoviste.

20. A-A. Sorescu, R.-M. Ion, A. Nuta, L. Iancu, M. Grigore, Noble metallic nanoparticles from natural materials: Sea buckthorn vs. Jujube, 9<sup>th</sup> International Conference of the Chemical Societies of the South-East European Countries, 8-11 mai, 2019, Targoviste.
21. R-M Ion, Selected inorganic consolidants and protective treatments on Romanian stone monuments, 9<sup>th</sup> International Conference of the Chemical Societies of the South-East European Countries, 8-11 mai, 2019, Targoviste.
22. M.O. Corban, R-M Ion, Thermal and photo-oxidative degradation of acrylic resins used for wood conservation, Exploratory Workshop, NeXT-Chem, ICECHIM, Bucharest, ROMANIA, 6-7 May.
23. M-L Udrea, R-M Ion, Removal of methylene blue dye from industrial wastewater using the fir wood sawdust as adsorbent material, Exploratory Workshop, NeXT-Chem, ICECHIM, Bucharest, ROMANIA, 6-7 May.
24. V. Trăistaru, R.-M. Ion, Ion content determinations for stone samples from Corvins' Castle towers, Exploratory Workshop, NeXT-Chem, ICECHIM, Bucharest, ROMANIA, 6-7 May.
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28. R-M Ion, R. Setnescu, T. Setnescu , Anca Irina Gheboianu, G. Vasilievici , I. D. Dulama, I. A. Bucurica, Dating thermoluminescence and microstructural characterization of archaeological ceramic samples from Corvins' castle area, 19<sup>th</sup> International Balkan Workshop on Applied Physics Constanța, Romania, July 16-19, 2019.
29. I. D. Dulama, C. Radulescu, R. M. Ion, S. Teodorescu, R. M. Stirbescu, D. D. Let, I. V. Gurgu, I. A. Bucurica, L. Olteanu, N.M. Stirbescu, S.G. Stanescu, Characterization of suspended fine particulate matter in indoor of rehabilitated cultural heritage, 19<sup>th</sup> International Balkan Workshop on Applied Physics Constanța, Romania, July 16-19, 2019.
30. R-M Ion, G Vasilievici, S. Tincu, L. Iancu, R. M. Grigorescu, S. Teodorescu, I. D. Dulama, A.I. Bucurica, A. I. Gheboianu, Thermal/spectral analysis of archaeological objects, 5<sup>th</sup> Central and Eastern European Conference on Thermal Analysis and Calorimetry (CEEC-TAC5) and 14<sup>th</sup> Mediterranean Conference on Calorimetry and Thermal Analysis (Medicta2019) 27-30 August 2019, Roma, [Italia](#).
31. R-M Ion, G Vasilievici, S. Tincu, L. Iancu, R. M. Grigorescu, S. Teodorescu, I. D. Dulama, A.I. Bucurica, A. I. Gheboianu, Thermal and multi-analytical investigations of the towers from Corvins' Castle, Hunedoara, Romania, 5<sup>th</sup> Central and Eastern European Conference on Thermal Analysis and Calorimetry (CEEC-TAC5) and 14<sup>th</sup> Mediterranean Conference on Calorimetry and Thermal Analysis (Medicta2019) 27-30 August 2019 Roma, Italia.

32. R-M Ion, Nanomaterials for the rescue of stone monuments, The 21<sup>st</sup> Romanian International Conference on Chemistry and Chemical Engineering, RICCCCE, Constanta-Mamaia, September 4-7, 2019.
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34. L. Iancu, R-M Ion, R. M. Grigorescu, P.N. Ghioca, M.E. David, R. E. Andrei, G.I. Radu, M.I. Filipescu, R.I. Suica-Bunghez, C. A. Nicolae, R.Somoghi, B. Trica, S. Teodorescu, Surface consolidation of model stone samples with carbonated hydroxyapatite, Simpozion International Prioritatile Chimiei pentru o Dezvoltare Durabila, PRIOCHEM - editia XV, 30 Octombrie - 01 Noiembrie 2019, Bucuresti.
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### **Cereri brevet OSIM**

Ion Rodica Mariana, Ion Nelu, Iancu Lorena, Radu Nicoleta

Compoziție antifungică pentru restaurarea/ conservarea artefactelor de lemn, și procedeu de folosire

A 2019 -00054/31.01.2019

Ion Rodica Mariana, Marin Laurențiu, Ion Nelu

Compozit antifungic, antiuzură, antialunecare și stabil fotochimic utilizat în muzee și spațiile de depozitare/ conservare a pieselor de patrimoniu cultural și procedeu de realizare

A2019 -00111/19.02.2019

Fruth Opreșan Victor, Todan Ligia, Predoană Luminita, Poenaru Iuliana, Aricov Ludmila, Leontieș Anca, Ciobanu Elena, Petcu Gabriela, Ion Rodica Mariana, Iancu Lorena, Jecu Luiza Maria, Răut Iuliana, Călin Mariana

Procedeu de obtinere a unor pelicule nanocompozite destinate protejării componentelor arhitecturale litice ale patrimoniului cultural

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### **Premii, medalii, distincții obținute prin proces de selecție în anul curent**

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