A N E X A 5

UNIVERSITATEA
Facultatea de
Domeniul de masterat
Programul de studii

TABEL PRIVIND INDEPLINIREA INDICATORULUI

„Cadrele didactice titulare* au pregătirea iniţială, sunt doctori / doctoranzi şi cercetează în domeniul în care se includ disciplinele din postul ocupat.”

Nr. crt.	Gradul didactic, numele şi prenumele titularului vârsta / vechimea în învăţământul superior	Disciplinele din cadrul programului de studii incluse în postul didactic şi tipul activităţii desfăşurate (curs, seminar, lucrări, proiect)	Competenţa cadrului didactic titular în disciplinele din postul didactic			Constatări privind îndeplinirea indicatorului
			Universitatea/ facultatea/ specializarea absolvită	Specializarea la masterat/ doctorat	Numărul de cărţi, numărul de lucrări ştiinţifice, numărul de brevete în domeniul disciplinelor din postul didactic ** conform Anexelor 5.1, 5.2 etc	
1.	Prof. dr. Simona Pinzaru 60 / 37	Spectroscopie si Laseri, curs, sm, lab Optoelectronica; curs, sem, lab	Universitatea Babes-Bolyai Cluj / Facultatea de Fizica	Doctorat în Fizica	Teza (A); 2 carti/capitole (B1-B2); 50 Lucrari inexate ISI/BDI C1-C45, C 46-C50, D1-D13 teza (A); 2 cărţi (B1- B2); 50 lucrări indexate ISI/BDI (C1-C45, C46-C50); 13 lucrări în rev. şi vol. conf. (D1-13);	îndeplinit
2						
3						
4						
5						
6						

* Din statul de funcţii cumulativ al tuturor disciplinelor şi tuturor activităţilor didactice desfăşurate în cadrul programului de studii evaluat.

** Se indică numărul pe următoarele tipuri de lucrări: A – teza de doctorat	D – Lucrări publicate în ultimii XX ani în reviste şi volume de conferinţe cu referenţi (neindexate); pentru lucrările publicate în volume de conferinţe se selectează de maximum 20 articole.

B – Cărţi şi capitole în cărţi publicate în ultimii XX ani C – Lucrări indexate ISI/BDI publicate în ultimii XX ani	E – Brevete acordate în întreaga activitate. Persoanele incluse în tabelul de mai sus anexează câte o listă de lucrări după modelul de mai jos.

A N E X A 5 . 1

(*Pentu următoarele cadre didactice se adaugă Anexele 5.2, 5.3. etc.*)

Universitatea Babes-Bolyai
Facultatea de Fizica
Departamentul de Fizica Biomoleculara
Prof. dr. Simona Pinzaru

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

A. Teza de doctorat

Simona Cinta, **Studii spectroscopice Raman si SERS asupra complexului metal-adsorbat in cazul unor molecule de interes biologic**, Septembrie, 1998, Universitatea Babeş-Bolyai Cluj-Napoca

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

1. Raman Spectroscopy: A Key Analytical Tool for New Drugs Research and Development,
S. Cinta Pinzaru, A. Falamas, C. A. Dehelean, STUDIES IN NATURAL PRODUCTS CHEMISTRY, VOL 6, Edited by:AttaurRahman, Book Series: Studies in Natural Products Chemistry, Pages: 211-250; DOI: 10.1016/B978-0-444-64183-0.00006-3, Published: 2018, Book Chapter.

2. Raman's Discovery in Historical Context,
Cinta Pinzaru, Simona; Kiefer, Wolfgang, in CONFOCAL RAMAN MICROSCOPY, 2ND EDITION Book Series: Springer Series in Surface Sciences Volume: 66 Pages: 3-21 Published: 2018, Book Chapter.

C. Lucrări indexate ISI/BDI publicate în ultimii 10 ani
Web of Science ResearcherID HNQ-2311-2023

54 ISI articles, 4 BDI,

2016

1. NIR-Raman spectrum and DFT calculations of okadaic acid DSP marine biotoxin microprobe
S. Cintă Pinzaru, Cs. Müller, I. S. Tódor, B. Glamuzina, V. Chis
J. Raman Spectrosc., 47: 636–642, 2016, doi: 10.1002/jrs.4870.

2. Live diatoms facing Ag nanoparticles: surface enhanced Raman scattering of bulk cylindrotheca closterium pennate diatoms and of the single cells
S. Cinta Pinzaru, Cs. Müller, S. Tomšić, M. M. Venter, I. Brezestean, S. Ljubimir, B. Glamuzina,

RSC Advances, 2016, 6, 42899-42910, DOI: 10.1039/C6RA04255D

3. Hydrophobic painting materials fast detection using temperature dependence SERS on simple or PEGylated Ag nanoparticles
Oana-Mara Gui, **SimonaCîntă Pînzaru**
Dyes and Pigments, 146, 2017, 551-557

4.Monitoring of betulin nanoemulsion treatment and molecular changes in mouse skin cancer using surface enhanced Raman spectroscopy.
Falamas, A., Dehelean, C.A., **Cinta Pinzaru, S.**
(2018) Vibrational Spectroscopy, 95, pp. 44-50. DOI: 10.1016/j.vibspec.2018.01.004

5. Citrus fruits freshness assessment using Raman spectroscopy
Nekvapil, F., Brezestean, I., Barchewitz, D., Glamuzina, B., Chiş, V, **Cintă Pinzaru, S.**
(2018) Food Chemistry, 242, pp. 560-567. DOI: 10.1016/j.foodchem.2017.09.105

2018
6. Lipophilic marine biotoxins SERS sensing in solutions and in mussel tissue
Simona CintăPinzaru, Csilla Müller, Ivana Ujević, Monica M.Venter, Vasile Chis, Branko Glamuzina,
Talanta, 187, 1, 47-58, 2018.

7. Application of SERS technique in white wines discrimination
DA Magdas, **SC Pinzaru**, F Guyon, I Feher, BI Cozar
Food Control, 92, 30-36, 2018

8.Wine discrimination based on chemometric analysis of untargeted markers using FT-Raman spectroscopy
DA Magdas, F Guyon, I Feher, **SC Pinzaru**
Food Control 85, 385-391, 2018

9.Ag Nanoparticles Meet Wines: SERS for Wine Analysis
SC Pinzaru, DA Magdas
Food Analytical Methods 11 (3), 892-900, 2018

2019
10. Biogeochemical specificity of adjacent natural carbonated spring waters from Swiss Alps promptly revealed by SERS and Raman technology
Cinta Pinzaru, S; Ardeleanu, M; Brezestean, I; Nekvapil, F; Venter, MM
Anal. Methods, 11, 800-812, 2019.

11. Microsphere packages of carotenoids: intact sea urchin eggs tracked by Raman spectroscopy tools
Nekvapil, F; Brezestean, I; Tomsic, S; Muller, C; Chis, V; **Pinzaru, SC**,
Photochemical & Photobiological Sciences, 18, 1933-1944, 2019

12. From Blue Bioeconomy toward Circular Economy through High-Sensitivity Analytical Research on Waste Blue Crab Shells,
Nekvapil, F; Aluas, M; Barbu-Tudoran, L; Suciu, M; Bortnic, RA; Glamuzina, B; **Pinzaru, SC**
Acs Sustainable Chemistry & Engineering, 7, 16820-16827, 2019.

13. Nikolov, Mirela; Georgescu, Doina; Eftimie, Emiliana Laura Andreici; **Pinzaru, Simona Cinta**; Roman, Roxana; Ledeti, Lonut; Ambrus, Rita; Cheveresan, Adelina; Avram, Nicolae M; DFT Study of Structure, IR and Raman Spectra for Betulinic Acid Solvatomorphs, Revista de Chimie,70 1, 107-111,2019

2020
14. Nekvapil, F., Glamuzina, B., Barbu-Tudoran, L., Suciu, M., Tamas, T., **Cintă Pinzaru, S**. Promoting hidden natural design templates in wasted shells of the mantis shrimp into valuable biogenic composite. Spectrochim. Acta A, 2020, DOI: 10.1016/j.saa.2020.119223; IF(2020): 3.232, AIS: 0.41

15. Nekvapil, F., **Cintă Pinzaru, S**., Barbu-Tudoran, L., Suciu, M., Tamas, T., Chis, V. (2020) Color-specific porosity in double pigmented natural 3d-nanoarchitectures of blue crab shell. Sci. Rep. 10: 3019. DOI: 10.1038/s41598-020-60031-4; IF (2019): 3.998, AIS: 1.261

16. Nekvapil, F., Bunge, A., Radu, T., **Cinta Pinzaru, S**, Turcu, R.
Raman spectra tell us so much more: Raman features and saturation magnetization for efficient analysis of manganese zinc ferrite nanoparticles. J. Raman Spectrosc. 51(6): 959-968. DOI: 10.1002/jrs.5852; IF (2019): 2, AIS: 0.465

17. Lazar, G., Firta, C., Matic-Skoko, S., Peharda, M., Vroljak, D., Uvanovic, H., Nekvapil, F., Glamuzina, B., **Cinta Pinzaru, S.**; Tracking the growth rings in biogenic aragonite from fish otolith using confocal Raman microscopy and imaging Studia UBB Chemia, 65(1): 125-136.(2019) DOI: 10.24193/subbchem.2020.1.1

18. Falamas, A; Faur, CI; Baciut, M; Rotaru, H; Chirila, M; **Cinta Pinzaru, S;** Hedesiu, M; Raman Spectroscopic Characterization of Saliva for the Discrimination of Oral Squamous Cell Carcinoma, Analytical Letters, 13-Jan 2020 https://doi.org/10.1080/00032719.2020.1719129

19. Hozan, Calin Tudor; Cavalu, Simona; **Cinta Pinzaru, Simona**; Mohan, Aurel George; Beteg, Florin; Murvai, Gelu; Rapid Screening of Retrieved Knee Prosthesis Components by Confocal Raman Micro-Spectroscopy, Applied Sciences, 10,15,5343,2020,Multidisciplinary Digital Publishing Institute.

2021
20. Investigations on the luminescence properties of quartz and Feldspars extracted from loess in the canterbury plains, new Zealand south island,
Authors (5): Brezeanu, D.; Avram, A. **Cinta Pinzaru, Simona**, Timar-Gabor, A.
Published: Jan 2021 in Geochronometria; DOI: 10.2478/GEOCHR-2021-0005

21. Biocompatible Magnetic Colloidal Suspension Used as a Tool for Localized Hyperthermia in Human Breast Adenocarcinoma Cells: Physicochemical Analysis and Complex In Vitro Biological Profile
Authors (12): Moaca, Elena-Alina; Watz, Claudia-Geanina ... **Pinzaru, Simona Cinta**, Dehelean, Cristina- Adriana
Published: May 2021 in Nanomaterials, DOI: 10.3390/NANO11051189

22. Rapid and noninvasive diagnosis of oral and oropharyngeal cancer based on micro-Raman and FT-IR spectra of saliva
Authors (7): Falamas, A.; Faur, C. I. **... Pinzaru, S. Cinta**
Published: May 2021 in Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy
DOI: 10.1016/J.SAA.2021.119477

23. Single-cell Raman micro-spectroscopy for tracking of carotenoids in cyanobacteria exposed to Mn and Zn doped ferrite nanoparticles
Authors (4): Nekvapil, Fran; Bunge, Alexander ... **Pinzaru, Simona Cinta**
Published: Jun 2021 in Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy
DOI: 10.1016/J.SAA.2021.119607

24. Development and Characterization of Fe3O4@Carbon Nanoparticles and Their Biological Screening Related to Oral Administration
Authors (13): Pop, Daniel; Buzatu, Roxana **Pinzaru, Simona Cinta….** Jivanescu, Anca
Published: Jul 2021 in Materials; DOI: 10.3390/MA14133556

25. A New Biofertilizer Formulation with Enriched Nutrients Content from Wasted Algal Biomass Extracts Incorporated in Biogenic Powders
Authors (7): Nekvapil, Fran; Ganea, Iolanda-Veronica ... **Cinta Pinzaru, Simona**
Published: Aug 2021 in Sustainability, DOI: 10.3390/SU13168777

26. Wasted Biomaterials from Crustaceans as a Compliant Natural Product Regarding Microbiological, Antibacterial Properties and Heavy Metal Content for Reuse in Blue Bioeconomy: A Preliminary Study, Authors (8): Nekvapil, Fran; Ganea, Iolanda-Veronica ... **Pinzaru, Simona Cinta**, 2021 Materials, DOI: 10.3390/MA14164558

27. Comprehensive mineralogical and physicochemical characterization of recent sapropels from Romanian saline lakes for potential use in pelotherapy,
Authors (17): Baricz, Andreea; Levei, Erika A, **Pinzaru, Simona Cinta,** ... Banciu, Horia Leonard, 2021,Scientific Reports
DOI: 10.1038/S41598-021-97904-1

28. Novel Drug Carrier: 5-Fluorouracil Formulation in Nanoporous Biogenic Mgcalcite from Blue Crab Shells-Proof of Concept
Authors (7): Lazar, Geza; Nekvapil, Fran ... **Pinzaru, Simona Cinta,** Published: Oct 2021 in ACS Omega
DOI: 10.1021/ACSOMEGA.1C03285

29. Rapid and Application-Tailored Assessment Tool for Biogenic Powders from Crustacean Shell Waste: Fourier Transform-Infrared Spectroscopy Complemented with X-ray Diffraction, Scanning Electron Microscopy, and Nuclear Magnetic Resonance Spectroscopy
Authors (11): Ogresta, Lovro; Nekvapil, Fran ... **Pinzaru, Simona Cinta,** Published: Oct 2021 in ACS Omega
DOI: 10.1021/ACSOMEGA.1C03279

2022
30. Synergic effect of selenium nanoparticles and lactic acid bacteria in reduction cadmium toxicity
Authors (6): Laslo, Vasile; **Pinzaru, Simona Cinta** ... Cavalu, Simona
Published: Jan 2022 in Journal of Molecular Structure
DOI: 10.1016/J.MOLSTRUC.2021.131325

31. Resonance Raman and SERRS of fucoxanthin: Prospects for carotenoid quantification in live diatom cells
Authors (5): Nekvapil, Fran; Brezestean, Ioana ... **Pinzaru, Simona Cinta**
Published: Feb 2022 in Journal of Molecular Structure
DOI: 10.1016/J.MOLSTRUC.2021.131608

32. Raman technology application for plastic waste management aligned with FAIR principle to support the forthcoming plastic and environment initiatives
Authors (3): Marica, Ioana; Aluas, Mihaela; **Pinzaru, Simona Cinta**, Published: May 2022 in Waste Management
DOI: 10.1016/J.WASMAN.2022.04.021

33. Characterization of the corrosion products formed on Michael the Brave's equestrian statue in urban atmosphere
Authors (6): Julieta Daniela Chelaru, Liana Maria Mureşan, Lucian Barbu, Tibor Kolozsi, **Simona Cîntă Pînzaru**, Tudor Tamas; Published: Jun 2022 in Materials Today Communications
DOI: 10.1016/J.MTCOMM.2022.103565

34. Comparative screening the life-time composition and crystallinity variation in gilthead seabream otoliths Sparus aurata from different marine environments
Authors (12): Lazar, Geza; Nekvapil, Fran ... **Cinta Pinzaru, Simona**
Published: Jun 2022 in Scientific Reports; DOI: 10.1038/S41598-022-13667-3

35. Rutin bioconjugates as potential nutraceutical prodrugs: An in vitro and in ovo toxicological screening
Authors (11): Cristina Adriana Dehelean, Dorina Coricovac, Iulia Pinzaru, Iasmina Marcovici, Ioana Gabriela Macasoi, Alexandra Semenescu, Geza Lazar, **Simona Cinta Pinzaru**, Isidora Radulov, Ersilia Alexa, Octavian Cretu
Published: Sep 2022 in Frontiers in Pharmacology; DOI: 10.3389/FPHAR.2022.1000608

36. Detection and Characterization of Nodularin by Using Label-Free Surface- Enhanced Spectroscopic Techniques
Authors (9): Brezestean, Ioana Andreea; Gherman, Ana Maria Raluca ... **Cinta-Pinzaru, Simona**
Published: Dec 2022 in International Journal of Molecular Sciences; DOI: 10.3390/IJMS232415741

2023
37. I. Marica, S.C. Pînzaru. A Raman spectral database of naturally aged plastics: A proof-of-concept study for waste plastic sorting. *J. Raman Spectrosc*. **2023**; 54 (3), 305–313.

38. SERS of cylindrospermopsin cyanotoxin: Prospects for quantitative analysis in solution and in fish tissue
Authors (5): Molnar, Cs. Mueller; **Pinzaru, S. Cinta** ... Glamuzina, B.
Published: Feb 2023 in Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy
DOI: 10.1016/J.SAA.2022.121984

39. Müller Molnár, C.; Berghian-Groşan, C.; Măgdaş, D.A.; **Cîntă Pînzaru, S**. Surface-Enhance Raman Spectroscopy Detection of Thiabendazole in Frozen Food Products: The Case of Blueberries and Their Extracts. Chemosensors 2023, 11, 505. https://doi.org/10.3390/chemosensors11090505

40. pH-Dependent Behavior of Novel 5-FU Delivery System in Environmental Conditions Comparable to the Gastro-Intestinal Tract
Authors (7): Lazar, Geza; Nekvapil, Fran ... **Cinta Pinzaru, Simona**
Published: Mar 2023 in Pharmaceutics; DOI: 10.3390/PHARMACEUTICS15031011

41. Ion Nesterovschi, Ioana Marica, Erika Andrea Levei, Simion Bogdan Angyus, Marius Kenesz, Oana Teodora Moldovan, **Simona Cîntă Pînzaru**,
Subterranean transport of microplastics as evidenced in karst springs and their characterization using Raman spectroscopy,
Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 298, 2023, 122811,
https://doi.org/10.1016/j.saa.2023.122811

42. Nekvapil, F.; Mihet, M.; Lazar, G.**; Pinzaru, S.C**.; Gavrilović, A.; Ciorîță, A.; Levei, E.; Tamaș, T.; Soran, M.-L. Comparative Analysis of Composition and Porosity of the Biogenic Powder Obtained from Wasted Crustacean Exoskeletonsafter Carotenoids Extraction for the Blue Bioeconomy. *Water* **2023**, *15*, 2591. https://doi.org/10.3390/w15142591

2024
43 Nesterovschi, I; Maskaric, K; Poplacean, IC; Santos, JP; Kantarciyan, A; Slaveykova, VI; Pinzaru, SC Impact of inorganic mercury on carotenoids in freshwater algae: Insights from single-cell resonance Raman spectroscopy AQUATIC TOXICOLOGY NOV 2024 276 107085 10.1016/j.aquatox.2024.107085 http://dx.doi.org/10.1016/j.aquatox.2024.107085 SEP 2024

44. Dumitru, DA; Poplacean, IC; Maskaric, K; Tamas, T; Barbu-Tudoran, L; Pinzaru, SC Calcium Acetate Drug Produced from Rapana venosa Invasive Gastropod Shells: Green Process Control Assisted by Raman Technology ACS OMEGA AUG 21 2024 9 35 37086 37093 10.1021/acsomega.4c04138 http://dx.doi.org/10.1021/acsomega.4c04138 AUG 2024

45. A. Ciorîță, M. Suciu, A. M. Rostas, A. Tarţa., G. Popovici, M. Bocăneală, F. Nekvapil, S. G. Macavei, M. Potara, I. Marica, I. Kacso, C. S. Moldovan, R. I. Ştiufiuc, C. S. Tuta, **S.C. Pînzaru**, & L. Barbu-Tudoran. Interaction of Low-Density Polyethylene Nanofragments with Autotrophic and Chemotrophic Bacteria.
ACS Sustainable Chemistry and Engineering. **2024**; 12 (29): 10831–10840.

46. Hategan, AR; David, M; Pirnau, A; Cozar, B; Cinta-Pinzaru, S; Guyon, F; Magdas, DA Fusing 1H NMR and Raman experimental data for the improvement of wine recognition models FOOD CHEMISTRY NOV 15 2024 458 140245 10.1016/j.foodchem.2024.140245 http://dx.doi.org/10.1016/j.foodchem.2024.140245 JUL 2024

47. Dehelean, C; Alexa, E; Marcovici, I; Iftode, A; Lazar, G; Simion, A; Chis, V; Pirnau, A; Pinzaru, SC; Boeriu, E Synthesis, characterization, and in vitro-in ovo toxicological screening of silibinin fatty acids conjugates as prodrugs with potential biomedical applications BIOMOLECULES AND BIOMEDICINE 2024 24 6 1735 1750 10.17305/bb.2024.10600 http://dx.doi.org/10.17305/bb.2024.10600 JUN 2024

48. **Pinzaru, SC**; Poplacean, IC; Maskaric, K; Dumitru, DA; Barbu-Tudoran, L; Tamas, TL; Nekvapil, F; Neculai, B Raman Technology for Process Control: Waste Shell Demineralization for Producing Transparent Polymer Foils Reinforced with Natural Antioxidants and Calcium Acetate By-Products PROCESSES APR 2024 12 4 832 10.3390/pr12040832 http://dx.doi.org/10.3390/pr12040832

49. Molnár, C; Drigla, TD; Barbu-Tudoran, L; Bajama, I; Curean, V; **Pinzaru, SC** Pilot SERS Monitoring Study of Two Natural Hypersaline Lake Waters from a Balneary Resort during Winter-Months Period BIOSENSORS-BASEL JAN 2024 14 1 19 10.3390/bios14010019 http://dx.doi.org/10.3390/bios14010019

2025
50. Bajama, I; Maskaric, K; Lazar, G; Tamas, T; Costinas, C; Barbu-Tudoran, L; **Pinzaru, SC** Aged Biogenic Carbonates from Crustacean Waste: Structural and Functional Evaluation of Calibrated Fine Powders and Their Conversion into Phosphate Minerals MATERIALS NOV 11 2025 18 22 5119 10.3390/ma18225119 http://dx.doi.org/10.3390/ma18225119

51. Lazar, G; Tamas, T; Barbu-Tudoran, L; Venter, MM; Bajama, I; **Pinzaru, SC** Biowaste Valorisation: Conversion of Crab Shell-Derived Mg-Calcite into Calcium Phosphate Minerals Controlled by Raman Spectroscopy PROCESSES OCT 24 2025 13 11 3413 10.3390/pr13113413 http://dx.doi.org/10.3390/pr13113413

52. Molnár, C; Maskaric, K; Barbu-Tudoran, L; Tamas, T; Bajama, I; **Pînzaru, SC** SERS Detection of Environmental Variability in Balneary Salt Lakes During Tourist Season: A Pilot Study BIOSENSORS-BASEL OCT 1 2025 15 10 655 10.3390/bios15100655 http://dx.doi.org/10.3390/bios15100655

53. I. Nesterovschi, I. Cârdan, D. Condor, A. Couţi, E. Levei, V. Pop and **S. C. Pînzaru**. Have You Ever Seen a Microplastic? A Collaborative High School–Academia Approach for Identification, Quantification and Raising Awareness of Microplastics in a River Crossing Urban Area. *J Chem Educ.* **2025**. 102 (8), 3277-3287.

54. Dehelean, C; Alexa, E; Marcovici, I; Iftode, A; Lazar, G; Simion, A; Chis, V; Pirnau, A; **Pinzaru, SC**; Boeriu, E Synthesis, characterization, and in vitro-in ovo toxicological screening of silibinin fatty acids conjugates as prodrugs with potential biomedical applications (vol 24, pg 1735, 2024) BIOMOLECULES AND BIOMEDICINE 2025 25 8 1896 1896 10.17305/bb.2025.12570 http://dx.doi.org/10.17305/bb.2025.12570 APR 2025

55. I. Cârdan, I. Nesterovschi, L. Barbu-Tudoran & **S. C. Pînzaru**. Blue micro-/nanoplastics abundance in the environment: a double threat as a Trojan horse for a plastic-Cu-phthalocyanine pigment and an opportunity for nanoplastic detection via micro-Raman spectroscopy. *Environ Sci Nano.* **2025***;* 12 (4), 2357–2370.

BDI

56 Cyanobacteria Detection and Raman Spectroscopy Characterization with a Highly Sensitive, High Resolution Fiber Optic Portable Raman System,
S. Cinta Pinzaru, Müller Molnár Cs, Brezestean I., D. Barchewitz, B. Glamuzina,
Studia Univ. Babes-Bolyai, Physica, 61 (LXI), 1, 2016, 99-108.

57. Nekvapil, F., Muller, Cs., Tomsic, S., **Cinta Pinzaru, S**. (2019) Exploring the biological protective role of carotenoids by Raman spectroscopy: mechanical stress of cells. Studia UBB Physica, 64(1-2): 75-82. DOI: 10.24193/subbphys.2019.0

58. Ilirjana Bajama, Luisa Andronie and **Simona Cinta Pinzaru**,
Drug-drug interaction: the case of flubendazole and doxycycline hyclate investigated by Raman spectroscopy
Asian Journal of Physics, 2022, 31, 355-364.

59. I. Cârdan, **S. Cîntă-Pînzaru**, L. Barbu-Tudoran and C. Farcău. Detection of blue nanoplastics using resonance Raman spectroscopy coupled with plasmonic nanostructured substrates. https://doi.org/10.1117/12.3062631, 2025, 13570, 20–26 (WoS, Proceedings Paper)
.
60 I. Marica, M. Aluas**, S.C. Pinzaru**. The management and stewardship of medical plastic waste using raman spectroscopy to sustain circular economy. 7th E-Health Bioeng. Conf. EHB 2019. 2019. ISSN 2575-5137 (WoS, Proceedings Paper)

D. Lucrări publicate în ultimii 10 anii în reviste şi volume de conferinţe cu referenţi

(neindexate)

- Reviste

1. Conference Report: INTERNATIONAL CONFERENCE DEDICATED TO WORLD WATER DAY AND WORLD METEOROLOGICAL DAY, REVIEW, March 22 – 24, 2019 Cluj-Napoca, ROMÂNIA
S Cinta Pinzaru, Risks and Catastrophes Journal/ REVISTA RISCURI SI CATASTROFE 24 (1), 167-168, 2019, https://riscurisicatastrofe.reviste.ubbcluj.ro/eng/index.htm

2. Analysis of hypersaline waters from Cojocna balneary resorts (Romania) using Raman spectroscopy techniques.
I Brezestean, F Nekvapil, S Cintă Pinzaru, Air & Water Components of the Environment/Aerul si Apa Componente ale Mediului, , DOI https://doi.org/10.24193/AWC2018_01, Journal volume & issue, Vol. 2018, no. 2018, pp. 3 – 11.

3. Comparative Raman spectroscopy study of the coelomic fluid of grazing sea urchins and their native seawater: prospect for a potential indicator of environmental aggression

F Nekvapil, S Tomčić, Pinzaru SC, Air and Water Components of the Environment Conference, 2018, DOI https://doi.org/10.24193/AWC2018_04; Journal volume & issue, Vol. 2018, no. 2018, pp. 27 – 34

- Selecţie cu maximum 20 lucrări în volume de conferinţe

1. Nekvapil, F; Tomčić, S; **SC, Pinzaru***; Comparative Raman spectroscopy study of the coelomic fluid of grazing sea urchins and their native seawater: prospect for a potential indicator of environmental aggression, Conference Air and Water Components of the Environment Conference 2018, Proceedings.

2. Pal Zoltan, T. Tamas, **S. Cinta Pinzaru***, *From naturally occurring aragonite to Art Nouveau decorative objects: Corund deposit, Romania and it's Aragonite Museum seen by multilaser micro-Raman spectroscopy*,
10th International Congress on the Application of Raman Spectroscopy in Art and Archaeology
September 3rd – 7th 2019 in Potsdam, Germany, Ed. Martin Ziemann, 2019.p.28-29.

3. Marica, Ioana; Aluaş, Mihaela; **Pînzaru, Simona Cîntă**; The Management and Stewardship of Medical Plastic Waste using Raman Spectroscopy to Sustain Circular Economy, 2019 E-Health and Bioengineering Conference (EHB), 4-Jan 2019, IEEE

4. I.Brezestean, Fran Nekvapil, **S.Cinta Pinzaru**,
Analisys of hypersaline water from Cojocna Balneary Resorts (Romania) using Raman Spectroscopy Tehniques; ISSN 2067-743X; Proceedings of Air and Water components of the Enviroment, 15-17 March 2018, Sovata, , pp 3-13.

5. Nekvapil, F., Tomšić, S., Glamuzina, B., Barbu-Tudoran, L, Brezestean, I., **Cintă Pinzaru, S**.,
Natural nanoarchitecture of blue crab (Callinectes sapidus Rathbun, 1896) claw studied by Raman spectroscopy and Scanning electron microscopy In: Vladoiu, R., Mandes, A., Dinca, Balan, V. (eds) Conference proceedings. Issue 17/2017, University of Ovidius Press, ISSN 2501-9050, ISSN-L 2501-9058. 17th International Balkan Workshop on Applied Physics, July 11 – 14, Constanţa, Romania. p. 146 – 147.

6. Comparative Raman spectroscopy study of the coelomic fluid of grazing sea urchins and their native seawater: prospect for a potential indicator of environmental aggression, F Nekvapil, S Tomčić, **Pinzaru, SC**, Proceedings of Air and Water components of the Enviroment, 15-17 March 2018, ISSN 2067-743X, pp 27-35,

7.Geza Lazar, Fran Nekvapil, Razvan Hirian, Branko Glamuzina, Tudor Tamaş, Lucian Barbu-Tudoran and **Simona Cinta Pinzaru**. *PH dependent fluorouracil release from novel composite drug based on biogenic calcium carbonate*. Poster: ICPAM 14, Dubrovnik, Croatia 7-16 Septembrer 2022.

8.Effects of ocean acidification on the morphology and structure of Hexaplex trunculus sea snail shell biomaterial revealed by Raman, XRD AND SEM-EDX data. G. Lazar, F. Nekvapil, I. Bajama, T. Tamas, M. Suciu, L. Barbu -Tudoran, S. Grdan, **S. Cinta Pinzaru**, S. Dupont, A. Bratos Cetinic, L. Glamuzina. Oral presentation: ICPAM 14, Dubrovnik, Croatia 7-16 Septembrer 2022.

9.New biocomposites from waste materials **S. Cinta Pinzaru**, G. Lazar, F. Nekvapil, R. Hirian, T. Tamas, L. Barbu-Tudoran, M. Suciu, M. Aluas, I. Bajama, D. A. Dumitru, S. Tomsic, B. Glamuzina. . ICPAM 14, Dubrovnik, Croatia 7-16 Septembrer 2022.

Multiplexed SERS for wastewater treatment utilizing highly absorbent biogenic powders to eliminate environmentally realistic mixtures comprising inorganic pollutants. Ilirjana Bajama, Geza Lazar, Tudor-Liviu Tamas,
Simona Cinta Pinzaru. Proc. ICORS 2024, Rome, Italy 28 July - 2 August 2024.

10.Raman technology for the development of a novel biogenic calcite based bone substitute material. **Geza Lazar**, Ilirjana Bajama, Tudor Tamas, **Simona Pinzaru**. Proc. Of the ICORS 2024. Rome, Italy 28 July - 2 August 2024.

.

11. Microplastic Days 2026 Conference

[03/02/2026 – 05/02/2026] Ljubljana, Slovenia, Program https://microplasticdays.fkkt.uni-lj.si/programme/,

Poster: I. Cârdan, I.Nesterovschi, A. Couți, S. Ducoli, S. Federici, **S. Cîntă Pînzaru**, and C. Farcău, " SERS detection of environmental nanoplastics by using customized plasmonic nanostructured substrates"

12. Microplastic Days 2026 Conference

[03/02/2026 – 05/02/2026] Ljubljana, Slovenia, Program https://microplasticdays.fkkt.uni-lj.si/programme/

Poster Identification of micro- and nanoplastics in Adriatic aquaculture waters using Raman and SERS spectroscopy
Ion Nesterovschi, Ioana Cardan, Csilla Molnar, Lucian Barbu, Maria Suciu, Karlo Maskaric, Tudor Tamas,
Luka Glamuzina, Branko Glamuzina, Vera Slaveykova, **Simona Cintă Pinzaru**

13. Microplastic Days 2026 Conference

[03/02/2026 – 05/02/2026] Ljubljana, Slovenia , Program https://microplasticdays.fkkt.uni-lj.si/programme/

Poster The Production of Environmental Micro- and Nanoplastics From Marine-Aged Plastics ~Environmentally relevant reference material, Anamaria Couți, Ion Nesterovschi, Ioana Cârdan, Iuliana-Cornelia Sandu-Poplăcean, Karlo Maškarić, Lucian Barbu-Tudoran, Csilla Molnar, Geza Lazar, Tudor-Liviu Tamas, Luka, Glamuzina, Branko Glamuzina, Vera Slaveykova, **Simona Cinta Pînzaru**

14. Final Conference of the Cost Action PRIORITY

[02/09/2025 – 05/09/2025] Leoben, Austria

Poster: I. Cârdan, S. Cîntă Pînzaru, L. Barbu-Tudoran and C. Farcău, "Resonance Raman-assisted SERS detection of blue nanoplastics: blue pigment as an analytical marker"

15. SPIE Optical Metrology - Multimodal Sensing and Artificial Intelligence for Sustainable Future

[23/06/2025 – 27/06/2025] Munchen, Germania

Oral presentation: I. Cârdan, S. Cîntă Pînzaru, L. Barbu-Tudoran and C. Farcău, "Detection of blue nanoplastics using resonance Raman spectroscopy coupled with plasmonic nanostructured substrates"

16. 28th International Conference on Raman Spectroscopy – ICORS 2024

[27/07/2024 – 02/08/2024] Rome, Italy

Oral presentation: I. Marica, I. Nesterovschi, C. Farcău, **S. Cîntă Pînzaru**. "Blue, naturally degraded nanoplastics abundance and their detection via two Raman-based approaches"

17. I**nternational Conference on Processes in Isotopes and Molecules (PIM 2023)** *[19/09/2023 – 22/09/2023] Cluj-Napoca, Romania*

Poster: I. Marica, A M M Gherman, A Colnita, V Zani, R Signorini, R Pilot, and C Farcau, “Plasmonic nanostructured substrates fabricated by colloidal lithography for nanoplastics SERS detection”

18. International Conference on Advanced Vibrational Spectroscopy (ICAVS12)

[27/08/2023 – 01/09/2023] Krakow, Poland

Poster: I. Marica, V. Zani, R. Signorini, R. Pilot, S. Cîntă Pinzaru, C. Farcău, “Optical properties and SERS analysis of quasi-3D plasmonic nanostructures fabricated by colloidal lithography”

19. 14th International Conference on Surfaces, Coatings and Nanostructured Materials (NANOSMAT)

[10/07/2023 – 14/07/2023] Athens, Greece

Poster: I. Marica, M. Stefan, S. Boca, A. Falamaş, C. Fracau, "Evaporation induced self-assembly of ZnO and TiO 2 colloidal nanoparticles into highly uniform films for spectroscopic applications"

20. International Conference on Physics of Advanced Materials (ICPAM-14)

[08/09/2022 – 15/09/2022] Dubrovnik, Croatia

Poster: I. Marica, I. Nesterovschi and **S. Cîntă** Pînzaru "A sustainable plastic waste initiative from macro- to microplastics based on Raman spectroscopy technique"

21. International Conference “Processes in Isotopes and Molecules" (PIM 2021)

[22/09/2021 – 24/09/2021] Cluj-Napoca, Romania

Poster: I. Marica, I. Nesterovschi, M. Aluaş, **S. Cîntă Pînzaru**, "Environmental degradation and pigments influence on plastics waste determined by Raman Spectroscopy: sorting algorithm and plastic Raman database"

22. International Conference “Life sciences for sustainable development"

[23/09/2021 – 24/09/2021] Cluj-Napoca, Romania

Poster: I. Marica, M. Aluaș and **S. Cîntă Pînzaru**, "Sorting of mixed plastic waste using the Raman spectroscopy technique as a sustainable solution"

23. International Conference on E-Health and Bioengineering (EHB)

[21/11/2019 – 23/11/2020] Iași, Romania

Oral presentation: I. Marica, M. Aluaș and **S. C. Pînzaru**, "The Management and Stewardship of Medical Plastic Waste using Raman Spectroscopy to Sustain Circular Economy.

E. Brevete obţinute în întreaga activitate

E – Brevete (pentru întreaga activitate) -

Data: 26.04.2026 **Semnătura:**