

Facultatea de Biologie și Geologie

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Doctoral School of Integrative Biology

1. PhD Student:

Photo

Name Porav **First name** Alin Sebastian

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2. Doctorate

2.1. PhD thesis title: THE CYANOBACTERIAL PHYCOBILISOME: STRUCTURAL AND FUNCTIONAL INVESTIGATIONS

2.2. PhD coordinator: prof. dr. Nicolaie DRAGOŞ

2.3. Date of PhD thesis defense (link from site): 25 SEPTEMBER 2020

2.4. Grade: PhD in Biology (Summa Cum Laude)

3. Scientific articles published in:

3.1. Impact factor journals (IF, AIS):

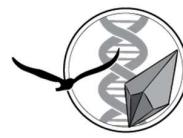
3.1.1. Drulyte, I., Johnson, R. M., Hesketh, E. L., Hurdiss, D. L., Scarff, C. A., **Porav**, S. A., Ranson, N. A., Muench, S. P., & Thompson, R. F. (2018). Approaches to altering particle distributions in cryo-electron microscopy sample preparation. *Acta Crystallographica Section D: Structural Biology*, 74(6), 560–571. (IF: 3.227)

3.1.2. Fălămaș*, A., **Porav***, S. A., & Tosa, V. (2020). Investigations of the energy transfer in the phycobilisomeantenna of *Arthrosira platensis* using femtosecond spectroscopy. *Applied Sciences*, 10(11), 4045. (IF: 2.474)

3.1.3. **Porav**, A. S., Bocăneală, M., Fălămaș, A., Bogdan, D. F., Barbu-Tudoran, L., Hegeduş, A., & Dragoş, N. (2020). Sequential aqueous two-phase system for simultaneous purification of cyanobacterial phycobiliproteins. *Bioresource Technology*, 315, 123794. (IF: 7.539)

3.1.4. Alexe, M., Ţerban, G., Baricz, A., Andrei, A.-Ştefan, Cristea, A., Battes, K. P., Cîmpean, M., Momeu, L., MunteAn, V., & **Porav**, S. A. (2018). Limnology and plankton diversity of salt lakes from Transylvanian Basin (Romania): A review. *Journal of Limnology*, 77(1). (IF: 1.606)

3.1.5. nBunge, A., **Porav**, A. S., Borodi, G., Radu, T., Pîrnău, A., Berghian-Grosan, C., & Turcu, R. (2019). Correlation between synthesis parameters and properties of magnetite clusters



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prepared by solvothermal polyol method. *Journal of Materials Science*, 54(4), 2853–2875. (IF: 3.553)

3.1.6. Casian, T., Iurian, S., Gavan, A., Revnic, C., **Porav**, S., Porfire, A., Vlase, L., & Tomuță, I. (2018). Near Infra-Red spectroscopy for content uniformity of powder blends—Focus on calibration set development, orthogonality transfer and robustness testing. *Talanta*, 188, 404–416. (IF: 4.916)

3.1.7. Chirila, L., COSMA, D., Urda, A., **Porav**, A., Turza, A., Timpu, D., & Mateescu, A. (2020). UV light-shielding properties of TiO₂-based materials coated flax samples. *Journal of Optoelectronics and Advanced Materials*, 22, 62–66. (IF: 0.631)

3.1.8. Cîrcu, M., Radu, T., **Porav**, A., & Turcu, R. (2018). Surface functionalization of Fe₃O₄@SiO₂ core-shell nanoparticles with vinylimidazole-rare earth complexes: Synthesis, physico-chemical properties and protein interaction effects. *Applied Surface Science*, 453, 457–463. (IF: 5.155)

3.1.9. Cîrcu, Monica, Bunge, A., Vasilescu, C., **Porav**, S., & Nan, A. (2018). Non-catalytic, solvent-free synthesis of poly (tartronic-co-glycolic acid) as a versatile coating for different surfaces. *Polymer International*, 67(2), 212–219. (IF: 2.433)

3.1.10. Colniță, A., Dina, N. E., Leopold, N., Vodnar, D. C., Bogdan, D., **Porav**, S. A., & David, L. (2017). Characterization and discrimination of Gram-positive bacteria using Raman spectroscopy with the aid of principal component analysis. *Nanomaterials*, 7(9), 248. (IF: 3.504)

3.1.11. Coroș, M., Pogăcean, F., Măgerușan, L., Roșu, M.-C., **Porav**, A. S., Socaci, C., Bende, A., Stefan-van Staden, R.-I., & Pruneanu, S. (2018). Graphene-porphyrin composite synthesis through graphite exfoliation: The electrochemical sensing of catechol. *Sensors and Actuators B: Chemical*, 256, 665–673. (IF: 6.393)

3.1.12. Dina, N. E., Colniță, A., Szöke-Nagy, T., & **Porav**, A. S. (2017). A critical review on ultrasensitive, spectroscopic-based methods for high-throughput monitoring of bacteria during infection treatment. *Critical Reviews in Analytical Chemistry*, 47(6), 499–512. (IF: 3.231)

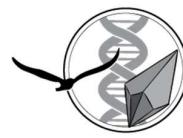
3.1.13. Dragoș, N., Chiriac, C., **Porav**, S., Szöke-Nagy, T., Coman, C., Török, L., & Hegedűs, A. (2019). *Desmodesmus tropicus* (Chlorophyta) in the Danube Delta—reassessing the phylogeny of the series Maximi. *European Journal of Phycology*, 54(3), 300–314. (IF: 2.756)

3.1.14. Gavan, A., Iurian, S., Casian, T., Porfire, A., **Porav**, S., Voina, I., Oprea, A., & Tomuta, I. (2019). Fluidised bed granulation of two APIs: QbD approach and development of a NIR in-line monitoring method. *Asian Journal of Pharmaceutical Sciences*. (IF: 3.968)

3.1.15. Gherman, A. M. M., Tosa, N., Cristea, M. V., Tosa, V., **Porav**, S., & Agachi, P. S. (2018). Artificial neural networks modeling of the parameterized gold nanoparticles generation through photo-induced process. *Materials Research Express*, 5(8), 085011. (IF: 1.449)

3.1.16. Hales, D., Vlase, L., **Porav**, S. A., Bodoki, A., Barbu-Tudoran, L., Achim, M., & Tomuță, I. (2017). A quality by design (QbD) study on enoxaparin sodium loaded polymeric microspheres for colon-specific delivery. *European Journal of Pharmaceutical Sciences*, 100, 249–261. (IF: 3.466)

3.1.17. Ispas, G.-M., Craciunescu, I., **Porav**, S., Turcu, R., & Gligor, D. (2018). New type of electrode material based on magnetic nanoparticles with high potential applicability in



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electrochemical sensors for nitrite detection. *Sensors and Actuators A: Physical*, 276, 43–51. (IF: 2.739)

3.1.18. Karagiorgis, S., Tsamis, A., Voutouri, C., Turcu, R., **Porav**, S. A., Socoliuc, V., Vekas, L., Louca, M., Stylianopoulos, T., & Vavourakis, V. (2020). Engineered magnetoactive collagen hydrogels with tunable and predictable mechanical response. *Materials Science and Engineering: C*, 111089. (IF: 5.880)

3.1.19. Lung, I., Soran, M.-L., Stegarescu, A., Opris, O., Guțoiu, S., Leostean, C., Lazar, M. D., Kacso, I., Silipas, T.-D., & **Porav**, A. S. (2020). Evaluation of CNT-COOH/MnO₂/Fe₃O₄ nanocomposite for ibuprofen and paracetamol removal from aqueous solutions. *Journal of Hazardous Materials*, 123528. (IF: 9.038)

3.1.20. Papaparaskeva, G., Dinev, M., Krasia-Christoforou, T., Turcu, R., **Porav**, S., Balanean, F., & Socoliuc, V. (2020). White magnetic paper with zero remanence based on electrospun cellulose microfibers doped with iron oxide nanoparticles. *Nanomaterials*, 10(3), 517. (IF: 4.324)

3.1.21. Pogacean, F., Rosu, M.-C., Coros, M., Magerusan, L., Moldovan, M., Sarosi, C., **Porav**, A.-S., Stefan-van Staden, R.-I., & Pruneanu, S. (2018). Graphene/TiO₂-Ag based composites used as sensitive electrode materials for amaranth electrochemical detection and degradation. *Journal of the Electrochemical Society*, 165(8), B3054. (IF: 3.120)

3.1.22. Rus, L. M., Iurian, S., Kacso, I., Borodi, G., **Porav**, S., Hegheş, S. C., Iuga, C. A., & Tomuță, I. (2019). Development of meloxicam oral lyophilisates: Role of thermal analysis and complementary techniques. *Farmacia*, 67(1), 56–67. (IF: 1.607)

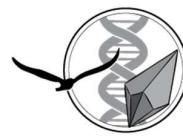
3.1.23. Sesarman, A., Tefas, L., Sylvester, B., Licarete, E., Rauca, V., Luput, L., Patras, L., **Porav**, S., Banciu, M., & Porfire, A. (2019). Co-delivery of curcumin and doxorubicin in PEGylated liposomes favored the antineoplastic C26 murine colon carcinoma microenvironment. *Drug Delivery and Translational Research*, 9(1), 260–272. (IF: 2.664)

3.1.24. Soran, M.-L., Opris, O., Lung, I., Kacso, I., **Porav**, A. S., & Stan, M. (2017). The efficiency of the multi-walled carbon nanotubes used for antibiotics removal from wastewaters generated by animal farms. *Environmental Science and Pollution Research*, 24(19), 16396–16406. (IF: 2.800)

3.1.25. Stan, M., Lung, I., Soran, M.-L., Leostean, C., Popa, A., Stefan, M., Lazar, M. D., Opris, O., Silipas, T.-D., & **Porav**, A. S. (2017). Removal of antibiotics from aqueous solutions by green synthesized magnetite nanoparticles with selected agro-waste extracts. *Process Safety and Environmental Protection*, 107, 357–372. (IF: 3.441)

3.1.27. Stan, M., Lung, I., Soran, M.-L., Opris, O., Leostean, C., Popa, A., Copaciu, F., Lazar, M. D., Kacso, I., Silipas, T.-D & **Porav**, A. S. (2019b). Starch-coated green synthesized magnetite nanoparticles for removal of textile dye Optilan Blue from aqueous media. *Journal of the Taiwan Institute of Chemical Engineers*, 100, 65–73. (IF: 4.794)

3.1.28. Stegarescu, A., Lung, I., Leoștean, C., Kacso, I., Opris, O., Lazăr, M. D., Copolovici, L., Guțoiu, S., Stan, M., Popa, A., **Porav**, A.-S & Soran, M.-L (2019). Green synthesis, characterization and test of MnO₂ nanoparticles as catalyst in biofuel production from grape residue and seeds oil. *Waste and Biomass Valorization*, 1–11. (IF: 2.851)



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3.1.29. Sylvester, B., Porfire, A., Van Bockstal, P.-J., **Porav**, S., Achim, M., De Beer, T., & Tomuță, I. (2018). Formulation optimization of freeze-dried long-circulating liposomes and in-line monitoring of the freeze-drying process using an NIR spectroscopy tool. *Journal of Pharmaceutical Sciences*, 107(1), 139–148. (IF: 3.197)

3.1.30. Szöke-Nagy, T., **Porav**, A. S., Coman, C., Cozar, B. I., Dina, N. E., & Tripon, C. (2019). Characterization of the action of antibiotics and essential oils against bacteria by surface-enhanced raman spectroscopy and scanning electron microscopy. *Analytical Letters*, 52(1), 190–200. (IF: 1.467)

3.2. IDB journals:

3.2.1. Stan, M., Lung, I., Soran, M.-L., Opris, O., Leostean, C., Popa, A., Copaciu, F., Lazar, M. D., Kacso, I., Silipas, T.-D & **Porav**, A. S. (2019a). Data on the removal of Optilan Blue dye from aqueous media using starch-coated green synthesized magnetite nanoparticles. *Data in Brief*, 25, 104165.

3.3. Other journals:

Article model (with IF):

4. Scientific conferences/symposia (please mention the author/s, title of the conference/symposium, year, country, link)

4.1. International:

4.2. National:

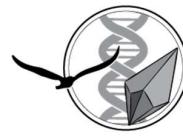
5. Projects/Grants:

5.1. Scientific projects/grants:

5.1.1. Emerging molecular technologies based on micro and nano-structured systems with biomedical applications, PN-III-P1-1.2-74PCCDI/2008 National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, 67-103 Donat, 400293 Cluj-Napoca - member of the team project.

5.1.2. Inter-institutional program of developing advanced eco-nanotechnology solutions for multifunctional treatments of leather and textile material, PN-III-P1-1.2-PCCDI-2017-0743 National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, 67-103 Donat, 400293 Cluj-Napoca - member of the team project.

5.1.3. Characterization of the sub-cellular effects of functionalized magnetic nanoparticles in targeted anti-tumor therapy, – PNII-RU-TE, Babes-Bolyai University 5-7, Clinicii, 400006 Cluj Napoca (Romania) - member of the team project.



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5.1.4. *Unprecedented polyesters as coating for solid surfaces with application in medicine and nanotechnology*, PN-II-RU-TE-2014-4-0654 National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, 67-103 Donat, 400293 Cluj-Napoca Napoca - member of the team project.

5.1.5. *Graphene-porphyrin supramolecular assemblies for chemical and electrochemical detection of hydrogen peroxide-an oxidative stress marker*, PN-II-RU-TE-2014-4-0305 National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, 67-103 Donat, 400293 Cluj-Napoca - member of the team project.

5.1.6. *Design of new lipid-modified peptides to destabilize Ras nanoclusters – A novel therapeutic approach for targeting oncogenic Ras proteins*, PN-II-RU-TE-2014-4-2418, National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, 67-103 Donat, 400293 Cluj-Napoca - member of the team project.

5.2. Projects for the community:

(please mention the title of the project/grant, period, coordinating institution, link)

6. Visibility (links):

6.1. Google Scholar: <https://scholar.google.com/citations?user=8CxQgwAAAAJ&hl=en&oi=ao>

6.2. ResearchGate:

6.3. Twitter (#AcademicTwitter):

6.4. Other accounts:

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