



Europass Curriculum Vitae

Personal information

First name(s) / Surname(s) **Orha Corina Ileana**
Official address(es) Str. Constantin Brancoveanu, Nr. 52A, Sc.A, Ap.13, Timisoara, Timis, cod 300216
Telephone(s) + 40 740-138456
Fax(es) -
E-mail haiduccorina@yahoo.com
Nationality Romania
Date of birth 31 December 1978
Gender Female

Work experience

Dates **March 2008-Present**
Occupation or position held Scientific Researcher III
Main activities and responsibilities Synthesis of micro and nano materials based on natural and synthetic zeolites. Synthesis of composite materials based on different carbon type (carbon nanotubes, carbon nanofiber and activated carbon), titanium dioxide. Structural and morphological characterization, experience in use Scanning Electron Microscope Inspect S (FEI Company) coupled with elemental analysis (EDX). Applications in water treatment processes.
Name and address of employer *National Institute for Research and Development in Electrochemistry and Condensed Matter Timisoara, Condensed Matter Department, 1 Plautius Andronescu, 300224, Timisoara*
Type of business or sector Research-Development

Education and training

Dates **November 2003-February 2008**
Title of qualification awarded Chemical Engineering PhD
Principal subjects/occupational skills covered Research activities in the field of inorganic chemical technology and environmental protection. The scientific activity was focused on indigene minerals (natural zeolite) in the aim of obtaining some new products with used in water treatment.
Name and type of organisation providing education and training University „Politehnica” of Timisoara, Faculty of Industrial Chemistry and Environmental Engineering
Dates **October 2002-June 2003**
Title of qualification awarded Master diploma
Principal subjects/occupational skills covered Ecotoxicology, Characterization and treatment of wastewaters, waste management, Security and risk analysis, Environmental pollution
Name and type of organisation providing education and training University „Politehnica” of Timisoara, Faculty of Industrial Chemistry and Environmental Engineering
Dates **October 1997- June 2002**
Title of qualification awarded Engineer
Principal subjects/occupational skills covered Managerial problems in environmental protection, Environmental legislation, Environmental analytical chemistry, New methods of wastewaters treatment
Name and type of organisation providing education and training University „Politehnica” of Timisoara, Faculty of Industrial Chemistry and Environmental Engineering

Expertise field

Grants and fellowships

Project responsible: "Solar light-activated nano-TiO₂ doped with silver - covered activated carbon and zeolite based photocatalytically-assisted filtering system for water treatment" WATICAZ - PN-III-P2-2.1-PED-2016-0265, **2017-2018**

Project leader : „Obtaining and testing of some innovative hybrid materials with low cost, used in advanced treating water processes” - Contract no. 33N/2016, PN16140202 , **2015-2017**;

Project leader : "Studies regarding some functionalized zeolite materials used like ecological fertilized"- Contract no. 34N/2009, AAD 12/2013, **2009-2014**

Post-doctoral project POSDRU (June 2010 - January 2013) at Sectoral Operational Programme Human resources Development (SOP HRD), financed from the European Social Fund and by the Romanian Government under the contract number POSDRU/89/1.5/S/63700 Research project: "Obtaining, characterization and application of some new hybride materials with superior properties, in improving water quality"

Research fellowship (funded by BALKAN ENVIRONMENTAL ASSOCIATION (BENA) with funds from the TUBORG-Romania), Politehnica University of Timisoara **May - December 2004**, research project "Doping the natural zeolite with oligoelements in order to use it in water disinfection".

Member of research team 18 national and 2 international projects, the most representatives are:

„Innovative technologies based on polymers for obtaining of some new advanced materials" **2018-present**
PN-III-P2-2.1-PED-2016-0524 : « Nanostructural anticorrosive hybride materials containing pseudo-binary oxides and porphyrine based on Zn» **2017-2018**

PN-III-P2-2.1-PED-2016-0526 «High-efficient and low-cost dye sensitized solar cells based on copper » **2017-2018**

"Development of multiple and selective sensor for detection of representatives explosives" **2014-2017**

"Use of TiO₂ doped nanoparticles functionalized zeolite materials for sewage treatment in order to recirculation" **2008-2011**

"Synthesis of functionalized zeolite materials with doped titanium dioxide nanoparticules and testing in water treatment pilot stations " **2007-2010**

Scientific and Technological Co-operation Austria-Romania (ZEOTIO-WW-2012) "TiO₂ functionalized zeolites in wastewater treatment and environment protection" **2012-2013**

Research and education programs

23 October-23 November 2005 training course in laser spectroscopy, at the Institute of Laser Physics and Spectroscopy, University of Pecs, Hungary, in the Bilateral Research Project RO-Hu-20/2002 - 2005.

2006, April - CASCADE Training Course: Measurement of Biomolecular Interaction, Tübingen, Germany
27.10.2008 -05.11.2008 – Course in project management, the Chamber of Commerce, Industry and Agriculture, Timisoara;

18.03.2010 – 22.03.2010 - Participation Certificate "Fuel Cells. Theoretical and Practical Aspects" presented by Prof. dr.dr.h.c. Joop Schoonman, from TU Delft, Netherlands.

01.04.2010-01.07.2010 - Research stage at TU Delft, Netherlands

Professional memberships

Affiliation: membership of:

- International Society of Electrochemistry
- Romanian Physical Society

Personal skills and competences

Mother tongue(s) **Romanian**

Other language(s)

Self-assessment

European level (*)

English

French

Understanding

	Listening	Reading
English	B2 Independent user	B2 Independent user
French	A1 Elementary user	A1 Elementary user

Speaking

	Spoken interaction	Spoken production
English	B2 Independent user	B2 Independent user
French	A1 Elementary user	A1 Elementary user

Writing

	Writing
English	B2 Independent user
French	A1 Elementary user

(*) [Common European Framework of Reference for Languages](#)

Social skills and competences	- Team Work, strong sense of responsibility, dedication - Good communicator, sociable, experience in projects management.
Computer skills and competences	- High level of competency on MS Office (Excel, PowerPoint, Word, Outlook, Access, Photo Shop) - Basic knowledge of graphic design applications (Adobe Illustrator, PhotoShop). - Good knowledge of OriginPro program
Other competence	- technical Romania/English/Romanian translator - focus on good results
Driving licence(s)	- B category since 2004

LIST OF THE MOST RELEVANT PUBLICATIONS:

1. **C. Haiduc (Orha)**, P. Barvinschi, G.Burtica, Structural characterization of silver modified clinoptilolite used in water treatment, Sustainability for Humanity and Environment in the Extended Connection Field Science-Economy-Policy, Politehnica University of Timisoara, **2005**;
2. **C. Orha**, K. Negrea, G. Burtica, F. Manea, A. Pop, *Al VIII-lea Simpozion International Tinerii si Cercetarea Multidisciplinara*, Timisoara, **2006**;
3. **C. Orha** G. Burtica, F. Manea, A. Pop, The Retaining Capacity Of The Zeolite Used In Water Disinfection, Bulletin of the Transilvania University of Brasov, 137, **2006**
4. **C. Orha**, F. Manea, C. Ratiu, G. Burtica, A. Iovi, Obtaining and characterization of romanian zeolite supporting silver ions, Environmental Engineering and Management, 6 (6), ISSN 1582-9596, p. 541, **2007**
5. **C.Orha**, F.Manea, C.Ratiu,G.Burtica, A.Iovi, Obtaining and Characterization of Romanian Zeolite Supporting Silver Ions, *The 4th International Conference on Environmental Engineering and Management*, ICEEM 04, Iasi, septembrie **2007**.
6. **C.Orha**, F.Manea, G.Burtica, P.Barvinschi, A study of the silver modified zeolite envisaging its using as water disinfectant, Book of Abstract, *RICCCE XV, Sinaia, S-5-14*, septembrie **2007**
7. **C. Orha**, F. Manea, A.Pop, G. Burtica, I. Fazakas Todea, Obtaining and characterization of zeolitic materials with antibacterial properties, Revista de Chimie, 59, 2, 173-178, **2008**
8. C.Podaru, C.Danielescu, D.Sonea, A.Pacala, I.Vlaicu, C.Cosma, G.Burtica, F.Manea, **C.Orha**, A comparative study of two groundwater treatment pilots plants, WATER POLLUTION IX, WIT Press, Transactions on Ecology and the Environment, Vol. 111, Eds. D. Prats Rico, C. A. Brebbia, Y. Villacampa Esteve, , 149-157, ISBN: 978-1-84564-115-3, ISSN: 1743-3541(print), ISSN: 1743-3549(online), **2008**
9. C. Lazau, C. Ratiu, P. Sfirloaga, A. Ioiutescu, I. Miron, P. Vlazan, **C. Orha**, F. Manea, P. Barvinschi, I. Grozescu, Synthesis of functionalized zeolite materials with undoped and doped TiO₂ nanocrystals through alternative methods, *18th International Congress of Chemical and Process Engineering*, Prague, Czech Republic, Abstract Book of the Conference, **24-28 August 2008**.
10. C. Ratiu, **C. Orha**, P. Sfirloaga, C. Lazau, F. Manea, A. Pacala, I. Vlaicu, G. Burtica, I. Grozescu, Enhancement of Natural Organic Matter Removal from Surface Water Using TiO₂-Modified Zeolite Chem. Bull. "POLITEHNICA" Univ. (Timișoara) Volume 53(67), 1-2, , 171- 174, **2008**
11. C. Lazau, F. Burada, I. Silosi, P. Sfirloaga, C. Ratiu, **C. Orha**, S. Novaconi, P. Vlazan, I. Rogoz, S. Rogoz, P. Barvinschi, I. Grozescu, "Immune response of animal organism treated with TiO₂ nanocrystals" *International Symposium Research and Education in Innovation Era 2nd edition*, Arad, **20-21 noiembrie 2008**.
12. Ratiu C., **Orha C.**; Lazau C.; Sfirloaga P.; Ioiutescu A; Manea F.; Grozescu A, Barvinschi P.; Vlazan P, Grozescu I., "Synthesis and characterization of zeolite materials functionalized with undoped and n-doped tio2 nanocrystals", *4th International Conference on Materials Science and Condensed Matter Physics*, Chisinau, **23-26 September 2008**
13. C. Ratiu, **C. Orha**, P. Sfirloaga, C. Lazau, F. Manea, A. Pacala, I. Vlaicu, G. Burtica, I. Grozescu, „Enhancement of Natural Organic Matter Removal from Surface Water Using TiO₂-Modified Zeolite”, Chem. Bull. "POLITEHNICA" Univ. (Timișoara), Volume 53(67), 1-2, **2008**
14. C.Lazau, C. Ratiu, P. Sfirloaga, A. Ioiutescu, I. Miron, P. Vlazan, **C. Orha**, A. Grozescu, F. Manea, P. Barvinschi, I Grozescu, „Synthesis and characaterization of zeolite materials functionalized with undoped and Ag-doped TiO₂ nanocrystals”, *The 5th Conference on Condensed Matter Physics*, Timisoara, **16-18 July 2008**
15. C. Lazău, P. Sfirloagă, C. Rațiu, **C. Orha**, A. Ioiutescu, I. Miron, S. Novaconi, D.I. Hădărugă, N. G. Hădărugă, G. N. Bandur, G. Rusu, I. Grozescu, Synthesis of bioactive materials based on undoped/doped TiO₂ and their nanocrystals with α / β -cyclodextrins, Journal of Optoelectronics and Advanced Materials, 11(8), 981 – 987, **2009**
16. C. Ratiu, C. Lazau, **C. Orha**, P. Sfirloaga, F. Manea, G. Burtica, A. Iovi, I. Grozescu, Synthesis of hybrid zeolitic materials with TiO₂ nanocrystals using solid-solid method, Journal of Optoelectronics and Advanced Materials, 11(6) 981 – 987, **2009**
17. C. Misca, C. Lazau, C. Ratiu, P. Sfirloaga, **C. Orha**, I. Grozescu, "The fungicidal effect of TiO₂ doped with metallic ions", Journal of Agroalimentary Processes and Technologies 15(3) 387-392, **2009**
18. C. Lazau, C. Ratiu, P. Sfirloaga, A. Ioiutescu, I. Miron, P. Vlazan, **C. Orha**, A. Grozescu, F. Manea, P. Barvinschi, I. Grozescu, Synthesis and characterization of zeolite materials functionalized with undoped and Ag-doped TiO₂ nanocrystals, Journal of optoelectronics and advanced materials - Symposia, Vol. 1, No. 1, p. 12 – 16, **2009**

19. **C. Orha**, C.Lazau, C.Ratiu, P.Sfirloaga, P.Vlazan, A.Ioitescu, F.Manea, P.Barvinschi, I.Muscutariu, I.Grozescu, Synthesis of hybrid zeolite materials with TiO₂ nanocrystals using solid-solid method, *American Physics Society, Pittsburg, SUA, Abstract Book of the Conference, 16-20 March 2009*
20. C. Lazau, C. Ratiu, **C. Orha**, C. Misca, A. Anghelina, F. Manea, I. Grozescu, Effect of TiO₂-Ag synthesized by hydrothermal method for Colliform bacteria removal from water, *The XVIth Symposium on Analytical and Enviromental Problems*, Szeged, Hungary, **28 Septembrie 2009**
21. C. Ratiu, C. Lazau, **C. Orha**, I. Grozescu, A. Pop, D. Sonea, F. Manea, G. Burtica, J. Schoonman, Using zeolite-modified electrode for the electrochemical determination of 4-aminophenol from water, *Environmental Engineering and Management Journal*, 8 (4) 825-830, **2009**
22. C. Ratiu, C. Lazau, P. Sfirloaga, **C. Orha**, D. Sonea, S. Novaconi, F. Manea, G. Burtica, I. Grozescu, Decontaminate effect of the functionalized materials with undoped and doped (Ag) TiO₂ nanocrystals, *Environmental Engineering and Management Journal*, 8 (3) 237-242, **2009**
23. P. Sfirloaga, S. Novaconi, C. Lazau, C. Ratiu, **C. Orha**, I. Grozescu, N. Vaszilcin, Preparation and characterization of Ag doped TiO₂ incorporated in natural zeolite, *Journal Optoelectronics and Advanced Materials*, Vol. 12, No. 9, p. 1884 – 1888, 2010
24. C. Lazau, P. Sfirloaga, **C. Orha**, C. Ratiu, I. Grozescu, Development of a novel fast-hydrothermal method for synthesis of Ag-doped TiO₂ nanocrystals, *Materials Letters* 65, 337–339, **2011**.
25. C. Lazau, **C. Ratiu**, **C. Orha**, R. Pode, F. Manea, Photocatalytic activity of undoped and Ag-doped TiO₂-supported zeolite for humic acid degradation and mineralization, *Materials Research Bulletin* 46, 1916-1921, **2011**
26. C. Ratiu, F. Manea, C. Lazau, **C. Orha**, Zeolite-supported TiO₂ based photocatalysis-assisted electrochemical degradation of p-aminophenol from water, *Chemical Papers* 65, 289–298, **2011**
27. **C. Orha**, A. Pop, C. Lazau, I. Grozescu, V. Tiponut, F. Manea, Structural characterization and the sorption properties of the natural and synthetic zeolite, *Journal of optoelectronics and advanced materials* Vol. 13, No. 5, p. 544 – 549, **2011**
28. **C. Orha**, A. Pop, C. Lazau, I. Grozescu, V. Tiponut, F. Manea, Silver doped natural and synthetic zeolites for removal of humic acid from water, *Environmental Engineering and Management Journal*, 11, 3, p.641-649, **2011**;
29. **C. Orha**, A. Pop, C. Lazau, P. Sfirloaga, I. Grozescu, V.Tiponut, F. Manea, Structural and sorption properties of copper doped natural and synthetic zeolite, *Proceedings of international Semiconductor Conference (CAS)*, Vol.2, 299-302, **2011**
30. **C. Orha**, Aniela Pop, Carmen Lazau, Paula Sfirloaga, Virgil Tiponut, Florica Manea, Removal of Humic Acid From Water by Sorption, *Proceedings of the 17th International Symposium On Analytical And Environmental Problems*, Szeged, p. 434-437, 19 September **2011**,
31. A Pop, F. Manea, A. Remes, A. Baci, **C. Orha**, N. Vaszilcsin, S. Picken, J. Schoonman, Silver-functionalized multi-wall carbon nanotubes composite electrode for non-enzymatic detection of glycerol, *IEEE Sensors*, 581 – 584, **2011**
32. A. Pop, F. Manea, **C. Orha**, S. Motoc, E. Ilinoiu, N. Vaszilcsin, J. Schoonman, Copper-decorated carbon nanotubes based composite electrodes for non-enzymatic detection of glucose, *Nanoscale Research Letters*, 7:266, doi:10.1186/1556-276X-7-266; **2012**
33. L.A. Colar, L. Coheci, E.C. Ilinoiu, F. Manea, **C. Orha**, R. Pode, Adsorption of Reactive Yellow 125 dye from aqueous solution on a silver doped TiO₂ modified clinoptilolite, *EEMJ*, vol. 11, (nr. 8), pp. 1822-1827, August **2012**;
34. E.C. Ilinoiu, A. Pop, **C.Orha**, A.Jakab, F.Manea, R.Pode, P.A.Serra, "Amperometric detection of dopamine and ascorbic acid with zeolite-graphite composite microelectrode", *WIT Press Trans. on Ecol. and The Environ.* Vol.164, p. 1743-3541, UK, July 2012;
35. L. A. Colar, A. Jakab, F. Manea, R. Pode, **C. Orha**, "Photocatalytic performance of Ag-modified natural zeolite catalyst for photocatalysis degradation of Methylene Blue (MB) under VIS irradiation", *WIT Press Trans. on Ecol. and The Environ.* Vol.164, pp. 335-344, UK, July **2012**,
36. **C. Orha**, A. Pop, V. Tiponut, F. Manea, Composite Material Based On Silver-Doped Zeolite and Multi-Wall Carbon Nanotubes For Humic Acid Removal, *Environmental Engineering and Management Journal*, Vol.12, No. 5, 917-921, May **2013**,
37. **C. Orha**, A. Pop, C. Lazau, A. Jakab, R. Pode, F. Manea, Carbon-Zeolite Composite Materials In Advanced Drinking Water Treatment, *Water Contamination Emergencies: Managing the Threats*, Ulrich Borchers, K. Clive Thompson, John Gray, Royal Society of Chemistry, 346-355, **2013**;
38. Ilinoiu E.C., Pode R., Manea F., Colar L.A., Jakab A., **Orha C.**, Ratiu C., Lazau C., Sfirloaga P., Photocatalytic activity of a nitrogen doped TiO₂ modified zeolite in the degradation of Reactive Yellow 125 Azo Dye, *Journal of the Taiwan Institute of Chemical Engineers*, Volume 44, Issue 2, pp 270 - 278, **2013**;
39. **C. Orha**, C. Lazau, C. Bandas, Structural and fertilizer properties of potassium doped natural zeolite, *Journal of Agroalimentary Processes and Technologies* 21(1), 1-5, **2015**;
40. **Orha C.**, Manea F., Pop A., Bandas C., Lazau C., TiO₂ nanostructured carbon composite sorbent/photocatalyst for humic acid removal from water, *Desalination and Water Treatment*, 57(30), 14178-14187, **2016**,
41. **C. Orha**, C. Lazau, A.M. Dabici, C. Bandas, S. Olariu, F. Manea, Comparative photocatalytic performances of undoped/N-doped TiO₂ under solar irradiation for a Reactive Yellow 125 Azo Reactive dye degradation from water, *Environmental Engineering and Management Journal*, Vol.14, No. 6, 1355-1360, June **2015**;
42. **Orha C.**, Pode R., Manea F., Lazau C., Bandas C., Titanium dioxide-modified activated carbon for advanced drinking water treatment, *Process Safety and Environmental Protection*, 108, 26-33, **2016**;
43. C. Lazau, T.V. Iordache, A.M. Florea, **C. Orha**, C. Bandas, A.L. Radu, A. Sarbu, T. Rotariu, Towards developing an efficient sensitive element for trinitrotoluene detection: TiO₂ thin films functionalized with molecularly imprinted copolymer films, *Applied Surface Science*, Volume 384, 449-458, **2016**;
44. A I. Bucur, R. A. Bucur, **C. Orha**, P. Svera, Hydrothermal crystallization of micrometric hydroxyapatite for biomedical applications, 82-85, *Proceedings of the 22nd International Symposium on Analytical and Environmental Problems*, October 10, **2016**
45. A. Pop, R. Pode, **C. Orha**, F. Manea, Electrochemical detection of paraquat from water using platinum modified BDD Electrode, 259-262 *Proceedings of the 22nd International Symposium on Analytical and Environmental Problems*, October 10, **2016**
46. **C. Orha**, C. Lazau, F. Manea, D. Ursu, Effect of carbon nanofiber onto tio2-modified powder/granular activated carbon for advanced water treatment, *Proceedings of the 23rd International Symposium on Analytical and Environmental Problems*, 244-248, **2017**

47. B.O. Taranu, A. I. Bucur, P. Svera, **C. Orha**, A. Racu, Hydroxyapatite coatings on Ti substrates by simultaneous precipitation and electrodeposition, *Proceedings of the 23rd International Symposium on Analytical and Environmental Problems*, 108-112, **2017**
48. A. I. Bucur, R. A. Bucur, Z. Szabadai, C. Mosoarca, P. A. Linul, **C. Orha**, Hydrothermal synthesis of hydroxyapatite with tartaric acid, *Proceedings of the 23rd International Symposium on Analytical and Environmental Problems*, 91-95, **2017**;
49. Jakab A., Pode R., Pop A., **Orha C.**, Manea F., TiO₂-modified zeolite-carbon nanotubes composite electrode for photoelectrodegradation of pentachlorophenol from water under UV irradiation, *WIT Transactions on Ecology and the Environment*, 216, 133 – 142, **2017**;
50. **Orha C.**, Pode R., Manea F., Lazau C., Bandas C., Titanium dioxide-modified activated carbon for advanced drinking water treatment, *Process Safety and Environmental Protection*, 108, 26-33, **2017**
51. **Orha C.**, Lazau C., Ursu D., Manea F., Effect of TiO₂ loading on powder-activated carbon in advanced drinking-water treatment, *WIT Transactions on Ecology and The Environment*, 216, 203 – 211, **2017**
52. M. Birdeanu, A.V. Birdeanu, M. Vaida, **C. Orha**, E. Fagadar-Cosma, Anticorrosive properties of ZnTa₂O₆ and ZnV₂O₆ nanomaterials deposited as sandwich structures by drop casting method in NaCl, *Nanocon 2017 Conference Proceedings, 9th International Conference of Nanomaterials – Research & Application*, Brno, Czech Republic, EU, p.359, October 18th – 20th **2017**
53. **Orha C.**, Lazau C., Pode R., Manea F., Simultaneous removal of humic acid and arsenic(III) From drinking water using TiO₂-powdered activated carbon, *Journal of environmental protection and ecology* 19(1):39 - 47, **2018**
54. Pop A., Lung S., **Orha C.**, Manea F., Silver/graphene-modified boron doped diamond electrode for selective detection of carbaryl and paraquat from water, *International Journal of Electrochemical Science*, 13, 2651–2660, doi: 10.20964/2018.03.02, **2018**
55. B.O. Taranu, A. I. Bucur, I. Sebarchievici, **C. Orha**, Electrodeposition and corrosion behavior of hydroxyapatite onto titanium, *Proceedings of the 24th International Symposium on Analytical and Environmental Problems*, 87-91, **2018**
56. C. Lazau, **C. Orha**, D. Ursu, M. Nicolaescu, M. Vajda, Preparation of mesoporous TiO₂ by sol-gel and hydrothermal methods, *Proceedings of the 24th International Symposium on Analytical and Environmental Problems*, 330, **2018**
57. M. Birdeanu, **C. Orha**, Synthesis, characterization and anticorrosive properties of pseudo-binary oxide nanomaterials, *Proceedings of the 24th International Symposium on Analytical and Environmental Problems*, 220-221, **2018**
58. A. I. Bucur, R. A. Bucur, **C. Orha**, Concentration influence in the hydrothermal synthesis of hydroxyapatite at 160°C, *Proceedings of the 24th International Symposium on Analytical and Environmental Problems*, 92-95, **2018**
59. C. Lazau, **C. Orha**, D. Ursu, A. Sarbu, Synthesis and characterization of TiO₂ (doped-undoped) nanocrystals through sol-gel and hydrothermal methods, *15th International Conference on Nanosciences & Nanotechnologies (NN18)* din Thessalonik, Grecia, 3-7 July **2018**
60. S. Motoc, F. Manea, **C. Orha**, A. Pop, Enhanced Electrochemical Response of Diclofenac at a Fullerene–Carbon Nanofiber Paste Electrode, *Sensors* **2019**, 19(6), 1332; <https://doi.org/10.3390/s19061332>
61. M. Nicolaescu, C. Lazau, **C. Orha**, C. Bandas, D. Ursu, M. Vajda, M. Ionela Popescu, Synthesis and structural characterization of black TiO₂, *New trends and strategies in the chemistry of advanced materials with relevance in biological systems, technique and environmental protection, 12th Edition*, June 06-07, **2019**, Timisoara, ROMANIA
62. C. Lazau, **C. Orha**, C. Bandas, M. Nicolaescu, M. Vajda, M. Popescu, Synthesis and characterization of mesoporous TiO₂, *TIM19 Physics Conference 29 – 31 May 2019*, Timisoara, Romania
63. M. Miclau, S. Kumar, D. Ursu, **C. Orha**, N. Miclau, J.M. Rueff, S. Malo, C. Martin, Ag₂CrO₄ for photocatalytic applications: High performance of crystals designed by autogenous pressure, *Materials Characterization*, 158, December **2019**, <https://doi.org/10.1016/j.matchar.2019.109970>

Chapter books:

1. G. Burtica, A. Negrea, D. Micu, **C. Orha**, *Poluantii si mediul inconjurator*, Politehnica Editor, 2005, Timisoara, ISBN 973-625-262-0
2. **C. Orha**, Contributii la studiul proceselor de obtinere si caracterizare a unor materiale zeolitice functionalizate cu utilizare in dezinfectia apei, PhD thesis, Politehnica University Timisoara, Series 4: Chemical Engineering, no. 12, Politehnica Ed., 2008, ISSN 1842-8223, ISBN 978-973-625-594-6
3. **C. Orha**, A. Pop, C. Lazau, A. Jakab, R. Pode, F. Manea, Carbon-zeolite Composite Materials in Advanced Drinking Water Treatment in Water Contamination Emergencies: Managing the Threats, Borchers, U., Gray, J., Thompson, KC. Eds., p. 346-355, ISSN: 978-1-84973-441-7, 2013.
4. F. Manea, **C. Orha**, Carbon-/Zeolite-Supported TiO₂ for Sorption/ Photocatalysis Applications in Water Treatment, *Photocatalysts: Applications and Attributes*, IntechOpen, Published: 5th November 2018. DOI: 10.5772/intechopen.80803

Patents

1. L. Carmen, C. Ratiu, **C. Orha**, I. Grozescu, M. Nitu, A. Dabici, "Procedeu de obtinere a materialelor hibride pe baza de zeoliti naturali si nanocristale de TiO₂, prin metoda hidrotermala in camp de microunde", A00546/15.07.2009
2. A. Sarbu, T. V. Iordache, A.M. Florea, S. Apostol, Teodor S., A. L. Radu, C. Lazau, C. Bandas, **C. Orha**, T. Rotariu, E.A. Voicu, "Filme impregnate molecular cu trinitrotoluen prin metoda sol-gel și procedeu de obținere a acestora", OSIM A 2016-00144/ 29.02.2016;
3. C. Lazau, **C. Orha**, C. Bandas "Procedeu pentru obtinerea filmelor de dioxid de titan depuse pe suporti din metale nobile prin metoda hidrotermala clasica", OSIM Nr. 132256;
4. F. Manea, **C. Orha**, C. Lazau, R. Pode, D. Ursu, A. Pop, « Instalație de filtrare asistată fotocatalitic pentru tratarea apei in scop potabil » OSIM A/00467/2018

I hereby certify that the above statements are true.

Date: 04.11.2019

