

Personal information

Name **SECLA, MARIUS SEBASTIAN**
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 Web-pages [ResearchGate](#); [Publons](#); [Academia](#); [Ad Astra](#); [Google Scholar](#); [Brainmap](#)
 WEB OF SCIENCE ResearcherID: [G-2585-2011](#); ORCID: [0000-0002-4148-0106](#);
 Scopus ID: [15133304000](#); BRAINMAP: [U-1700-030B-5661](#).
 Nationality Romanian
 Birth date 31.12.1976



Professional experience

Period	From November 2020 onwards
Function	C.S.II Scientific Researcher
Name of the employer	Faculty of Chemical Engineering and Environmental Protection, Gheorghe Asachi Technical University of Iasi
Period	From October 2017 to October 2018
Function	Le Studium Research Fellow
Activities	Independent research activity; experimental planning; data processing and interpretation, communication of scientific results. Convener of The International Conference "Water Micropollutants: from detection to removal" , Orleans, 26-28 th November 2018
Name of the employer	Le Studium Loire Valley Institute for Advanced Studies, ICMN-CNRS, Orleans
Period	From October 2015 to September 2017
Function	Project Manager
Research project	Development and optimization of an innovative photo-Fenton-peroxone system for degrading organic micropollutants in water PNII-RU-TE-2014-4-0405 Grant
Activities and responsibilities	Research team leadership (2 postdocs and 2 Ph.D. students); experimental planning and laboratory development; data processing, publication and communication of scientific results.
Name of the employer	<i>Faculty of Chemical Engineering and Environmental Protection, Gheorghe Asachi Technical University of Iasi</i>
Period	From August 2010 to July 2012
Function	Project Manager
Research project	Optimization of a hybrid electrocoagulation-sorption-electrooxidation system for wastewater treatment PNII-RU-PD Grant, No 52/2010, COD 44
Activities and responsibilities	Independent research activity; experimental planning and acquisition of necessary laboratory equipment and analytical reagents; experimental data processing and interpretation, mathematical modeling, simulation and optimization of investigated processes, publication and communication of scientific results.
Name of the employer	<i>Faculty of Chemical Engineering and Environmental Protection, Gheorghe Asachi Technical University of Iasi</i>
Research grants	From June 2022 to present, Bio-based porous materials for hydrogen storage and environmental applications , PN-III-P4-PCE-2021-1455, project manager Prof. Irina Volf. From November 2020 to October 2022, Novel materials with optical properties for anti-counterfeiting paper , PN-III-P2-2.1-PED-2019-4825, project manager Prof. Teodor Măluțan. From November 2018 to September 2021, Antitumoral theranostic platforms based on carbon dots and polymer matrices , PN-III-P1-1.2-PCCDI-2017-0083, project manager Acad. Prof. Bogdan C. Simionescu. From August 2012 to December 2015, Innovative electroluminescent nanocomposites for a new approach in polymer based light emitting devices , PN-II-ID-PCE-2011-3-0708, project manager Prof. Marcel Popa. From May 2009 to December 2011, Complex combinations and nanostructured compounds destined for obtaining some new types of nanocomposite materials with applications in electronic and instrumental chemical analysis , PNII-IDEI Grant, No. 357/2008, COD 721, project manager Lector Doina Sibiescu From November 2007 to July 2010, Researches concerning gas drying by adsorption on composite materials with porous matrix , PNII-IDEI Grant, No. 63/2007, COD 608, project manager Prof. Stelian Petrescu.
Activities and responsibilities	Laboratory research activity; experimental planning and data interpretation; publication of scientific results
Function	Scientific Researcher
Name of the employer	<i>Faculty of Chemical Engineering and Environmental Protection, Gheorghe Asachi Technical University, Iasi, Romania</i>
Period	From July 2002 to October 2003
Function	Chemical Engineer
Name of the employer	S.C. Compania Conex S.A. (National Paints), Str. Silvestru Nr. 152, 7000012, Iasi, Romania
Sector of the activity	Resin, Paint and Glue Company

Education

Period	From November 2003 to October 2007
Qualification/diploma	Doctor in Chemical Engineering
Doctoral thesis	“Study of Mass Transfer in Anodic Dissolution Processes”
Name of institution	Gheorghe Asachi Technical University of Iasi, Faculty of Chemical Engineering and Environmental Protection, Chemical Engineering Department, 73 Prof. dr. docent D. Mangeron, 700050, Iasi, Romania, website: www.tuiasi.ro . Fully funded research scholarship
Period	From October 2001 to June 2002
Qualification/diploma	Master of Science
Disciplines approach/competence	Specialization: Environmental Engineering and Management; Dissertation: “Treatment of Wastewater Containing Sulfides” water management; pollution minimization at source; environmental impact assessment; risk assessment; process monitoring and control.
Name of institution	Faculty of Industrial Chemistry, Gheorghe Asachi Technical University, Iasi, Romania Fully funded study scholarship
Period	From October 1996 to June 2001
Qualification/diploma	Bachelor of Science
Disciplines approach/competence	Specialization: Technology and Biotechnology of Environmental Protection; Project Diploma: Electrochemical Treatment of Wastewater Containing Refractory Organic Compounds conventional and advanced water and wastewater treatment methods; air treatment technologies; optimization in chemical engineering; chemical engineering technologies; organic chemistry; inorganic chemistry; mathematics.
Name of institution	Faculty of Industrial Chemistry, Gheorghe Asachi Technical University, Iasi, Romania Fully funded study scholarship
Research stages	
Period	October 28 th -November 30 th , 2021
Activity	Research stage, Physico-chemical investigations of some photoluminescent materials based on polymeric complexes of pHEMA with Tb(III) and Eu(III), and Carbon Dots-based polymeric composites, respectively
Name of institution	Interfaces, Confinement, Matériaux et Nanostructures, CNRS, Orléans, France
Period	April 18, 2016 – July 8, 2016
Activity	Research stage, <i>Identification of intermediary compounds of micropollutant degradation by advanced oxidation processes, within PN-II-RU-TE-2014-4-0405.</i>
Name of institution	ICMN, CNRS, Orléans, France
Period	April 26, 2011 –July 26, 2011
Activity	Research stage, <i>Adsorption of dyes on granular activated carbon</i> , within PNII-RU Grant, No. 52/2010, 44
Name of institution	ICOA, Université d’Orléans, France
Period	October 4, 2008 –October 19, 2008
Activity	Research stage, <i>Characterization of porous adsorption materials</i> , within PNII-IDEI Grant, No. 63/2007, 608
Name of institution	<i>Laboratoire de Matériaux Avances pour la Catalyse et la Santé (Institut Charles Gerhardt – Ecole Nationale Supérieure de Chimie de Montpellier), France.</i>
Period	September 22, 2008 –October 3, 2008
Activity	Research stage, <i>Experimental data processing in adsorption processes</i> , within PNII-IDEI Grant, No. 63/2007, 608
Name of institution	<i>Laboratoire de Génie des Procédés pour l’Environnement, l’Energie et la Santé, Université d’Orléans, France</i>
Period	November 1, 2007 –November 20, 2007
Activity	Documentation stage within PNII-IDEI Grant, No. 63/2007, 608
Name of institution	<i>Laboratoire de Matériaux Avances pour la Catalyse et la Santé (Institut Charles Gerhardt – Ecole Nationale Supérieure de Chimie de Montpellier), France.</i>
Period	From May 3, 2006 to August 3, 2006
Training	Erasmus-Socrates Training Grant: “Wastewater Treatment by Advanced Oxidation Processes”
Disciplines approach/competence	Investigation Methods of Electrochemical Processes (Course); Wastewater Treatment Technology (Course); Removal of Organic Compounds from Wastewater by Physical-Chemical Methods (Project).
Name of institution	Physical Chemistry Lab., Department of Chemistry, Aristotle University of Thessaloniki, Greece

RESEARCH INTERESTS Advanced technologies for water and wastewater treatment
Applied electrochemistry
Synthesis and characterization of adsorbents and catalysts
Transport phenomena and kinetics of chemical and electrochemical processes
Simulation, modeling and optimization of chemical engineering processes

INVITED CONFERENCES *Water Treatment by Electrocoagulation/Granular Activated Carbon Coupling* - Université d'Orléans, France, July 12, 2011
New perspectives of Advanced Oxidation Processes in the context of emerging micropollutants, LE STUDIUM Thursday, Orléans. December 07, 2017
and 6ème Colloque Master Energie et Matériaux, March 16th 2018, Orleans.

AUTHOR OF 129 (50 as main author) papers published and/or presented
48 (20 as main author) papers published in ISI indexed journals (45) and conference volumes (3); Hirsch Index: 13, 745 citations
44 (18 as first author) papers presented at international conferences
4 papers published in BDI indexed conference volumes
18 (6 as main author) papers published in BDI
14 papers presented at national conferences
3 national patents, 2 national patent requests and 1 international patent request
Convener of The International Conference "Water Micropollutants: from detection to removal", Orleans, 26-28th November 2018

SELECTED PAPERS PUBLISHED IN ISI JOURNALS **M.S. Secula**, G.C. Piuleac, B. Cagnon, Acid Blue 74 removal from aqueous solutions by EC/GAC coupling: a multi-objective optimization approach based on a hybrid NN-GA, *Desalination and Water Treatment*, 271, 2022, 281-296.
M.S. Secula, G.D. Suditu, I. Poulis, C. Cojocar, I. Cretescu, Response surface optimization of the heterogeneous photocatalytic decolorization of a simulated dyestuff effluent, *Chemical Engineering Journal*, 141(1-3), 2008, 18-26 (96 citations). The 7th most downloaded paper published by Elsevier in 2011 on Chemical Engineering subject.
M.S. Secula, I. Cretescu, S. Petrescu, An experimental study of Indigo Carmine removal from aqueous solution by electrocoagulation, *Desalination*, 277 (1-3), 2011, 227-235, (162 citations).
M.S. Secula, B. Cagnon, T.F. de Oliveira, O. Chedeville, H. Fauduet, Removal of acid dye from aqueous solutions by electrocoagulation/GAC adsorption coupling: Kinetics and electrical operating costs, *J Taiwan Inst Chem Eng*, 2012, 43 (5), 767-775. (80 citations)
M.S. Secula, I. Cretescu, B. Cagnon, L.R. Manea, C.S. Stan, I.G. Breaban, Fractional Factorial Design Study on the Performance of GAC-Enhanced Electrocoagulation Process involved in Color Removal from Synthetic Dye Wastewater, *Materials* (2.972 IF-2018), 6(7), 2013, 2723-2746; (56 citations).

SELECTED PAPERS PRESENTED AT CONFERENCES **M.S. Secula**, B. Cagnon, O. Chedeville, High performance Fe-doped Mn/TiO₂ activated carbon catalyst applied in photo-Fenton-peroxone processes, *Carbon*, July 2018, Madrid, Spain.
M.S. Secula, L.Zaleschi, B. Cagnon, A. Vajda, I. Mamaliga, Iron(II)-impregnated and magnetic activated carbon used as Fenton like catalysts for photodegrading organic compounds, *1st International Conference on Sustainable Water Processing*, September 11-14, 2016, Sitges, Spain.
M.S. Secula, B. Cagnon, O. Chedeville, Etude de la cinétique et de la thermodynamique d'adsorption sur charbons actifs de trois colorants dans différentes conditions opératoires, *XIV^e Congrès de la Société Française de Génie des Procédés (SFGP 2013)*, October 2013, Lyon, France.
M.S. Secula, B. Cagnon, O. Chedeville, I. Mămăligă, I. Cretescu, Coupling of GAC adsorption and electrooxidative regeneration for the treatment of dye wastewater, *Carbon*, June 2012, Krakow, Poland.
M.S. Secula, T.Ferreira de Oliveira, B. Cagnon, O. Chedeville, H.Fauduet, S. Petrescu, Étude de différents charbons actifs granulaires pour l'élimination par électrocoagulation du Carmin Indigo présent dans des eaux usées, *XIII^{ème} Congrès de la Société Française de Génie des Procédés (SFGP 2011)*, November 29th – December 1st, 2011, Lille, France.
M.S. Secula, R. Diaconescu, C. Petrescu, S. Petrescu, ANN Modeling and Simulation of Gas Drying by Adsorption on Composite Materials, *The 23rd European Conference on Modelling and Simulation*, June 2009, Madrid, Spain.

PATENTS 1. S. Petrescu, M. Spiridon, I. Solomon, **M.S. Secula**, Gas drying equipment, comprises vertical cylindrical body provided inside with low-thickness adsorbent layer located between two concentric perforated cylindrical shell rings and inner space, Patent RO127381-A2, 2012.
2. C.S. Stan; I. Cretescu; D. Sibiescu; **M.S. Secula**, Process for obtaining a fluorescent composite based on polyethyleneterephthalate and cadmium selenide nanocrystals, Patent RO128622-A2, 2013.
3. C.S. Stan; **M.S. Secula**, Preparation of polymeric cryogel for purifying water with high organic content, involves photopolymerizing 2-hydroxyethyl methacrylate in presence of N,N'-methylenebisacrylamide and 1-hydroxycyclohexyl phenyl ketone in graphene solution, Patent RO00132703, 2021.

SCIENTIFIC REFEREE AND REVIEWER UEFISCDI REVIEWER: PNCDI III, SP 1.1 TE-2019 (D-2100-001M-5918); PNCDI III, SP 2.1 PTE-2019 (D-2100-001Z-5912); PNCDI III, SP 1.1 PD-2019 (Certificate No. D-2100-001F-5915)
More than 50 papers reviewed and 80 evaluations performed mainly in the fields of adsorption, electrocoagulation, electrochemical oxidations, photocatalysis, Fenton's reagent, ion exchange, and membranes applied in wastewater treatment, synthesis and characterization of composite materials, as well as on RSM applied in modeling and optimization of chemical processes.

Aptitude and professional competence

Mother language **Romanian**

Foreign languages

Understanding

Speaking

Writing

Self-evaluation
English language

French language*

Listening		Reading		Conversation		Oral discussion		Writing proficiency	
C2	Proficient User	C2	Proficient User	C1	Proficient User	C1	Proficient User	C2	Proficient User
C1	Proficient User	C2	Proficient User	B2	Independent User	B1	Independent User	B2	Independent User

* French courses - Institut de français Université d'Orléans - UFR Lettres, Langues et Sciences Humaines, 2017/2018.

Official Tests

14TH MAY 2005, PAPER-BASED **TOEFL** TEST
21ST NOVEMBER 2005, COMPUTER-BASED **GRE** TEST

Management abilities

Project manager of PNII-RU-PD Grant, 52/2010, 44, 2010-2012, Budget: 319,909 lei (~75,000 EUR).
Project manager of PNII-RU-TE-2014-4-0405 Grant, Budget 550,000 lei (~125,000 EUR).

Competence and organizing aptitudes

Able to plan, organize, and handle a heavy workload.
Work well independently or in a team.

Competence and computer skills

Operating with programs as: *Excel*, *Origin*, *ChemCAD*, *MathCAD*, *Table Curve* (Surface fitting software), *Curve Expert* (Regression software), *VoltaMaster* (Electrochemistry software), *Matlab* (Model-Based Calibration Toolbox - Design of Experiments Statistical Modeling, Calibration Generation), *NeuroSolutions* (neural network simulation software).
Advanced operating with statistical analysis, modeling and optimization softwares such as: *Modde*, *Design-Expert*, *MiniTab*, *Jmp Statistical Discovery*, *Model-Based Calibration and Calibration Generation Toolbox under Matlab*.
Advanced processing of texts and images: *Word*, *PowerPoint*, *ISIS Draw* (*Chemweb*, *Chemwindow*, *ChemSketch*), *Adobe Reader*.

Scientific memberships

The International Water Association (IWA); World Academy of Science Engineering and Technology (WASET)