CURRICULUM VITAE

PERSONAL INFORMATION

Andrei Honciuc, Ph.D.
Senior Scientist (CS II)
Aleea Grigore Ghica Voda 41A, 700487 Iasi, Romania,
Mobile: +40729261522
Email : honciuc.andrei@icmpp.ro
ORCiD : https://orcid.org/0000-0003-2160-2484
Google Scholar ID: Andrei Honciuc

EDUCATION

09/2001 – 08/2006	PhD in Chemistry, The University of Alabama, USA
10/1997 – 06/2001	Diploma Chemistry & Physics, Universitatea "Al. I. Cuza", Romania
09/1993 - 09/1997	High School Baccalaureate, Colegiul Național "Roman-Vodă", Roman, Romania

EMPLOYMENT HISTORY

01/2020 – present	Senior Scientist (CSII), "Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania
03/2014 – 10/2019	Professor and head of research group „New Materials", Institute of Chemistry & Biotechnology, Zurich University of Applied Sciences (ZHAW), Switzerland
05/2011-03/2014	Chemist, Laboratory leader and Manager R&D, BASF SE, Ludwigshafen, Germania
02/2009-04/2011	Alexander von Humboldt postdoctoral fellow of the Alexander von Humboldt Foundation, Friedrich-Alexander University, Erlangen, Germany
10/2006-02/2009	Research assistant (postdoc), Chemical Engineering Department, University of Colorado, Boulder, USA

AWARDS & ACCOLADES

2007	Outstanding Graduate Student Award, University of Alabama, USA
2008	Outstanding Dissertation Award, University of Alabama, USA
2008	Award of merit, University of Alabama, USA
2009	Humboldt Fellowship, from Alexander von Humboldt Foundation, Germania
2014	Metrohm Foundation Endowment, Metrohm Foundation, Switzerland

SCIENTIFIC ACTIVITY: 32 peer review journal articles, 1 book chapter (Springer), 1 book (Elsevier), ca. 40 patents and published patent applications, Hirsch-index 17, 597 citations (Web of Science, 02.06.2021)

CHAIRED CONFERENCE

"Polymer, Colloids and Interfaces" Section of Swiss Chemical Society, Fall National Meeting, 15.09.2016, Irchel Campus, University of Zurich

TEACHING ACTIVITIES

- "Nanotechnology and Functional Surfaces" 2015 – 2019 (ZHAW)
- "General Chemistry" Laboratory Course 2014 – 2019 (ZHAW)
- "Colloids: Fundamentals and Practical Applications" SEPAWA Summer school training for -formulators and students in the industry, 31.08.-04.09.2015 (ZHAW)
- "Scanning Electron Microscopy and its Application in Powder Analytics" SEPAWA Summer school training for formulators and students in the industry, 05.09.-09.09.2016 (ZHAW)

SUPERVISED STUDENTS AND POSTDOCTORANDS

Students: Dac Ngan Nguyen Giang (2019), Oliver Pauli (2019), Tristan Kipfer (2018), Gioele Moll (2018), Simon Burgener (2017), Michel Gion Flurin (2016), Anto Udovicic (2016), Lorena Moll (2015), Roman Zambail (2015)

Postdoctorands: Voichita Mihali PhD (2016 – 2020), Chengjun Kang PhD (2016-2018), Dalin Wu PhD (2015 – 2018), Vanessa Rullaud PhD (2015-2016), Manolis Tzirakis PhD (2014-2015)

Co-supervised students: Yong Zen Tan (2015-2016) and Thien Ahn Trinh (2015), with Assoc. Prof. Jia-wei Chew from Nanyang Technical University (NTU), Singapore

PARTICIPATION IN RESEARCH PROJECTS

2019-2020 "NanoTraPPED" – Development of a Method for Measuring the Surface Energy of Nanoparticles, Project Nr. 200021_188465, financed by Swiss National Science Foundation, Budget total: 272'500 CHF, Role: director/coordinator

2019-2020 "Development of high-performance surfactants"- financed de AdvanSix Inc., USA, Budget total: 195'000 CHF, Role: director/coordonator

2016 – 2019 "Intensified by Design® for the intensification of processes involving solids handling" European Commission H2020-SPIRE-2015, Project Nr. 680565, Total project budget 10'986'652.90 Euro https://cordis.europa.eu/project/id/680565, Role: participant, allocated budget 200'000 Euro

2015 – 2015 "Nanopartikel als Schlüsselkomponenten für sensitive Schichten in besonders leistungsfähigen optischen Sauerstoffsensoren" financed by the Comission for Technology and Innovation, Switzerland – partnership with Mettler Toledo, Switzerland, Project Nr. 19112.1 PFSATW-NM, 16'000 CHF, Role: director/coordonator with Mettler Toledo Gmbh

2014 – 2015 "Water-Floating Membranes of Ligand Carrying Amphiphilic Nanoparticles for Wastewater Treatment, Soil Recovery and Hydrological Mining" financed by ZHAW/2014, 45'000 CHF, Role: director/coordonator

ACTIVE MEMBERSHIPS: American Chemical Society

LANGUAGES English (fluent), German (fluent), Romanian (native)

OTHER COMPETENCES: Labview, Python, digital electronic circuits

BOOK

Andrei Honciuc, "Chemistry of Functional Materials Surfaces and Interfaces: Fundamentals and Applications", **2021**, 1st Edition, Elsevier, 1-298, ISBN: 9780128210598

BOOK CHAPTER

Andrei Honciuc „*Amphiphilic Janus Particles at Interfaces*" in „*Flowing Matter*" Edited by Federico Toschi, Ignacio Pagonabaraga, Nuno Araujo, Marisol Ripoll and Marcello Sega, Springer, 2018

SELECTED ARTICLES (peer reviewed)

- D. Wu, J. W. Chew, A. Honciuc* "Polarity reversal in a homologous series of surfactant-free Janus nanoparticles: toward the next generation of amphiphiles" *Langmuir* **2016**, 32, 6376-6386
- V. Mihali & A. Honciuc* "Semiconductive Materials with Tunable Electrical Resistance and Surface Polarity Obtained by Asymmetric Functionalization of Janus Nanoparticles" *Advanced Materials Interfaces* **2017**, 1700914- 1700925
- D. Wu, B. P. Binks, A. Honciuc* "Modelling the Interfacial Energy of Surfactant-Free Amphiphilic Janus Nanoparticles from Phase Inversion in Pickering Emulsions" *Langmuir* **2018**, 34(3), 1225–1233, DOI: 10.1021/acs.langmuir.7b02331 (invited contribution for the special issue of "Early Career Authors in Fundamental Colloid and Interface Science")
- C. Kang; A. Honciuc* "Self-Assembly of Janus Nanoparticles into Transformable Suprastructures" *J. Phys. Chem. Lett.*, **2018**, 9 (6), 1415–1421
- C. Kang, A. Honciuc* "Influence of Geometries on the Assembly of Snowman-Shaped Janus Nanoparticles" *ACS Nano* **2018**, 12(4), 3741-3750, DOI: 10.1021/acsnano.8b00960
- C. Kang; A. Honciuc* "Growth of Nano- Microcolloidal Architectures from Janus Seeds by ATRP" Chem. Mater., **2018**, DOI: 10.1021/acs.chemmater.8b02946
- C. Kang, A. Honciuc* "Versatile Tri-Block Janus Nanoparticles: Synthesis and Self-Assembly", Chem. Mater. **2019**, 31, 5, 1688-1695
- V. Mihali & A. Honciuc* "Evolution of Self-Organized Microcapsules with Variable Conductivities from Self-Assembled Nanoparticles at Interfaces" ACS Nano **2019**, 13, 3, 3483-3491

SELECTED PATENTS & PATENT APPLICATIONS

- Klipp, A. Honciuc, C.-Y. Yang "The Use of Surfactants Having at Least Three Short-Chain Perfluorinated Groups in Formulations for Photo Mask Cleaning" USA Patent **US9891520 B2**, Publication Date 13 February 2018;

- A. Klipp, A. Honciuc, G. Oetter, C. Bittner "Use of Compositions Comprising a Surfactant and a Hydrophobizer for Avoiding Pattern Collapse When Treating Patterned Materials with Line-Space Dimensions of 50 nm or Below" USA patent **US 9557652 B2**, Publication Date 31 January 2017;
- A. Klipp, A. Honciuc, G. Oetter, C. Bittner "Compositions for Anti-Pattern Collapse Treatment Comprising Gemini Additives" European patent **EP 2872948 B1**, Publication Date 11 October 2017
- B. Christian; O. Guenter; A. Honciuc, A Klipp, S. Braun "Defect Reduction Rinse Solution Containing Ammonium Salts of Sulfoesters" **US 10538724 B2**, Publication Date: 21 January 2020
- E Asirvatham, A Honciuc, V Mihali, "Siloxane derivatives of amino acids having surface-active properties" – **US 2021/0054002**, 2021, Publication Date: 25 February 2021