



Curriculum vitae Europass

Personal information

First name(s) / Surname(s) Simona Margareta COMAN
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URL <https://unibuc.ro/user/simona.margareta.coman/>
Nationality Romanian
Date of birth 26.07.1969
Gender female

Work experience

Dates 2008-present
Occupation or position held Professor
Main activities and responsibilities didactic and research activities in the field of catalysis
Name and address of employer University of Bucharest, Faculty of Chemistry, Romania
Type of business or sector Education and Academic research

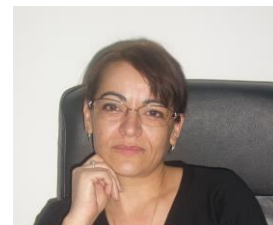
Dates 2005-2008
Occupation or position held Associate Professor
Main activities and responsibilities didactic and research activities in the field of catalysis
Name and address of employer University of Bucharest, Faculty of Chemistry, Romania
Type of business or sector Education and Academic research

Dates 2001-2005
Occupation or position held Lecturer
Main activities and responsibilities didactic and research activities in the field of catalysis
Name and address of employer University of Bucharest, Faculty of Chemistry, Romania
Type of business or sector Education and Academic research

Dates 1992-2001
Occupation or position held Assistant Professor
Main activities and responsibilities didactic and research activities in the field of catalysis
Name and address of employer University of Bucharest, Faculty of Chemistry, Romania
Type of business or sector Education and Academic research

Education and training

Dates March 2018
Title of qualification awarded Habilitation
Principal subjects/occupational skills covered Chemistry - Heterogeneous catalysis
Name and type of organisation providing education and training University of Bucharest, Doctoral School in Chemistry



Dates 1993-2001
 Title of qualification awarded PhD degree
 Principal subjects/occupational skills covered Title of the thesis: "Catalysts for enantio- and diastereoselective hydrogenation reactions", Supervisor: Prof. Em. Angelescu
 Name and type of organisation providing education and training University of Bucharest

Dates 1987 - 1992
 Title of qualification awarded License degree
 Principal subjects/occupational skills covered Chemistry- Catalysis
 Name and type of organisation providing education and training University of Bucharest

Personal skills and competences

Research stages:

- **2007-2008, Post-doctoral fellowship Alexander von Humboldt Foundation**, Germany, Host institution: Institut für Chemie, Humboldt-Universität zu Berlin, Brook-Taylor-Str. 2, 12489, Berlin, Prof. Dr. Habil. Erhard Kemnitz. The fellowship was won by selecting scientific files for senior researchers.
- **2002-2003, Postdoctoral fellowship**: Belgium, funded by the 'Services Federaux des Affaires Scientifiques, Techniques and Culturels (OSTC)', Ministry of Valon, Belgium, Catholic University Louvain, Catalyse et Chemie des Materiaux Divises, Louvain-la-Neuve, Prof. Dr. Paul Grange. The fellowship was obtained through the selection of scientific papers for 'Young researchers in South-Eastern Europe'.
- **2001, Research fellowship**: Belgium, funded by the Ministry of the Flemish Community, Belgium, Catholic University of Leuven, Department of Interface Chemistry, Catalysis Center, Kasteelpark Arenberg 23, B-3001, Heverlee, Prof. Dr. Pierre A. Jacobs.
- **1999-2000, Research fellowship**: Belgium, funded by the Ministry of the Flemish Community, Belgium, Catholic University of Leuven, Department of Interface Chemistry, Catalysis Center, Kasteelpark Arenberg 23, B-3001, Heverlee, Prof. Dr. Pierre A. Jacobs.

Mother tongue(s) Romanian

Other language(s)

Self-assessment
 European level (*)

English

French

| Understanding | | | | Speaking | | | | Writing | |
|---------------|------------------|---------|------------------|--------------------|------------------|-------------------|------------------|---------|------------------|
| Listening | | Reading | | Spoken interaction | | Spoken production | | | |
| C2 | Experienced user | C2 | Experienced user | C1 | Experienced user | C1 | Experienced user | C1 | Experienced user |
| B1 | Independent user | B1 | Independent user | A2 | Basic user | A2 | Basic user | A2 | Basic user |

Social skills and competences

Versatile, efficient and considerate, either as a team member or on independent assignments; Desire to learn more; Good communication skills; Good adaptability.

Organisational skills and competences

The ability to design and implement a project, the ability to coordinate work teams, the ability to initiate and the ability to respond positively to crisis situations.

Technical skills and competences

a) Teaching using multimedia tools
 b) Other practical skills in fields like: computers, mechanical equipment, thermo-mechanical processes, materials, science:

- Preparation of inorganic nanomaterials
- Chemical synthesis, inert atmosphere manipulations
- Heterogeneous catalysis
- Hydrogenation reactions, isomerization reactions, fine chemicals synthesis, biomass capitalisation
- Analytical methods: HPLC, GC, GC-MS, TLC
- Determination of surface and bulk properties: BET, TG-DTA, RAMAN, DRX, FTIR, UV-VIS

Other skills and competences

Publications:

- 2 books
- 8 chapters in books;
- 102 ISI publications
- 10 non-ISI publications.
- Hirsch index = 28

Member of professional associations:

2019 - : Member of the Romanian Catalysis Society (SCR) Council

2019- : Member of Federation of the European Zeolite Association (FEZA) Council

2016-2020: Member of the International Association of Catalysis Communities (IACS) Council

Member of the American Nano Society (ANS)

Member of the Royal Society of Chemistry (RSC)

Member of the International Association of Advanced Materials (IAAM)

Member of didactical commissions/councils:

2012-present: Chairman of the Dissertation Commission, Master: Chemistry of Advanced Materials

2011-present: Master Coordinator: Chemistry of Advanced Materials

2009-present: Member in doctoral commissions for the analysis of doctoral theses, Chemistry Domain

2008-2013; 2016-present: Member of the licence commission, Chemistry section

2010-2014: Member of the European Research Network Management Committee COST CM 0905: Organocatalysis (ORCA)

2009-2015; 2017- present : Member of the Faculty of Chemistry Council

2017- present: Member of the Organic Chemistry, Biochemistry and Catalysis Department Council

2019-present: Member of the Doctoral School in Chemistry Council

Member of the organizing committees of the scientific conferences:

2016: Member of Scientific Committee: International Congress on Green Chemistry and Sustainable Engineering, Rome, Italy, 20-22 July 2016

2019: Member of Scientific Committee: The 5th International Congress of water, waste and energy management (WWEM-19), Paris, France, 22-24 July 2019

Editorial activity:

2018 - present: Editorial team member, Current Catalysis, Bentham Science Publishers, ISSN: 2211-5455 (online), ISSN: 2211-5447 (print)

2020 - present: Editorial team member, Catalysts, MDPI, ISSN: 2073-4344

2020: Invited Editor, Molecules, MDPI: SI New Approaches in Green Catalysis.

Referee for the following journals: Applied Catalysis A: General; Applied Catalysis B: Environmental; ACS-Catalysis; ACS-Sustainable Chemistry and Engineering; BioResources; Catalysis Today; Catalysis Science & Technology; Catalysis Communications; Catalysis Letters; ChemSusChem; ChemCatChem; ChemPlusChem; Fuels&Energy; Fuel Processing Technology; Industrial Crops and Products; JMolCatal; JorganometallicChem; Reaction Kinetics Mechanisms and Catalysis; Revue Roumaine de Chimie; Revista de Chimie; RSC Advances; RSC Book

Driving licence

B

Additional informations

Awards and Distinctions: "Gheorghe Spacu" Prize in Chemical Sciences Award, awarded by the Romanian Academy in December 2010 (December 2012)

Anexx

ISI Publications and books/chapters on the last 5 years

Annex

List of publications (2015-2019)

A) Reviews

1. Coman, S. M., Parvulescu, V. I. (2015): Non-precious metals catalyzing hydroamination and C-N coupling reactions, *Organic Process Research & Development*, 19(10), 1327-1355 (IF 2.922)
2. Coman, S. M., Parvulescu, V. I. (2015): Heterogeneous Diastereoselective Catalysis – A Powerful Strategy Toward C(15) Stereoselectivity from PGF_{2α} Analogues Structure, *Current Pharmaceutical Design*, Thematic issue: “Challenging organic syntheses and pharmacological applications of natural products and their derivatives”, 21 (38), 5558 – 5572 (IF 3.052)
3. Sudarsanam, P., Zhong, R., Van den Bosch, S., Coman, S. M., Parvulescu, V. I., Sels, B. F. (2018): Functionalized heterogeneous catalysts for sustainable biomass upgrading to high-value chemicals, *Chem. Soc. Rev.*, 2018, 47, 8349-8402 DOI: 10.1039/C8CS00410B (IF 40.182)
4. Parvulescu, V. I., Coman, S. M. (2019): Core-Magnetic Composites Catalysts for the Valorization and Upgrading of the Renewable Feedstocks. A Minireview, *Current Catalysis*, 8, 2-19, DOI: 10.2174/2211544708666181227152000

B) Book chapters

1. Tudorache, M., Coman, S., Parvulescu, V. I. (2015): Chapter 9: Catalytic metal-/ bio- composites regarding as new opportunities for fine chemical derived from biomass, in: “Advanced Catalytic Materials”, A. Tiwari and S. Titinchi (Eds.), WILEY-Scrivener Publishing, USA, ISBN: 978-1-118-99828-1, pages: 315-353
2. Kemnitz, E., Coman, S. M. (2016): Chapter 6: Nanoscaled Metal Fluorides in Heterogeneous Catalysis, in: “New materials for catalytic applications”, V. Parvulescu and E. Kemnitz (Eds.), Elsevier Ltd., Oxford, UK, ISBN 9780444635877, pages: 133-191
3. Coman, S. M., Parvulescu, V. I. (2017): Chapter: Core-Magnetic Composites for Catalytic Applications, In: Nanotechnology in Catalysis. Applications in the Chemical Industry, Energy Research, and Environmental Protection, Vol 2, Preparation and characterization of nanocatalysts, B. F. Sels, M. Van de Voorde (Eds.), 2017 Wiley-VCH Verlag GmbH & Co. KGaA. ISBN: 978-3-527-33914-3, pages: 145 – 178
4. Laguna Espita, O. H., Coman, S. M., Centeno Gallego, M. A., Parvulescu, V. I. (2018): Chapter 5: Biomass transformation into chemicals using zeolites and MOFs, in: Zeolites and Metal-Organic Frameworks: From Lab to Industry, V. Blay, L. F. Bobadilla, A. Cabrera-Garcia (Eds.), 2018 Amsterdam University Press, ISBN: 978-94-6298-556-8, pages: 117-148

C) ISI papers

1. Candu, N., Rizescu, C., Podolean, I., Tudorache, M., Parvulescu, V. I., Coman, S. M. (2015): Efficient magnetic and recyclable SBILC (Supported Basic Ionic Liquid Catalyst)-based heterogeneous organocatalysts for the asymmetric epoxidation of *trans*-methylcinnamate, *Catal. Sci. & Tech.*, 5, 729-737 (f.i. = 4.76)
2. Pavel, O. D., Goodrich, P., Cristian, L., Coman, S. M., Parvulescu, V., Hardacre, C., (2015): Direct oxidation of amines to nitriles in the presence of ruthenium-terpyridyl complex immobilized on ILs / SILP, *Catal. Sci. & Tech.*, 5, 2696 - 2704 (f.i. = 4.76)
3. Coman, S. M., Verziu, M., Tirsoaga, A., Jurca, B., Teodorescu, C., Kuncser, V., Parvulescu, V. I., Scholz, G., Kemnitz, E. (2015): NbF₅-AlF₃ catalysts: Design, synthesis and application in lactic acid synthesis from cellulose, *ACS Catalysis*, 5, 3013–3026 (f.i. = 7.572)
4. Kuncser, V., Coman, S. M., Kemnitz, E., Parvulescu, V. I. (2015): Magnetic nano-composites for an efficient valorization of biomass, *J. Appl. Phys.*, 117, 17D724 (f.i. = 2.185)
5. Lazaridis, P. A., Karakoulia, S., Delimitis, A., Coman, S. M., Parvulescu, V. I., Triantafyllidis, K. S. (2015): D-glucose hydrogenation/hydrogenolysis reactions on noble metal (Ru, Pt)/activated carbon supported catalysts, *Catal. Today*, 257, 281-290. (f.i. = 3.464)
6. Primo, A., Esteve, I., Blandez, J. f., Dhakshinamoorthy, A., Alvaro, M., Candu, N., Coman, S., Parvulescu, V., Garcia, H. (2015): Remarkable Catalytic Activity of Oriented 2.0.0 Copper (I) Oxide Grown on Graphene Film, *Nature Commun.*, Article number: 8561 (f.i. = 11.47)
7. Primo A., Esteve-Adell I., Candu N., Coman S., Parvulescu V., Garcia H. (2016): One Step Pyrolysis Preparation of Oriented 1.1.1 Gold Nanoplatelets Supported on Graphene and Six Orders of Magnitude Enhancement of the Resulting Catalytic Activity, *Angew. Chem.-Int. Ed.*, 55 (2), 607-612. (f.i. = 11.26)
8. Opris, C., Cojocaru, B., Gheorghe, N., Tudorache, M., Coman, S. M., Parvulescu, V. I., Duraki, B., Krumeich, F., van Bokhoven, J. A. (2016): Lignin fragmentation over magnetically recyclable composite Co@Nb₂O₅@Fe₃O₄ catalysts. Synthesis of Separable Nanocatalysts and Characterization, *J. Catal.*, 339, 209-227 (f.i. = 6.921)
9. Podolean, I., Rizescu, C., Bala, C., Rotariu, L., Parvulescu, V. I., Coman, S. M., Garcia, H., (2016): Unprecedented catalytic wet oxidation of glucose to succinic acid induced by the addition n-butyl amine to Ru(III) catalysts, *ChemSusChem*, 9 (17), 2307-2311 (f.i. = 7.657)
10. I. Podolean, F. Anita, H. Garcia, V. I. Parvulescu, S. M. Coman (2017): Efficient magnetic recoverable acid-functionalized-carbon catalysts for starch valorization to multiple bio-chemicals, *Catal. Today*, 279, 45-55 (f.i. = 4.312)
11. N. Candu, F. Anita, I. Podolean, B. Cojocaru, V. I. Parvulescu, S. M. Coman (2017): Direct conversion of cellulose to α-hydroxy acids (AHAs) over Nb₂O₅-SiO₂ coated magnetic nanoparticles, *Green Processing and Synthesis*, 6, 255-264 (f.i. = 1.291)
12. Opris, C., Cojocaru, B., Apostol, N., Tudorache, M., Coman, S., Parvulescu, V., Duraki, B., Krumeich, F., van Bokhoven, J. (2017): Lignin fragmentation onto multifunctional Re@Co@Nb₂O₅@Fe₃O₄ catalysts: the role of the composition and deposition route of rhenium, *ACS Catal.*, 7(5), 3257-3267 (f.i. = 10.614)

13. C. RIZESCU, I. PODOLEAN, J. ALBERO, V. I. PARVULESCU, S. M. COMAN, C. BUCUR, M. PUCHE, H. GARCIA (2017): N-doped graphene as metal-free catalyst for glucose oxidation to succinic acid, *Green Chem.*, 19, 1999-2005 (f.i. = 9.125)
14. C. RIZESCU, I. PODOLEAN, B. COJOCARU, V. I. PARVULESCU, S. M. COMAN, J. ALBERO, H. GARCIA (2017): RuCl₃ supported on N-doped graphene as reusable catalyst for one-step glucose oxidation to succinic acid, *ChemCatChem*, 9(17), 3314-3321 (f.i. = 4.803)
15. P.A.LAZARIDIS, S.A.KARAKOULIA, C. TEODORESCU, N. APOSTOL, D. MACOVEI, A. PANTELI, A. DELIMITIS, S.M. COMAN, V.I. PARVULESCU, K.S.TRIANTAFYLIDIS (2017): High hexitols selectivity in cellulose hydrolytic hydrogenation over platinum (Pt) vs. Ruthenium (Ru) catalysts supported on micro/mesoporous carbon, *Appl. Catal. B: Environmental*, 214, 1-14 (f.i. = 9.446)
16. S. M. COMAN, I. PODOLEAN, M. TUDORACHE, B. COJOCARU, V. I. PARVULESCU, H. GARCIA (2017): Graphene oxide as catalyst for the diastereoselective transfer hydrogenation of unsaturated ketones to secondary allylic alcohols, *ChemComm.*, 53, 10271-10274 (f.i. = 6.319)
17. M. EL FERGANI, N. CANDU, S. M. COMAN, V. I. PARVULESCU (2017): Nb-based zeolites: efficient bi-functional catalysts for the one-pot synthesis of succinic acid from glucose, *Molecules*, 22(12), 2218; doi:10.3390/molecules22122218 (f.i. = 2.861)
18. N. CANDU, D. PAUL, I.-C. MARCU, M. TUDORACHE, V. I. PARVULESCU, S. M. COMAN (2018): New organic-inorganic LDH composites: synthesis, characterization and catalytic behavior in the green epoxidation of α , β -unsaturated esters, *Inorganica Chimica Acta*, 475, 127-132 (f.i. = 2.002)
19. M. VERZIU, M. SERANO, B. JURCA, V. I. PARVULESCU, S. M. COMAN, G. SCHOLZ, E. KEMNITZ (2018): Catalytic features of Nb-doped nanoscopic inorganic fluorides for an efficient one-pot conversion of cellulose to lactic acid, *Catal. Today*, 306, 102-110 (f.i. = 4.312)
20. N. CANDU, D. PAUL, I.-C. MARCU, V. I. PARVULESCU, S. M. COMAN (2018): Levulinate-intercalated LDH: a potential heterogeneous organocatalyst for the green epoxidation of α,β -unsaturated esters, *Catal. Today*, 306, 154-165 (f.i. = 4.312)
21. I. PODOLEAN, B. COJOCARU, H. GARCIA, C. TEODORESCU, S. M. COMAN, V. I. PARVULESCU (2018): From glucose direct to succinic acid: an optimized recyclable bi-functional Ru@MNP-MWCNT catalyst, *Top Catal*, 61(18-19), 1866-1876 (f.i.= 2.439)
22. TUDORACHE, M., OPRIS, C., COJOCARU, B., APOSTOL, N., TIRSOAGA, A., COMAN, S., PARVULESCU, V., DURAKI, B., KRUMEICH, F., VAN BOKHOVEN, J. (2018): Highly efficient, easily recoverable and recyclable Re(VI)@SiO₂@Fe₃O₄ catalyst for the fragmentation of lignin, *ACS Sustainable Chemistry and Engineering*, 6, 9606-9618 (f.i. = 6.14)
23. N. CANDU, A. SIMION, S. M. COMAN, A. PRIMO, I. ESTEVE-ADELL, V. I. PARVULESCU, H. GARCIA (2018): Graphene film-supported oriented 1.1.1 gold (0) versus 2.0.0 copper (I) nanoplatelets as very efficient catalysts for coupling reactions, *Top Catal*, 61(14), 1449-1457, DOI: 10.1007/s11244-018-1043-x (f.i.= 2.439)
24. A. TIRSOAGA, M. EL FERGANI, V. I. PARVULESCU, S. M. COMAN (2018): Upgrade of 5-Hydroxymethylfurfural to dicarboxylic acids onto multifunctional based Fe₃O₄@SiO₂ magnetic catalysts, *ACS Sustainable Chemistry & Engineering (SI: Catalytic Byproduct Valorization in Future Biorefineries)*, 6(11), 14292-14301 (f.i. = 6.14)
25. A. I. SIMION, N. CANDU, S. M. COMAN, A. PRIMO, I. ESTEVE-ADELL; V. MICHELET, V. I. PARVULESCU, H. GARCIA (2018): Bimetallic Oriented (Au/Cu₂O) versus monometallic 1.1.1 Au⁰ or 2.0.0 Cu₂O Graphene supported Nano-platelets as very efficient Catalysts for Michael and Henry Additions, *European Journal of Organic Chemistry*, 2018, 6185-6190 (f.i. = 2.882)
26. N. CANDU, M. EL FERGANI, M. VERZIU, B. COJOCARU, B. JURCA, N. APOSTOL, C. TEODORESCU, V. I. PARVULESCU, S. M. COMAN (2019): Efficient glucose dehydration to HMF onto Nb-BEA catalysts, *Catal. Today*, 325, 109-116 (f.i. = 4.312)
27. N. CANDU, B. COJOCARU, S. M. COMAN, V. I. PARVULESCU (2019) : Diastereoselective hydrogenation of Formoterol intermediate over M(Ir, Pd, Pt, Rh, Ru)/BEA zeolite catalysts, *Catal. Today*, SI: Fascinating catalysis: past, present and future, *Catal. Today*, <https://doi.org/10.1016/j.cattod.2019.04.009> (f.i. = 4.312)
28. N. CANDU, I. MAN, A. SIMION, B. COJOCARU, S. M. COMAN, C. BUCUR, A. PRIMO, H. GARCIA, V. I. PARVULESCU (2019): Nitrogen-doped graphene as metal free basic catalyst for coupling reactions, *J. Catal.*, 376, 238-247 (f.i. = 7.723)
29. N. CANDU, A. TOMPOS, E. TALAS, M. TUDORACHE, S. M. COMAN (2019): Green catalytic synthesis of phenprocoumon, *STUDIA UBB CHEMIA, LXIV (3)*, 47-58 (i.f. = 0.305)

Prof. Dr. Habil. Simona Margareta COMAN