CURRICULUM VITAE

Nume COMAN
Prenume SIMONA MARGARETA

Adresa

Departamentul de Chimie Organica, Biochimie si Cataliza, Facultatea de Chimie, Universitatea din Bucuresti, B-dul Regina Elisabeta 4-12, Bucuresti 030016
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Locul nasterii Ghelari, Hunedoara
Data nasterii 26 Iulie 1969

Pozitia actuala Profesor Universitar

Studii

1993-2001	**Doctorat:** Universitatea din Bucuresti **Domeniul:** Chimie
1987-1992	**Licenta**: Facultatea de Chimie, Universitatea din Bucuresti **Specializare:** Chimie **Directie de aprofundare:** Cataliza si Catalizatori

Experienta profesionala

2008-prezent	**Profesor Universitar** la Departamentul de Chimie Organica, Biochimie si Cataliza, Facultatea de Chimie, Universitatea din Bucuresti
2008-prezent	**Cercetator Stiintific I** la Centrul de Cercetari "Catalizatori si Procese Catalitice", Universitatea din Bucuresti
2005-2008	**Conferentiar Universitar** la Catedra de Tehnologie Chimica si Cataliza, Facultatea de Chimie, Universitatea din Bucuresti
2001-2005	**Lector Universitar** la Catedra de Tehnologie Chimica si Cataliza, Facultatea de Chimie, Universitatea din Bucuresti
1995-2001	**Asistent Universitar** la Catedra de Tehnologie Chimica si Cataliza, Facultatea de Chimie, Universitatea din Bucuresti
1992-1995	**Preparator universitar** la Catedra de Tehnologie Chimica si Cataliza, Facultatea de Chimie, Universitatea din Bucuresti

Domenii de competenta

- Sinteze de catalizatori: oxizi metalici, metal/suport, materiale mezoporoase, floruri metalice
- Procese catalitice omogene si heterogene (hidrogenari selective, enantio- si diastereoselective,

izomerizari, acilari, alchilari, sinteze catalitice in chimie fina si intermediari farmaceutici)

- Procese catalitice in chimia verde (sinteza biodiesel, sinteza molecule platforma din biomasa)
- Caracterizari materiale solide (TPD, XRD, XPS, DRIFT, FT-IR, TG-DTA, TPR, TPO)
- Analize compusi organici (GC, GC-MS, HPLC, LTC, RMN)

Cursuri Universitare Predate

Nivel Licenta:

Chemical Technology.	Anul II, Chimie cu predare in Limba Engleza
Chemical Technology.	Anul III, Chimie cu predare in Limba Engleza
Chimie Verde.	Anul II, Chimia mediului

Nivel Master:

Procese catalitice in obtinerea principiilor active; Tehnologia obtinerii formelor farmaceutice.	Anul I, Master „Chimia Medicamentelor si a Produselor Cosmetice"
Cataliza Asimetrica si Chimie Verde.	Anul II, Master „Materiale Moleculare"
Cataliza Asimetrica.	Anul I, Master "Enzimologie aplicată"
Chimie Verde si Cataliza.	Anul II, Master "Abordarea integrata a stiintelor naturii"
Cataliză Acido-Bazică.	Anul I, Master "Cataliza si catalizatori"

Nivel Doctorat:

Dezvoltare durabila in chimie: metode si strategii	Anul I, Modul IV, Scoala doctorala

Specializari

2007-2008	**Bursa postdoctorat Alexander von Humboldt**, Germania, Institutie gazda: Institut für Chemie, Humboldt-Universität zu Berlin, Brook-Taylor-Str. 2, 12489, Berlin, Prof. Dr. Habil. Erhard Kemnitz. Bursa a fost castigata prin selectie de dosare stiintifice pentru cercetatori seniori.
2002-2003	**Bursa postdoctorat:** Belgia, finantata de 'Services Federaux des Affaires Scientifiques, Thechniques and Cullturells (OSTC)', Ministerul Valon, Belgia, la Universitatea Catolica Louvain, Catalyse et Chemie des Materiaux Divises, Louvain-la-Neuve, Prof. Dr. Paul Grange. Bursa a fost obtinuta prin selectie de dosare stiintifice pentru 'Tinerii cercetatori din Sud-Estul Europei'.
2001	**Bursa de cercetare:** Belgia, finantata de Ministerul Comunitatii Flamande, Belgia, Universitatea Catolica din Leuven, Departamentul Chimie de Interfata, Centrul de Cataliza, Kasteelpark Arenberg 23, B-3001, Heverlee, (Prof. Dr. Pierre A. Jacobs).
1999-2000	**Bursa de cercetare:** Belgia, finantata de Ministerul Comunitatii Flamande, Belgia, Universitatea Catolica din Leuven, Departamentul Chimie de Interfata, Centrul de Cataliza, Kasteelpark Arenberg 23, B-3001, Heverlee, (Prof. Dr. Pierre A. Jacobs).

Contributie stiintifica

255 contributii stiintifice din care:

- 1 brevet European
- 2 carti publicate in Ed. Universitatii din Bucuresti si Ed. Academiei Romane
- 6 capitole de carti in Ed. CRC PRESS-TAYLOR and Francis Group, Bocaraton, Florida, USA; Ed. Elsevier Ltd., Oxford, UK si Ed. Future Science, London, UK
- 3 Review-uri (*European Journal of Inorganic Chemistry, Organic Process Research & Development si Current Pharmaceutical Design)*

- 90 articole stiintifice (din care, 81 articole cotate ISI)
- 9 Invited Key si Plenary lectures la conferinte internationale
- 19 comunicari la manifestări ştiinţifice nationale
- 125 comunicari la manifestări ştiinţifice internationale

Alte date relevante

Premii si distinctii	Premiul „Gheorghe Spacu" in domeniul Stiintelor Chimice, pe anul 2010, decernat de Academia Romana (decembrie 2012)
Activitate de cercetare	Membru in echipa de cercetare a 20 de proiecte de cercetare nationala si 5 proiecte de cercetare europeana. Director a 8 proiecte de cercetare nationala.
Membru al comisiilor didactice	2012-prezent: Presedinte al Comisiei de dizertatie, Master: Chemistry of Advanced Materials 2012-prezent: Membru in comisii de indrumare lucrari de doctorat, Domeniul Chimie 2011-prezent: Coordonator Master: Chemistry of Advanced Materials 2009-prezent: Membru specialist în comisii de doctorat pentru analiza tezelor de doctorat, Domeniul Chimie 2008-2013; 2016-prezent: Membru in comisia de licenta, sectia Chimie
Membru al asociatiilor stiintifice	Membru al Societatii de Cataliza din Romania (SCR) Membru al American Nano Society (ANS) Membru al Royal Society of Chemistry (RSC)
Membru in consilii de administratie	2010-2014: Membru al Comitetului European de Management al retelei de cercetare COST CM 0905: Organocatalysis (ORCA) 2009-2015; 2017- : Membru al Consiliului Profesoral, Facultatea de Chimie 2017- : Membru al Consiliului Departamentului de Chimie Organica, Biochimie si Cataliza
Citari	1025
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Referent la jurnale	Applied Catalysis A: General Applied Catalysis B: Environmental ACS-Catalysis ACS-Sustainable Chemistry and Enginnering 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 RSC Advances RSC Book
Membru in comitetele de organizare ale conferintelor stiintifice / Presedinte de sesiuni stiintifice	The 6th Asia-Pacific Congress on Catalysis (APCAT), 13-17 Oct. 2013, Taipei, Taiwan (Presedinte de sesiune) 12th European Congress on Catalysis – EuropaCat-XI, Kazan, Russia, 30 August – 4 September, 2015 (Presedinte de sesiune) International Congress on Green Chemistry and Sustainable Engineering, Roma, Italia, 20-22 Iulie 2016 (Membru in Comitetul Stiintific) The International Symposium on Green Chemistry (ISGC), La Rochelle, Franta, 16-19 Mai 2017 (Presedinte de sesiune)

Articole (ultimii 5 ani):

1. Tudorache, M., Protesescu, L. Coman, S., Parvulescu, V. I. (2012): Efficient bio-conversion of glycerol to glycerol carbonate catalyzed by lipase extracted from Aspergillus niger, *Green Chem*, 14 (2), 478 – 482
2. Candu, N., Ciobanu, M., Filip, P., Haskouri, J.E., Guillem, C., Amoros, P., Beltran, D., Coman, S.M., Parvulescu, V.I. (2012): Efficient Sc triflate mesoporous-based catalysts for the synthesis of 4,4′-methylenedianiline from aniline and 4-aminobenzylalcohol, *J. Catal.*, 287, 76–85
3. Candu, N., Wuttke, S., Kemnitz, E., Coman, S. M., Parvulescu, V. I. (2012): Replacing benzyl chloride with benzyl alcohol in heterogeneous catalytic benzylation of aromatic compounds, *Pure and Applied Chemistry,* 84 (3), 427-437
4. Dobrinescu, C., Iorgulescu, E. E., Mihailciuc, C., Macovei, D., Wuttke, S., Kemnitz, E., Parvulescu, V. I., Coman, S. M. (2012): One-pot hydroacetylation of menadione (vitamin K_3) to menadiol diacetate (vitamin K_4) in heterogeneous catalysis, *AdvSynth&Catal*, 354, 1301-1306
5. Negoi, A., Teinz, K., Kemnitz, E., Wuttke, S., Parvulescu, V. I., Coman, S. M. (2012): Bifunctional nanoscopic catalysts for the one-pot synthesis of (+)-menthol from citral, *Topics Catal.,* 55 (2012) 680-687
6. Wuttke, S., Negoi, A., Gheorghe, N., Kuncser, V., Kemnitz, E., Parvulescu, V. I., Coman, S. M. (2012): Novel Sn-doped hydroxylated MgF_2 catalysts for the fast and selective saccharification of cellulose to glucose, *ChemSusChem,* 5 (9) , 1708-1711
7. Ciobanu, M., Cojocaru, B., Teodorescu, C., Vasiliu, F., Coman, S. M., Leitner, W., Parvulescu, V. I. (2012): Heterogeneous Buchwald-Hartwig amination over titania supported gold catalysts, *J. Catal.,* 296, 43-54
8. Finch, K. B. H., Richards, R. M., Richel, A., Medvedovici, A. V., Gheorghe, N. G., Verziu, M., Coman, S. M., Parvulescu, V. I. (2012): Catalytic hydroprocessing of lignin under thermal and ultrasound conditions, *Catal. Today,* 196 (1), 3-10
9. Coman, S. M., Macovei, D., Parvulescu, V. I. (2012): Icosahedral AlMnLn (Ln = Ce, Gd, Dy, Ho) alloys – an EXAFS study and catalytic behaviour, *Rev.Roum.Chim., 57*(4-5), 521-529
10. Podolean, I., Hardacre, C., Goodrich, P., Brun, N., Backov, R., Coman, S. M., Parvulescu, V. I. (2013): Chiral supported ionic liquid phase (CSILP) catalysts for greener asymmetric hydrogenation processes, *Catal. Today,* 200, 63–73
11. Tudorache, M., Nae, A., Coman, S., Parvulescu, V. I. (2013): Strategy of cross-linked enzyme onto magnetic particles aggregates adapted to the green design of biocatalytic synthesis of glycerol carbonate, *RSC Advances,* 3, 4052-4058

12. Candu, N., Tudorache, M., Florea, M., Ilyes, E., Coman, S. M., Haiduc, I., Andruh, M., Parvulescu, V. I. (2013): Postsynthetic modification of a MOF structure for enantioselective catalytic epoxidation, *ChemPlusChem,* 78 (5), 443–450
13. Negoi, A., Trotus, I. T., Mamula Steiner, O., Tudorache, M., Kuncser, V., Macovei, D., Parvulescu, V. I., Coman, S. M. (2013): Direct synthesis of sorbitol and glycerol from cellulose over ionic Ru-MNP and in the absence of external hydrogen, *ChemSusChem,* 6 (11), 2090-2094
14. Podolean, I., Kuncser, V., Gheorghe, N., Macovei, D., Parvulescu, V. I., Coman, S. M. (2013): Ru based magnetic nanoparticles (MNP) for succinic acid synthesis from levulinic acid, *Green Chem,* 15, 3077-3082
15. Cristian, L., Nica, S, Pavel, OD, Mihailciuc, C, Almasan, V, Coman, SM, Hardacre, C, Parvulescu, VI (2013): Novel ruthenium-terpyridyl complex for direct oxidation of amines to nitriles, *Catal Sci & Tech*, 3 (10) 2646-2653
16. Ciobanu, M., Tirsoaga, A., Amoros, P., Beltran, D., Coman, S. M., Parvulescu, V.I. (2014): Comparative hydroamination of aniline and substituted anilines with styrene on different zeolites, triflate based catalysts and their physical mixtures, *Appl.Catal. A*, 474, 230-235
17. Negoi, A., Triantafyllidis, K., Parvulescu, V. I., Coman, S. M. (2014): The hydrolytic hydrogenation of cellulose to sorbitol over M (Ru, Ir, Pd, Rh)-BEA-zeolite catalysts, *Catal. Today* 223, 122– 128
18. Tudorache, M., Ghemes, G., Nae, A., Matei, E., Mercioniu, I., Kemnitz, E., Ritter, B., Coman, S., Parvulescu, V. I. (2014): Biocatalytic design for the conversion of renewable glycerol into glycerol carbonate as a value-added product, *Central European Journal of Chemistry,* 12, 1262-1270
19. Podolean, I., Negoi, A., Candu, N., Tudorache, M., Parvulescu, V. I., Coman, S. M. (2014): The cellulose capitalization to bio-chemicals in the presence of magnetically nanoparticles catalysts, *Topics Catal,* 57, 1463-1469
20. 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
21. 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
22. Coman, S. M., Verziu, V., Tirsoaga, A., Jurca, B., Teodorescu, C., Kuncser, V., Parvulescu, V. I., Scholz, G., Kemnitz, E. (2015): NbF_5-AlF_3 catalysts: Design, synthesis and application in lactic acid synthesis from cellulose, *ACS Catalysis,* 5, 3013–3026
23. 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
24. 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.
25. 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 (review)
26. Coman, S. M., Parvulescu, V. I., (2015): Heterogeneous Diastereoselective Catalysis – A Powerful Strategy Toward C(15) Stereoselectivity from $PGF_{2\alpha}$ Analogues Structure, *Current Pharmaceutical Design,* Thematic issue: "*Challenging organic syntheses and pharmacological applications of natural products and their derivatives*", *21 (38), 5558 – 5572 (review)*
27. 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*
28. 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.,* 55 (2), 607-612

29. 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@Nb_2O_5@Fe_3O_4 catalysts. Synthesis of Separable Nanocatalysts and Characterization, *J. Catal., 339, 209-227*
30. 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*
31. 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
32. N. Candu, D. Paul, I.-C. Marcu, V. I. Parvulescu, S. M. Coman (2017): Levulinate-intercalated LDH: a potential heterogeneous organocatalyst for the green epoxidation of α,β-unsaturated esters, *Catal. Today*, http://dx.doi.org/10.1016/j.cattod.2016.12.007
33. 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 Nb_2O_5-SiO_2 coated magnetic nanoparticles, *Biomass Processing and Synthesis*, DOI 10.1515/gps-2016-0187
34. M. Verziu, M. Serano, B. Jurca, V. I. Parvulescu, S. M. Coman, G. Scholz, E. Kemnitz (2017): Catalytic features of Nb-doped nanoscopic inorganic fluorides for an efficient one-pot conversion of cellulose to lactic acid, *Catal. Today*, http://dx.doi.org/10.1016/j.cattod.2017.02.051
35. 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.*, DOI: 10.1021/acscatal.6b02915
36. 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
37. C. Rizescu, I. Podolean, B. Cojocaru, V. I. Parvulescu, S. M. Coman, J. Albero, H. Garcia (2017): $RuCl_3$ supported on N-doped graphene as reusable catalyst for one-step glucose oxidation to succinic acid, *ChemCatChem,* DOI: 10.1002/cctc.201700383
38. P.A.Lazaridis, S.A.Karakoulia, C. Teodorescu, N. Apostol, D. Macovei, A. Panteli, A. Delimitis, S.M. Coman, V.I. Parvulescu, K.S.Triantafyllidis (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*

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