

CURRICULUM VITAE

Nume COMAN
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Pozitia actuala Profesor universitar

Domenii de competenta: sinteze de catalizatori, procese catalitice omogene si heterogene (hidrogenari selective, enantio- si diastereoselective, izomerizari, acilari, alchilari, sinteze catalitice in chimie fina si intermediari farmaceutici, procese biocatalitice); caracterizari materiale solide (TPD, XRD, XPS, DRIFT, FT-IR, TG-DTA, TPR, TPO); analize compusi organici (GC, GC-MS, HPLC, LTC, RMN)

Cursuri Predate:

Chemical Technology, anul II Chimie cu predare in Limba Engleza

Chemical Technology, anul III Chimie cu predare in Limba Engleza

Cataliza Asimetrica, anul I Master "Enzimologie aplicată"

Cataliză Acido-Bazică, anul I Master Cataliza

Chimie Verde, anul II, Chimia mediului

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”

Publicatii

A) Brevete

1. Kemnitz, E., Coman S. M., Rüdiger S., Wuttke, S (2007): Method for the synthesis of *dl*-[α]-tocopherol and means therefore, Eur. Pat. Appl, EP 07 020 498.7

B) Carti/capitole de carti

1. Parvulescu, V. I, Coman, S. and Parvulescu, V. (1996): Cataliza asimetrica, Editura Universitatii din Bucuresti, 150 pp.
2. Coman, S. M., Poncelet, G. and Parvulescu, V. I. (2006): Chapter 14: Asymmetric catalysis by heterogeneous catalysts, In: Surface and nanomolecular catalysis, Ed. Richards, R. M., CRC PRESS-TAYLOR and Francis Group, Boca Raton, Florida, USA, ISBN: 1574444816, pages: 493-533
3. Coman, S. M., Parvulescu, V. I (2010): Cataliza acido-Bazica, Editura Academiei Romane, *in curs de publicare*

C) *Articole*

C1) *In reviste nationale*

1. Szabo, A., Coman, S. and Gutui, M. (1994): The electrical conductivity of the Fe-Zn-O catalytic system. *Progress in Catalysis*, 3, 41-54
2. Coman, S., Vasiliu, F. and Parvulescu, V. I. (2002): Selective hydrogenation of unsaturated aromatic compounds upon Pd-Eu/ γ -Al₂O₃ Catalysts. *Rev.Roum.Chim.*, 47, 353-362
3. Iosif, F. and Coman, S. (2004): One step synthesis of menthol from citronellal on Ir-beta catalysts. *Progress in Catalysis*, 13, 53-60
4. Coman, S. M. (2005): Ru/BEA catalysts for selective and stereoselective hydrogenation of prostaglandin intermediates. *Analele Universitatii din Bucuresti - Chimie*, 1-2, 33-40
5. Coman, Simona; Delsarte, Stephanie; Grange, Paul (2005): Green catalytic synthesis of amide esters in the presence of triflates-based catalysts, *Progress in Catalysis*, 14, 21-28

C2) *In reviste internationale*

1. Parvulescu, V. I., Grecu, N., Frunza, L., Birjega, R., Coman, S., David, V., Parvulescu, V. and Russu, R. (1995): Hydroxylation of Benzene and Toluene using Bi Containing ZSM-5 Zeolites as Catalysts. *Stud. Surf. Sci. Catal.*, Eds. Karge, H.G. and Weitkamp, J. (Elsevier Science B.V., Amsterdam), 98, 153
2. Parvulescu, V. I., Parvulescu, V., Coman, S., Radu, C., Macovei, D., Angelescu, Em. and Russu, R. (1995): Modified Ruthenium-Exchanged Zeolites for Enantioselective Hydrogenation. *Stud. Surf. Sci. Catal.*, Eds. Poncelet G. et al. (Elsevier Science B.V., Amsterdam), 91, 561-570
3. Cocu, F., Coman, S., Tanase, C., Macovei, D. and Parvulescu, V. I. (1997): Diastereoselective hydrogenation of a prostaglandin intermediate over Ru supported on different molecular sieves. *Stud. Surf. Sci. Catal.*, Eds. Blaser, H.U., Baiker A. and Prins R. (Elsevier Science B.V., Amsterdam), 108, 207-214
4. Parvulescu, V., Coman, S., Frunza, L., Macovei, D., Sandulescu I. and Parvulescu, V. I. (1997): Spillover Effects Induced by Rare-earth Metals on Pd/Al₂O₃ in Vinylbenzenes Hydrogenation. *Stud. Surf. Sci. Catal.*, Eds. Li, Can and Xin, Qin (Elsevier Science B.V., Amsterdam), 112, 161-170
5. Parvulescu, V., Coman, S., Grange, P. and Parvulescu, V. I. (1997): Mixed M₂O₃.ZrO₂-SO₄²⁻ (M=Ga, In, Tl) Catalysts: Preparation, Characterisation and Catalytic Behaviour in Dehydroisomerisation of n-Hexane. *Catalytic Activation and Functionalisation of Light Alkanes. Advances and Challenges*, Eds. Derouane, E.G., Haber, J., Lemos, F., Ramoa-Ribeiro, F. and Guisnet, M. (Kluwer Academic Publishers, 3.High Technology, Amsterdam), 44, 417-421
6. Coman, S., Cocu, F., Roux, J. F., Parvulescu, V. I. and Kaliaguine, S. (1998): Diastereoselective Hydrogenation of some Prostaglandins Intermediates and Compounds over MCM-41 Supported Ru. *Stud. Surf. Sci. Catal.*, Eds. Bennevoit, L., Béland, F., Danumah, C., Giasson, S. and Kaliaguine, S. (Elsevier Science B.V., Amsterdam), 117, 501-509
7. Coman, S., Bendic, C., Hillebrand, M., Angelescu, E., Parvulescu, V. I., Petride, A. and Banciu, M. (1998): Hydrogenation of Cyclic- β -Ketoesters over Modified Ru/Zeolite Catalysts. *Catalysis in Organic Reactions*, Ed. Herkes, F. (Marcel Decker, New York), 145-157
8. Parvulescu, V., Craciun, R., Tiu, F., Coman, S., Grange, P. and Parvulescu, V. I. (1998): Co-Nb₂O₅/ SiO₂ Sol-Gel Catalysts: Preparation Implications on the Texture and Acidity of the Support and Dimension of the Metal Particle. *Stud. Surf. Sci. Catal.*, Eds. Delmon, B., Jacobs, P.A., Maggi, R., Martens, J.A., Grange, P. and Poncelet, G. (Elsevier Science B.V., Amsterdam), 118, 691-698
9. Parvulescu, V. I., Coman, S., Parvulescu, V. and Poncelet, G. (1998): TG and DTA Investigation of ZrO₂.SO₄²⁻ Catalysts exposed to Hexane, Methylcyclopentane and Cyclohexane. *Catal. Lett.*, 52, 231-238

10. Parvulescu, V., Coman, S., Parvulescu, V. I., Grange, P. and Poncelet, G. (1998): Reaction of Hexane, Cyclohexane and Methylcyclopentane over Gallium-, Indium-, and Thallium-promoted Sulfated Zirconia Catalysts. *J.Catal.*, 180, 66-84
11. Parvulescu, V., Coman, S., Grange, P. and Parvulescu, V. I. (1999): Preparation and Characterization of Sulfated Zirconia Catalysts obtained via various Procedures. *Appl. Catal.A: General*, 176, 27-43
12. Coman, S., Parvulescu, V., Grange, P. and Parvulescu, V. I. (1999): Transformation of C6 Hydrocarbons over Sulfated Zirconia Catalysts. *Appl. Catal. A: General*, 176, 45-62
13. Coman, S., Cocu, F., Parvulescu, V. I., Tesche, B., Bönnemann, H., Roux, J. F., Kaliaguine, S. and Jacobs, P. A. (1999): Stereocontrolled Hydrogenation of Prostaglandin Intermediates over Ru-MCM-41 Catalysts. *J. Mol. Catal.*, 146, 247-256
14. Parvulescu, V. I., Coman, S., Palade, P., Macovei, D., Teodorescu, C. M., Filoti, G., Molina, R., Poncelet, G. and Wagner, F. E. (1999): Reducibility of ruthenium in relation with zeolite structure. *Appl. Surf. Sci.*, 141, 164-176
15. Coman, S., Florea, M., Cocu, F., Parvulescu, V. I., Jacobs, P. A., Danumah, C. and Kaliaguine, S. (1999): Low metal loading Ru-MCM-41 stereocontrolled hydrogenation of prostaglandin intermediates. *Chem. Commun.*, 2175-2176
16. Coman, S., Cocu, F., Oancea, D. and Parvulescu, V. I. (2000): Diastereoselective Hydrogenation of a Prostaglandinic Intermediate over Chirally Modified Pt/Al₂O₃. *Catal. Today*, 60, 185-192
17. Coman, S., Caraba, R., Cocu, F., Parvulescu, V. I., Bönnemann, H., Tesche, B., Danumah, C. and Kaliaguine, S. (2000): Diastereoselective hydrogenation of a prostaglandin intermediate over Ru supported on MCM - 41 and MCM-48. *Stud. Surf. Sci. Catal.*, 130, 3471-3476
18. Coman, S., Angelescu, E., Petride, A., Banciu, M. and Parvulescu, V. I. (2001): Enantioselective catalytic hydrogenation of (6: 7,8: 9)-Dibenzobicyclo[3, 2, 2]nona-6, 8-dien-2-one on Ru-containing zeolites. *Catalysis of Organic Reactions*, Ed. Ford, M. E. (Marcel Decker, New York), 483-488
19. Coman, S., Cocu, F., Parvulescu, V. I., De Vos, D. and Jacobs, P. A. (2001): Chemoselective reduction of prostaglandin intermediates by liquid-phase hydrogen transfer on Pt-Sn/MCM-41 catalysts. *Microporous and Mesoporous Materials*, 44-45, 477-482
20. Coman, S. M., Parvulescu, V. I., De bruyn, M., De Vos, D. E. and Jacobs, P. A. (2002): Reduction of prostaglandin unsaturated ketones to secondary allylic alcohols by hydrogen transfer over mesoporous supported PtSn catalysts. *J. Catal.*, 206, 218-229
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22. Iosif, F., Coman, S., Parvulescu, V. I., Grange, P., Delsarte, S., De Vos, D. and Jacobs, P. A. (2004): Ir-Beta zeolite as a heterogeneous catalyst for the one-pot transformation of citronellal to menthol. *Chem. Commun.*, 1292-1293
23. Coman, S. M., Dobre, A., Banciu, M. D., Petride, A., Campeanu, V., Poncelet, G. and Parvulescu, V. I. (2004): Transformation of 5-hydroxymethylene-5H-6,7-dihydrodibenzo[a,c]cyclohepten-6-one over Ru-containing BEA zeolites. *J. Mol. Catal.*, 220, 257-265
24. Coman, S., Radu, D., Parvulescu, V. I., Sobalik, Z., De Vos, D. E. and Jacobs, P. A. (2004): The diastereoselection properties of the Ru-BEA catalysts in the prostaglandin intermediates hydrogenation. *Stud. Surf. Sci. Catal.*, Eds. Van Steen, E., Callanan, L.H. and Claeys, M., 154, 2696-2703
25. Radu, D.C., Coman, S.M., Parvulescu, V.I., De Vos, D., Jacobs, P.A. and Sobalik, Z. (2005): Investigation of acidic properties of Ir-*BEA zeolites by Py-, DTBP-, and Qu-FTIR. *Stud. Surf. Sci. Catal.*, Eds. Cejka, J., Zilkova, N. and Nachtigall, P., 158, 909-916
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28. Coman, S. M., Pop, G., Stere, C., Parvulescu, V.I., El Haskouri, J., Beltrán, D., Amorós, P., (2007): New Heterogeneous Catalysts for Greener Routes in the Synthesis of Fine Chemicals, *J. Catal.*, 251, 388–399
29. Paun, C., Stere, C., Coman, S.M., Parvulescu, V.I., Goodrich, P., Hardacre, C. (2008): Acylation of sulfonamides using silica grafted 1-butyl-3-(3-triethoxysilylpropyl)-4,5-dihydroimidazolium ionic liquids as catalysts, *Catal. Today*, 131, 98-103
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31. Coman, S. M., Wuttke, S., Vimont, A., Daturi, M., Kemnitz, E., (2008) Catalytic performance of nanoscopic AlF₃ based catalysts in the synthesis of (all-*rac*)- α -tocopherol, *Adv. Synth. & Catal.*, 350, 2517-2524
32. Wuttke, S., Coman, S. M., Scholz, G., Kirmse, H., Vimont, A., Daturi, M., Schroeder, S. L. M., Kemnitz, E., (2008) “Novel Sol-Gel Synthesis of acidic MgF_{2-x}(OH)_x materials”, *Chem. Eur. J.*, 14, 11488 – 11499
33. Coman, S. M., Patil, P., Wuttke, S., Kemnitz, E., (2009) „Cyclisation of citronellal over heterogeneous inorganic fluorides – highly chemo- and diastereoselective catalysts to (\pm)-isopulegol”, *Chem. Commun.*, 460-462
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35. Candu, N., Coman, S., Parvulescu, V. I., El Haskouri, J., Amoros, P., Beltran, D., (2009) “Metal triflates incorporated in mesoporous catalysts for green synthesis of fine chemicals”, *Top. Catal.*, 52, 571–578.
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38. Wuttke, S., Coman, S., Kröhnert, J., Jentoft, F.C., Kemnitz, E. (2009), Sol-Gel prepared nanoscopic metal fluoride phases – A New Class of Tunable Acid-Base Catalysts, *Cat. Today*, DOI:10.1016/j.cattod.2009.10.008.
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