CURRICULUM VITAE

PERSONAL INFORMATION

Name, Surname	Irina Simakova
Address House number, street name, postcode, city, country	**630078, Russia, Novosibirsk, Vatutina street 17-11**
Telephone	**+7-383-326-9531**
Fax	**+7-383-330-8056**
E-mail	**simakova@catalysis.ru**
Website	**www.catalysis.ru**
Nationality	**Russian**
Place and Date of birth	**Novosibirsk (Russia), 28 October 1964**

WORK EXPERIENCE

Dates (from – to)	From June **2004** - at present Senior Research Scientist, Head of Group of Catalysts on Carbon Support, Boreskov Institute of Catalysis, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia
Add separate entries for each relevant post occupied, starting with the most recent.]	May **1999**-June **2004** Research Scientist in a Group of Catalysts on Carbon Support, Boreskov Institute of Catalysis, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia June **1986**–May **1999** Junior Researcher in a Group of Catalysts on Carbon Support, Boreskov Institute of Catalysis, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia
Name and address of employer	Academician Valerii Bukhtiyarov 630090, Russia, Novosibirsk, pr. Ak. Lavrentieva 5 Boreskov Institute of Catalysis (BIC)
Type of business or sector	Applied and fundamental scientific research in catalysis
Occupation or position held	Head of Research Group (**2004-present**), Associated professor in specialty ”Kinetics and catalysis” (**2010-present**)
Main activities and responsibilities	**Managing the projects** 1. **2018-2019** DST (India) - RFBR (Russian Foundation of Basic Research) Grant № 18-53-45013 “Catalytic transformation of Indian and Russian Origin Biomass Feedstocks to biofuel vis levulinic acid” (project leader) 2. **2015-2017** RFBR (Russian Foundation of Basic Research) Grant № 15-03-09329 “Fundamentals of transformations of the bio-derived oxygen containing carboxylic acids into valuable chemical compounds over functionally chemoselective catalysts” (project leader) 3. **2013-2016** Grant 310490 SusFuelCat — “Sustainable fuel production by aqueous phase reforming – understanding catalysis and hydrothermal stability of carbon supported noble metals“ in the frame of FP7-NMP-2012-SMALL-6 (member of project consortium, WP leader, project leader from BIC) 4. **2013-2015** RFBR Grant № 13-03-00754 “New high octane number gasoline components

from plan carbohydrates and their production technologies" (project leader)

5. **2010-2012** RFBR Grant № 10-03-01005 "The investigation of structural peculiarities of active components in catalytic nanosystems on the base of noble metals (project leader).
6. **2010-2011** Federal Special Program ''Scientific and Educational Cadres of Innovative Russia via state contract N 02.740.11.5178 "Development of catalytic methods for biomass derivatives processing into valuable chemical compounds and alternative fuel" (as a leader from Boreskov Institute of Catalysis (Russia) with Prof. Murzin as a foreign invited leader from Abo Akademi University, Finland).
7. **2008-2010** Bilateral Russian-Finland research grant RFBR- ÅA № 08-03-91758-AF (Institute of Catalysis, Russia and Åbo Akademi University, Finland) "Development of theoretical and experimental approaches to the formation of catalytically active tailored gold nanoparticles supported on various carriers for selective synthesis of multifunctional organic molecules from biorenewables" (project manager).
8. **2009-2010** Federal Special Program ''Scientific and Educational Cadres of Innovative Russia via state contract N 02.740.11.0265 (project leader).
9. **2008-2010** RFBR Grant № 08-03-00823 "The investigation of the reaction mechanisms and influence of physical-chemical properties of the Pt, Pd and Au nanoparticles in structure of heterogeneous catalysts on catalytic properties in the carbohydrates oxidation processes into multifunctional organic acids" (project leader).
10. **2007-2008** RFBR Grant № 07-03-12159 "Regularities of catalytic conversion of vegetable oils over heterogeneous catalysts" (project leader).
11. **2006-2008** Europe Integrated Project BIOCOUP "Co-processing of upgraded bio-liquids in standard refinery units", subproject "Studying of model compounds decarboxylation and deoxygenation over metals of platinum groups" (project leader from BIC).
12. **2006-2008** Interdisciplinary project "Mechanochemical composites – as precursors for the synthesis of new materials with new properties" (head of the project from BIC).
13. **2006-2008** Industrially funded project on lactic acid valorisation with NORDBIOCHEM (Estonia) (head of project from BIC).
14. **2005-2007** Industrially funded project on free fatty acids and vegetable oil continuous hydrogenation (head of project from BIC).
15. **2005-2006** Program in the framework of CNR/RAS Agreement. Project "Studying of kinetics and mechanism of the homo- and heterogeneous bond cleavage and formation during stoichiometric and catalytic reactions proceeding over transient metals" (coordinators Prof. N. A. Ustynyuk (from RAS) and Dr. Maurizio Perruzzini (from CNR)) (leader of project from BIC).
16. **2004-2005** CRDF BRHE (Basic Research and Higher Education) for the Independent States of the Former Soviet Union program NO-008-X1 "Molecular design and ecologically safe technologies" (project leader from BIC group).

Supervising PhD Students – 5

1. **2014** Yuliya Guliaeva "Study of valeric acid catalytic conversion into alkanes in consecutive reactions of ketonization and hydrogenation for synthesis of fuel components". Ph.D. Thesis (defense on 05.03.2014).
2. **2013** Yuliya Demidova "Isomerization of a-pinene and amination of its oxygen containing derivative myrtenol for synthesis of various compounds over Au catalysts". Ph.D. Thesis (defense on 05.06.2013).
3. **2009** Mikhail Simonov "The development of ecologically safe method of propylene glycol synthesis by hydrogenation of lactic acid and lactates in the presence of copper containing catalysts". Ph.D. Thesis (defense on 20.10.2009).
4. **2009** Irina Deliy "Study of competitive hydrogenation and isomerization reactions of C=C double bond in methyl fatty acid esters and monoterpenes in the presence of Pd, Rh, Ru, Pt and Ir metal catalysts". Ph.D. Thesis (defense on 06.10.2009).
5. **2007** Anton Koskin "The design of Pd/C catalyst and method for hydrodebenzylation of 2,4,6,8,10,12-hexabenzyl-2,4,6,8,10,12-hexaazaizowurcitane." Ph.D. Thesis (defense on 26.12.2007).

Supervising MSc/BhSc Students - 6

1. **2017-2019** MSc thesis in chemistry of Yuliya Kurchenko "Selective furfural into furfuryl alcohol hydrogenation over zeolite-like supported Ru catalysts" (Aircraft Department, Speciality of Environmental Protection, Novosibirsk State Technical University)
2. **2017-2018** BhSc thesis in chemistry of Anna Medvedeva "Catalytic synthesis of branched C8 Guerbet alcohols from *n*-butanol over VIII group metals" (Chemical-Pharmaceutical Department, Novosibirsk State Pedagogical University)
3. **2008-2010** MSc thesis in chemistry of Yuliya Demidova (Solkina) "The development of selective α-pinene isomerization to camphene over gold catalyst" (Department of Natural Sciences, Novosibirsk State University)
4. **2005-2007** MSc thesis in chemistry of Elena Gavrilova "Study of hydroisomerization of monoterpenes over Ru- and Au-containing heterogeneous catalysts" (Department of Natural Sciences, Novosibirsk State University)
5. **2004-2006** MSc thesis in chemistry of Mikhail Simonov "Study of hydrogenation of lactic acid into 1,2-propylene glycol" (Department of Natural Sciences, Novosibirsk State University)
6. **2001-2003** MSc thesis in chemistry of Natalia Maksimchuk "Study of kinetic of α-pinene conversion into isopiperitenol and citral" (Department of Natural Sciences, Novosibirsk State University)

Acting as thesis defense opponent

2008 - opponent at the Defense of Doctoral Thesis of Anna Gentsler "Development and investigation of bimetallic catalysts for liquid-phase hydrogenolysis of chloroaromatic compounds" 21.05.2008, Boreskov Institute of Catalysis, Novosibirsk, Russia.
2007 - opponent at the Defense of Doctoral Thesis of Natalia Shtertser "Synthesis and dehydrogenation of methanol over copper containing catalysts" 25.04.2007, Boreskov Institute of Catalysis, Novosibirsk, Russia.
2006 – Invited opponent at the Public Defense of Doctoral Thesis of M. Snare "Development of next generation biodisel technology – catalytic deoxygenation of renewables", 16.12.2006, Åbo Akademi University, Finland.

Research visits

2017 (3 weeks) Centro de Nanociencias y Nanotecnologia, UNAM, Ensenada, Mexico
2016 (2 weeks) Åbo Akademi University, Prof. Murzin, Process Chemistry Centre, Finland
2011 (1.5 week) Instituto de Tecnología Química, Prof. Corma, Prof. Renz, Valencia, España
2010 (3 months) Åbo Akademi University, Prof. Murzin, Process Chemistry Centre, Finland
2009 (4 weeks) Åbo Akademi University, Prof. Murzin, Process Chemistry Centre, Finland
2008 (10 weeks) Åbo Akademi University, Prof. Murzin, Process Chemistry Centre, Finland
2008 (2 weeks) Centro de Nanociencias y Nanotecnologia, UNAM, Ensenada, Mexico
2007 (6 weeks) Åbo Akademi University, Prof. Murzin, Process Chemistry Centre, Finland
2006 (1 month) Institute of Molecular Science and Technology (ISTM), Prof. Psaro, department of inorganic, metalorganic and analytic chemistry, CNR, Milan, Italy

Key Invited lectures

2015 – Key lecturer *"One-step synthesis of alkanes from biomass derived carboxylic acids over VIII group metals*", Conference 'Reagents – 2015', Novosibirsk.
2013 - Invited plenary lecturer *"Nanocatalysis in valorization of bio-derived carboxylic acids"*, 05.03.2013, Centro de Ciencias de la Materia Condensada, UNAM, Ensenada, Mexico.
2009 - Invited lecturer «*Catalytic methods for biodiesel preparation. Effect of palladium metal dispersion*» 24.06.2009, Centro de Nanociencias y Nanotecnologia, UNAM, Ensenada, Mexico.
2008 - Invited lecturer *"Development of selective catalytic synthesis of multifunctional organic molecules from biorenewables over heterogeneous nanocatalysts"*, 27.02.2008, Centro de Ciencias de la Materia Condensada, UNAM, Ensenada, Mexico.

Awards

2011 – Certificate of appreciation for the valuable contribution and dedicated service in the peer review of manuscripts submitted to ACS Journals
2005 – CRDF Travel Grant Program Award TGP-1379 RU-T1-6087-NO-05-7 to attend the conference SPIE's 50th Annual Meeting, 1-5 August 2005, San Diego, California, USA.

Conference organization, etc.

Member of the International Scientific Committee (ISC), Congress on Catalysis Applied to Fine Chemicals (CAFC): 16 – 19 June 2013, Turku, Finland; 4-9 September 2016 Lyon, France.

EDUCATION AND TRAINING

Dates (from – to) Add separate entries for each relevant course you have completed, starting with the most recent.	**2010** Ph.D. Chemical Engineering, Laboratory of Industrial Chemistry and Reaction Engineering, Abo Akademi University, Finland Doctoral Thesis: "Catalytic transformations of fatty acid derivatives for food, oleochemicals and fuels over carbon supported platinum group metals" http://www.doria.fi/bitstream/handle/10024/61555/simakova_irina.pdf?sequence=3&isAllowed=y **2001** M.Sc. in Management and Marketing, Novosibirsk State University, Novosibirsk, Russia M.Sc. Thesis Title: "The marketing outlook for the application of new technology" **1999** Ph.D. in Chemical kinetics and Catalysis, Institute of Catalysis, Russian Academy of Science, Siberian Branch, Novosibirsk, Russia Ph.D. Thesis Title: "Development of the catalytic process for production of N-ethyl-2-aminomethylpyrrolidine, a key intermediate of the synthesis of "Sulpyride" medicine " **1986** M.Sc. in Chemistry, Novosibirsk State University, Novosibirsk, Russia M.Sc. Thesis Title: "Studying of the hydrodechlorination reaction of chlorine-containing organic compounds over Pd/C catalyst"
Name and type of organization providing education and training	Novosibirsk State University, Novosibirsk, Russia
Principal subjects occupational skills covered	Catalysis, kinetics, analytics, informatics, thermodynamics, adsorption, project management, marketing
Title of qualification awarded	**2010** – PhD (Chemical Engineering) **2010** – Associated professor in speciality "Kinetics and catalysis" **2001** – Master Science in Management and Marketing **1999** – PhD (Chemical kinetics and Catalysis) **1986** – Master Science in Chemistry
Level in National classification	PhD ("kandidat khimicheskikh nauk"), Docent in speciality "Kinetics and catalysis" Head of scientific research group

RESEARCH ACTIVITIES

Research sectors

Author or co-author of more than **100** scientific papers and **260** communications at national and international congresses, **2** international and **11** national patents in heterogeneous catalysis (hydrogenation, isomerization, oxidation).

Member of the international scientific committee (ISC) of the 10th Congress on Catalysis Applied to Fine Chemicals **www.caf10.org**.

The object of scientific interest is to develop nanocatalysts and catalytic processes, to understand kinetics and reaction mechanism (hydrogenation, isomerization, oxidation, etc.) over heterogeneous catalysts (i.e. platinum group metals, gold, and copper).

Books and Articles

Main scientific papers and book chapters – 104

1. **I.L. Simakova**, V.A. Semikolenov. *Study of the principles of liquid-phase hydrodechlorination of organochlorine compounds on a Pd/C catalyst. //*Kinetics and Catalysis, 32 (4) (1991) 892-895.
2. G.V. Sadovnichy, Z.P. Fedyakina, Z.P. Bezverkhaya, Z.A. Kornienko, **I.L. Simakova**, V.A. Semikolenov, V.Z. Sharf, E.F. Litvin, I.S. Portyakova, I.I. Zakharova. *Study of vegetable oil hydrogenation with palladium catalyst carbon carrier.*//Izvestiya Vysshikh Uchebnykh Zavedenii, Pishchevaya Tekhnologiya.1-2, (1994), 47-49 (in Russian).
3. V.A. Semikolenov, **I.L. Simakova** and G.V. Sadovnichii. *Novel catalyst for food fat hydrogenation.* //Chemical industry ("Khimicheskaia promyshlennost`"), 3 (1996) 40-47 (in

Russian).

4. V.A. Semikolenov, **I.L. Simakova**, A.V. Golovin, O.A. Burova, N.M. Smirnova, *Design of selective 1-ethyl-2-nitromethylenepyrrolidine hydrogenation pharmaceuticals production.* //Studies in surface science and catalysis, 108 (Heterogeneous Catalysis and Fine Chemicals IV) (1997) 255-262.
5. **I.L. Simakova**, A.V. Golovin and V.A. Semikolenov. *Hydrogenation of 1-ethyl-2-nitromethylenepyrrolidine to 1-ethyl-2-aminomethylpyrrolidine over Pd/C. //*Kinetics and Catalysis, 39 (2) (1998) 177-181.
6. **I.L. Simakova**, A.V. Golovin and V.A. Semikolenov. *Role CO_2 in selective hydrogenation of 1-ethyl-2-nitromethylenepyrrolidine to 1-ethyl-2-aminomethylpyrrolidine over Pd/C.* //Kinetics and Catalysis, 39 (2) (1998) 182-187.
7. **I.L. Simakova**, V.A. Semikolenov. *Synthesis of 1-ethylpyrrolidinone by hydrogenation of 1-vinylpyrrolidinone over Pd/C.* //Kinetics and Catalysis, 41 (3) (2000) 383-387.
8. I.I. Ilyna, **I.L. Simakova**, V.A. Semikolenov. *Kinetics of pinane oxidation to pinane hydroperoxide by dioxygen.* //Kinetics and Catalysis, 42 (1) (2001) 41-45.
9. I.I. Ilyna, **I.L. Simakova**, V.A. Semikolenov. *Kinetics of 2-pinanol isomerization to linalool on the monolith carbon-containing catalyst.* //Kinetics and Catalysis, 42 (5) (2001) 686-692.
10. V.A. Semikolenov, I.I. Ilyna, **I.L. Simakova**. *Linalool synthesis from a-pinene: Kinetic peculiarities of catalytic steps.* //Appl. Catal. A, 211 (1) (2001) 91-107.
11. I.I. Ilyna, **I.L. Simakova**, V.A. Semikolenov. *Kinetics of the hydrogenation of alpha-pinene to cis- and trans-pinanes on Pd/C.* //Kinetics and Catalysis, 43 (5) (2002) 645-651.
12. I.I. Ilyna, **I.L. Simakova**, V.A. Semikolenov. *Kinetics of the hydrogenation of pinane hydroperoxide to pinanol on Pd/C.* //Kinetics and Catalysis, 43 (5) (2002) 652-656.
13. V.A. Semikolenov, I.I. Ilyna, **I.L. Simakova**. *Effect of heterogeneous and homogeneous pathways on selectivity of pinane-2-ol to linalool izomerization.* //J. Mol. Catal. A: Chem, 182-183 (2002) 383-393.
14. **I.L. Simakova,** V.A. Semikolenov. *The Catalytic method of verbanol preparation with controlled isomer distribution starting from renewable material α-pinene.* //Chemistry for sustainable development, 11 (1) (2003) 271 – 275.
15. J. E. Ancel, N.V. Maksimchuk, **I.L. Simakova**, V.A. Semikolenov. *Kinetic peculiarities of α-pinene oxidation by molecular oxygen*. //Applied Catalysis A: General, 272 (1-2) (2004) 109-114.
16. N.V. Maksimchuk, **I.L. Simakova**, V.A. Semikolenov. *Kinetic study on isomerization of verbenol to isopiperitenol and citral.* //React. Kinet. Catal. Lett. 82, 1 (2004) 165-172**.**
17. G.A. Kovalenko, **I.L. Simakova**, L.V. Perminova, O.V. Komova, A.V. Simakov. *Heterogeneous biocatalysts and reactors in novel procedures for enzymatic conversion of starch and sugar*. //Catalysis in industry, 2 (2004) 41-47(in Russian, resume in English).
18. O.V. Komova, A.V. Simakov, G.A. Kovalenko, N.A. Rudina, **I.L. Simakova**. *Nanosized carbon fibers located onto ceramics.* //Proceedings of SPIE - The International Society for Optical Engineering, 2005, v. 5924 (Complex Mediums VI: Light and Complexity), p. 592412/1-592412/5.
19. **I.L. Simakova**, A.P. Koskin, I.V. Deliy, A.V. Simakov. *Nanoscaled palladium catalysts on activated carbon support "Sibunit" for fine organic synthesis.* //Proceedings of SPIE The International society for Optical Engineering, 2005, v. 5924 (Complex Mediums VI: Light and Complexity), p. 592413/1-592413/7.
20. **I.L. Simakova**, M.N. Simonov, V.N. Parmon, T.F. Grigorieva, I.A. Vorsina, A.P. Barinova, N.Z. Lyakhov. *Mechanochemically prepared supported copper catalysts for propylene glycol synthesis from lactic acid.* //Chemistry for Sustainable Development, 2 P (2007) 169-173.
21. **I.L. Simakova**, O. Simakova, A.V. Romanenko, D.Yu. Murzin. *Hydrogenation of vegetable oils over Pd on nanocomposite carbon catalysts*. //Industrial and Engineering Chemistry Research, 47 (19) (2008) 7219-7225.
22. O.A. Simakova, P.A. Simonov, A.V. Romanenko, **I.L. Simakova**. *Preparation of Pd/C catalysts via deposition of palladium hydroxide onto sibunit carbon and their application to*

partial hydrogenation of rapeseed oil. //React. Kinet. Catal. Lett., 95 (1) (2008) 3-12.

23. I.V. Deliy, **I.L. Simakova**. *Kinetics and thermodynamics of liquid phase isomerization of α- and β-pinene over Pd/C catalyst*. //React. Kinet. Catal. Lett., 95 (1) (2008) 161-174.
24. D.Yu. Murzin, **I.L. Simakova**. *Kinetic aspects of stereoselectivity in hydrogenation of fatty acids.* //Journal of Molecular Catalysis .A. Chemical, 286 (1-2) (2008) 156-161.
25. P. Mäki-Arvela, J. Kuusisto, E. Mateos Sevilla, **I.L. Simakova**, J.-P. Mikkola, J. Myllyoja, T. Salmi, D.Yu. Murzin. *Catalytic hydrogenation of linoleic acid to stearic acid over different Pd and Ru supported catalysts.* //Applied Catalysis.A. General, 345 (2) (2008) 201-212.
26. S. Lestari, **I.L. Simakova**, A. Tokarev, P. Mäki-Arvela, K. Eränen, D.Yu. Murzin. *Synthesis of biodiesel via deoxygenation of stearic acid over supported Pd/C catalyst.* //Catalysis Letters, 122 (3-4) (2008) 247-251.
27. I.V. Deliy, **I.L. Simakova**. *Influence of the nature of VIII group metal on catalytic activity in the reactions of α- u β-pinenes hydrogenation and isomerisation.* //Russian Chemical Bulletin, 57 (10) (2008) 2021-2028.
28. I.V. Deliy, I.G. Danilova, **I.L. Simakova**, F. Zaccheria, N. Ravasio, R. Psaro. *Tuning selectivity through the support in the hydrogenation of citral over copper catalysts.* //Chemical Industries (Boca Raton, FL, United States), 2009, v. 123 (Catalysis of Organic Reactions), p. 87-92.
29. **I.L. Simakova**, O.A. Simakova, P. Mäki-Arvela, A.V. Simakov, M. Estrada, D.Yu. Murzin, *Deoxygenation of stearic acid over supported Pd catalysts: Effect of metal dispersion*. // Applied Catalysis. A. General, 355 (1-2) (2009) 100-108.
30. D. Yu. Murzin, D. Kubicka, **I.L. Simakova**, N. Kumar, A. Lazuen, P. Maki-Arvela, M. Tiitta, T. Salmi. *Decalin cycle opening reactions on ruthenium-containing zeolite MSM-41*. //Neftekimiya, 49 (1) (2009) 94-98.
31. **I.L. Simakova**; Yu.S. Solkina; I.V. Deliy; J. Wärnå; D.Yu. Murzin. *Modeling of kinetics and stereoselectivity in liquid-phase α-pinene hydrogenation over Pd/C.* //Applied Catalysis. A. General, 356 (2) (2009) 216-224.
32. I.V. Deliy, **I.L. Simakova**, N. Ravasio, R. Psaro. *Catalytic behaviour of carbon supported platinum group metals in the hydrogenation and isomerization of methyl oleate.* //Applied Catalysis. A. General, 357 (2) (2009) 170-177.
33. M.N. Simonov, **I.L. Simakova**, V.N. Parmon. *Hydrogenation of lactic acid to propylene glycol over copper-containing catalysts.* //React. Kin. Cat. Lett., 97 (1) (2009) 157-162.
34. M.N. Simonov, **I.L. Simakova**, T.P. Minyukova, A.A. Khassin. *Hydrogenation of lactic acid to propylene glycol over reduced copper-containing catalysts.* //Russ. Chem. Bull., 6 (2009) 1086-1090.
35. V.V. Kriventsov, **I.L. Simakova**, A. Simakov, E. Smolentseva, F. Castillon, M. Estrada, E. Vargas, E.P. Yakimchuk, D.P. Ivanov, D.G. Aksenov, D.V. Andreev, B.N. Novgorodov, D.I. Kochubey, S. Fuentes. *XAFS study of α Au/Al_2O_3 catalytic nanosystem doped by Ce and Ce–Zr oxides.* //Nuclear Instruments and Methods in Physics Research A: Accelerators, Spectrometers, Detectors, and Associated Equipment, 603 (1-2) (2009) 185-187.
36. S. Lestari, P. Mäki-Arvela, **I.L. Simakova**, J. Beltramini, G.Q Max Lu, D. Yu. Murzin. *Catalytic deoxygenation of stearic acid and palmitic acid in semibatch mode. //*Catalysis Letters, 130 (1-2) (2009) 48-51.
37. S. Lestari, P. Mäki-Arvela, H. Bernas, O. Simakova, R. Sjöholm, J. Beltramini, G.Q Max Lu, J. Myllyoja, **I.L. Simakova**, D. Yu. Murzin. *Catalytic deoxygenation of stearic acid in a continuous reactor over a mesoporous carbon supported Pd catalyst. //*Energy Fuels, 23 (8) (2009) 3842–3845.
38. M. Snåre, P. Mäki-Arvela, **I.L. Simakova**, J. Myllyoja, D.Yu. Murzin. *Overview of the catalytic methods of next generation biodiesel production from natural oils and fats*. //Russian Journal of Physical Chemistry B, 3 (2009) 17-25 (Published in Russian in Sverkhkriticheskie Flyuidy: Teoriya i Praktika, 4 (2009) 3-17).
39. P. Mäki-Arvela, G. Martin, **I.L. Simakova**, A. Tokarev, J. Wärnå, J. Hemming, B. Holmbom, T. Salmi, D.Yu. Murzin. *Kinetics, catalyst deactivation and modeling in the hydrogenation of β-sitosterol to β -sitostanol over micro- and mesoporous carbon supported Pd catalysts.* //Chemical Engineering Journal, 154 (1-3) (2009) 45-51.

40. **I.L. Simakova**, O. Simakova, P. Mäki-Arvela, D.Yu. Murzin. *Decarboxylation of fatty acids over Pd supported on mesoporous carbon. //*Cat. Tod., 150 (2010) 28-31.

41. H. Bernas, K. Eränen, **I.L. Simakova**, J. Myllyoja, P. Mäki-Arvela, T. Salmi, D. Murzin. *Deoxygenation of dodecanoic acid under inert atmosphere.* //Fuel, 89 (8) (2010) 2033-2039.

42. V.N. Parmon, **I.L. Simakova**, M.N. Simonov. *Chapter 3.8 "Methods of studying the catalytic properties" (4 pages), chapter 5.3 "Mechanical composites in catalysis" (20 pages). //*Monograph "Mechanical composites – the precursors for the development of new materials with new properties" in the series "Interdisciplinary projects of SB RAS", 2010, 424 pp.

43. A. Bernas, **I.L. Simakova**, K. Eränen, J. Myllyoja, T. Salmi, D. Yu. Murzin. *Continuous mode linoleic acid hydrogenation on Pd/Sibunit catalyst. //*Catalysis in Industry, 2 (2) (2010) 95–100.

44. A.V. Simakov, V.V. Kriventsov, **I.L. Simakova**, , E.V. Smolentseva, F. Castillon, M. Estrada, E. Vargas, E.P. Yakimchuk, D.P. Ivanov, D.G. Aksenov, D.V. Andreev, B.N. Novgorodov, D.I. Kochubey, S. Fuentes. *The effect of support (Al_2O_3, Al_2O_3-CeO_2 u Al_2O_3-$CeZrO_2$) on the nature of gold-species in supported gold catalysts.* //Journal of surface investigation-X-ray synchrotron and neutron techniques, 4 (4) (2010) 630-635.

45. **I.L. Simakova**, Yu. S. Solkina, B. L. Moroz, O. A. Simakova, S. I. Reshetnikov, I. P. Prosvirin, V. I. Bukhtiarov, V. N. Parmon, D. Yu. Murzin. *Selective vapour-phase α-pinene isomerization to camphene over Au catalysts.* //Applied Catalysis. A. General 385 (2010) 136–143.

46. V.V. Kriventsov, B.N. Novgorodov, E.P. Yakimchuk, D.I. Kochubey, D.A. Zyuzin, **I.L. Simakova**, A.V. Chistyakov, V.V. Zhmakin, O.V. Bukhtenko, M.V. Tsodikov, N.Yu. Kozitsyna, M.N. Vargaftik, I.I. Moiseev, E.A. Maksimovskii, S.F. Nechepurenko, J.A. Navio, S.G. *Nikitenko Determination of the local structure of a highly dispersed Pd-Nanosystem located on a titanium dioxide carrier.*// Journal of surface investigation-X-ray synchrotron and neutron techniques, 4 (4) (2010) 636-639.

47. B. Rozmyslowicz, P. Maki-Arvela, S. Lestari, O.A. Simakova, K. Eranen, **I.L. Simakova**, D.Yu. Murzin, T.O. Salmi *Catalytic deoxygenation of tall oil fatty acids over a palladium-mesoporous carbon catalyst: a new source of biofuels.* //Topics in Catalysis, 53 (15-18) (2010) 1274-1277.

48. D.Yu. Murzin, **I.L. Simakova**. *On quantitative description of metal particles size effect in catalytic kinetics.* //Kinetic and Catalysis, 51(6) (2010) 1–4.

49. **I.L.Simakova**, I. Deliy, O. Simakova, A. Simakov, D. Yu. Murzin. *Design of palladium catalysts supported on mesoporous carbon for hardening of vegetable oils.* //Science of Central Asia, 1 (2010) 24-29.

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