

INTERNATIONAL CONFERENCE CATALYSIS FOR RENEWABLE SOURCES: FUEL, ENERGY, CHEMICALS

Tsars Village, St. Petersburg suburb, Russia, June 28 – July 2, 2010 http://conf.nsc.ru/CRS



Organizers:

- Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
- Missouri University of Science and Technology, USA
- Petrobras, Brazil
- St. Petersburg Scientific Center RAS, Russia
- Scientific Council on Catalysis RAS, Russia

We cordially invite you to participate in the International Conference Catalysis for Renewable Sources: fuel, energy, chemicals to be held in Tsars Village, St. Petersburg suburb, Russia, on June 28 – July 2, 2010.

Financial support:

Russian Foundation for Basic Research



International Scientific Committee

Valentin Parmon, **Chairman**Alexander Noskov, **Vice-Chairman**Dmitry Murzin, **Vice-Chairman**Jamal Chaouki

Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Abo Akademi University, Turku, Finland
Polytechnique Montréal, Canada

Raghunath Chaudhari

Buxing Han

John Gleaves

Valerii Kirillov

University of Kansas, USA

Institute of Chemistry CAS, Beijing, China

Washington University in St. Louis, USA

Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

Faïçal Larachi

Martyn Poliakoff

Université Laval, Quebec, Canada

The University of Nottingham, UK

Wolter Prins Gent University, Belgium

Gennadii Tereschenko St. Petersburg Scientific Center RAS, Russia

Padmaja Vasudevan University of New Hampshire, USA Gregory Yablonsky St. Louis University – Missouri, USA

Conference Chairpersons

Dr. Vadim Yakovlev, Boreskov Institute of Catalysis SB RAS, Russia **Professor Muthanna H. Al-Dahhan,** Missouri University of Science and Technology, USA

Organizing Committee

Victoria Dundich Evgenia Kirichenko Nataliya Krylova Tatiana Pimenova Inna Mutas Tatiana Zamulina, Executive Secretary Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia St. Petersburg Scientific Center RAS, St. Petersburg, Russia Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

Scientific Program

The conference scientific program comprises 6 invited lectures of leading specialists (1 hour including questions), 8 key-note lectures (30 minutes including questions), 60 oral (15 min including questions) and 60 poster presentations on the following topics.

- Catalysis in combustion and co-combustion of biomass
- Catalytic processes for chemicals production from biomass
- **B**iocatalysis: fermentation and enzymatic processes
- Catalyst application in biomass gasification for clean syn-gas production, power and CHP
- Catalytic aspects in liquid biofuels production from carbohydrate crops and oilseeds
- Catalytic approach to production of liquid biofuels from lignocelluloses

List of invited speakers

Valentin Parmon

DESIGN OF CATALYSTS AND CATALYTIC PROCESSES FOR BIOFUELS PRODUCTION Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

Dmitry Murzin

CATALYTIC TRANSFORMATIONS FOR PRODUCTION OF BIOFUELS, SPECIALTY CHEMICALS AND PHARMACEUTICALS FROM WOODY BIOMASS

Åbo Akademi University, Turku, Finland

Muthanna Al-Dahhan

ADVANCEMENT OF CATALYTIC FISCHER-TROPSCH SLURRY BUBBLE COLUMNS VIA ADVANCED MEASUREMENT TECHNIQUES FOR RENEWABLE ENERGY AND CHEMICALS PRODUCTION

Missouri University of Science and Technology, Rolla, USA

Wolter Prins

PROGRESS IN THE DEVELOPMENT OF BIOMASS FAST PYROLYSIS TECHNOLOGY AND ITS APPLICATION

University of Ghent, Belgium

Palligarnai Vasudevan

ENVIRONMENTALLY SUSTAINABLE BIOFUELS: ADVANCES IN BIODIESEL RESEARCH University of New Hampshire, Durham, USA

Donato Aranda

TRANSESTERIFICATION AND HYDROESTERIFICATION: THEORETICAL AND EXPERIMENTAL ANALYSIS OF BIODIESEL PRODUCTION USING HETEROGENEOUS CATALYSIS Greentec-Federal University of Rio de Janeiro, Brazil

Key-Note presentations

Elena V. Gusevskaya, Luciana A. Parreira, Luciano Menini

PALLADIUM-CATALYZED AEROBIC OXIDATION OF BIOMASS-BASED ALKENES AS A ROUTE TO VALUABLE FRAGRANCE AND PHARMACEUTICAL COMPOUNDS Universidade Federal de Minas Gerais, Belo Horizonte, MG, Brazil

Ivan Kozhevnikov

POLYOXOMETALATES AS CATALYSTS FOR SUSTAINABLE ORGANIC SYNTHESIS University of Liverpool, Liverpool, UK

B.N. Kuznetsov^{1,2}, V.I. Sharypov¹, S.V. Baryshnikov¹

CONVERSIONS OF WOOD AND CELLULOSE TO GLUCOSE AND LEVULINIC ACID UNDER THE ACTION OF ACIDIC CATALYSTS

N. Lingaiah, K. Jagadeeswaraiah, M. Balaraju and P.S. Sai Prasad

VALUE ADDED CHEMICALS FROM GLYCEROL: SYNTHESIS OF GLYCEROL CARBONATES USING SOLID BASE CATALYSTS

Catalysis Laboratory, I&PC Division, Indian Institute of Chemical Technology, Hyderabad, India

Jyri-Pekka Mikkola^{1,2}, Leif Jönsson¹, Stellan Marklund¹

BIO4ENERGY - THE SWEDISH QUEST FOR SUSTAINABLE SOCIETY

¹Umeå University, Department of Chemistry, Technical Chemistry, Chemical-Biological Center, Sweden ²Åbo Akademi University, Department of Chemical Engineering, Laboratory of Industrial Chemistry and Reaction Engineering, Process Chemistry Centre, Turku, Finland

Brenno A. D. Neto, Paulo A. Z. Suarez, Alexandre A. M. Lapis, Wendylene S. D. Silva

ENZYME-CATALYZED EPOXIDATION OF BIODIESEL SUPPORTED BY IONIC LIQUIDS – AN IMPROVED ECO-FRIENDLY PROCESS

P.E. Strizhak, A.I. Tripolskyi, V.E. Eremenko, T.S. Ivashchenko, A.O. Busko

CATALYTIC CRACKING OF SUNFLOWER SEED OIL

L.V. Pisarzhevsky Institute of Physical Chemistry, National Academy of Sciences of Ukraine, Kiev, Ukraine

L. van de Beld, E.J. Leijenhorst

CATALYTIC FUEL-GAS CLEANING IN A STAGED BIOMASS GASIFICATION PROCESS BTG Biomass Technology Group, Enschede, The Netherlands

The official language of the conference is English.

Exhibition and advertisement

Representatives of industrial enterprises and companies engaged in chemical technology are welcome to take part in the conference and in the exhibition as part of the conference, to give a presentation of the company, to publish the advertisement materials in the Book of Abstracts (CD). The proposals are available at the conference site.

Presentation

Beamer for the projection of computer- or video signal on the screen will be provided. It is recommended that you prepare computer presentations in *.ppt format (Microsoft Power Point from the package MS Office). Posters should be not more than 100 cm wide and 100 cm high.

Publication opportunities

The **CD-Book** of the abstracts of the plenary lectures and all accepted presentations will be available at the registration. Double-refereed conference Proceedings will be published in a Special Issue of *the* Journal *Catalysis in Industry* after the conference. **Only papers presented at the conference will be considered for publication**. Manuscripts should be submitted after the conference by E-mail ctls@kalvis.ru not later than July 20, 2010. **Papers may be submitted in Russian or in English.** You can find the regulations in the attached *Guide for Authors*. Journal home page:

http://kalvis.ru/index.php?option=com_k2&view=item&layout=item&id=7&Itemid=36

¹Institute of Chemistry and Chemical Technology SB RAS, Krasnoyarsk, Russia

²Siberian Federal University, Krasnoyarsk, Russia

¹Laboratory of Medicinal and Technological Chemistry, University of Brasília (IQ-UnB), Brasilia, Brazil

PRELIMINARY TIME-TABLE

In	ternatio	nal Conference CATA		VABLE SOURCES:FU Petersburg, Russia	JEL, ENERGY, CHE	MICALS
Sunday, June 27		Monday, June 28	Tuesday, June 29	Wednesday, June 30	Thursday, July 1	Friday, July 2
	8.00		Breakfast		Breakfast	
	8.45	Opening				9.30 a.m. Excursion to
Arrival	9.00	PL-1	PL-3	PL-5	KN-7	
Allivai	10.00	PL-2	PL-4	PL-6	KN-8	
	11.00			Coffee Coffee		Peterhof (until
	11.20	KN-1	KN-3	KN-5	11.20 OP 41	2 p.m.)
	11.50	KN-2	KN-4	KN-6	11.35 OP 42	
b.6					11.50 OP 43	
2 00					12.05 OP-44	3.30 p.m.
Ħ	12.20		Lunch Lunch			Excursion to th
sp	14.00	OP-1	OP-17	OP-34 14.00		Catherine Park and Catherine Palace Departure
er er	14.15	OP-2	OP-18	OP-35 14.15		
io	14.30	OP-3	OP-19	OP-36 14.30		
L at	14.45	OP-4	OP-20	OP-37 14.45	OP-48	
t t	15.00	OP-5	OP-21	OP-38 15.00	OP-49	
S. S.	15.15	OP-6	OP-22	OP-39 15.15	OP-50	
නු	15.30	OP-7	OP-23	OP-40 15.30	OP-51	
	15.45	Coffee	Coffee	Coffee	Coffee	
<u>.</u>	16.00	OP-8	OP-24		OP-52	
	16.15	OP-9	OP-25		OP-53	
12.00 (noon) Registration m. Excursion to St. Peter	16.30	OP-10	OP-26		OP-54	
	16.45	OP-11	OP-27		OP-55	
	17.00	OP-12	OP-28	De et es Consissa OP-	OP-56	
D. (17.15	OP-13	OP-29	- Poster Session	OP-57	
12.00 (noon) Registration 2.00 p.m. Excursion to St. Petersburg	17.30	OP-14	OP-30	O	OP-58	
	17.45	OP-15	OP-31		OP-59	
	18.00	OP-16	OP-32		OP-60	
	18.15	Exhibition opening	OP-33		Closing	
	19.00	Welcome Reception	18.30 Concert	19.00 Banquet	22.00 Boat excursion	
		•	21.30 Excursion			

Venue

The CRS conference will be held in the Education & Conference Center ("Mansion of Duke Kochubey") in a beautiful suburb of St. Petersburg Tsars Village (now named as city of Pushkin).

Tsars Village is located approximately twenty-five kilometers from St. Petersburg. It takes 30 minutes to reach Tsars Village from St. Petersburg International airport Pulkovo-2.

Mansion of Duke Kochubey is minutes away from the famous Catherine Park and Catherine Palace.

Address: Radishcheva street, 4, 196602 St. Petersburg, city of Pushkin; tel. +7 812 465 39 10, fax +7 812 465-4964



Local transportation

All participants will be met at the airport and picked up to the hotel (30 minutes drive). The representatives of the Organizing Committee will have the transparencies with the Conference logo. We ask the participants to inform in advance about arrival (and departure) date, time and flight number to arrange the meeting at the airport of St. Petersburg.

If you reach the conference venue yourself

From St. Petersburg International **Airport Pulkovo-2**:

bus 39 till the final stop "Moskovskya metro station" (15 minutes) --> then mini-buses (route taxi - marshrutnoe taxi) 286, 287, 347, 545 (direction "Pushkin") till the stop "Parkovaya street" (25-30 minutes). You need to pay for the mini-bus just to the driver - 35 rubles.

From the **Railway stations**:

- metro till the station "Moskovskya" --> then mini-buses (route taxi marshrutnoe taxi) 286, 287, 347, 545 (direction "Pushkin") till the stop "Parkovaya street" (25-30 minutes). You need to pay for the mini-bus just to the driver 35 rubles.
- > **or** metro till railway station "Pushkinskaya" ("Vitebskii vokzal" "Vitebsk railway station") --> then suburban train till the railway station "Detskoe Selo" (city of Pushkin) (30 minutes) --> then the busses (direction "The Catherine Park") till the stop "Parkovaya street" (10 minutes).

Accommodation

The participants will be accommodated in the hotel of the Conference Center. The prices for accommodation per night (current exchange rates: 1 Euro = 39.6 Rubles; 1 USD = 29.2 Rubles):

Single room (including breakfast): 2500 Rubles/63 Euro/86 USD

Double room (including 2 breakfasts): **3000 Rubles/76 Euro/103 USD** (per person: 1500 Rubles/38 Euro/52 USD)

Some Luxe rooms, Suites and apartments are also available.

A new building for accommodation situated nearby was put into service a month ago. The majority of the rooms have a view of the Catherine Park. The prices are:

Single room (including breakfast): 3000 rubles/76 Euro/103 USD

Single room for double use (including two breakfasts): 3500 rubles/89Euro/120 USD

Single room with king-size bed (including breakfast): 4000 rubles/1000 Euro/137 USD

Single room with king-size bed for double use (including two breakfasts): 4500 rubles/114 Euro/155 USD

Attention! The structure of the accommodation is quite complicated, that's why we will send you the lists of the accommodation in the rooms according to your applications, and you will be able to express your opinion individually.

The accommodation should be paid by in cash upon your arrival to the hotel.

Conference fee

The conference fee is **450 Euro** and **250 Euro** for PhD students, students and accompanying persons. Fee includes the registration for the conference, conference documentation and materials, Welcome reception, lunches, refreshments, social program, local transportation.

Payment of the conference fee

Registration fee should be transferred before May 15, 2010 to the following bank accounts (payments should be free of bank charges):

Euro account:	
Beneficiary	Boreskov Institute of Catalysis
Account No	40503978600201000004
Beneficiary Bank:	JSC MDM Bank
	16, Prospect Lavrentieva
	Novosibirsk, 630090, Russia
	SWIFT: URSARU55
Intermediary Bank:	JPMorgan AG
	Frankfurt am Main, Germany
	SWIFT: CHASDEFX
Account No:	6231606564
Dollar account:	
Beneficiary	Boreskov Institute of Catalysis
Account No	40503840000201000004
Beneficiary Bank:	JSC MDM Bank
-	16, Prospect Lavrentieva
	Novosibirsk, 630090, Russia
	SWIFT: URSARU55
Intermediary Bank:	JPMORGAN CHASE BANK
	NATIONAL ASSOCIATION
	New York, USA
	SWIFT: CHASUS33
Account No:	400759861

Payments should be **free** of bank charges. To ensure that we process your payment correctly, please indicate "**CRS**" and the **delegate name** at the payment. Fees are not refundable after June 5, 2010.

We will send you the Invoice for fee payment on your request.

Meals

Lunch will be arranged at local restaurant. Breakfast is included in the accommodation. Tickets for lunches and Welcome Reception will be included in the participant package. Morning and afternoon coffee-breaks will be provided.

Climate and clothing

Late June - early July in St. Petersburg is usually warm, with average temperatures at plus 20-25°C. Closeness to Baltic Sea makes the weather unstable, this is why raining is possible. Raincoat, umbrella and warm sweater are recommended. In early July, during fascinated romantic White Nights the city offers dazzling views and a vibrant cultural life that is second to none. The Organizing Committee hopes that the weather and unique flavor of this magnificent city will promote scientific activity and wonderful spirit around the Conference.

Currency

The Russian currency is Ruble. One Euro is currently 39.6 rubles. Cash exchange is available at banks nearby. Major credit cards are accepted at the banks and ATM. Please note that personal cheques are not accepted.

Time difference

Time in St. Petersburg is 3 hours ahead of GMT.

Electricity

The electric current in Russia is 220 V (50 Hz). Plugs and sockets are the same as in the Continental countries of the European Union.

Registration

The registration of the Conference participants will take place at the Conference Center (**Mansion of Duke Kochubey**) on June 27 (Sunday) from **12.00** (**noon**).

Visa information

In order to obtain visa to Russia, foreign participants should have official "Invitation to Russia".

To complete visa formalities we kindly ask you to fill in attached Visa form and send it by E-mail <u>zam@catalysis.ru</u> before May 1. Please also send the high quality electronic copy of the 1st and 2nd pages of your passport (with the personal data) as graphic black and white jpg-file by E-mail. The passport should be valid at least half a year after the event (until January 01, 2011, at least). If the period of passport validity is prolonged and it is marked in the separate page – please send this page also.

The procedure of getting the Invitations usually takes 30 days. The representatives of the St. Petersburg Scientific Center will send you the Invitations by fax or E-mail, and then by post. This invitation should be presented to the Russian Federation Consulate as the basis for the visa application. If you request visa in country other than your home country, make electronic copy of valid visa or residence permit and send it to Organizing Committee as well.

For representatives of the countries which are not members of European Union: the state-duty for the Invitation is 500 rubles (13 Euro, 17\$).

Registration in St. Petersburg for all foreign participants is 200 rubles (5 Euro, 7\$). We kindly ask you to make these payments at the registration.

June 27 – last day of the celebration of 300-th anniversary of Tsars Village

Where else one could feel the perfect harmony of music, architecture and paintings, or spend time in the mysterious alleys of the parks dreaming of love, or hear wonderful music in the beautiful halls with perfect acoustics?

June 27, Sunday - 2 p.m.	Excursion to St. Petersburg – Mystery of palace squares		
June 28, Monday - 7 p.m.	Welcome Reception		
June 29, Tuesday - 6.30 p.m.	Concert, White Hall (soloists of Mariinsk theatre)		
June 29, Tuesday - 9.30 p.m.	Excursion on the Mansion of Duke Kochubey (conference venue)		
June 30, Wednesday - 7 p.m.	Banquet	50 Euro	
July 1, Thursday - 10 p.m. (until 3.00)	Symphony of water and stone: night boat excursion – St. Petersburg channels; divided bridges, architectural ensembles	35 Euro	
July 2, - Friday - 10 p.m. (until 2 p.m.)	Excursion to the Peterhof (Park and Fountains)	25 Euro	
July 2, - 3.30 p.m.	Excursion to the Catherine Park (Hanging Garden, The Grotto) and Catherine Palace	20 Euro	

Half-day excursion to St. Petersburg, excursion on Mansion of Duke V. P. Kochubey and concert are included in the conference fee. The prices for the optional excursions are indicated in above table. The Catherine Park and Palace may be closed for the excursions on June 27, that's why the trip to St. Petersburg is proposed this day. If you don't have a possibility to come to St. Petersburg on July 27, you may include Night Boat Excursion to the fee instead.

The excursions should be paid by cash upon your arrival.

Tsars Village (Tsarskoe Selo in Russian), located 25 km south of St. Petersburg, one of St. Petersburg's



numerous Imperial estates, first appeared in the 18th century as the summer residence of the Russian tsars. In 1918 the town was renamed into Detskoe Selo (Children's Village). In 1937 the name was changed into Pushkin, to commemorate the centenary of the great Russian poet's tragic death. Created for two centuries by many prominent architects, the unique architectural ensemble of Pushkin is world famed for its elegant palaces and pavilions, landscape parks and ponds, 18th-century marble statues and historic obelisks. This "town of Muses" inspired many celebrated Russian poets, painters and musicians to create their renowned masterpieces in music and art.

Nowadays:

City of **Pushkin** (district of St. Petersburg)

Detskoe Selo (Children's Village) - railway station of Pushkin

Tsars Village – tourist center (St. Petersburg suburb)

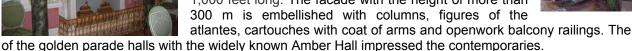
Mansion of Duke V. P. Kochubey - a small detached house named after Duke Kochubey who was the Chief Master of Ceremonies of the last Russian Imperial Court.

The Catherine Park is a monument of landscape architecture and the central part of Tsars Village palace ensemble. It occupies an area of more than one hundred hectares. The park consists of a grassed and landscape areas, divided by the Great Pond. There are marble sculptures and busts of the early 18th century on the park's paths. This large

landscape park is centered on the magnificent blue, white and gold Catherine Palace.

The Catherine Palace is a remarkable example of Russian baroque architecture. Named after its creator, Empress Catherine, the second wife of Peter the Great, and designed by Bartolomeo Rastrelli, Palace is over 1,000 feet long. The facade with the height of more than 300 m is embellished with columns, figures of the

atlantes, cartouches with coat of arms and openwork balcony railings. The suite



Peterhof is perhaps St. Petersburg's most famous and spectacular Imperial estate. Nestled on the shore of the Gulf of Finland (part of the Baltic Sea), Peterhof is a tremendous complex of the attractive area and Palace luxury. The Grand Palace, filled with fascinating and elaborate interiors, sits on top of a high seashore ridge overlooking the vast Lower Park adorned with fountains, statues and pavilions. There are three major cascades and over 120 fountains in the park. The most impressive is the Grand Cascade, located directly below the Grand Palace and featuring an impressive golden statue of Samson grasping the mighty jaws of the lion.



St. Petersburg is one of the most beautiful cities in the world. It is often referred to as the Venice of the North or the Paris of the East, but its beauty is really a brand all its own. The lavish interior of the grandiose and skyline-dominating cathedrals, mysterious palaces and squares present a unique monument of the Russian

architecture.



Night boat trip. Walk on Neva and channels - wonderful travel. You will see prospect of the Petersburg embankments famous architectural ensembles, will pass under figured bridges, which for a long time stay symbols of the city.

Important dates

April 20, 2010 – preliminary program

May 1, 2010 – confirmation of participation, visa documents submission

May 15, 2010 – fee payment

June 15, 2010 – final conference program

June 27, 2010 – arrival and registration; excursion

June 28-July 1, 2010 – scientific program

July 2, 2010 – excursions

Please, contact for details:

Tatiana Zamulina

Tel/Fax: +7 383 330 62 97, zam@catalysis.ru

Inna Mutas

Tel: +7 383 326 96 06, mutas@catalysis.ru Boreskov Institute of Catalysis SB RAS

pr. Akademika Lavrentieva, 5 630090 Novosibirsk, Russia Fax: +7 383 330 80 56



Conference Scientific Committee kindly asks to confirm participation before May 1, 2010 to avoid drastic changes in the scientific program.

Please fill in the attached **Registration form** and send it by E-mail to Ms. Inna Mutas mutas@catalysis.ru

REGISTRATION FORM

International Conference Catalysis For Renewable Sources:Fuel, Energy, Chemicals (Please return this form not later than May 1)

Name	Mr/Ms			
City, Country				
ACCOMPANYING PERSO Name	Mr/Ms			
		be published and order the r	materials at the price of €30	
Details of the arrival and	departure			
Date of arrival	Time of arrival	Number of the flight	From (city)	
Date of departure	Time of departure	Number of the flight	Destination	
		•		
Fees (please tick off or mar	rk)			
Regular fee			☐ 420 Euro	
PhD student fee, Accompanying person fee			□ 250 Euro	
Banquet			☐ 50 Euro	
Night boat excursion		☐ 35 Euro		
Excursion to Peterhof	☐ 25 Euro			
Excursion to the Catherin	□ 20 Euro			

Attachment 2

CATALYSIS IN INDUSTRY (Kataliz v Promyshlennosti)

ISSN PRINT: 2070-0504 ISSN ONLINE: 2070-0555

Guide for Authors

Authors are responsible for reliability of the information, accuracy in citing the references, and for using the data not subject to public disclosure.

The attached License Contract (2 copies filled out and signed by each author) is mailed by post to the Editorial Office (119049, Moscow, Leninsky Prospect 4, MISIS, for ZAO KALVIS). **The article is sent in electronic form to the e-mail address ctls@kalvis.ru**

English version of the Journal will be published by Springer.

Information about all authors (last name, first name, academic degree, job position, affiliation, telephone number, e-mail) should be provided.

A questionnaire should be attached to the article with answers to the following questions:

- practical significance of the work and prospects for industrial use;
- novelty of the work compared to existing domestic (foreign) base analogue in the technology for creating new or improving the existing catalysts (to improve quality or efficiency of the catalyst, reduce costs, etc.) or designing the catalytic reactors;
- general information about the catalysts presented in the article (composition in general, the manufacturer).

Volume of the article is approximately 15 pages (10 to 20 pages), A4, including figures, tables, etc. **Font** Times New Roman (14 pt), **spacing** 1.5. **Text format** is Word or RTF.

The article begins with a title, under which are printed the initials and names of all authors and full title of the organization(s) where the work was done. It is desirable to use the International System of Units (SI). Formulas and letter symbols should be scrutinized by the authors, who bear full responsibility for them. Tables should have a theme title and consecutive numbering.

Illustrations (drawings, photographs, graphics) should be presented as individual files: TIF, JPEG (300 dpi). Illustrations in the Word format are also acceptable.

Figure captions are supplied in a separate file (Word or RTF).

Abstract of the article appears on a separate sheet and does nor exceed 0.5 page (15-20 lines with 1.5 spacing). The abstract should reflect the main goal, novelty and relevance of the work, provide specific information about the object, conditions, methods and results of the research, give a comparison with the analogue, and indicate practical significance for industry.

Key words should be attached to the Abstract.

Conclusion (brief) or numbered conclusions should be consistent with the abstract (not repeating it verbatim) and content of the article and reflect the extent to which the stated problem was solved; practical recommendations are desirable.

References include sources to the materials used by the authors. References in the text are given in square brackets: [1] or [2-6]. References should be individually numbered in the order in which they are cited in the text. Unpublished works and sources published before 1980 should be avoided in the reference list.

LICENCE CONTRACT

Moscow, Russia	· · · · · · · · · · · · · · · · · · ·	2010
Author (Writing team)		_
		_ ,
on the one part, and Closed Joint-Stock Society KALVI part, make the present Contract as follows:	S, hereinafter referred to as "Publisher",	on the other
1. Subject of the	ne Contract	
1.1. Author (Writing team) as copyright holder(s) transfe (their) Article	•	ts to use his
including figures, graphic charts, tables (hereinafter Mat	erials) in the journal Catalysis in Industr	_ , y (Kataliz v
Promyshlennosti).	,	
1.2. Author (Writing team) guarantees that he (they) have	e the copyright transferred under the Contr	ract for both

2. Rights and Obligations of the Parties

2.1. Under the present Contract, Author (Writing team) transfers to the Publisher the following non-exclusive rights to Materials for publication in the journal Catalysis in Industry (Kataliz v Promyshlennosti): the rights to reproduce, disseminate, re-edit, translate, digitize and distribute in electronic form in a composite publication (on-line version of the journal), and transfer to third parties for impart to the public.

Territory of non-exclusive usage is not limited: in Russian and in English, in printed and on-line version of this journal.

- 2.2. Author (Writing team) furnishes his (their) personal data (affiliation, job position, contact telephone number, e-mail) that he (they) permits to publish on open access.
- 2.3. Said rights are transferred by the Author (Writing team) to Publisher for a period of 5 years.

3. Contract Price

3.1. The Publisher provides to the Author (Writing team) one (1) copy of the journal Catalysis in Industry (Kataliz v Promyshlennosti) as a fee for the Article. The journal is given to the Author (Writing team) after receiving the edition from the printing office.

4. Liabilities of the Parties

- 4.1. The Party that failed or not adequately fulfilled the obligations under the present Contract will be liable in accordance with the effectual legislation of the Russian Federation.
- 4.2. This Contract is valid until the Parties are in full satisfaction of their obligations.

the Article and Materials.

- 4.3. Dissolution of the present Contract is possible at will by mutual consent of the Parties with mandatory signature by the Parties of a reasonable agreement on this.
- 4.4. Dissolution of the present Contract unilaterally is possible in the instances provided with effectual legislation of the Russian Federation or through a Court proceeding.
- 4.5. Any amendments to the present Contract become valid only if they are compiled in written form and signed by the both Parties of the present Contract.
- 4.6. All disputes or differences which may arise inter Parties on the issues that did not find a solution in the text of the present Contract will be resolved through good faith consultations and negotiations based on the effectual legislation of the Russian Federation and usual and customary business practice.
- 4.7. In the absence of adjustments of a disputable matter by negotiation, the disputes will be resolved by arbitration court according to procedures established by the effectual legislation of the Russian Federation.
- 4.8. The present Contract is made in two copies of identical content and equal legal form, one for each Party.

5. Details of the Parties

Author:	Print name	
Address:		
Passport.		
Contact telephone number	e-mail	
Author:	Print name	
Address:		
Passport:		
Contact telephone number	e-mail	
Author:	Print name	
Address:		
Passport:		
Contact telephone number	e-mail	
Author:	Print name	
Address:		
Passport:		
Contact telephone number	e-mail	
Author:	Print name	
Address:		
Passport:		
Contact telephone number	e-mail	
Publisher:		
Closed Joint-Stock Society KALVIS		
· ·	brognost 4 D 40 Magazyy Duggio 110	040
MISIS for Closed Joint-Stock Society KALVIS, Leninsky PCEO	10spect 4, D-49, Moscow, Russia, 119	U49
(Bystrova Vera)		
(Dysuova voia)		