

Dear Colleagues!

The Faculty of Chemical Technologies, Industrial Ecology and Biotechnology (CTF) and Mechanical Engineering Faculty (MEF) of the Perm National Research Polytechnic University (PNRPU) are holding

**the All-Russian Scientific and Practical Conference
with international participation**

“Chemistry. Ecology. Urbanistics”

on April 20–21, 2023.

We invite you to take part in the Conference. Teachers, postgraduate students, doctoral candidates and researchers, students of universities and colleges and also schoolchildren, gymnasium and lyceum students are invited to participate. We hope that participation in the conference will promote scientific growth, exchange of scientific information and experience, establishment of cooperation and friendly relations. The best works of the speakers will be awarded diplomas of winners.

Conference website: www.ceu.pstu.ru.



Sections and Topics of the Conference

- Section 1. Energy and resource conservation. Nature-saving and climate-neutral technologies
- Section 2. Modern problems of biotechnology
- Section 3. Chemistry. Ecology. Urbanistics (section in English)
- Section 4. Urbanistics: design, construction, transport
- Section 5. Advanced chemical technologies
- Section 6. Digitalization, automation, mechanization
- Section 7. Modern problems of mechanical engineering and materials science
- Section 8. Topical issues of obtaining pharmaceutical substances and biologically active substances
- Section 9. Schoolchildren – young researchers

The conference will include round tables with the participation of the academic community and representatives of the real sector of the economy on the following topics:

1. Decarbonization and hydrogen energy technologies for a low-carbon economy
2. Solutions for critical technologies and components for the chemical industry

Possible Options for Participation in the Conference

1. Full-time participation (report + publication of the article);
2. Full-time participation* (report **without** publication of the article);
3. Full-time participation with the use of remote technologies (report with publication of the article);
4. Full-time participation with the use of remote technologies* (report **without** publication of an article);
5. Correspondence participation (only publication of the article).

Participation for students of colleges and schoolchildren are possible only for options marked with an asterisk (). Publication is not provided. For other participants, all the listed participation options are possible.*

Participation in the Conference and Publication of the Article are FREE

For non-resident participants, travel to Perm and back, accommodation and meals are paid for by the sending party.

Oral presentation should be accompanied by a presentation, made in *.pdf, *.ppt or *.pptx format, 7–10 slides in size. The time limit for an oral presentation is no more than 7 minutes. The working languages of the conference are Russian and English.

Conditions for Publishing an Article

It is necessary to fill out the registration form on the conference website www.ceu.pstu.ru and attach the materials no later than March 1, 2023.

Materials should include:

- 1. The text of the article*** with an abstract and keywords, formatted in accordance with the requirements.
- 2. Expert opinion**** on the possibility of publishing the article in the open press, confirming that the material does not contain information prohibited for publication in the open press. (Basis: Decree of the Government of the Russian Federation No. 852-r dated 28.06.2001).



** Submitted articles will be checked for plagiarism, if the share of borrowings (30 %) is exceeded, the materials will not be accepted for publication.*

*** Employees of PNRPU do not need to issue an expert opinion, this will be done centrally.*

The collection of conference materials (included in the RSCI) will be available in electronic form on the conference website <https://ceu.pstu.ru/>

Participation of schoolchildren.

Section 8. Schoolchildren – young researchers

Completed papers on the basis of independently completed results of accomplished scientific research of practical or applied significance are accepted for participation in the conference.



Review (abstract) works are not considered

For full-time participation with the report, it is necessary to: fill out and send to the moderator's email address a letter with attached files named by the participant's last name:

- 1. Registration forms.** They are filled in separately for both the speaker and the supervisor. Example: file "Ivanov_ speaker ", file "Petrov_ supervisor".
- 2. Abstract for the work.** The abstract (no more than four pages) contains brief information about the work performed: the purpose, tasks, actuality, the results obtained and their analysis and conclusions. It is called by the last name of the speaker. Example: file "Abstract_Ivanov".

Moderator of the section “Schoolchildren – young researchers”:

Maria Mikhailovna Kombarova

Leading Engineer, Scientific Secretary of the Department of Environmental Protection

email: mariya-kombarova@yandex.ru

phone. +7 342 239-14-82 from 12:00 to 16:00.

Competition of Research Works of Junior Students and Schoolchildren

Within the framework of the All-Russian Scientific and Practical Conference with international participation “Chemistry. Ecology. Urbanistics” is held a regional competition of research papers of undergraduate students of universities and schoolchildren. The deadline for the competition is April – October 2023. In May, the results of the competition are summed up for schoolchildren; in October – for students.

Details and regulations on the competition on the website of the Department of Chemistry and Biotechnology <http://purec.pstu.ru/> in the Entrant section / Competitions.

The Order of Submission of Works

Scientific papers of students and schoolchildren are submitted by e-mail to annysky2002@mail.ru in MS Word format in Russian (the form of presentation of the work is free). The title page contains names, surnames, patronymics, data on the position, degree and title of the author (authors) and the supervisor of the work, indicating the educational organization, locality. The volume of work should not exceed 35–40 pages of text in free form (font size - 12 pt, 1.5 spacing), reference material, photographs of experiments can be included in the supplementary material.

The following documents are attached to the work:

- review of the supervisor on the degree of independence of the work performed and the contribution of each of the authors, if the work is done by the author's team (in any form),
- information about the author and supervisor,
- consent to the processing of personal data.

Samples and forms of accompanying documents are presented in the regulations for the competition on the website of the Department of Chemistry and Biotechnology <http://purec.pstu.ru/> in the Entrant / Competitions section.

Conference Calendar

Newsletter – February 2023

Registration, acceptance of texts of articles and related documents for the conference, acceptance of applications for participation in the conference – until March 1, 2023.

Acceptance of research papers of schoolchildren – until April 30, 2023, junior students – until October 1, 2023.

Conference – April 20–21, 2023

Responsible for Holding the Conference

Responsible for holding the conference

Bankovskaya Ekaterina Vladimirovna
+7 919 484-50-53

Responsible for holding round tables

Denislamova Ekaterina Sergeevna
+7 908 249-93-70

Conference Organizing Committee

ceu-pstu@list.ru

Section 1. Energy and resource conservation.

Nature-saving and climate-neutral technologies

Tashkinova Irina Nikolaevna – Candidate of Technical Sciences, Associate Professor of the Department “Environmental Protection”
Phone: +7 912 599-95-50; +7 342 239-14-82,
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Section 2. Modern problems of biotechnology

Portnova Anna Vladimirovna – Candidate of Chemical Sciences, Associate Professor of the Department of Chemistry and Biotechnology
Phone/fax: +7 342 239-15-11, E-mail: annysky2002@mail.ru

Section 3. Chemistry. Ecology. Urbanistics (section in English)

Klimova Yana Anatolievna – 4rd year postgraduate student of the Department of Chemistry and Biotechnology
Phone: +7 919 709-60-50; E-mail: yana-klimova-1995@mail.ru

Section 4. Urbanistics: design, construction, transport

Kuznetsov Nikita Igorevich – Candidate of Technical Sciences, Associate Professor of the Department of Cars and Technological Machines
Phone: +7 963 883-80-51; E-mail: conf.transport@yandex.ru

Section 5. Advanced chemical technologies

Pershin Daniel Vladimirovich –

assistant of the department of Chemical Technologies

Phone: +7 951 926-83-17; E-mail: daniel-pershin@mail.ru

Section 6. Digitalization, automation, mechanization

Stashkov Sergey Igorevich – Candidate of Technical Sciences,

Associate Professor of the Department of Equipment

and Automation of Chemical Production

Phone: +7 342 239-15-06; E-mail: sergey.stashkov@pstu.ru

Section 7. Modern problems of mechanical engineering and materials science

Fedoseeva Elena Mikhailovna – Candidate of Technical Sciences,

Associate Professor, Associate Professor of the Faculty of

Welding Production, Metrology and Materials Technology

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Section 8. Topical issues of obtaining pharmaceutical substances and biologically active substances

Bankovskaya Ekaterina Vladimirovna –

Candidate of Pharmaceutical Sciences, Associate

Professor of the Department of Chemical Technologies

Phone: +7 919 484-50-53, e-mail: albit2302@mail.ru

Section 9. Schoolchildren – young researchers

Kombarova Maria Mikhailovna – Leading Engineer,

Scientific Secretary of the Department of Environmental Protection

Phone: +7 342 239-14-82; E-mail: mariya-kombarova@yandex.ru

Conditions for Publishing an Article

The text of the article should be submitted in Microsoft Word 97–2003 format. The file name is determined by the surname of the first author, the city and the section number. For example: Ivanov_Moscow_3.doc.

1. **UDC** (on the left);
2. **Surnames and initials of the authors;**

3. **Title of the article** (centered);
4. **Abstract** (the word “abstract” is not written);
5. **Keywords**;
6. **The text of the article:** A4 page format, font – Times New Roman, Size – 12, line spacing – 1.0, paragraph indent – 1.25 mm, width alignment, page layout – normal, alignment of the title and subtitle – in the center.

To set formulas, use the formula editor. parameters: font – Times New Roman; size: 12 (normal); place formulas in the center, and their numbers at the right margin of the page. Parameters: font – Times New Roman; size: 12 (normal); place formulas in the center, and their numbers at the right margin of the page.

The figures and tables contained in the article are recommended to be drawn up in accordance with the following rules:

- figures and tables are placed inside the text, in the center of the page;
- captions should not go beyond the borders of the figure itself;
- table names should not be longer than the tables themselves;
- black-and-white and color drawings, photographs, graphics are allowed.

8. **References:** drawn up in accordance with the requirements of GOST 7.0.5-2008 from 3 to 5 sources.
9. **Information about authors:** Full name; Place of work (study), position, academic degree, academic title, other honorary titles (full name of the organization in the nominative case); Email Address.

The volume of the material is NO more than three completely filled pages.



Articles that are not properly formatted will not be accepted for publication and will not be sent back. Explanations are not given.

Example of Article Design

UDC 620.193.8

A.G. Bortnik, A.V. Botin, N.A. Medvedeva, S.U. Balandina

THE STUDY OF CHANGES IN THE MECHANICAL PROPERTIES OF STEEL UNDER THE INFLUENCE OF MICROMYCETE CORROSION

This article discusses the effect of various micromycetes on the corrosion of steel of two grades. Micromycetes of the genera *Aspergillus*, *Penicillium*, and *Trichoderma* were isolated from soil and water samples taken in the Perm Territory. Deterioration of the mechanical properties of steel and significant structural changes in its surface is revealed.

Keywords: biological corrosion, micromycetic corrosion, micromycetes, steel, ultimate tensile strength, fracture surface.

At the moment, more and more attention is paid to the processes occurring at the junction of science. One of these processes is biological corrosion. One of the biggest problems in this area is the small amount of research devoted to this problem.

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References

1. Skovhus T.L., Enning D., Lee J.S. Microbiologically Influenced Corrosion in the Upstream Oil and Gas Industry // CRC Press. – 2017. – P. 559.
2. Widdel F. Microbiology and ecology of sulfate and sulfurreducing bacteria // *Biology of Anaerobic Microorganisms* / ed. A.J.B. Zehnder, Wiley-Liss, John Wiley and Sons, Inc. – New York, 1988. – P. 469–586.
3. *Microbiologically Influenced Corrosion* / Brenda J. Little [et. al.]. – John Wiley & Sons, 2007. – 272 p.
4. O mekhanizme mikrobiologicheskoy korrozii stalej neftepromyslovogo oborudovaniya v usloviyah ekspluatacii i v laboratorii / E.A. Borisenkova [i dr.] // *Vestnik SGTU*. –2013. – Vol. 3 (39). – P. 99–104.
5. O vozmozhnosti vliyaniya mikromicetov na korroziionnoe povedenie uglerodistoj stali / N.A. Medvedeva, S.Y. Balandina, A.G. Bortnik,

M.D. Plotnikova, N.Y. Lisovenko // Vestnik Permskogo Universiteta. – 2020. – №1 (10). – P. 84–93.

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