

Dear colleagues!

We invite you to attend All-Russian theoretical and practical conference
with international participation

**всероссийскую научно-практическую конференцию
с международным участием**

“Chemistry. Ecology. Urbanistics”

April 17–19, 2024

Participants of the conference – leading scientists, practitioners, federal,
municipal and regional administration and authorities, lecturers from Rus-
sian and foreign universities, post-graduate students, graduates, students,
leading scientific research relevant for the conference.

We hope that participation in the conference will promote scientific growth,
exchange of scientific information and experience, establishment of cooper-
ation and friendly relations. The best works of the speakers will be awarded
diplomas of winners.

The working languages of the conference are Russian and English.



Problems to be discussed at the conference

- Section 1. Energy and resource conservation. Nature-saving and climate-neutral technologies (section in Russian)
- Section 2. Biotechnology: achievements and prospects (section in Russian)
- Section 3. Advanced chemical technologies (section in Russian)
- Section 4. Topical issues of obtaining pharmaceutical substances and biologically active substances (section in Russian)
- Section 5. Urbanistics: design, construction, transport (section in Russian)
- Section 6. Digitalization, automation, mechanization (section in Russian)
- Section 7. Modern problems of mechanical engineering and materials science (section in Russian)
- Section 8. Chemistry. Ecology. Urbanistics
- Section 9. Schoolchildren – young researchers (section in Russian)
- Section 10. Course in science (section in Russian)

Topics of the round table talks

«Biotechnology as a strategic element of the country's innovative development»

Possible options for participation in the conference

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

There is no registration fee for all participants

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. Presentation time is 7 minutes plus 3 minutes of subsequent questions and discussion.

Conditions for publishing an article

Applications for participation in the conference are accepted by the Organizing Committee until March 15, 2024 by www.ceu.pstu.ru and attach the materials.

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: ceu.pstu.ru

Articles of students and graduate students are accepted only in co-authorship with the supervisor.

The collection of conference articles is assigned ISBN, UDC, BBK. Conference materials will be included article by article in the Russian Science Citation Index (RSCI).

Participation of schoolchildren

Schoolchildren in 1–11 grades are invited to participate in the conference.

The following participation options are available:

- Schoolchildren in 1–8 grades – face-to-face report only
- Schoolchildren of 9-11 grades:
 - face-to-face report with the results of scientific work
 - face-to-face report submitted to the design competition
 - correspondence competition of scientific works

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. Work abstract. 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".

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.

The procedure for submitting works to the design competition

To participate in the competition, the participant must submit to the organizing committee by email snoxtf@mail.ru with the subject line: "Course in science", during the period from February 5 to March 15, 2024, the following applications:

The application for participation in the conference is drawn up (the name of the application should be drawn up according to the sample: Last name IO_Application (for example, Ivanov A.S._Application)). Applications received after the specified deadlines are not allowed to participate in the competition. The project can be completed individually or in a team.

The presentation template for the design competition is posted on the conference website ceu.pstu.ru.

The file with the presentation must be named according to the example: Last name IO_rabota (for example, Ivanov A.S._Rabota) and sent to the organizing committee by email snoxtf@mail.ru until April 10, 2024 inclusive. Presentation time is 7 minutes plus 3 minutes of subsequent questions and discussion.

Competition nominations:

- 1. Scientific breakthrough** – presentation of an idea or visual representation of a product being created in the field of chemistry, ecology or automation.
- 2. Scientific development** – a development or invention that is in the process of design or creation.

The procedure for submitting works to the correspondence competition of scientific works

Completed works based on independently completed results of completed scientific research that have practical or applied significance are accepted for the competition.

Scientific works are submitted from May 1 to May 30 in MS Word format in Russian (the presentation form is free) with the note “Correspondence competition of scientific works” by email to vadim.lyadov2017@yandex.ru. The title page contains the names, surnames, patronymics, information about the position, degree and title of the author (authors) and the head of the work, indicating the educational organization and locality. The volume of work should not exceed 40 pages of text in free form (font size – 12 pt, 1.5 spacing), reference material, photographs of experiments can be included in appendices.

The following documents are attached to the work:

- feedback from the supervisor on the degree of independence of the work performed and the contribution of each of the authors, if the work was completed by a team of authors (in free form),
- information about the author and scientific supervisor,
- consent to the processing of personal data.

June 20, 2024 – summing up the results of the competition. The results of the competition will be posted on the conference website ceu.pstu.ru

Conference organizing committee

Section 1. Energy and resource conservation. Nature-saving and climate-neutral technologies (section in Russian)

Alena E. Zhulanova

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Section 2. Biotechnology: achievements and prospects (section in Russian)

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Section 3. Advanced chemical technologies (section in Russian)

Daniel V. Pershin

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Section 4. Topical issues of obtaining pharmaceutical substances and biologically active substances (section in Russian)

Ekaterina V. Bankovskaya

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Section 5. Urbanistics: design, construction, transport (section in Russian)

Nikita I. Kuznetsov

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Section 6. Digitalization, automation, mechanization (section in Russian)

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Section 7. Modern problems of mechanical engineering and materials science (section in Russian)

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Section 8. Chemistry. Ecology. Urbanistics (section in English)

Olkova Alina Sergeevna

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Section 9. Schoolchildren – young researchers (section in Russian)

Maria M. Kombarova

Leading Engineer, Scientific Secretary of the

Department of Environmental Protection

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Section 10. Course in science (section in Russian)

Vadim A. Lyadov

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Responsible for the conference

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Responsible for the round table talks

Irina A. Permyakova

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Conference organizing committee

ceu-pstu@list.ru

Conditions for publishing an article

The text of the article should be submitted in MicrosoftWord 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 – 10, 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: 10 (normal); place formulas in the center, and their numbers at the right margin of the page. Parameters: font – Times New Roman; size: 10 (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.

7. **References:** to draw up in accordance with the example.
8. **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 NOT 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 ekspluatatsii i v laboratorii / E.A. Borisenkova [i dr.] // *Vestnik SGTU*. –2013. – Vol. 3 (39). – P. 99–104.
5. O vozmozhnosti vliyaniya mikromicetov na korrozionnoe 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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