



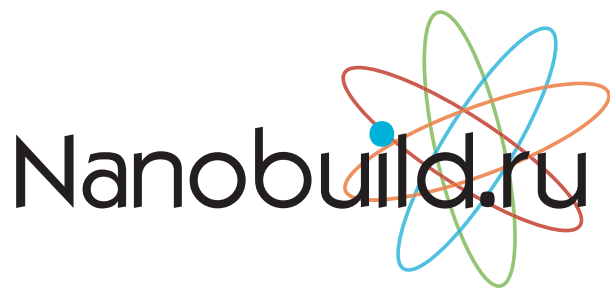
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# Нанотехнологии в строительстве: научный Интернет-журнал

## Nanotechnologies in construction: a scientific Internet-journal

Научно-техническая поддержка  
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THE THIRD INTERNATIONAL THEORETICAL AND PRACTICAL  
ONLINE-CONFERENCE  
«**APPLICATION OF NANOTECHNOLOGIES  
IN CONSTRUCTION INDUSTRY**»  
(19–20 SEPTEMBER 2011)

**И**нтернет-портал NanoNewsNet ([www.nanonewsnet.ru](http://www.nanonewsnet.ru)) и электронное издание «Нанотехнологии в строительстве: научный Интернет-журнал» ([www.nanobuild.ru](http://www.nanobuild.ru)) совместно проводят III Международную научно-практическую online-конференцию «Применение нанотехнологий в строительстве».

**I**nternet-portal NanoNewsNet ([www.nanonewsnet.ru](http://www.nanonewsnet.ru)) and electronic edition «Nanotechnologies in Construction: A Scientific Internet-Journal» ([www.nanobuild.ru](http://www.nanobuild.ru)) jointly hold The Third International Theoretical and Practical Online-Conference «Application of Nanotechnologies in Construction Industry».



## Сопредседатели оргкомитета конференции:

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## Участники online-конференции

В online-конференции примут участие ведущие ученые и специалисты Российской академии наук, Российской инженерной академии, Российской академии архитектуры и строительных наук, РОСНАНО, Научно-технического центра прикладных нанотехнологий (г. Санкт-Петербург), Международной инженерной академии, Международного союза экспертов и лабораторий по испытанию строительных материалов, систем и конструкций (РИЛЕМ), руководители и специалисты организаций и предприятий, ученые, преподаватели вузов, сотрудники НИИ и научных центров из различных регионов России, стран ближнего и дальнего зарубежья.

## Порядок проведения online-конференции

Организаторы уже запустили механизм проведения online-конференции. Посетите-

## Co-chairmen of Conference Organizing Committee:

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V.I. Telichenko, Rector of National Research University «Moscow State University of Civil Engineering», Academician of RAASN, Doctor of Engineering, Professor.

## Participants of Online-Conference

Russian leading scientists and specialists of Russian Academy of Sciences, Russian Academy of Engineering, Russian Academy of Architecture and Construction Sciences, ROSNANO, Scientific and Technical Center of Applied Nanotechnologies (Saint-Petersburg), International Academy of Engineering, International Union of Experts and Laboratories on Testing Construction Materials, Systems and Structures (RILEM), chiefs and specialists of different organizations and enterprises, scientists, lecturers of universities, research officers of scientific institutions from different Russian regions and foreign countries will take part in this online-conference.

## Conference Order

Organizers have already launched the procedure of online-conference. The visitors of the web

ли сайтов ([www.nanonewsnet.ru](http://www.nanonewsnet.ru) и [www.nanobuild.ru](http://www.nanobuild.ru)) смогут до 10 сентября с.г. задавать вопросы участникам конференции по электронной почте (e-mail: [info@nanobuild.ru](mailto:info@nanobuild.ru) и e-mail: [empirv@mail.ru](mailto:empirv@mail.ru)). Электронное издание «Нанотехнологии в строительстве: научный Интернет-журнал» включено в Перечень ведущих рецензируемых научных журналов и изданий, в которых должны быть опубликованы основные научные результаты диссертаций на соискание ученой степени доктора и кандидата наук, поэтому оргкомитет просит участников online-конференции указывать свое место работы, учёную степень и учёное звание.

Оргкомитет 14–15 сентября обобщит все вопросы и направит их участникам, 19–20 сентября участники online-конференции ответят на эти вопросы.

**Материалы III Международной научно-практической online-конференции «Применение нанотехнологий в строительстве» будут опубликованы:**

- на портале NanoNewsNet ([www.nanonewsnet.ru](http://www.nanonewsnet.ru));
- в электронном издании «Нанотехнологии в строительстве: научный Интернет-журнал» № 5/2011 ([www.nanobuild.ru](http://www.nanobuild.ru)).

Свои вопросы направляйте по электронной почте (e-mail: [info@nanobuild.ru](mailto:info@nanobuild.ru) и e-mail: [empirv@mail.ru](mailto:empirv@mail.ru)), а также на сайт [www.nanonewsnet.ru](http://www.nanonewsnet.ru).

sites ([www.nanonewsnet.ru](http://www.nanonewsnet.ru) and [www.nanobuild.ru](http://www.nanobuild.ru)) to be published, this is why Organizing Committee asks participants to indicate their place of employment, academic degree and academic status.

Organizing committee will summarize all the questions and sent them to participants on 14–15 of September, participants will answer these questions on 19–20 of September.

**Materials of The Third International Theoretical and Practical Online-Conference «Application of Nanotechnologies in Construction Industry» will be published:**

- at the portal NanoNewsNet ([www.nanonewsnet.ru](http://www.nanonewsnet.ru));
- in the electronic edition «Nanotechnologies in Construction: A Scientific Internet-Journal», № 5/2011 ([www.nanobuild.ru](http://www.nanobuild.ru)).

Send us your questions by email ([info@nanobuild.ru](mailto:info@nanobuild.ru) or [empirv@mail.ru](mailto:empirv@mail.ru)) or address them to the website [www.nanonewsnet.ru](http://www.nanonewsnet.ru).



УДК 691.175.743

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*Kazan State University of Architecture and Engineering*

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## RESEARCH OF PVC COMPOUND WITH CARBON NANOTUBES

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**Obtained polymer film materials based on polyvinyl chloride (PVC) and containing carbon nanotubes (CNT) within the range of 0,001 to 0,1 mp have unique characteristics: high strength combined with high elastic strain, chemical and thermal stability. In general, the use of CNTs allows obtaining considerable increase of technological and operational parameters of PVC compositions.**

**Key words:** polymer nanocomposites, polyvinylchloride, carbon nanotubes.

**Dear colleagues!**

**The reference to this paper has the following citation format:**

*Ashrapov A.Kh., Abdrakhmanova L.A., Nizamov R.K., Khozin V.G.* Research of PVC Compound with Carbon Nanotubes. Nanotechnologies in Construction: A Scientific Internet-Journal, Moscow, CNT «NanoStroitelstvo». 2011, Vol. 3, no. 3, pp. 13–24. Available at: [http://www.nanobuild.ru/magazine/nb/Nanobuild\\_3\\_2011.pdf](http://www.nanobuild.ru/magazine/nb/Nanobuild_3_2011.pdf) (Accessed \_\_\_\_ \_\_\_\_). (In Russian).

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УДК 621.791: 69(075)

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## **PROBLEMS OF MICRO- AND NANOMODIFIED JOINTS UNDER BUILDING METAL STRUCTURE WELDING**

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**The problems of metal joint modification when fusion welding is used have been considered. The analysis of the causes leading to reduction of modifiers efficiency in weld pool is given. The application of nanomodifiers in combination with macroparticles functioning as microrefrigerators is justified.**

**Key words:** weld joints modification efficiency, modifier deactivation, nano-complexes.



**Dear colleagues!**

**The reference to this paper has the following citation format:**

*Boldyrev A.M., Grigorash V.V.* Problems of micro- and nanomodified joints under building metal structure welding. Nanotechnologies in Construction: A Scientific Internet-Journal, Moscow, CNT «NanoStroitelstvo». 2011, Vol. 3, no. 3, pp. 42–52. Available at: [http://www.nanobuild.ru/magazine/nb/Nanobuild\\_3\\_2011.pdf](http://www.nanobuild.ru/magazine/nb/Nanobuild_3_2011.pdf) (Accessed \_\_\_\_\_). (In Russian).

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## THE WINNERS OF “SKOLKOVO INNOVATIONS AWARD SUPPORTED BY CISCO I-PRIZE”



УДК 620.179.1.082.7:658.58

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## SCIENTIFIC DISCOVERIES IN MICRO- AND NANOTRIBOLOGY AND HELIUM WEAR

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**The characteristic of friction control through superflowability of helium in microtribosystems on the basis of carbon-and-nitrogen cycle (effect) in friction zone are considered.**

**Key words:** friction control, carbon-and-nitrogen cycle, superflowability of helium.

**Dear colleagues!****The reference to this paper has the following citation format:**

*Ivasyshin G.S.* Scientific discoveries in micro- and nanotribology and helium wear. Nanotechnologies in Construction: A Scientific Internet-Journal, Moscow, CNT «NanoStroitelstvo». 2011, Vol. 3, no. 3, pp. 59–76. Available at: [http://www.nanobuild.ru/magazine/nb/Nanobuild\\_3\\_2011.pdf](http://www.nanobuild.ru/magazine/nb/Nanobuild_3_2011.pdf) (Accessed \_\_\_\_ \_\_\_\_). (In Russian).

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RESEARCHES, DEVELOPMENTS, PATENTS

УДК 69

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## NANOADDITIVES FOR COMPOSITE MATERIALS

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The analysis of the patent information about nanoadditives for composite materials is given. Inventions can be applied in construction technologies for obtaining nanomodified composite materials on the basis of air and hydraulic binder. That allows considerable intensification of industrial production of nanomodified composite materials due to broadening of nanoadditives assortment as well as to the use of new kinds of a fiber.

**Key words:** patent, invention, nanoadditives, nanomodified, air-setting and hydraulic binder, fiber, composite materials, chinks for oil and gas recovery.

**Dear colleagues!****The reference to this paper has the following citation format:**

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IN THE WORLD OF THE BOOKS

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## SCIENTIFIC AND TECHNICAL LITERATURE. NANOMATERIALS AND NANOTECHNOLOGIES

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**Some information on the books proposed by the limited company «Techinform» in the sphere of nanomaterials and nanotechnologies is given.**

**Key words:** nanocrystal alloys, nanoelectromechanical systems, sol-gel material technologies based on nanodispersed silica, nanostructural materials.