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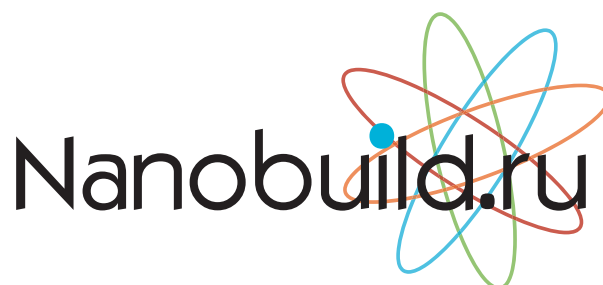
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# Нанотехнологии в строительстве: научный Интернет-журнал

## Nanotechnologies in construction: a scientific Internet-journal

Научно-техническая поддержка  
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NANOTECHNOLOGIES IN CONSTRUCTION: A SCIENTIFIC INTERNET-JOURNAL

NANOTEHNOLOGII V STROITEL'STVE: NAUCHNYJ INTERNET-ZHURNAL

## CONTENTS

<i>Basin E.V.</i> Dear colleagues, congratulations on the Day of Builder!.....	6
Internet-journal «Nanotechnologies in construction» – laureate of the national contest «Stroymaster-2011» .....	8
<i>Smirnov V.A., Korolev E.V., Albakasov A.I.</i> Size effects and topological characteristics of nanomodified composites.....	17
www.engineeracademy.ru – the new web resource for informal professionals’ communication .....	28
«CITYBUILD–2011» – urban construction is waiting for innovations .....	32
<i>Pershina A.S., Korenkova S.F.</i> Decorative nanofilled cement-polymer compositions for facades finishing.....	36
On 75 <sup>th</sup> anniversary of academician Evgeniy Mikhailovich Chernishov .....	48
<i>Telichenko V.I., Egorychev O.O., Korolev E.V.</i> Research and educational center «Nanotechnology» of the Moscow state university of civil engineering: progress and prospects .....	55
The Third International Theoretical and Practical Online-conference «Application of Nanotechnologies in Construction Industry» .....	63
Kingdom of Spain Exposure on the IV International Forum on nanotechnologies RUSNANOTECH’2011.....	66
<i>Kuzmina V.P.</i> Application of nanotitanium dioxide in construction .....	70
On the build-up of intellectual capital and its protection by means of patenting.....	80
Scientific and technical literature. Nanomaterials and nanotechnologies .....	81
The list of requirements to the presentation and article publication conditions.....	85

**INTERNET-JOURNAL «NANOTECHNOLOGIES IN CONSTRUCTION» –  
LAUREATE OF THE NATIONAL CONTEST «STROYMASTER-2011»**

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УДК 620.3, 004.942-022.532

**SMIRNOV Vladimir Alexeevich**, Ph.D. in Engineering, Associate Professor, Leading Research Officer of the Research and Educational Center “Nanotechnology”;<sup>3</sup>

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## SIZE EFFECTS AND TOPOLOGICAL CHARACTERISTICS OF NANOMODIFIED COMPOSITES

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**Determination of the size and concentration limits of nanomodifier content is the necessary prerequisite for successful application of nanotechnology in material science. Some results concerning the mentioned problems, obtained both by the theoretical investigation and simulation, are presented in the article.**

**Key words:** nanomodifier, disperse system, simulation.

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<sup>3</sup> Moscow University of Civil Engineering, Russian Federation;

<sup>4</sup> Orenburg State University, Russian Federation

**Dear colleagues!**

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

*Smirnov V. A., Korolev E. V., Albakasov A. I.* Size effects and topological characteristics of nanomodified composites. *Nanotechnologies in Construction: A Scientific Internet-Journal*, Moscow, CNT «NanoStroitelstvo». 2011, Vol. 3, no. 4, pp. 17–27. Available at: [http://www.nanobuild.ru/magazine/nb/Nanobuild\\_4\\_2011.pdf](http://www.nanobuild.ru/magazine/nb/Nanobuild_4_2011.pdf) (Accessed \_\_\_\_\_). (In Russian).

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***Contact information***

**e-mail: [KorolevEV@mgsu.ru](mailto:KorolevEV@mgsu.ru)  
e-mail: [kkatarn@rambler.ru](mailto:kkatarn@rambler.ru)**



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## DECORATIVE NANOFILLED CEMENT-POLYMER COMPOSITIONS FOR FACADES FINISHING

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The article deals with the results concerning application of nanoanthropogenic fillers in moist facade systems. Incorporation of carbonic slime (size of particles is 20–60 nm) taken in the quantity of 5–15% of the total astringent mass and carbonic-siliceous product taken in the quantity of 13% (size of particles is 60–80 nm) into composition considerably increases its adhesive activity to the base (concrete, brick).

**Key words:** carbonic slime, carbonic-siliceous product, cement-polymer composition, acryl, dispersion, adhesion, cohesion, adsorption, nanodisperse filler, facade.

**Dear colleagues!**

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**Контакты**  
**Contact information:**

**e-mail: [miranova163@mail.ru](mailto:miranova163@mail.ru)**



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## **RESEARCH AND EDUCATIONAL CENTER «NANOTECHNOLOGY» OF MOSCOW STATE UNIVERSITY OF CIVIL ENGINEERING: ACHIEVMENTS AND PROSPECTS**

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**Development of scientific infrastructure objects is the necessary condition to establish priority technologies. Moscow State University of Civil Engineering is forming the platform for researches and education of the staff of top qualification – Research and Educational Center «Nanotechnology». The center is equipped with modern research instruments.**

**Key words:** scientific infrastructure, nanotechnology, higher education.

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*Telichenko V. I., Egorychev O. O., Korolev E. V.* Research and educational center “Nanotechnology” of the Moscow state university of civil engineering: progress and prospects. Nanotechnologies in Construction: A Scientific Internet-Journal, Moscow, CNT «NanoStroitelstvo». 2011, Vol. 3, no. 4, pp. 55–62. Available at: [http://www.nanobuild.ru/magazine/nb/Nanobuild\\_4\\_2011.pdf](http://www.nanobuild.ru/magazine/nb/Nanobuild_4_2011.pdf) (Accessed \_\_\_\_\_). (In Russian).

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**Contact information****e-mail: [KorolevEV@mgsu.ru](mailto:KorolevEV@mgsu.ru)****e-mail: [misi@mgsu.ru](mailto:misi@mgsu.ru)****e-mail: [rector@mgsu.ru](mailto:rector@mgsu.ru)**





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».

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## 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 [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:**

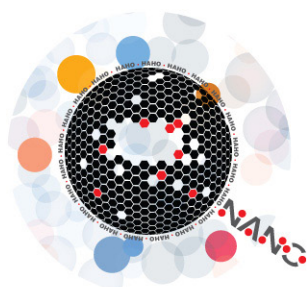
- at the portal NanoNewsNet ([www.nanonewsnet.ru](http://www.nanonewsnet.ru));
- in the electronic edition «Nanotechnologies in Construction: A Scientific Internet-Journal», № 5/2011 ([www.nanobuild.ru](http://www.nanobuild.ru)).

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).



## KINGDOM OF SPAIN EXPOSURE ON THE IV INTERNATIONAL FORUM ON NANOTECHNOLOGIES RUSNANOTECH'2011

In the context of bilateral project «The Year Russia–Spain'2011» exposure of Kingdom of Spain will be organized for the first time in Russia on the IV International Forum on nanotechnologies RUSNANOTECH'2011. The Forum will be held on 26–28 of October in «Expocentre», Moscow.



**ИСПАНИЯ**   
**ЭКСПОЗИЦИЯ** НА IV-М МЕЖДУНАРОДНОМ ФОРУМЕ  
**ПО НАНОТЕХНОЛОГИЯМ**  
**RUSNANOTECH'2011**   
 26~28 \ ОКТЯБРЯ \ МОСКВА \ ЦВК «ЭКСПОЦЕНТР»



## ИССЛЕДОВАНИЯ, РАЗРАБОТКИ, ПАТЕНТЫ

RESEARCHES, DEVELOPMENTS, PATENTS

УДК 69

**KUZMINA Vera Pavlovna**, Ph.D. in Engineering, Director of Open Company «COLORIT-МЕХАНОХИМИА», Russian Federation

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## APPLICATION OF NANOTITANIUM DIOXIDE IN CONSTRUCTION

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The analysis of the patent information about nanotitanium dioxide of different forms for application as modifying additive in producing facade finishing materials and coverings is given. Inventions can be applied in building technologies to produce nanomodified building paints, as well as finishing plaster mixtures on the basis of air and hydraulic binders, that will allow considerable change of exterior appearance of buildings facades and increasing of their durability due to expansion of manufacture of self-cleaning finishing coverings of a new class.

**Key words:** patent, invention, nanoadditives, nanomodified, nanotitanium dioxide, air-setting and hydraulic binders, finishing materials, finishing plaster mixtures, building paints, self-cleaning finishing coverings, exterior appearance, facades of buildings, durability.

**Dear colleagues!**

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

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5. Hiredmet SNC the Russian Federation, JSC.  
URL: <http://18215.ru.all-biz.info/>

***Contact information:***

**e-mail: [kuzminavp@yandex.ru](mailto:kuzminavp@yandex.ru)**



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.