

## **Prof. Gorin Dmitry**

### **CURRICULUM VITAE**

**Date of Birth:** October 13, 1975

**Place of Birth:** Saratov, Russia

**Citizenship:** Russian

**University address:** 83, Astrachanskaya Str., Nano- and Biomedical Technologies department, Saratov State University, 410012 Saratov, Russia

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#### **Research Interests**

Biophysics, Biophotonics, Theranostics, Physics and Chemistry of Colloids and Interfaces, Smart Materials

#### **Professional record**

**6.2011 – present:** Deputy Director of Institute of Nanostructures and Biosystems at Saratov State University, Head of Nanotechnology Department

**7.2011 – present:** Professor at Department of Nano- and Biomedical Technologies

**01.2009 - 08.2010:** PostDoc fellow in the Max Planck Institute of Colloids and Interfaces, Golm, Germany, Max Plank Society stipendium, group under Prof. Dr. H. Moehwald supervision).

**9.2008 – present:** Head of Joint Research Center of Technologies and Measurement of Nanostructures (Saratov State University Department of Nano- and Biomedical Technologies Queen Mary & Westfield College University of London School of Engineering and Material Sciences)

**10.2005 – 01.2009 & 09.2010- 09.2012:** Depute of Dean for Scientific Work of Nano- and Biomedical Technologies Department at Saratov State University



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**10.2005 – 06.2011:** Associate Professor (Docent), Nano- and Biomedical technologies department at Saratov State University

**04.2002 – 09.2005:** Senior Lecturer, Physical Department at Saratov State University

**01.2001 - 03.2002:** Assistant Professor, Physical Department at Saratov State University

Dmitry Gorin is author and co-author of 103 scientific publications including 60 articles in peer-reviewed journals (Q1&Q2, Web of Science - Sum of Times cited is 957, h-index is 17, Research ID: D-8324-2013), 1 book and 2 book chapter and 8 tutorials for students and PhD students, and co-inventor of 12 patents (11 in RF, 1 in China D. Gorin, J. Frueh, L. Dai, Q. He; Device for layer-by-layer deposition on templates in solution, Patent in China, ZL 2013 1 0737808.3).

Dmitry Gorin was promoter of **10 completed PhD theses** (Candidate of Science) and **2 Habilitation work** (Doctor of Science). Doctor of Science - Maria Antipina (2016 in Biophysics); Alexey Yashchenok (2017 in Biophysics). Candidates of Science: 1) Sergey Portnov (2009 in Biophysics); 2) Tatiana Kolesnikova (2010 in Biophysics); 3) Maria Lomova (2012 in Biophysics and Physical Chemistry, promotion together Dr. Maria Antipina ((IMRE, Singapore)); 4) Daniil Bratashov (2012 in Optics and Electronics); 5) Yulia Svenskaya (2013 in Biophysics); 6) Alexey Markin (2013 in Analytical Chemistry and Physical Chemistry) promotion together Prof. Tatiana Rusanova; 7) Dmitry Zayrskii (2013 Electronics and Materials Science) promotion together Prof. Vill Baiburin; 8) Sergey German (2016 in Biophysics); 9) Inna Stetsyura (2016 in Biophysics), 10) Alexandra Severuchina (2017 in Biophysics). Dmitry Gorin was a supervisor of 10 Master theses, 15 Bachelor and 35 Diploma theses. He is supervisor of 6 PhD Students now.

### **Academic Preparation and Education**

- 11.2012-10.2013** Diploma of Moscow School of Management SKOLKOVO program named “New Leader of High Education - 2012”, Moscow School of Management Skolkovo
- 10.2010** Doctor of Science, specialty: “Physical chemistry”  
Title of thesis: “Nanodimensional layers, core-shell structures, nanocomposite microcapsules and control over their physical chemistry properties” Saratov State University
- 12.2000** Candidate of Science (PhD), specialty: “Physical chemistry”  
Title of thesis: “The Modification Effect of the Langmuir-Blodgett based Polyamic Acid Salt on their Electrical and Optical Properties” Saratov State University
- 10. 1997-12 .2000** Postgraduate student at Saratov State University
- 09. 1992 –** Diploma in Physics ” Preparation and Exploration of the Polyamide

**06. 1997:** Langmuir – Blodgett Films” Saratov State University

Specialty: Materials and Components of Solid-State Electronics

**Scientific probation**

**02.10.04 – 22.12.04:** PostDoc fellow in the Max Planck Institute of Colloids and Interfaces, Golm, Germany (“Influence of microwave irradiation on composite polymer/nanoparticle microcapsules” Michail Lomonosov’s programm founded by DAAD (Germany) and the Russian Ministry of Education and Science (Referat 325, Number A/04/38409) group under Prof. Dr. H. Möhwald and Dr. G. Sukhorukov supervision).

**06.06.05 –30.09.05:** PostDoc fellow in the Max Planck Institute of Colloids and Interfaces, Golm, Germany („Development of multifunctional nanometallic particles by Sonoelectrochemistry” in the frames of EU projects „Selectnano“, group under Prof. Dr. H. Moehwald and Dr. G. Sukhorukov supervision).

**09.01.06 – 24.03.06:** PostDoc fellow in the Max Planck Institute of Colloids and Interfaces, Golm, Germany („Development of multifunctional nanometallic particles by Sonoelectrochemistry” in the frames of EU projects „Selectnano“, group under Prof. Dr. H. Moehwald and Dr. G. Sukhorukov supervision).

**17.10.06 – 14.11.06:** PostDoc fellow in the Max Planck Institute of Colloids and Interfaces, Golm, Germany«Remote (microwave) activated release from composite nanoparticle/polymer microcapsules. German-Russian cooperation project DFG 436 RUS 113/844/0-1 and RFBR (06-02-04009)» group under Prof. Dr. H. Moehwald supervision).

**04.01.07- 16.02.07:** PostDoc fellow in the Max Planck Institute of Colloids and Interfaces, Golm, Germany (in the frames of EU projects „Nanocaps“, group under Prof. Dr. H. Moehwald and Dr. G. Sukhorukov supervision).

**15.06.07 - 22.07.07:** PostDoc fellow in the Max Planck Institute of Colloids and Interfaces, Golm, Germany «Remote (microwave) activated release from composite nanoparticle/polymer microcapsules. German-Russian cooperation project DFG 436 RUS 113/844/0-1 and RFBR (06-02-04009)» group under Prof. Dr. H. Moehwald supervision).

**29.10.07 - 17.12.07:** PostDoc fellow in Queen Mary University of London, United Kingdom in frames of Joint Research Project Queen Mary University of London, United Kingdom – Saratov State University, Russian Federation financed by British Council (BRIDGE Project RC-10) Project Title: Fabrication and exploration of multifunctional microcontainers with remote controlling properties, Subject: Nanotechnologies

**03.02.08 - 03.03.08 *PostDoc fellow*** in the Max Planck Institute of Colloids and Interfaces, Golm, Germany «Remote (microwave) activated release from composite nanoparticle/polymer microcapsules. German-Russian cooperation project DFG 436

RUS 113/844/0-1 and RFBR (06-02-04009)» group under Prof. Dr. H. Moehwald supervision).

**08.10.08 - 29.10.08 *PostDoc fellow*** in Queen Mary University of London, United Kingdom in the frames of innovation project of Saratov State University financed by Russian Government

**14.01.09 - 23.08.10 *PostDoc fellow*** in the Max Planck Institute of Colloids and Interfaces, Golm, Germany, Max Plank Society stipendium, group under Prof. Dr. H. Moehwald supervision).

**22.02.11-22.03.11 *PostDoc fellow*** in the Max Planck Institute of Colloids and Interfaces, Golm, Germany, Max Plank Society stipendium, group under Prof. Dr. H. Moehwald supervision).

**05.05.11-10.05.11 *Visiting Scientist*** in the Ankara university (Turkey), in the frames of innovation project (National Research University) of Saratov State University financed by Russian Government

**07.06.11-06.07.11 *Visiting Scientist*** in the Max Planck Institute of Colloids and Interfaces, Golm, Germany, in the frames of innovation project (National Research University) of Saratov State University financed by Russian Government.

**30.01.12-29.02.12 *PostDoc fellow*** in the Max Planck Institute of Colloids and Interfaces, Golm, Germany, Max Plank Society stipendium, group under Prof. Dr. H. Moehwald supervision). **19.09.12-21.09.12 *Visiting Scientist*** in Queen Mary University of London, United Kingdom in frames of Joint Research Project Queen Mary University of London, United Kingdom – Saratov State University, Russian Federation financed by British Council. **07.11.12-06.12.12 *Visiting Scientist*** in the Max Planck Institute of Colloids and Interfaces, Golm, Germany, in the frames of innovation project (National Research University) of Saratov State University financed by Russian Government.

**01.05.13-20.05.13 *Visiting Scientist*** in the Max Planck Institute of Colloids and Interfaces, Golm, Germany, in the frames of innovation project (National Research University) of Saratov State University financed by Russian Government, **24.06.13-29.06.13 *Invited speaker***, Nanoscience and nanotechnology conference NanoTR9), Erzurum, Turkey, <http://www.nanotr9.org/davetli-konusmacilar-22.html>, **10.08.13-11.09.13 *Visiting Scientist***, Institute of Transfusion Medicine Charité Universitätsmedizin, Berlin, Germany supported by Marie Curie Actions— International Research Staff Exchange Scheme (IRSES)FP7 - PEOPLE - 2013 - IRSES (PI)Dual - Imaging Nano/Micro – sized Theranostics (against cancer) DNaMIT FP7 - PEOPLE - 2013 - IRSES (2013-2016), **11.11.13-22.11.13 *Visiting Scientist*** to the Chemistry Department of Bilkent University supported by TUBITAK through the 2221 Program

**08.05.14-13.05.14 *Visiting Scientist*** in the Ghent University, Ghent, Belgium, in the frames of innovation project (National Research University) of Saratov State University financed by Russian Government

### **Personal Grants and Awards**

Award of MAIK for the best series of papers (2004); Michail Lomonosov's fellowship (2004); Award of the Vladimir Potanin Foundation for young university lecturers (2007); Member of American Nano Society (2010); Certificate of Appreciation for valuable contribution and dedicated service in the peer review of manuscripts submitted to ACS Journals (2011), Member of American Chemical Society (2012), Award of Height – the best Professor of Saratov region (2016), Letter of Appreciation from Federal Inspector of Saratov Region (2016).

**2004** Research Fellowship in Max Planck Institute of Colloids and Interfaces ((2.10.04 - 22.12.04) Potsdam/Golm, Germany) under supervision of Dr. Gleb Sukhorukov by supporting Michail Lomonosov's programm founded by DAAD (Germany) and the Russian Ministry of Education and Science (Referat 325, Number A/04/38409 ) "Influence of microwave irradiation on composite polymer/nanoparticle microcapsules"

**2005** «Fabrication of nanodimensional planar films and microcapsule shell and investigation their physical properties» (**as head of scientific group**) (given by the Ministry of Education and Science of Russian Federation, Project №02.442.11.7183)

**2006** «Fabrication and investigation of physical properties of nanocomposite micro- and nanostructures» (**as head of scientific group**) (given by the Ministry of Education and Science of Russian Federation, Project №02.442.11.7249)

**2007** «Functionalized nanoparticles with control over plasmon resonance and polyelectrolyte microcapsules with nanoparticles in the shell» (**as head of scientific group**) (given by the Ministry of Education and Science of Russian Federation, Project №02.513.11.3043)

**2007** «Fabrication and exploration of multifunctional microcontainers with remote controlling properties» BRIDGE Research Co-operation project - RC10 between Queen Mary University of London (Prof. Gleb Sukhorukov is **UK Principal Researcher**) and Saratov State University (Dr. Dmitry Gorin is **Russia Principal Researcher**) given by British Council.

**2009-2011** Functionalization of emulsion disperse phase surface by inorganic nanoparticles RFBR (Russian Foundation of Basis Research) project 09-03-00245-a (**Principal Researcher**)

**2009-2010** Morphology, technological conditions and external exposure influences to dielectric and magnetic properties of nanocomposites RFBR (Russian Foundation of Basis Research) project 10-08-91219-CT\_a (**Researcher**)

**2011-2012** The synthesis of multifunctional nanocomposite structures with possible adaptation of their physical properties under ionizing and laser irradiations **RFBR project 11-08-12058-ofi-m-2011(Principal Researcher)**

**2012** «Smart Nanocomposite Scaffold for Tissue Engineering», BRIDGE Research Co-operation project between Queen Mary University of London (Dr. Andrey Sapelkin is **UK PI**) and Saratov State University (Prof. Dmitry Gorin is **Russia PI**) given by British Council.

**2013-2014** Remote controlled nanostructured materials containing biosensors and encapsulated bioactive substances **RFBR project 12-03-33088 (Principal Researcher)**

**2013-2016** Grant EC, Marie Curie Actions— International Research Staff Exchange Scheme (IRSES)FP7 - PEOPLE - 2013 - IRSES (PI)Dual - Imaging Nano/Micro – sized Theranostics (against cancer) DNaMIT FP7 - PEOPLE - 2013 - IRSES (2013-2016)- PIRSES-GA-2013-612673 **PI from Russian side**

**2014-2016** Grant of Government of the Russian Federation (No.14.Z50.31.0004 to support scientific research projects implemented under the supervision of leading scientists at Russian institutions and Russian institutions of higher education) **PI from Saratov State University**, Supervisor and leading scientist is Prof. G.B. Sukhorukov.

**2014-2016** – Study of charge transfer and adsorption and photoluminescence spectra in ordered systems “nanoparticle in organic matrix” and development of physical and technical basis for creation molecular electronics circuitry, Russian Scientific Foundation, №14-12-00275 (**Principal Researcher**)

**2015-2017** SERS platform based on inorganic porous particles decorated by plasmonic nanoparticles, as sensor systems for intracellular studies, **RFBR project 15-29-01172 (Principal Researcher)**

### **Professional Activities**

**Reviewer:** Scientific Reports, ACS NANO, Advanced Functional Materials, Soft Matter, Langmuir, RSC Advance, Colloids and Surface B, Colloids and Surface A, Current Opinion in Pharmacology, ACS Appl. Mater. Interfaces, J. Phys. Chem, PCCP, Small, Nanoscale, Nanoresearch, Materials Chemistry and Physics, Colloid Journal, Polymer Science, Journal of Optics and Spectroscopy, Quantum Electronics. Guest Editor of special issue of BioNanoScience <http://link.springer.com/journal/12668>

In 2013, he took part as candidate in the election of rector of Saratov State University. In same year, he has received offer for vice rector for Science and Research of Saratov State university.

**Organizer of the following conference and school:**

- 1) I International workshop "NANOPARTICLES, NANOSTRUCTURED COATINGS AND MICROCONTAINERS: TECHNOLOGY, PROPERTIES, APPLICATIONS" (2007, London, UK) <http://nanoworkshop.sgu.ru/index.php/history/6-2007-2>
- 2) II International workshop "NANOPARTICLES, NANOSTRUCTURED COATINGS AND MICROCONTAINERS: TECHNOLOGY, PROPERTIES, APPLICATIONS" (2009, Saratov, Russia) <http://nanoworkshop.sgu.ru/index.php/history/7-2007-3>
- 3) III International workshop "NANOPARTICLES, NANOSTRUCTURED COATINGS AND MICROCONTAINERS: TECHNOLOGY, PROPERTIES, APPLICATIONS" (2011, Anatlia, Turkey) <http://nanoworkshop.sgu.ru/index.php/history/3-2011>
- 4) IV International workshop "NANOPARTICLES, NANOSTRUCTURED COATINGS AND MICROCONTAINERS: TECHNOLOGY, PROPERTIES, APPLICATIONS" (2013, Golm/Potsdam, Germany) <http://nanoworkshop.sgu.ru/index.php/history/8-2013>
- 5) V International workshop "NANOPARTICLES, NANOSTRUCTURED COATINGS AND MICROCONTAINERS: TECHNOLOGY, PROPERTIES, APPLICATIONS" (2014, Ghent, Belgium) <http://nanoworkshop.sgu.ru/index.php/history/10-2014>
- 6) VI International workshop "NANOPARTICLES, NANOSTRUCTURED COATINGS AND MICROCONTAINERS: TECHNOLOGY, PROPERTIES, APPLICATIONS" (2015, Saratov, Russia) <http://nanoworkshop.sgu.ru/index.php/history/11-2015>
- 7) 1th International school "NANOSTRUCTURED MATERIALS" (2015, Saratov, Russia) <http://nanoworkshop.sgu.ru/index.php/history/12-2015-2>
- 8) VII International workshop "NANOPARTICLES, NANOSTRUCTURED COATINGS AND MICROCONTAINERS: TECHNOLOGY, PROPERTIES, APPLICATIONS" (2016, Tomsk, Russia) <http://nano2016.tpu.ru/>
- 9) 2th International school "NANOSTRUCTURED MATERIALS" (2016, Tomsk, Russia) <http://nanoworkshop.sgu.ru/index.php/history/12-2015-2>  
<http://nano2016.tpu.ru/>

**Selected Publications:**

1. Voronin, D. V., Sindeeva, O. A., Kurochkin, M. A., Mayorova, O., Fedosov, I. V., Semyachkina-Glushkovskaya, O.B., Gorin, D.A., Tuchin, V.V., Sukhorukov, G. B. In Vitro and in Vivo Visualization and Trapping of Fluorescent Magnetic Microcapsules in a Bloodstream, **ACS Applied Materials & Interfaces**, **2017**, **9**, **6885-6893**
2. A.N.Severyukhina, N.V.Petrova, A.M.Yashchenok, D.N.Bratashov, K.Smuda, I.A.Mamonova, N.A.Yurasov, D.M.Puchinyan, R.Georgieva, H.Bäumler, A.Lapanje, D. Gorin, Light-induced antibacterial activity of electrospun chitosan-based material containing photosensitizer, **Materials Science & Engineering C**, **2017**, **70**, **311-316**
3. M.S. Savelyeva, A.A. Abalymov, G.P. Lyubun, I.V. Vidyasheva, A. M. Yashchenok, T. E. L. Douglas, D. A. Gorin, B.V. Parakhonskiy, Vaterite coatings on electrospun polymeric fibers for biomedical applications, **Journal of Biomedical Materials Research Part A**, **2017**, **105(1)**, **94-103**.

4. S.V. German, D.N. Bratashov, N.A. Navolokin, A.A. Kozlova, M.V.Lomova, M.V.Novoselova, E.A.Burilova, V.V.Zyev, B.N.Khlebtsov, R.R.Amirov, A.B.Bucharskaya, G.S.Terentyuk, G.N. Maslyakova, G.B. Sukhorukov, D.A. Gorin, In vitro and in vivo MRI visualization of nanocomposite biodegradable microcapsules with tunable contrast, **Phys. Chem. Chem. Phys.**, **2016**, **18**, **32238-32246**
5. A.S. Timin, K.V. Lepik, A.R. Muslimov, D.A. Gorin, B.V. Afanasyev, G.B. Sukhorukov, Intracellular redox induced drug release in cancerous and mesenchymal stem cells, **Colloids and Surfaces B: Biointerfaces**, **2016**, **147**, **2016**, **450-458**
6. A. S. Timin, H. Gao, D. V. Voronin, D. A. Gorin, G.B. Sukhorukov, Inorganic/Organic Multilayer Capsule Composition for Improved Functionality and External Triggering, **Adv. Mater. Interfaces**, **2016**, **1600338- 1600338**
7. Yu. I. Svenskaya, A.M. Pavlov, D.A. Gorin, D.J. Gould, B.V., Parakhonskiy, G.B. Sukhorukov Photodynamic therapy platform based on localized delivery of photosensitizer by vaterite submicron particles, **Colloids and Surfaces B: Biointerfaces**, **2016**, **146**, **171-179**
8. E. A. Genina, Y. I. Svenskaya, I.Yu. Yanina, L.E. Dolotov, N.A. Navolokin, A.N. Bashkatov, G. S. Terentyuk, A.B. Bucharskaya, G.N. Maslyakova, D.A. Gorin, V.V. Tuchin, G.B. Sukhorukov, In vivo optical monitoring of transcutaneous delivery of calcium carbonate microcontainers, **2016**, **Biomed. Opt. Express**, **7(6)**, **2082-2087**
9. A.N. Severyukhina, N.V. Petrova, K. Smuda, G.S. Terentyuk, B.N. Klebtsov, R. Georgieva, H. Bäuml, D.A. Gorin, Photosensitizer-loaded electrospun chitosan-based scaffolds for photodynamic therapy and tissue engineering, **Colloids and Surface B: Biointerfaces**, **2016**, **144**, **57-64**
10. A. M. Yashchenok, J.Jose, P. Trochet, G. B. Sukhorukov, D. A. Gorin Multifunctional polyelectrolyte microcapsules as a contrast agent for photoacoustic imaging in blood, **J. Biophotonics**, **1-8 (2016) / DOI 10.1002/jbio.201500293**
11. V. F. Korolovych, O. A. Grishina, O. A. Inozemtseva, A. V. Selifonov, D. N. Bratashov, S. G. Suchkov, L. A. Bulavin, O. E. Glukhova, G. B. Sukhorukov, D. A. Gorin, Impact of high-frequency ultrasound on nanocomposite microcapsules: in silico and in situ visualization, **Phys. Chem. Chem. Phys.**, **2016**, **18**, **2389-2397**
12. A. N. Severyukhina, B.V. Parakhonskiy, E.S. Prikhozhenko, D.A. Gorin, G.B. Sukhorukov, H.Möhwald, A.M.Yashchenok, Nanoplasmonic Chitosan Nanofibers as Effective SERS Substrate for Detection of Small Molecules, **ACS Appl. Mater. Interfaces** **2015**, **7**, **15466-15473**
13. S.V. German, N.A. Navolokin, N.R. Kuznetsova, V.V. Zuev, O.A. Inozemtseva, A.A. Anis'kov, E.K. Volkova, A.B. Bucharskaya, G.N. Maslyakova, R.F. Fakhrullin, G.S. Terentyuk, E.L. Vodovozova, D.A. Gorin, Liposomes loaded with hydrophilic magnetite nanoparticles: Preparation and application as contrast agents for magnetic resonance imaging, **2015**, **Colloids and Surfaces B: Biointerfaces**, **135**, **109-115**
14. A.S. Sergeeva, E. K. Volkova, D. N. Bratashova, M.I. Shishkin, V. S. Atkina, A.V. Markina, A. A. Skaptsova, D.V. Volodkin, D. A. Gorin, Layer-by-layer assembled highly absorbing hundred-layer films containing a phthalocyanine dye: Fabrication and photosensibilization by thermal treatment, **Thin Solid Films**, **2015**, **583**, **60-69**
15. M. V. Lomova, A.I. Brichkina, M.V. Kiryukhin, E. N. Vasina, A. M. Pavlov, D. A. Gorin, G.B. Sukhorukov, M. N. Antipina, Multilayer Capsules of Bovine Serum Albumin and Tannic Acid for Controlled Release by Enzymatic Degradation, **ACS Appl. Mater. Interfaces**, **2015**, **7**, **11732-11740**
16. O.A. Inozemtseva, A.N. Severuchina, I.V. Vidyasheva, N.V. Petrova, H.A. Metwally, I.Y. Stetciura, D. A. Gorin, Electrospinning of functional materials for biomedicine and tissue engineering, **RUSS CHEM REV**, **2015**, **84 (3)**, **251-274**
17. I.Y. Stetciura, A.Yashchenok, A. Masic, E.V. Lyubin, O.A. Inozemtseva, M.G. Drozdova, E. A. Markvichova, B.N. Khlebtsov, A.A. Fedyanin, G.B. Sukhorukov, D.A. Gorin, D.Volodkin,



- Composite SERS-based satellites navigated by optical tweezers for single cell analysis, **Analyst**, **2015**, **140**, **4981–4986**
18. A. Yashchenok, A. Masic, D. Gorin, O. Inozemtseva, B. S. Shim, N. Kotov, A. Skirtach, H. Moehwald, Optical Heating and Temperature Determination of Core–Shell Gold Nanoparticles and Single-Walled Carbon Nanotube Microparticles, **Small** **2015**, **11**, **1320–1327**
  19. I.Y. Stetsiura, A.V. Markin, D.N. Bratashov, G.B. Sukhorukov, D.A. Gorin, Nanoencapsulated and microencapsulated SERS platforms for biomedical analysis, **Current Opinion in Pharmacology**, **2014**, **18**, **149–158**
  20. B.V. Parakhonskiy, Yu.I. Svenskaya, A.M. Yashchenok, H.A. Fattah, O.A. Inozemtseva, F. Tessarolo, R. Antolini, D.A. Gorin, Size controlled hydroxyapatite and calcium carbonate particles: synthesis and their application as templates for SERS platform, **Colloids and Surface B: Biointerfaces**, **2014**, **118**, **243–248**
  21. Malyar I.V., Gorin D.A., Santer S., Stetsyura S.V. Photocontrolled Adsorption of Polyelectrolyte Molecules on a Silicon Substrate, **2013**, **Langmuir**, **29** (52), **16058–16065**
  22. Svenskaya Yu., Parakhonskiy B., Haase A., Atkin V., Lukyanets E., Gorin D., Antolini R.. Anticancer drug delivery system based on calcium carbonate particles loaded with a photosensitizers, **Biophysical Chemistry**, **2013**, **182**, **11–15**.
  23. Stetsyura I.Y., Markin A.V., Ponomarev A.N., Yakimansky A.V., Demina T.S., Grandfils C., Volodkin D.V., Gorin D.A. New Surface-Enhanced Raman Scattering Platforms: Composite Calcium Carbonate Microspheres Coated with Astralen and Silver Nanoparticles, **Langmuir**, **2013**, **29** (12), **4140–4147**.
  24. Yashchenok, A., Masic, A., Gorin, D., Shim, B. S., Kotov, N. A., Fratzl, P., Möhwald, H. and Skirtach, A. (2013), Nanoengineered Colloidal Probes for Raman-based Detection of Biomolecules inside Living Cells, **Small**, **2013**, **9** (3), **351–356**
  25. D. Voronin, D. Borisova, V. Belova, D.A. Gorin and D.G. Shchukin. Effect of surface functionalization of metal wire on electrophysical properties of inductive elements, **Langmuir**, **2012**, **28**, **12275–12281**.
  26. Kolesnikova T.A., Akchurin Ga.G., Portnov S.A., Khomutov G.B., Akchurin Ge.G., Naumova O.G., Sukhorukov G.B., Gorin D.A. Visualization of magnetic microcapsules in liquid by optical coherent tomography and control of their arrangement via external magnetic field, **Laser Physics Letters**, **2012**, **9**, **643–648**.
  27. Ilker Dincer, Onur Tozkoparan, Sergey V.German, Alexey V. Markin, Oguz Yildirim, Gennady B. Khomutov, Dmitry A. Gorin, Sergey B. Wenig and Yalcin Elerman. Effect of layer number on the magnetic properties of iron oxide nanoparticle/polyelectrolyte LbL assemblies, **Journal of Magnetism and Magnetic Materials** **2012**, **324**, **2958–2963**.
  28. V. Belova, D.G. Shchukin, D.A. Gorin, A. Kopyshchev, H. Möhwald, A new approach to nucleation of cavitation bubbles at chemically modified surfaces, **Phys. Chem. Chem. Phys.**, **2011**, **13**, **8015–8023**
  29. D. N. Bratashov, A. Masic, A. M. Yashchenok, M. F. Bedard, O. A. Inozemtseva, D. A. Gorin, T. Basova, T. K. Sievers, G. B. Sukhorukov, M. Winterhalter, H. Moehwald, A. G. Skirtach, Raman imaging and photodegradation study of phthalocyanine containing microcapsules and coated particles, **Journal of Raman Spectroscopy**, **2011**, **42**, **1901–1907**
  30. V. Belova, D.A.Gorin, D. G. Shchukin, H. Möhwald, Ultrasonic selective cavitation at patterned hydrophobic surfaces, **Angew. Chem. Int. Ed**, **2010**, **49**, **7129–713**
  31. A.M. Yashchenok, D. N. Bratashov, D.A. Gorin, M.V. Lomova, A.M. Pavlov, A.V. Sapelkin, B.S. Shim, G.B. Khomutov, N.A. Kotov, G.B. Sukhorukov, H.Moehwald, A.G. Skirtach Carbon Nanotubes on Polymeric Microcapsules: Free-Standing Structures and Point-wise Laser Opening, **Advanced Functional Materials**, **2010**, **18**, **3136–3142**
  32. A. M. Yashchenok, D. A. Gorin, M. Badylevich, A. A. Serdobintsev, M. Bedard, Y. G. Fedorenko, G. B. Khomutov, D. O. Grigoriev, H.Moehwald, Impact of magnetite

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