

**ALBERT G. NASIBULIN**

Ph.D., Dr.Sc., Professor

Professor of Russian Academy of Sciences

**Personal Information**

**Birth date:** March 23, 1972  
**Birthplace:** Novokuznetsk, Kemerovo Region, Russia  
**Civil status:** Married, four children

**Addresses**

**Office:** Skolkovo Institute of Science and Technology  
Nobel str. 3, Moscow  
143026, RUSSIA  
**E-mail:** [a.nasibulin@skoltech.ru](mailto:a.nasibulin@skoltech.ru)

**Education**

08.07.2011 Doctor of Science (the highest scientific degree in Russia, habilitation) (specialization: Powder Metallurgy and Composite Materials): “Development of technologies of nanoparticle and carbon nanotube synthesis by chemical vapor deposition method” Saint-Petersburg Technical State University, Russia.  
06.12.1996 Ph.D. in Physical Chemistry (specialization: Physical Chemistry): “Binary nucleation of supersaturated glycerine vapour in the vicinity of the phase transition lines” Kemerovo State University, Russia.  
28.06.1994 M.S. in Chemistry (specialization: Solid State Chemistry): “Kinetic analysis of oscillatory decomposition of silver azide ( $\text{AgN}_3$ ) under photolysis and radiolysis” Kemerovo State University, Russia.

**Scientific interests**

- Synthesis of nanomaterials such as nanoparticles, carbon nanotubes, graphene structures, metal oxide nanowires by aerosol and substrate CVD synthesis methods.
- Kinetic and mechanistic investigations of the nanomaterial growth.
- Applications of electrically conductive, transparent, flexible and stretchable carbon nanotube films in electronics and electrochemical applications (photovoltaic devices, supercapacitors and OLEDs).

**Professional experience**

2014 - present: Professor at Skolkovo Institute of Science and Technology, Moscow, Russia.  
2007 - present: Adjunct Professor, Department of Applied Physics, Aalto University School of Science, Espoo, Finland.  
2017 - present: CEO, CryptoChemistry Ltd. (Spin-off from Skolkovo Institute of Science and Technology), Moscow, Russia.  
2018 - present: CEO, NovaPront 3D. (Spin-off from Skolkovo Institute of Science and Technology), Moscow, Russia.  
2004 - present: Chief Scientist/Consultant (Co-founder. Board member 2004-2009. Technical Advisory Board member), Canatu Ltd. (Spin-off from Helsinki University of Technology), Helsinki, Finland.  
2003 - 2014: Deputy Manager of NanoMaterials Group, Senior Research Scientist, Department of Applied Physics, Aalto University School of Science, Espoo, Finland.

2006 - 2011:	Academy Research Fellow, Academy of Finland.
1999 - 2002:	Senior Research Scientist at Aerosol Technology Group, VTT Chemical Technology (VTT Processes), Finland;
1998:	Senior Teacher at Physical Chemistry Department, Kemerovo State University, Russia;
1995 - 1998:	Senior Researcher (Researcher until 06.12.1996) at Aerosol Nucleation Lab. of the Siberian Branch of the Russian Academy of the Sciences at Kemerovo State University, Russia;
1994 - 1997:	Post Graduate student at the Kemerovo Scientific Centre of the Siberian Branch of the Russian Academy of Sciences, Russia;
1994 - 1995:	Junior Research Fellow at Aerosol Lab. of the Kemerovo Scientific Centre of the Siberian Branch of the Russian Academy of Sciences, Russia.

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### Languages

*Russian*: native language;  
*Bashkirian*: mother tongue;  
*English*: fluent;  
*Finnish*: intermediate knowledge (B1).

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### Professional activities

#### An external expert

- Jury member for Startup village, May 2018.
- Expert member for Rusnano award “RUSNANOPRIZE”, August 2017.
- Expert of the foundation of innovation promotion, since May 2017
- Expert of Russian Foundation for Basic Research, since March, 2016.
- Umnik. Expert: 2015, 2016, 2017.
- Expert of Skolkovo Foundation. Since September, 2015.
- EU proposals project evaluator for Euro-Mediterranean countries. “ERANETMED Renewable Energies”. August, 2015.
- The Estonian Research Council. Project evaluator. Septemebr, 2015.
- Executive Agency for Higher Education, Research, Development and Innovation Funding ([www.uefiscdi.gov.ro](http://www.uefiscdi.gov.ro)). Joint Research Projects undertaken by researchers from Romania and EFTA States (Norway, Iceland and Liechtenstein). April-May, 2014.
- The Czech-Norwegian Research Programme (CZ09) in the framework of Bilateral Research Cooperation. April-May, 2014.
- Academia Europaea Prizes for Young Russian Scientists, evaluator. June 2013.
- U.S. Department of Energy, Office of Science, project evaluator, June 2013.
- Norwegian-Estonian Research Cooperation Programme. Project evaluator, May-July, 2013.
- Kemerovo State University for examination of the project "Development of innovative infrastructure at universities", \$5.000.000 project June, 2011.
- Estonian Science Foundation. Project evaluator, November, 2007.

#### An official opponent of a PhD dissertation:

- 2012, January 29: Jevgeni Šulga. "Self-assembly and interaction of nanostructures". Institute of Physics, University of Tartu. Estonia.
- 2015, February 24: Vladislav Kondrashov "Synthesis of graphene structures as self-aligned elements in micro- and nanoelectronics". National Research University of Electronic Technology, Zelenograd, Russia.
- 2015, June 25: Jhih-Fong Lin “Multi-dimensional carbonaceous composites for electrode applications”. University of Oulu.

- 2016, January 27: Dmitry V. Krasnikov "Active center formation in catalyst for the synthesis of multiwalled carbon nanotube with controlled properties". Boreskov Institute of Catalysts of Siberian Branch of Russian Academy of Sciences.
- 2016, October 21: Sergey A. Urvanov "Modification of carbon fiber surface by carbon nanostructures". Moscow State University. Chemical Department.
- 2016, December 8: Muratov, Dmitry S. "Development of methods for the creation and study of the characteristics of functional polymer coatings on the surface of oxide and nitride nanoparticles" Tambov State polytechnical University. Tambov, Russia.
- 2016 December 20: Fedorov, Irog V.: "Research and development of photoelectric detection devices based on supramolecular self-assembled structures of cyanine dyes" National Research University of Electronic Technology, Zelenograd, Russia.
- 2016, December 22: Andrey Orekhov "Electron Microscopy Study of Structural Peculiarities of Carbon Materials" University of Eastern Finland, Joensuu, Finland.
- 2018, April 11: Kirill V. Mironovich "Growth mechanisms, structural and functional properties of plasmichemically deposited nanostructured graphine-film films" Physics. Moscow State University. Specialty: 01.04.15 - Physics and technology of nanostructures, atomic and molecular physics.

**An external pre-examiner of PhD dissertations:**

- 2007: Helmi Keskinen "Synthesis of nanoparticles and preparation of deposits by liquid flame spray" for the degree of Doctor of Technology at Tampere University of Technology;
- 2010: Antti Tolvanen " Atomic scale engineering of carbon nanotubes", for the PhD degree at the Department of Physics, University of Helsinki.
- 2013: Manoko Maubane "Nickel and copper catalysed synthesis of novel carbon fibers". University of the Witwatersrand, Johannesburg, South Africa.
- 2015: Anne-Riikka Rautio "On the stability of carbon nanotube and titania nanowire based catalyst materials: from synthesis to applications". Oulu University. Finland.
- 2015: Jarno Ruusunen "Studies of nanoparticle synthesis and physico-chemical properties of aerosols", Faculty of Science and Forestry. University of Eastern, Finland.
- 2016: Tommi Isoniemi "Optical Properties of Conductive Carbon-Based Nanomaterials". Faculty of Mathematics and Science of the University of Jyväskylä.
- 2017: Sami Sainio "Carbon based hybrid nanomaterials for electrochemical detection of neurotransmitters". Aalto University Electrical Engineering School.
- 2017: Feruza Tuyakova "Carbon nanomaterials tailored for particular applications" University of Eastern Finland, Joensuu, Finland.
- 2018: Onkar Shinde "Study of selected processes in solar cell fabrication for reducing input energy." Doctor of Philosophy (Ph.D.) In Electronic Science. Department of Electronic Science. Savitribai Phule Pune University Pune, India.
- 2018: Rashad Hajimammadov "Plasmonic, electrical and catalytic properties of one- dimensional copper nanowires: Effect of native oxides". Faculty of Information Technology and Electrical Engineering. University of Oulu.

**A chairman** of III International Workshop on Electromagnetic Properties of Novel Materials. December 18-21, 2018, Moscow, Skolkovo Innovation Center, Russia. (130 participants).

**A chairman of National Committee of NT13:** Fourteenth International Conference on the Science and Application of Nanotubes. Aalto University, Espoo, Finland, June 24-28, 2013. (450 participants).

**A co-chairman of the 2nd Nanocarbon Composites Symposium (NCC2013):** Aalto University and Tallinn University of Technology, Tallinn, Finland, June 29-30, 2013. (around 150 participants).

**A chairman** of 14th International Workshop on New Approaches to High-Tech: Nano-Design, Technology, Computer Simulations (NDTCS-2011) August 22-26, 2011, Espoo, Finland. (65 participants).

A **visiting editor** of journal *Materials Physics and Mechanics* to publish selected scientific papers of 14<sup>th</sup> International Workshop on New Approaches to High-Tech: Nano-Design, Technology, Computer Simulations (NDTCS-2011).

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### Supervision of PhD dissertations

I have been a supervisor of 1 Doctor of Science, 10 PhD and 13 MS theses. I supervised 14 BS thesis and 8 mini M.S. theses (special assignment) in Physics. At the moment, I supervise 11 PhD students.

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### Awards

- April, 2018: Professor of Russian Academy of Sciences.
  - June, 2017: The Best Professor of SkolTech “Teaching activities”.
  - September, 2011: *Smoluchowski award* for the contribution to field of "Aerosol synthesis and mechanistic investigations of carbon nanotubes" at European Aerosol Conference in Manchester, UK.
  - September, 2010: FAAR (Finnish Association for Aerosol Research) awarded for Excellent work in Aerosol Science at International Aerosol Conference in Helsinki, Finland.
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### Conference presentations and seminars

The results of the scientific research were personally presented mainly orally at many International Conferences, Symposiums, and Congresses: 4 plenary presentations, 4 tutorial lectures, 37 invited talks, 42 oral presentations and 48 seminars at various universities and institutions.

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### Publication summary

Co-author of more than 230 peer-reviewed publications in scientific journals including *Nature Nanotechnology* (2), *Nature Communications* (1), *Nano Letters* (4), *ACS Nano* (4), *Angewandte Chemie* (3), *Advanced Materials* (1), *Journal of American Chemical Society* (3), *Scientific reports* (1), *Physics Review Letters* (1), *Nano Research* (6), *Small* (2), *Chemistry of Materials* and others. 23 patent applications have been filed on. Co-author of more than 260 unrefereed publications and conference proceedings and abstracts.

[Google scholar](#): H-index 48; citations 8880. [Scopus](#): H-index: 42; citations 6570. (12.02.2018)

## LIST OF PUBLICATIONS:

### *Articles in refereed journals:*

1. M. P. Anisimov, A. G. Nasibulin, and S. D. Shandakov (1996) Nucleation of a glycerine supersaturated vapour in a vicinity of a melting point. *Atmospheric and Oceanic Optics*. **9**(6), 548-554.
2. M. P. Anisimov, A. G. Nasibulin, S. D. Shandakov, I. I. Shvets, L. V. Timoshina (1996) Folds of the nucleation rate surface illustrated with the n-pentanol – argon system. *Atmospheric and Oceanic Optics*. **9**(12), 997-1004.
3. M. P. Anisimov, S. D. Shandakov, I. I. Shvets, A. G. Nasibulin, and L. V. Timoshina (1997) Nucleation in a system of n-pentanol-sulphur hexafluoride as an example of nonequilibrium phase transition. *Atmospheric and Oceanic Optics*. **10**(1), 1-4.
4. M. P. Anisimov, A. G. Nasibulin, L. V. Timoshina (1997) Empirical determination of the critical nuclei composition in the vicinity of glycerin melting point. *Atmospheric and Oceanic Optics*. **10**(2), 84-88.
5. M. P. Anisimov, A. G. Nasibulin, L. V. Timoshina (1997) Binary nucleation in a system glycerine - sulphur hexafluoride in the vicinity of line of phase transitions. *Colloid Journal*. **59**(4), 450-459.
6. M. P. Anisimov and A. G. Nasibulin (1997) Binary Nucleation in the Vicinity of the Critical Line of the Dibutyl Phthalate–Sulfur Hexafluoride Model System *Doklady Earth Sciences*, **356**(1–4), 1061-1063.
7. M. P. Anisimov, J. A. Koropchak, A. G. Nasibulin, L. V. Timoshina (1998) Critical embryo phase transitions in nucleated binary glycerin - carbon dioxide system. *J. Chem. Phys.* **109**(22), 10004-10010.
8. M. P. Anisimov, A. G. Nasibulin, and L. V. Timoshina (1998) Binary Nucleation in the Vicinity of Phase Transition Lines in the Condensed Phase. *Doklady Physical Chemistry*. **361**(4–6), 249-251.
9. M. P. Anisimov, A. G. Nasibulin, and S. D. Shandakov (2000), Experimental detection of nucleation rate surface singularity *J. Chem. Phys.* **112**(5) 2348-2354.
10. M. P. Anisimov, S. D. Shandakov, A. G. Nasibulin, Yu. I. Polygalov (2000) Possible rout of the investigation of decomposition and formation rates of methane-hydrate embryos. *Chemistry for Sustainable Development* **8**(3), 465-475.
11. M. P. Anisimov, J. A. Koropchak, A. G. Nasibulin, and L. V. Timoshina (2000) 1,2-propanediol and 1,3-propanediol homogeneous nucleation rates and phase transitions in the new phase critical embryos. *J. Chem. Phys.* **112**(22), 9917-9928.
12. M. P. Anisimov, A. G. Nasibulin, S. D. Shandakov, and I. N. Shaimordanov (2001) Experimental Determination of the Surface Energy of Critical Nuclei During the Nucleation of Supersaturated Vapor. *Colloid Journal* **63**(2), 131-136.
13. T. Seto, O. Shinozaki, K. Saito, E. Shinoyama, C.-S. Kim, K. Okuyama, E. I. Kauppinen, A. Nasibulin. (2001) Charging State and Micro Structure of Nanoparticles in Diesel Exhaust Gas, *Transactions of the Society of Automotive Engineers of Japan (Jidousha Gijutsukai (JSAE) Ronbunshu)*, **32**(1), 47-52.
14. A. G. Nasibulin, P. P. Ahonen, O. Richard, E. I. Kauppinen, I. S. Altman (2001) Copper and Copper Oxide Nanoparticle Formation by Chemical Vapor Nucleation from Copper (II) Acetylacetonate. *J. Nanoparticle Res.* **3**(5-6), 383-398.
15. A. G. Nasibulin, E. I. Kauppinen, D. P. Brown, J. K. Jokiniemi (2001) Nanoparticle Formation via Copper (II) Acetylacetonate Vapor Decomposition in the Presence of Hydrogen and Water. *J. Phys. Chem. B*, **105**(45), 11067-11075.
16. A. G. Nasibulin, O. Richard, E. I. Kauppinen, D. P. Brown, J. K. Jokiniemi, I. S. Altman (2002) Nanoparticle Production by Copper (II) Acetylacetonate Vapor Decomposition – The Effect of Carrier Gas Oxygen Concentration. *Aerosol Sci. Tech.* **36**(8), 899-911.
17. V. Ya. Rudyak, S. L. Krasnolutskii, A. G. Nasibulin, E. I. Kauppinen (2002) Methods of Measuring the Diffusion Coefficient and Sizes of Nanoparticles in a Rarefied Gas. *Doklady Physics* **47**(10), 758-761.

18. A. G. Nasibulin, E. I. Kauppinen, B. A. Thomson, J. Fernandez de la Mora (2002) TEM Imaging of Mass-selected Polymer Molecules. *Journal of Nanoparticle Research*, **4**(5), 449-453.
19. A. G. Nasibulin, I. S. Altman, E. I. Kauppinen (2003) Semiempirical dynamic phase diagrams of nanocrystalline products during copper (II) acetylacetonate vapour decomposition. *Chemical Physics Letters*, **367**(5-6), 771-777.
20. I. S. Altman, P. V. Pikhitsa, M. Choi, A. G. Nasibulin, and E. I. Kauppinen (2003) Zero-phonon lines in the photoluminescence spectra of MgO:Mn<sup>2+</sup> nanocrystals. *Physical Review B* **68**, 125324-1 – 125324-6.
21. A. Moisala, A. G. Nasibulin, E. I. Kauppinen (2003) The role of metal nanoparticles in the catalytic production of single-walled carbon nanotubes – A review. *Journal of Physics: Condensed Matter* **15**(42), 3011-3035.
22. A. G. Nasibulin, A. Moisala, D. P. Brown, E. I. Kauppinen (2003) Carbon nanotubes and onions from carbon monoxide using Ni(acac)<sub>2</sub> and Cu(acac)<sub>2</sub> as catalyst precursors. *Carbon*. **41**(14), 2711-2724.
23. E. G. Rakov, D. A. Grishin, Yu. V. Gavrilov, E. V. Rakova, A. G. Nasibulin, H. Jiang, E. I. Kauppinen (2004) The Morphology of Pyrolytic Carbon Nanotubes with a Small Number of Walls. *Russian Journal of Phys. Chem.* **78**(12), 1966-1971.
24. A. G. Nasibulin, L. I. Shurigina, E. I. Kauppinen (2005) Synthesis of nanoparticles by copper (II) acetylacetonate vapour decomposition. *Colloid Journal* **67**(1) 1-21.
25. A. G. Nasibulin, A. Moisala, D. P. Brown, H. Jiang, E. I. Kauppinen (2005) A novel aerosol method for single walled carbon nanotube synthesis. *Chemical Physics Letters*, **402**(1-3) 227-232.
26. S. D. Shandakov, A. G. Nasibulin, E. I. Kauppinen (2005) Phenomenological description of mobility of nm- and sub nm-sized charged aerosol particles in electric field. *Journal of Aerosol Science*, **36**(9), 1125-1143.
27. A. Moisala, A. G. Nasibulin, S. D. Shandakov, H. Jiang and E. I. Kauppinen (2005) On-line detection of single-walled carbon nanotube formation during aerosol synthesis method. *Carbon* **43**, 2066-2074.
28. A. G. Nasibulin, P. V. Pikhitsa, H. Jiang, E. I. Kauppinen (2005) Correlation between catalyst particle and single-walled carbon nanotube diameters. *Carbon*. **43**(11), 2251-2257.
29. D. A. Grishin, Yu. V. Gavrilov, A. G. Nasibulin, H. Jiang, E. I. Kauppinen, S. S. Bukalov, L. A. Mikhailitsin, E. G. Rakov (2005) Influence of Co to Mo Ratio on the Yield and Morphology of Carbon Nanotubes. *Surface*.№ 12, 52–58.
30. A. G. Nasibulin, D. P. Brown, P. Queipo, D. Gonzalez , H. Jiang, E. I. Kauppinen (2005) An essential role of CO<sub>2</sub> and H<sub>2</sub>O during single-walled CNT synthesis from carbon monoxide. *Chemical Physics Letters* **417**, 179-184.
31. S. D. Shandakov, A. G. Nasibulin, Yu. I. Polygalov, E. Y. Samchinskii, E. I. Kauppinen (2005) Description of particle motion from hydrodynamic to free-molecular regime taking into account acceleration effect under internal and external forces. *Journal of Experimental and Theoretical Physics*, **101**(6) 1147-1152.
32. D. Gonzalez, A. G. Nasibulin, A. M. Baklanov, S D. Shandakov, D. P. Brown, P. Queipo, and E. I. Kauppinen (2005) A new thermophoretic precipitator for collection of nanometer-sized aerosol particles”. *Aerosol Science and Technology*, **39**(11), 801-809.
33. S. D. Shandakov, A. G. Nasibulin, E. I. Kauppinen, (2006) Response to Comment on: “Phenomenological description of mobility of nm- and sub nm-sized charged aerosol particles in electric field”, *Journal of Aerosol Science* **37**(1), 115-118.
34. A. G. Nasibulin, P. Queipo, S. D. Shandakov, D. P. Brown, H. Jiang, P. V. Pikhitsa, O. V. Tolochko, and E. I. Kauppinen, (2006) Studies on mechanism of single-walled carbon nanotube formation. *Journal of Nanoscience and Nanotechnology*, **6**(5), 1233-1246.
35. E. S. Vasilieva, A. G. Nasibulin, O. V. Tolochko, E. I. Kauppinen. (2006) Synthesis of nanoparticles by vapour phase decomposition of iron pentacarbonyl in CO atmosphere. Electronic journal *Physico-Chemical kinetics in gas dynamics* (<http://chemphys.edu.ru/article/31>). In Russian.
36. A. Moisala, A. G. Nasibulin, D. P. Brown, H. Jiang, L. Khriachtchev, and E. I. Kauppinen (2005) Single-walled carbon nanotube synthesis using ferrocene and iron pentacarbonyl in a laminar flow reactor. *Chemical Engineering Science*, **61**, 4393-4402.

37. P. Queipo, A. G. Nasibulin, D. Gonzalez, U. Tapper, H. Jiang, T. Tsuneta, K. Grigoras, J. A. Duenas, and E. I. Kauppinen, (2006) Novel catalyst particle production method for CVD growth of single- and double-walled carbon nanotubes. *Carbon*, **44**(8), 1604-1608.
38. P. Queipo, A. G. Nasibulin, H. Jiang, D. Gonzalez, and E. I. Kauppinen (2006) Aerosol catalyst particles for substrate CVD synthesis of single-walled carbon nanotubes. *Chemical Vapor Deposition*. **12**(6) 364-369.
39. D. Gonzalez, A. G. Nasibulin, S. D. Shandakov, H. Jiang, P. Queipo, and E. I. Kauppinen. (2006) Spontaneous charging of single-walled carbon nanotubes in gas phase. *Carbon*, **44**(10) 2099-2101.
40. H. Jiang, D. P. Brown, A. G. Nasibulin, E. I. Kauppinen (2006) Robust Bessel-function-based method for determination of the (n,m) indices of single-walled carbon nanotubes by electron diffraction, *Physical Review B* **74** 035427 (2006).
41. A. G. Nasibulin, A. Moisala, H. Jiang, E. I. Kauppinen (2006) Carbon nanotube synthesis from alcohols by a novel aerosol method, *Journal of Nanoparticle Research*, **8**(3-4), 465-475.
42. D. Gonzalez, A. G. Nasibulin, S. D. Shandakov, H. Jiang, P. Queipo, T. Tsuneta, and E. I. Kauppinen (2006) Spontaneous charging of single-walled carbon nanotubes: a novel method for the selective substrate deposition of individual tubes at ambient temperature. *Chemistry of Materials* **18**(21), 5052-5057.
43. A. G. Nasibulin, P. V. Pikhitsa, P. Queipo, M. Choi, E. I. Kauppinen. (2006) Investigations of mechanism of carbon nanotube growth. *Phys. Stat. Sol.* **243**(13), 3095-3100.
44. A. G. Nasibulin, D. P. Brown, P. Queipo, D. Gonzalez, H. Jiang, A. S. Anisimov, E. I. Kauppinen (2006) Effect of CO<sub>2</sub> and H<sub>2</sub>O on the synthesis of single-walled CNTs, *Phys. Stat. Sol.* **243**(13), 3087-3090.
45. D. Gonzalez, A. G. Nasibulin, S. D. Shandakov, P. Queipo, H. Jiang, and E. I. Kauppinen (2006) Single-walled carbon nanotube charging during bundling process in the gas phase, *Phys. Stat. Sol.* **243**(13), 3234-3237.
46. D. Kim, E. S. Vasilieva, A. G. Nasibulin, D. W. Lee, O. V. Tolochko, B. K. Kim, (2007) Aerosol Synthesis and Growth Mechanism of Magnetic Iron Nanoparticles. *Material Science Forum* **534-536**, 9-12.
47. H. Jiang, A. G. Nasibulin, D. P. Brown, E. I. Kauppinen, (2006) Unambiguous atomic structural determination of single-walled carbon nanotubes by electron diffraction. *Carbon* **45**(3) 662-667.
48. Nasibulin, A. G., P. V. Pikhitsa, H. Jiang, D. P. Brown, A. V. Krasheninnikov, A. S. Anisimov, P. Queipo, A. Moisala, D. Gonzalez, G. Lientschnig, A. Hassanien, S. D. Shandakov, G. Lolli, D. E. Resasco, M. Choi, D. Tománek, and E. I. Kauppinen (2007) A Novel Hybrid Carbon Nanomaterial. *Nature Nanotechnology* **2**(3), 156-161.
49. D. Gonzalez, A. G. Nasibulin, H. Jiang, P. Queipo, and E. I. Kauppinen, (2007) Electro spraying of ferritin solutions for the production of monodisperse iron oxide nanoparticles. *Chemical engineering communications*. **194**, 901-912.
50. Yu. V. Gavrilov, D. A. Grishin, H. Jiang, N. G. Digurov, A. G. Nasibulin, E. I. Kauppinen, (2007) The Synthesis of Few-Walled Carbon Nanotubes by the Catalytic Pyrolysis of Methane and the Kinetics of Their Accumulation. *Russian Journal of Physical Chemistry*, **81**(9) 1502-1506.
51. K. Kurppa, H. Jiang, G. R. Szilvay, A. G. Nasibulin, E. I. Kauppinen, M. B. Linder, (2007) Controlled hybrid nanostructures via protein mediated noncovalent functionalization of carbon nanotubes. *Angewandte Chemie*, **46**, 6446–6449.
52. Zavodchikova, M. Y., A. Johansson, M. Rinkiö, J. J. Toppari, A. G. Nasibulin, E. I. Kauppinen, and P. Törmä (2007) Fabrication of carbon nanotube-based field-effect transistors for studies of their memory effects. *Phys. Stat. Sol.* **244**(11) 4188-4192.
53. F. Wu, P. Queipo, A. Nasibulin, T. Tsuneta, T. H. Wang, E. Kauppinen, and P. J. Hakonen (2007) Shot Noise with Interaction Effects in Single-Walled Carbon Nanotubes. *Phys. Rev. Letters*. **99**, 156803.
54. A. G. Nasibulin, A. S. Anisimov, P. V. Pikhitsa, H. Jiang, D. P. Brown, M. Choi, and E. I. Kauppinen, Investigations of NanoBud formation. *Chemical Physics Letters*, **446** (2007) 109–114.
55. A. G. Nasibulin, A. Ollikainen, A. S. Anisimov, D. P. Brown, P. V. Pikhitsa, S. Holopainen, J. S. Penttilä, P. Heliö, J. Ruokolainen, M. Choi, E. I. Kauppinen (2008) Integration of single-walled

- carbon nanotubes into polymer films by thermo-compression, *Chemical Engineering Journal*, **136**(2-3), 409-413.
56. A. G. Nasibulin, J. Fernandez de la Mora, E. I. Kauppinen, (2008) Ion-induced nucleation of dibutyl phthalate vapors on spherical and non-spherical singly and multiply charged polyethylene glycol ions. *Journal of Physical Chemistry A*. **112**, 1133-1138.
  57. Y. Tian, D. Chassaing, A.G. Nasibulin, P. Ayala, H. Jiang, A. S. Anisimov, E. I. Kauppinen, (2008) Combined Raman Spectroscopy and Transmission Electron Microscopy Studies of a NanoBud Structure. *Journal of American Chemical Society*. **130**, 7188–7189.
  58. H. Jiang, D. P. Brown, P. Nikolaev, A. G. Nasibulin, and E. I. Kauppinen, (2008) Determination of helicities in unidirectional assemblies of graphitic or graphiticlike tubular structures, *Appl. Phys. Lett.* **93**, 141903.
  59. A. G. Nasibulin, S. D. Shandakov, A. S. Anisimov, D. Gonzalez, H. Jiang, M. Pudas, P. Queipo and E. I. Kauppinen (2008) Charging of Aerosol Products during Ferrocene Vapor Decomposition in N<sub>2</sub> and CO Atmospheres. *Journal of Physical Chemistry C* **112**(15); 5762-5769.
  60. Y. Tian, D. Chassaing, A.G. Nasibulin, P. Ayala, H. Jiang, A.S. Anisimov, A. Hassanien, Kauppinen, E.I. (2008) The local study of a nanobud structure, *Phys. Stat. Sol. B* **245**(10) 2047-2050.
  61. M. Y. Zavodchikova, A.G. Nasibulin, T. Kulmala, K. Grigorias, A. Anisimov, S. Franssila, V. Ermolov, E.I. Kauppinen, (2008) Novel carbon nanotube network deposition technique for electronic device fabrication, *Phys. Stat. Sol. B*, **245**(10) 2272-2275.
  62. D. P. Brown, A. G. Nasibulin, and E. I. Kauppinen, (2008) Effects of Wall Composition and Inlet Conditions on Carbon Nanotube Catalyst Particle Activity. *Journal of Nanoscience and Nanotechnology*. **8**(8) 3803–3819.
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