

Curriculum Vitae, Dr. Sergii Chertopalov

Dr. Sergii Chertopalov,

Post-Doctoral Researcher,

Department of Analysis of Functional Materials, Division of Optics,

Institute of Physics of the Czech Academy of Sciences



Na Slovance 1999/2, 182 21 Prague 8, Czech Republic

☎ Phone: +420 722 410 716

✉ E-mail: chertopalov@fzu.cz, chertopalovsv@gmail.com

Web: <https://www.fzu.cz>

Languages: English (fluent), Russian (native), Ukrainian (native).

Current h-index: 6

ORCID: [0000-0001-7417-8475](https://orcid.org/0000-0001-7417-8475)

Scopus ID: 57208977251

Research ID: [AAM-3502-2020](https://www.researcherid.com/rid/AAM-3502-2020)

Biography

Dr. Sergii Chertopalov was born in the USSR in 1975. He received both a B.S. and M.S. in Solid State Physics and Science of Materials from the Department of Physics at Donetsk National University (Donetsk, Ukraine). Dr. Chertopalov received his Ph.D. in Solid State Physics from the Department of Physics and Technology at Donetsk National University (Donetsk, Ukraine). He is an expert in fields of thermal deposition in vacuum and magnetron sputtering.

During the past eight years Sergii has worked with materials for solar cells (hybrid, dye-sensitized, and bulk heterojunction solar cells) and organic light emitting diodes. He was involved in development of materials for magnonics and plasmonics. Last three years Sergii worked with 2D materials (MXenes) and with a thin film deposition technology.

Sergii collaborates with scientists from following Universities: Clemson University (USA), the University of Exeter (UK), Lomonosov Moscow State University (Russia), and the V.E. Lashkaryov Institute of Semiconductor Physics NAS of Ukraine.

In his free time Sergii enjoys hiking, HAM-radio, Arduino programming.

Biography	1
Education	2
Professional experience	2
Field of research	4
Teaching	4
Symposia and session chair	5
Grants awarded	5
Professional memberships	6
Certifications	6
Experimental Skills	6
Peer reviewed journal publications	7
Talks, seminars, and conference presentations	9
References	11

Education

Ph.D., Solid State Physics

February, 12, 2016

Donetsk National University, Donetsk, Vinnytsya, Ukraine

Thesis: "Influence of the composition and the structure of fullerene-containing films on their physical and chemical properties".

Professor A. I. Bazhyn, Department of Nanophysics, advisor.

M.S., Solid State Physics

June 1998

Thesis: "Influence of conditions of ionic irradiation on the characteristics of scattering of HTSC ceramics $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ ".

Professor A. I. Bazhyn, Department of Solid State Physics and Science of Materials, advisor.

B.S., Solid State Physics

June 1997

Thesis: "Variation of the resonant frequency of domain walls in ferrite-garnet films upon implantation of hydrogen ions with energy of 25 keV".

Dr. I. O. Melnichuk, Department of Solid State Physics and Science of Materials, advisor.

Professional experience

Post-Doctoral Researcher

July 2018 – Present (2020)

Department of Analysis of Functional Materials, Division of Optics, Institute of Physics of the Czech Academy of Sciences (Prague, Czech Republic), <https://www.fzu.cz>

Research focus: Crystalline thin film fabrication using physical vapor deposition technics: thermal evaporation, magnetron sputtering, electron beam evaporation and pulsed laser deposition methods. Fabrication of metal-dielectric (metal nanoparticles in CaF₂ doped by rare earth elements) composites and investigation of their structure and optical properties. MAX phase and MXene synthesis for sensors. The surface modification of MXene and their properties investigation.

Post-Doctoral Researcher

November 2016 – May 2018

Department of Chemistry, Missouri University of Science and Technology (Rolla, Missouri, United States of America), <http://chem.mst.edu/>

Research focus: Nanodiamond, nanoonions, and silicon carbide characterization which produced by detonation method, developing applications in composites and biology/medicine. Synthesis, characterization and applications of MXenes in energy storage (supercapacitors and batteries), sensors, composites, and optoelectronics.

Research Fellow

September 2016 – October 2016

Department of Materials for Reactor Construction and Physical Technologies, Physics and Technology Faculty, V. N. Karazin Kharkiv National University (Kharkiv, Ukraine), <http://www.univer.kharkov.ua/>

Research focus: diffusion processes in thin film layered structures and using quartz microbalance for investigation of phase transformation.

Senior Lecturer

September 2015 – August 2016

Department of Thermal Physics and Molecular Physics, Physics and Power Engineering Faculty, V. N. Karazin Kharkiv National University (Kharkiv, Ukraine), <http://www.univer.kharkov.ua/>

Teaching classes in physics, computer science and signal processing.

Research focus: diffusion processes in thin film layered structures and using quartz microbalance for investigation of phase transformation.

Senior Lecturer

September 2014 – August 2015

Department of Nanophysics, Faculty of Physics and Engineering, Donetsk National University (Vinnytsya, Ukraine), <http://www.donnu.edu.ua/>

Teaching classes in physics and supervising of one student.

Research focus: Development of technologies for obtaining nanocrystalline oxide coating (ITO, ZnO, TiO₂) by pulse magnetron and electrochemical methods.

Senior Research Fellow

September 2011 – August 2014

Department of Nanophysics of Donetsk National University (Donetsk, Ukraine)

Teaching classes in physics and supervising of four students.

Research focus: Nanostructures based on fullerene-metal-fullerene heterojunctions: a structural, transport and photovoltaic properties.

Research Fellow

November 2004 – August 2011

Department of Solid State Physics and Material Science of Donetsk National University (Donetsk, Ukraine)

Teaching classes in physics and supervising of five students.

Research focus: Development of technologies of nanostructured, functional, diamond-like and metal-fullerene films using ion-plasma methods.

Research Assistant

January 1999- October 2004

Department of Solid State Physics and Material Science of Donetsk National University (Donetsk, Ukraine)

Project “Physical-chemical properties of fullerite coatings”. Synthesized and characterized fullerite and metal-fullerene thin films.

Field of research

- Nanomaterials: characterization, surface modification for energy harvesting
- Materials for photovoltaic. Self assembled structures for creating p-n junction. Effective light absorption and photon-electron transformation.
- Thin films obtaining using different methods (thermal and electron beam deposition, magnetron sputtering, electrochemical deposition from solution)
- Nanodiamonds and nanoions
- 2D materials from MAX phase (MXene). Investigation of properties of MXene thin films
- Fullerenes and metal-fullerene composites
- Physics of surface

Teaching

Spring Semester 2018 (Missouri University of Science and Technology, Department of Chemistry): teaching as an Instructor in General Chemistry Lab (Chem 1319) (220 students).

During 2007-2016 years teaching classes: Vacuum technology and equipment (2007-2009), X-Ray diffraction, Electron TEM and SEM microscopy (2011-2014), Atomic and Nuclear Physics (2014-2016), Signal Processing (2015-2016), Introduction in Solid State Physics (2014-2015).

Creating the laboratory practice for making organic light emitting diodes and solar cells and teaching undergraduate class (23 students) (2013-2014).

Supervised a group of 2-3 undergraduate students per year, working on fullerene, oxide thin films at Donetsk National University in 2002-2014.

- More than eight years of tutorials, problem classes, and laboratories in Solid State Physics and General Physics for undergraduates at the Department of Nanophysics (Solid State Physics and Material Science) of Donetsk National University
- Eight years of supervision of BSc and MSc project students at the Department of Nanophysics (Solid State Physics and Material Science) of Donetsk National University
- Seven years of lectures in General Physics at the School for talented students Lyceum «Erudit» (Donetsk) and Lyceum by Donetsk National University.

Symposia and session chair

Session Chair, (Session: THz and ultrafast magnonics), International School on Magnonics, Exeter 19th - 24th June 2016, Great Britain

Grants awarded

July, 10-25, 2016

Training study courses in the Pavol Jozef Šafárik University (Kosice, Slovakia), project Erasmus+ STAFF MOBILITY FOR TRAINING.

July-August 2015

Scientific project MagIC «MagIC – Magnonics, Interactions and Complexity: a multifunctional aspects of spin wave dynamics» (project RISE № 644348) in the University of Exeter (Great Britain)

February-March, July-August 2013

Training study course in the University of Exeter (Great Britain) “Spin Wave Excitation and Propagation in Magnonic Networks”, project FP7-PEOPLE-2009-IRSES- Novel Wave Phenomena in Magnetic Nanostructures.

2011-2012

Project-manager of project of the State Fund for Fundamental Researchers, Ukraine, “Nanostructures based on fullerene-metalfulleren heterojunctions: a structural, transport and photovoltaic properties”.

September 2009 – August 2010

Scientific project “Design, structure and properties of hybrid solar cells based on ZnO and polymer-fullerenes”, Prof. T. Yoshida group, Gifu University, Japan, grant «Greater Nagoya».

July-August 2009, July-October 2008

Training study course in the International Laser Center of Lomonosov Moscow State University, grant №09-02-90907mob_sng_st of Russian Foundation for Basic Research (“Production of thin film fullerene heterostructure of new type and investigation of their optical and photoelectrical properties”).

January-March 2009

Training study course in the Gifu University (Japan), grant of New Energy and industrial technology Development Organization (NEDO, Japan), (“Production of ZnO-fullerene hybrid thin film structure for solar cells and light emitting diodes and investigation of their optical and photoelectrical properties”).

September 2004 - January 2007

Project of the Science and Technology Center in Ukraine
Uzb-136(J) “Production and technology of protective films and coatings based on ion implantation and investigation of their properties”

Professional memberships

- American Chemical Society (ACS), 2017 - 2018
- Materials Research Society (MRS), 2017 – 2018
- American Physical Society (APS), 2017 – 2018

Certifications

- Certificate of Completion. Below the Surface Electrode Workshop (electrode theory, electrode selection, electrode calibration, maintenance and replacement). Metrohm USA. June 8, 2017.
- Certificate of attendance. This certificate is issued to confirm that Dr. Sergii Chertopalov has attended the 2nd International Advanced School on Magnonics 2016 held at University of Exeter in Exeter, United Kingdom from 19th – 24th June 2016 and has fully achieved the School’s learning goals.
- CERTIFICATE of ACHIEVEMENT (edX, Berkeley) – (successfully completed and received a passing grade in EE40LX: Electronic Interfaces: Bridging the Physical and Digital Worlds a course of study offered by BerkeleyX, an online learning initiative of The University of California, Berkeley through edX).
- CERTIFICATE of ACHIEVEMENT (edX, Berkeley) – (successfully completed and received a passing grade in ChM001x: Graphene Science and Technology, a course of study offered by ChalmersX, an online learning initiative of Chalmers University of Technology through edX).

Experimental Skills

- Ultrahigh vacuum apparatus and techniques

- Thin film deposition using thermal evaporation, electron beam evaporation, pulsed laser deposition and magnetron sputtering. Grown samples include (film/substrate)
Cu/NaCl(001), Cu/KBr(001), C₆₀Cu/NaCl, C₆₀CuC₆₀CuC₆₀/NaCl, C₆₀/NaCl, C₆₀/Ti, C₆₀/Si, C₆₀/Cu(001)(011)(111), C₆₀/glass, C₆₀/sapphire(100)(110)(001), C₆₀/Cu, Al/C₆₀/ITO/glass, Ti/C₆₀/ITO/glass (amorphous and polycrystalline), metal nanoparticles layered structures / Eu:CaF₂/ fused silica (Si wafer)
- **Solar cells:**
glass/ITO/PEDOT:PSS/P3HT:PCBM/CaAl,
glass/ITO/PEDOT:PSS/P3HT:IrC₆₀(DIOP)/CaAl metals,
plastic/ITO/PEDOT:PSS/P3HT:PCBM/CaAl,
glass(plastic)/ITO(FTO)/ZnO/dye/electrolyte/Pt/FTO.
- **Hybrid Solar Cells:**
glass(plastic)/ITO/ZnO_{c,p}/P3HT:PCBM/Au.
- **OLED, LED:**
glass/ITO/PEDOT:PSS/P3HT /CaAl,
glass/ITO/PEDOT:PSS/MEH:PPV /CaAl,
glass/ITO/ZnO/PEDOT:PSS/Au.
- **Supercapacitors:**
Ti/activated carbon:PTFE/separator/activated carbon:PTFE/ Ti,
Ti/MXene:PTFE/separator/ MXene:PTFE / Ti,
- **Li-ion batteries:**
Cu/ activated carbon:PTFE/separator/Li
- MAX and MXene synthesis (Ti₂AlC, Ti₃AlC₂, Nb₂AlC, V₂AlC)
- Nanooxides, nanodiamonds
- Micro-, Nano-Electron-Beam Lithography
- X-ray diffractometry (phase and structure analyses)
- Transmission electron microscopy (TEM), including analyses of images, diffraction, and microdiffraction
- Scanning electron microscopy (SEM)
- Ion-photon emission spectroscopy (IPhE)
- Electrochemical analyses (corrosion properties of metals), electrochemical deposition
- Micro-interferometry
- Optical absorption spectroscopy

Peer reviewed journal publications

1. Stefan A Irimiciuc, Sergii Chertopalov, Valentin Craciun, Michal Novotný, Jan Lancok
Investigation of laser - produced plasma multistructuring by floating probe measurements and optical emission spectroscopy. Plasma Processes and Polymers, 17 (11), p.2000136 (2020) <https://doi.org/10.1002/ppap.202000136>

2. Martin J. Langenderfer, William G. Fahrenholtz, Sergii Chertopalov, Yue Zhou, Vadym N. Mochalin, Catherine E. Johnson *Detonation synthesis of silicon carbide nanoparticles*, **Ceramics International**, **46** (5), p.6951-6954 (2020)
3. Sergii Chertopalov and Vadym N. Mochalin *Environment-Sensitive Photoresponse of Spontaneously Partially Oxidized Ti_3C_2 MXene Thin Films*, **ACS Nano**, **12**, p.6109–6116 (2018)
4. Guangjiang Li, Kateryna Kushnir, Yongchang Dong, Sergii Chertopalov, Apparao M. Rao, Vadym N. Mochalin, Ramakrishna Podila and Lyubov V. Titova *Equilibrium and non-equilibrium free carrier dynamics in 2D $Ti_3C_2T_x$ MXenes: THz spectroscopy study*, **2D Materials**, **5**, p.035043-8 (2018)
5. Yongchang Dong, Sergii Chertopalov, Kathleen Maleski, Babak Anasori, Longyu Hu, Sriparna Bhattacharya, Apparao M. Rao, Yury Gogotsi, Vadym N. Mochalin, Ramakrishna Podila *Saturable Absorption in 2D Ti_3C_2 MXene Thin Films for Passive Photonic Diodes*, **Advanced Materials**, **30** (3), p.1705714-8 (2018)
6. C. S. Davies, A. Francis, A. V. Sadovnikov, S. V. Chertopalov, M. T. Bryan, S. V. Grishin, D. A. Allwood, Y. P. Sharaevskii, S. A. Nikitov, and V. V. Kruglyak *Towards graded-index magnonics: Steering spin waves in magnonic networks*, **Physical Review B.**, **92**, 020408(R). – p. 020408-1 – 020408-5 (2015)
7. V. A. Postnikov, S. V. Chertopalov *Growth of Large Naphthalene and Anthracene Single-Crystal Sheets*, **Crystallography Reports**, **60** (4), p. 59–600 (2015)
8. A.I.Bazhin, A.N.Trotsan, S.V.Chertopalov, A.A.Stipanenko, V.A.Stupak *Influence mode magnetron sputtering and the composition of the reaction gas on the properties of the ITO films structure*, **Physical surface engineering**, **10** (4), p.308-315 (2012)
9. A.I.Bazhin, A.N.Trotsan, S.V.Chertopalov, V.A.Stupak *Twinning in fullerite films at the Ar ions irradiation*, **Physical surface engineering**, **9** (4), p.256-260 (2011)
10. G. Ya. Grodzyuk, A. E. Rayevskaya, A. L. Stroyuk, S. Ya. Kuchmy, M. Ya. Vortman, V. N. Lemeshko, V. V. Shevchenko, S. V. Chertopalov, Yu. V. Kolomzarov,, V. M. Sorokin *Optical and Electroluminescent Properties of CdS Nanoparticles Stabilized by Guanidine-Containing Dendrimers*, **Theoretical and Experimental Chemistry**, **47** (6), p.346-352 (2011)
11. S.V.Chertopalov, A.N.Trotsan, A.I.Bazhin, T.Yoshida *Column structure and optical properties of ZnO films obtained by electrochemical deposition*, **Physical surface engineering**, **8** (3), p.236-241 (2010)
12. A.I.Bazhin, A.N.Trotsan, S.V.Chertopalov, V.A.Glazunova *Influence of structure of fullerite films on the optical properties*, **Messenger of Donetsk National University, Ser. A: Natural Sciences**, (1), p.101-106 (2010)
13. S.V.Chertopalov, V.V.Bruevich, A.A.Gromchenko, D.Y.Paraschuk *Volt-ampere characteristics of polymer-fullerene structures of solar photocells*, **Nanomaterials and nanostructures**, (1), p.54-57 (2010)
14. A.I.Bazhin, A.N.Trotsan, S.V.Chertopalov, V.A.Turchenko, V.A.Glazunova *The effect of the substrate upon the quality of fullerene films*, **Carbon nanoparticles in condensed matter: Collection of Articles**. Minsk, Lykov Institute of Heat Transport of Belorussian National Academy of Science, p.205-211 (2006)

15. A.Bazhin, A.Trotsan, S.V.Chertopalov, V.A.Stupak *Corrosion stability of copper monocrystal coated with fullerene film*, **Physico-Chemical Mechanics of Materials**, **2** (5), p.523-526 (2006)
16. A.I.Bazhin, V.V.Styrov, V.I.Tyutynnikov, E.I.Nedrigailov, S.V.Chertopalov *Luminescence of fullerite under low energy hydrogen atom and ion bombardment*, **Surface. X-ray, synchrotron and neutron investigation**, (5), p.56-60 (2004)
17. A.I.Bazhin, A.M.Trotsan, R.O.Minikaev, S.V.Chertopalov *Phases and Structure Heterogeneousness of Fullerite Coating on Titanium*, **Physics and Chemistry of Solid State**, **3** (3), p.521-525 (2003)
18. A.I.Bazhin, A.N.Trotsan, R.A.Minikaev, S.V.Chertopalov, S.V.Lazarenko, A.V.Shalimov *Transformation of fullerite films C₆₀ at bombardment by low energies ions Ar⁺*, **Bulletin of Russian Academy of Sciences: Physics**, **66** (7), p.1019-1022 (2002)
19. A.I.Bazhin, A.N.Trotsan, S.V.Chertopalov *Phase composition, structure and radiation stability of fullerite films*, **Messenger of Zaporizya State University**, (1), p.160-165 (2000)

Talks, seminars, and conference presentations

1. Sergii Chertopalov, Premysl Fitl, Martin Hruska, Jan Lancok *Chemiresistors Based on Ti₃C₂ MXene*, Beilstein Nanotechnology Symposium 2019, MXene at the Frontier of the 2D Materials World, Favorite Parkhotel, Mainz, Germany, October 15–17, 2019.
2. Sergii Chertopalov, Vadym N. Mochalin *Environment sensitive photoresponse of MXenes*, Missouri University of Science & Technology, Rolla, USA, 2018.
3. A.I. Bazhin, A.N. Trotsan, S.V. Chertopalov, A.A. Stipanenko, V.A. Stupak *Influence of substrate temperature on structure and properties of ITO films obtained by MF magnetron sputtering*, International meeting "Clusters and nanostructured materials", Uzhgorod, Ukraine, 14-17 October 2012.
4. Sergii Chertopalov, Tsukasa Yoshida *ZnO/polymer-fullerene hybrid solar cell*, Proceedings of V Ukrainian scientific conference of Semiconductor Physics, USCSP-5, Uzhgorod, 9-15 October, 2011, P.346-347.
5. D.A.Samodurov, S.V.Chertopalov *The Schottky barrier based on C₆₀ fullerene*, Proceedings of V Ukrainian scientific conference of Semiconductor Physics, USCSP-5, Uzhgorod, 9-15 October, 2011, P.307-308.
6. S.V.Chertopalov, A.N.Trotsan, V.A.Stupak, A.I.Bazhin, T.Yoshida *Obtaining of columnar ZnO nanostructures by electrochemical method*, Fourth International Conference "Physical and chemical principles of formation and modification of micro- and nanostructures", Kharkiv, Ukraine, 6-8 October, 2010, p. 67-71.
7. S. Chertopalov, A. Trotsan, T. Yoshida, L. Sun *Hybrid solar cells based on ZnO porous structure obtained by electrochemical deposition method*, 8-th International Conference "ELECTRONIC PROCESSES IN ORGANIC AND INORGANIC MATERIALS "(ICEPOM – 8), May 17 – 22, 2010, Ivano-Frankivsk, Ukraine. p. 272-273.
8. S. Chertopalov, K. Ichinose, T. Yoshida *Hybrid Solar Cells Based on Zinc Oxide Columnar Structures*, The 7th Asian Conference on Electrochemistry in Kumamoto (ACEC 2010), May 18-22, 2010, Kumamoto, Japan.

9. Sergiy Chertopalov, Tsukasa Yoshida *Using the ZnO porous structure for creation of hybrid ZnO-polymer-fullerene solar cell*, IV Ukrainian Scientific Conference, Semiconductor Physics, Zaporizhzhya, Ukraine, 15-19 September, 2009, V.2, p.81.
10. S.V.Chertopalov, A.I.Bazhin, A.M.Trotsan, V.A.Stupak, T.Yoshida *Investigation of influence of ZnO porous layer thickness on the efficiency of dye sensitized solar cells*, IV Ukrainian Scientific Conference, Semiconductor Physics, Zaporizhzhya, Ukraine, 15-19 September, 2009, V.2, p.80.
11. S.V.Chertopalov *Solar cells based on ZnO and sensitized by organic D149 dye*, Proceedings of XVI International Conference of students, postgraduate students and young scientists, MSU, Moscow, 2009. P.27.
12. S.V.Chertopalov, V.V.Bruevich, A.A.Gromchenko, D.Yu.Parashuk *Influence of material of top electrode on voltage-current characteristics of polymer-fullerene solar cells*, Abstracts of International Scientific and Technical School-Conference «Young Scientists – for Science, Technology and Professional Education», 10-13 November 2008, Moscow, Russia. V.3, P. 61-64.
13. A.N.Trotsan, A.I.Bazhin, S.V.Chertopalov, V.A.Glazunova, E.A.Beseda, A.M.Prudnikov *The influence of crystallographic orientation of sapphire substrates on structure and optical properties of fullerite films*, International seminar «Interaction of atomic particles and clusters with the surface of solid state», Zaporizhzhya: KPU, 2008. – P.45-46.
14. S.V.Chertopalov, A.I.Bazhin, V.A.Stupak, A.N.Trotsan, V.A.Glazunova *Influence of ion mixing on structure and optical properties of metal-fullerite composites*, Proceedings of 7-th International Conference "ELECTRONIC PROCESSES IN ORGANIC MATERIALS" (ICEPOM – 7), May 26 – 30, L'viv, Ukraine, 2008, P.52.
15. S.V.Chertopalov *Optical properties of fullerite films with different degree of perfection*, Proceedings of XV International Conference of students, postgraduate students and young scientists, MSU, Moscow, 2008. P.48-49.
16. A.I.Bazhin, E.A.Beseda, V.A.Glazunova, V.A.Stupak, A.N.Trotsan, S.V.Chertopalov *Influence of degree of fullerite films perfection on their optical properties*, Proceedings of X International Conference "Hydrogen Materials Science and Chemistry of Carbon Nanomaterials" Sudak, Crimea, 2007. P.762-765.
17. S.V.Chertopalov, A.I.Bazhin, V.A.Stupak, A.N.Trotsan, V.A.Glazunova *Structural and Optical Properties of Titanium-Fullerite and Copper-Fullerite Films*, Oral talk at Euromat-2007, European Congress and Exhibition on Advanced Materials and Processes, Nürnberg, Germany, 10 - 13 September 2007.
18. S.V.Chertopalov, A.I.Bazhin, V.A. Stupak, A.M.Trotsan, V.A.Glazunova *Structural transformation of C₆₀/Ti composites under ion bombardment*, XVIII International conference «Interaction ion with surface - 2007», V2. Zvenigorod, 2007, P.97-100.
19. A.I.Bazhin, E.A.Beseda, V.A.Glazunova, V.A.Stupak, A.N.Trotsan, S.V.Chertopalov *Structure and optical properties of amorphous-crystalline fullerite films*, Proceedings of XI International conference on physics and technology of thin films, Ivano-Frankivsk, 2007, P. 54-55.
20. A.I.Bazhin, A.N.Trotsan, S.V.Chertopalov *Inter-crystallite absorption in copper-fullerite system*, Abstracts of International Conference «Mesoscopic phenomena in solid state», 26 February – 1 March 2007, Donetsk, Ukraine. P. 96.

21. S.V.Chertopalov, A.I.Bazhin, V.A.Stupak, A.N.Trotsan, V.A.Glazunova *Optical properties of fullerite films*, Abstracts of IV International Scientific and Technical School «Young Scientists – 2006», 14-18 November 2006, Moscow, Russia. V.2, P. 295-297.
22. S.V.Chertopalov, A.I.Bazhin, A.N.Trotsan, A.N.Magasinski *Copper-fullerite films and their structural properties*, Oral talk at International Conference “Junior Euromat 2006”, 4-8 September 2006, Lausanne, Switzerland.
23. A.I.Bazhin, A.N.Trotsan, S.V.Chertopalov, V.A.Stupak, A.V.Vishnyakov *Electrochemical behaviour of composites fullerite – single crystalline copper*, Proceedings of IX International Conference “Hydrogen Materials Science and Chemistry of Carbon Nanomaterials” Sevastopol’, 2005. P.714-717.
24. A.I.Bazhin, A.M.Trotsan, S.V.Chertopalov, V.A.Stupak *Radiation stability of fullerite films*, Proceedings of III International Symposium “Fullerens and fulleren like structures in Condensed materials”, Minsk, 2004. P.143-145.
25. A.I.Bazhin, A.M.Trotsan, S.V.Chertopalov, A.A.Savchenko *Structural transformations of composites C₆₀Cu at ionic bombardment*, Proceedings of XVI International conference «Interaction of ions with surfaces - 2003», V2, Zvenigorod, 2003, P.262-265.
26. A.N.Trotsan, R.A.Minikaev, S.V.Chertopalov *Transformation of amorphous - crystalline films of C₆₀ at an ionic irradiation*, Proceedings of XV International conference «Interaction of ions with surfaces - 2001», V.2. Zvenigorod, 2001. P.88-90.
27. A.I.Bazhin, A.N.Trotsan, A.V.Shalimov, S.V.Chertopalov *Morphology and thin structure of textured fullerite films*, Proceedings of VIII International conference on the physics and technology of thin films, Ivano-Frankivsk, 2001, P.270-271.
28. A.I.Bazhin, A.N.Trotsan, R.A.Minikaev, S.V.Chertopalov *Phase and structural inhomogeneities of fullerite coatings on titanium*, Proceedings of VIII International conference on the physics and technology of thin films, Ivano-Frankivsk, 2001, P.271-272.

References

Dr. Jan Lancok

Senior Scientist,

Head of the Department of Analysis of Functional Materials (28)

Division of Optics

E-mail: lancok@fzu.cz

Phone: +420 266 05 2645, +420 266 05 2540

Web: <https://www.fzu.cz/>

Dr. Vadym Mochalin

Associate Professor,

Department of Chemistry,

Missouri University of Science & Technology

400 W.11th Street, 334 Schrenk,

Rolla, Missouri 65409, USA

E-mail: mochalinv@mst.edu

Phone: (573) 341-6043

Fax: (573) 341-6033
Web: <http://chem.mst.edu/mochalin-group>

Dr. Volodymyr V. Kruglyak (*Collaborator*)

Professor

Physics and Astronomy, CEMPS

University of Exeter

Stocker road

Exeter, EX4 4QL

United Kingdom

E-mail: V.V.Kruglyak@exeter.ac.uk

Phone: +44-(0)1392 72 6243 (office)

Fax: +44-(0)1392 26 4111