Curriculum vitae

PERSONAL INFORMATION

First Name, Surname	Oleh Olikh
Date of Birth	1974-06-05
Citizenship	Ukraine
E-mail	olegolikh@knu.ua
Mobile Telephone	+380673169020
Scopus ID	6506623724

EDUCATION

1996-2000	Post-graduate course at the general physics department in Taras Shevchenko National University of Kyiv
1991-1996	Physics faculty of Taras Shevchenko University of Kyiv, master in solid state physics (diploma ЛТ ВЕ №001760, 28.06.1996)

ACADEMIC DEGREE, ACADEMIC RANK

2022	Academic rank of professor at the general physics department
2018	Doctor of Science Degree (Dr. Hab., Physics and Mathematics), solid-state physics specialty, thesis «Acoustically and radiation induced phenomena in surface barrier silicon and gallium arsenide structures»
2004	Academic rank of associate professor at the general physics department
2001	Ph.D. Degree (Physics and Mathematics), solid-state physics specialty, thesis «Investigation of acousto-photo-electric interaction in GaAs and Si semiconductor structures»

WORK EXPERIENCE

2021 - Present	Professor at the general physics department, Taras Shevchenko National University of Kyiv, Kyiv (Ukraine)
2002 - 2021	Associate professor at the general physics department, Taras Shevchenko National University of Kyiv, Kyiv (Ukraine)
1998-2002	Assistant at the general physics department Taras Shevchenko National University of Kyiv, Kyiv (Ukraine)

AWARDS AND HONORS

2021	I. Puluj Prize of the National Academy of Sciences of Ukraine for the implementation of controlled acoustic field influence on processes of defect reordering in semiconductors and surface barrier structures

GRANTS AND PROJECTS

1997-2000	researcher in project of Ministry of Education and Science of Ukraine " Study of physical properties of emission phenomena in heterogeneous materials" (No 97017)
2001-2005	researcher in project of Ministry of Education and Science of Ukraine «Theoretical and experimental study of physical properties of heterogeneous systems based on materials of acousto-optoelectronics and microelectronics» (No 01БФ051–09)
2006-2010	researcher in project of Ministry of Education and Science of Ukraine «Experimental and theoretical study of the structure and physical properties of low-dimensional systems based on semiconductor structures, various modifications of carbon, and composites» (No 0106U006390)
2006-2008	researcher in project of Science & Technology Center in Ukraine "Research and development of methods for opto-acoustic monitoring of materials"

	(№3555)
2011-2015	researcher in project of Ministry of Education and Science of Ukraine «Fundamental research in the field of condensed matter and elementary particles, astronomy, and materials science for the creation of the foundations of advanced technologies» (No 0111U004954)
2016-2018	researcher in project of Ministry of Education and Science of Ukraine «Formation and physical properties of nanoscale composite materials and functional surface layers based on carbon, semiconductor, and dielectric components» (No 0116U004781)
2019-2021	researcher in project of Ministry of Education and Science of Ukraine «Development of physical principles for the functionalization of nanostructured materials based on carbon, semiconductor heterostructures, and porous silicon» (No 0119U100303)
2020-2021	leader of the project of National Research Foundation of Ukraine «Development of physical base of both acoustically controlled modification and machine learning-oriented characterization for silicon solar cells» (No 2020.02/0036)
2022-…	researcher in project of Ministry of Education and Science of Ukraine «Physico-chemical properties of nanostructured carbon-containing and semiconductor thin-film structures for the needs of renewable-hydrogen energy» (No 0122U001953)
LANGUAGES	Ukrainian - C2, English – B2.
SCIENTIFIC ACTIVITY	
Number of Scientific Papers	89
Main Stream of Research	Field of knowledge "Nature Sciences" - the ultrasound effect on materials; - defect engineering in semiconductor structures; - using of ultrasound methods to determine the semiconductor structure parameters; acousto-stimulated dynamic phenomena in semiconductor barrier structures
Papers in Q1 and Q2 Journals (2021–2022)	1. Olikh O., Lytvyn P. «Defect engineering using microwave processing in SiC and GaAs», Semiconductor Science and Technology, 2022, vol.37, is.7, 075006, https://doi.org/10.1088/1361-6641/ac6f17 2. Olikh O., Kostylyov V., Vlasiuk V., Korkishko R., Chupryna R. «Intensification of iron–boron complex association in silicon solar cells under acoustic wave action», Journal of Materials Science: Materials in Electronics, 2022, vol.33, is.13, P. 13133-13142, https://doi.org/10.1007/s10854-022-08252-3 3. Olikh O., Lozitsky O., Zavhorodnii O. «Estimation for iron contamination in Si solar cell by ideality factor: Deep neural network approach», Progress in Photovoltaics: Research and Applications, 2022, vol.30, is.6, p. 648-660; https://doi.org/10.1002/pip.3539 4. Olikh O., Kostylyov V., Vlasiuk V., Korkishko R., Olikh Ya., Chupryna R. «Features of FeB pair light-induced dissociation and repair in silicon *n*+-*p*-*p*+ structures under ultrasound loading», Journal of Applied Physics, 2021, vol.130, is.23, 235703; https://doi.org/10.1063/5.0073135

Curriculum vitæ

First name and surname:	Vasyl Kuryliuk
Date of Birth:	23 July 1982
Address:	64/13, Volodymyrska Street, 01601 Kyiv, Ukraine
Phone:	+380987117118
Civil status:	Married
E-mail:	kuryluk@knu.ua
Scopus ID:	26647533300

Status:

Position:	Head of Department
Establishment:	Department of Metal Physics, Faculty of Physics, Taras Shevchenko National University of Kyiv
Phone:	+380445213312
E-mail:	dekanat203@gmail.com

Education:

2005 – 2008	PhD-student, Solid State Physics, Taras Shevchenko National University of Kyiv, Kyiv (Ukraine)
1999–2005	MSc in Physical Science, Taras Shevchenko National University of Kyiv, Kyiv (Ukraine)

Professional experiences:

04.2021 – current	Head of the Department of Metal Physics, Faculty of Physics, Taras Shevchenko National University of Kyiv
12.2013 – 04.2021	Associate Professor at the Metal Physics Department, Faculty of Physics, Taras Shevchenko National University of Kyiv
09.2008 –12.2013	Assistant Professor at the Metal Physics Department, Faculty of Physics, Taras Shevchenko National University of Kyiv

Research Skills:

Modeling:	Analytic, semi-analytic approaches
Simulation:	Molecular Dynamics (LAMMPS), Anharmonic Lattice Dynamics (kALDo), FEM (FlexPDE), Maple, C/C++, Fortran
Experimental competencies:	Photovoltage decay techniques, 3-omega techniques
Languages:	Ukrainian, Russian, English

Participation in scientific projects:

National Research Foundation of Ukraine, (2020 – 2023). Competition "Leading and Young Scientists Research Support" 2020. Computer design, synthesis and heat transfer properties of silicon nanostructures for energy efficient applications (**project leader**).

Ministry of Education and Science of Ukraine, (2016 – 2018). Competition of Projects of Scientific Works of Young Scientists 2016. Features of the stress state of SiGe quantum dots in the crystalline and amorphous matrices (**project leader**).

Ministry of Education and Science of Ukraine, (2015). Competition of Projects of Scientific Works of Young Scientists 2015. Analysis of mechanical stress in semiconductor nanostructures for the photo- and thermovoltaic applications (**project leader**).

Ukrainian Foundation for Basic Research, (2012). Grants of the President of Ukraine to Support Scientific Research of Young Scientists 2012. Engineering of mechanical stress in semiconductor heterostructures as a basis for the latest architecture of nanodevices (**project leader**).

Academics awards:

2016	Scholarship of Cabinet of Ministers of Ukraine for young scientists
2013	Awarded by the Taras Shevchenko Prize and Medal of Taras Shevchenko National University of Kyiv

Publication summary (total)

32 articles in international journals (Scientific Reports, PRB, JAP,PCCP);

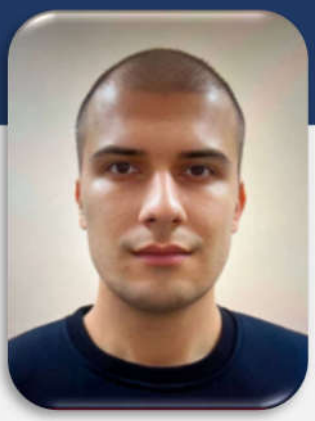
15 articles in national (Ukrainian) journals;

14 articles in proceedings;

34 abstracts in conferences and seminars.

Selected Publications:

1. **V. Kuryliuk**, O. Tyvonovych, S. Semchuk. Impact of Ge clustering on the thermal conductivity of SiGe nanowires: atomistic simulation study. Phys. Chem. Chem. Phys., 2023. Vol.25. P. 6263 (7p.). (**Q1**, **IF -3.945**)
2. **V.V. Kuryliuk,** S.S. Semchuk, K.V. Dubyk, R.M. Chornyi Structural features and thermal stability of hollow-core Si nanowires: A molecular dynamics study. Nano-Structures and Nano-Objects, 2022. V. 29. P. 100822 (8p.). (**Q1**)
3. A. Nadtochiy, **V. Kuryliuk**, V. Strelchuk, O. Korotchenkov, P.-W. Li and S.-W. Lee Enhancing the Seebeck effect in Ge/Si through the combination of interfacial design features. Scientific Reports, 2019. V.9. P. 16335 (11 p.). (**Q1**, **IF -4.525**)
4. **V. Kuryliuk**, O. Nepochatyi, P. Chantrenne, D.Lacroix, and M. Isaiev Thermal conductivity of strained silicon: Molecular dynamics insight and kinetic theory approach. Journal of Applied Physics, 2019. V.126. P. 055109 (13 p.). (**Q2**, **IF -2.328**)
5. B. Gorelov, A. Gorb, A. Nadtochiy, D. Starokadomsky, **V. Kuryliuk**, N. Sigareva, S. Shulga, V. Ogenko, O. Korotchenkov, O. Polovina. Epoxy filled with bare and oxidized multi-layered graphene nanoplatelets: a comparative study of filler loading impact on thermal properties. Journal of Materials Science, 2019. V. 54. P. 9247 – 9266. **(Q1, IF - 2.993)**



Pavlo Lishchuk

Date of Birth: 12 July 1992 **Gender:** male

Nationality: Ukraine **Phone:** +38 (063) 57 57 925

E-mail: pavel.lishchuk@gmail.com pavel.lishchuk@knu.ua

Official (postal) address: Ukraine, 01601, Volodymyrska street, 64/13, Faculty of Physics.

Profile in Bibliographic Databases:

Scopus | Researchgate | GoogleScholar | Orcid

EDUCATION

Ph.D. in Solid State Physics
Dec 2015 - Nov 2018

Faculty of Physics, Taras Shevchenko National University of Kyiv
Advisor: Dr. Roman Burbelo
Dissertation: Features of thermal transport in porous silicon-based semiconductor structures

MSc in Physics of Nanosystems
Aug 2013 - June 2015

Faculty of Physics, Taras Shevchenko National University of Kyiv
degree with distinction

Bachelor in Physics and Astronomy
Sep 2009 - June 2013

Faculty of Physics, Taras Shevchenko National University of Kyiv

RELEVANT WORK EXPERIENCE

Teaching assistant
2019 – Present

General Physics Department,
Faculty of Physics, Taras Shevchenko National University of Kyiv

Engineer of Studied Laboratory
2018 – 2019

Faculty of Physics,
Taras Shevchenko National University of Kyiv

SCOPUS PROFILE INFORMATION

h-index – 5, number of records – 21, number of citations – 92 (*date of checking 28-April-2023*)

ACADEMIC AWARDS

2022 Awarded by The Honorary Diploma of the Presidium of National Academy of Science of Ukraine.

2015 Awarded a Diploma for participating in the All-Ukrainian competition of student research papers in Physics **(**Ministry of Education and Science of Ukraine)

PARTICIPATION IN THE SCIENTIFIC PROJECTS

Carbon-based nano-materials for theranostic application. Funding scheme: Marie Skłodowska-Curie Research and Innovation Staff Exchange (RISE), HORIZON-2020. Call: H2020-MSCA-RISE-2015

Features of photothermal and photoacoustic processes in low-dimensional silicon-based semiconductor systems. Youth project of the Ministry of Education and Science of Ukraine (2018-2020), Ukraine.

Ultra-small Nanohybrides for Advanced Theranostics (UNAT) Funding scheme: Marie Sklodowska-Curie Actions (MSCA), Research and Innovation Staff Exchange (RISE), Call:H2020-MSCA-RISE-2020

TRAVEL GRANTS FOR THE PRESENTATIONS

Impact of thermal annealing on photoacoustic response and heat transport in porous silicon based nanostructured materials.
Thermophysics 2019, 22nd - 24th October, 2019, Smolenice, Slovakia.

Characterization of Porous Silicon Based Composite Nanostructures by Means of Photoacoustic Technique. The 2018 IEEE 8th International Conference on Nanomaterials: Applications & Properties (NAP-2018), 9-14 September, 2018, Zatoka, Ukraine.

Features of thermal transport in porous silicon based nanocomposite systems.
International Conference Porous Semiconductors Science and Technology (PSST – 2016), 6-11 March, 2016, Tarragona, Spain.

Investigations of thermal transport properties in porous silicon by photoacoustic technique.
Conference Photoacoustic and Photothermal Theory and Applications (CPPTA-II), 23-26 September, 2014, Warsaw, Poland.

REFEREE OF THE JOURNALS

Advanced Optical Materials, Journal of Applied Physics.

PROFESSIONAL SKILLS

MAIN RESEARCH AREAS:

Photothermal and photoacoustic phenomena

Heat transport in bulk and nanostructured materials

COMPUTING SKILLS

Fully conversant with Origin, MatLab, Comsol Multiphysics, Arduino, LabView, Microsoft Office, Inkscape, VEGAS Pro

Programming skills in c++

LANGUAGE COMPETENCIES

Superior skills in Ukrainian and Russian (oral and written)

Intermediate skills in English (oral and written)

Curriculum vitae

PERSONAL INFORMATION

First Name, Surname	Oleksii Zavhorodnii
Date of Birth	1998-12-07
Citizenship	Ukraine
E-mail	nevermor464@gmail.com
Mobile Telephone	+380509257946

EDUCATION

2022 - Present	Post-graduate course at the general physics department in Taras Shevchenko National University of Kyiv
2020-2022	Physics faculty of Taras Shevchenko University of Kyiv, master in physics of nanosystems (diploma with honours M22 №034028, 31.05.2022)
2016-2020	Physics faculty of Taras Shevchenko University of Kyiv, bachelor in speciality “Physics and Astronomy” (diploma B20 №142087, 30.06.2020)

LANGUAGES

Ukrainian - C2, English – B2.

SCIENTIFIC ACTIVITY

Number of Scientific Papers 5

Main Stream of Research

Field of knowledge "Nature Sciences"
- defect engineering in semiconductor structures;
- machine learning for defect characterization.

Papers in Q1 and Q2 Journals

1. Olikh O., Lozitsky O., Zavhorodnii O. «Estimation for iron contamination in Si solar cell by ideality factor: Deep neural network approach», Progress in Photovoltaics: Research and Applications, 2022, vol.30, is.6, p. 648-660; https://doi.org/10.1002/pip.3539
2. Olikh, O., Zavhorodnii O. «Modeling of ideality factor value in structure», Journal of Physical Studies, 2020, vol. 24, is.4, p. 4701-1-4701-8; https://doi.org/10.30970/jps.24.4701

International Conferences

1. Olikh, O., Zavhorodnii O. «Modeling of ideality factor value in silicon solar cells», XXII International Seminar on Physics and Chemistry of Solids, Lviv, Ukraine, Book of Abstracts, 2020. p. 77
2. Olikh O., Lozitsky O., Zavhorodnii O. «Deep-learning approach to the iron concentration evaluation in silicon solar cell», 9 European conference on renewable energy systems, Istanbul, Turkey, 2021, p. 22; ISBN: 978-605-86911-9-3
3. Olikh, O., Zavhorodnii O., Olikh Ya., Gapochenko S., Lyubchenko O., «Deep Learning-Based Impurity Evaluation: Targeting Silicon Solar Cells' Photovoltaic Parameters», IEEE 3rd KhPI Week on Advanced Technology (KhPIWeek), 2022

LESIA CHEPELA

CONTACTS

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WEBSITE

https://www.researchgate.net/profile/L-Chepela

https://orcid.org/0000-0003-2690-9207

H-INDEX (GOOGLE SCHOLAR, SCOPUS)

1

PUBLICATION SUMMARY

2 articles in international journals;
1 articles in national (Ukrainian) journals;
2 abstracts in conferences.

LANGUAGES

Ukrainian	●●●●●
Russian	●●●●●
English	●●●●○

EDUCATION

PhD degree, physics and astronomy
2020–present
Taras Shevchenko National University of Kyiv, Kyiv (Ukraine).

Master's degree, physics of nanosystems
2018–2020
Taras Shevchenko National University of Kyiv, Kyiv (Ukraine).
Honors Diploma. The total mark is 93,8/100

Bachelor's degree, physical material
2014–2018
Taras Shevchenko National University of Kyiv, Kyiv (Ukraine).
Honors Diploma. The total mark is 84,3/100

Internship
2019
Ecole Centre de Lyon, F LYON11, ERASMUS +, France
2023
Université de Lorraine, F Nancy 43, ERASMUS +, France

WORK EXPERIENCE

Physics of Laboratory
09.2018–12.2018
Taras Shevchenko National University of Kyiv, Faculty of Physics (Kyiv, Ukraine)

07.2019–12.2019
Taras Shevchenko National University of Kyiv, Faculty of Physics (Kyiv, Ukraine)

SKILLS

Instrumentation
Photothermal and photoacoustic techniques, Raman-Spectroscopy, electrochemical etching.
Software
MS Office, Origin, COMSOL.

ARTICLES IN PEER REVIEWED INTERNATIONAL JOURNALS

2019 Dubyk, K.; **Chepela, L**.; Lishchuk, P.; Belarouci, A.; Lacroix, D.; Isaiev, M. Features of photothermal transformation in porous silicon based multilayered structures**.** Applied Physics Letters, 2019, 115(2), 021902

2023 Lishchuk P.; Vashchuk A.; Rogalsky S.; **Chepela L**.; Borovyi M.; Lacroix D.; Isaiev M. Thermal transport properties of porous silicon filled by ionic liquid nanocomposite system Scientific Reports 2023, 13, 5889

ARTICLES IN PEER REVIEWED UKRAINIAN JOURNALS

2020 Dubyk, K.; **Chepela, L.**; Alekseev, S.; Kuzmich, A.; Zousman, B.; Levinson, O.; Rozhin, A.; Geloen, A.; Isaiev, M.; Lysenko, V. Some types of carbon-based nanomaterials as contrast agents for photoacoustic tomography, Journal of Nano- and Electronic Physics, 2020, 12(4), 04033

ARTICLES AND PROCEEDINGS OF INTERNATIONAL AND UKRAINIAN CONFERENCES

2022 **Chepela L.,** Lishchuk P., Shevchenko V., Kuryliuk V., Polishchuk E., Kuzmich A., Teselko P., Matushko I., Borovyi M. Fabrication and Photoacoustic Characterization of Multilayered Structures Based on Porous Silicon. (accepted for oral presentation) 2022 IEEE 41st International Conference on Electronics and Nanotechnology (ELNANO), October 10 – 14, 2022 in Kyiv, Ukraine

2022 Lishchuk P., **Chepela L.,** Polishchuk E., Shevchenko V., Kuryliuk V., Borovyi M., Lacroix D., Isaiev M. Investigation of Thermal Transport Properties of Multilayer Porous Silicon Based Hybrid Nano-structures by Photo-acoustic Technique. 2022 IEEE 12th International Conference "Nanomaterials: Applications & Properties" (IEEE NAP-2022), Sept. 11-16, 2022, Krakow, Poland

2018 **Chepela L.I**., Isaiev M.V, Lishchuk P.O. Features of photothermal transformation in multilayer systems based on porous silicon // Book of abstracts. Young Scientist conferenc "The Science of the 21st Century: Modern Problems of Physics" - Taras Shevchenko National University of Kyiv, May 15-17, 2018.

NATALIIA KYRYCHENKO

Kyiv, Ukraine
+380673227729 (WhatsApp)
natalija.kyrychenko@gmail.com
08-Sep-2001

EDUCATION

Master's Degree | Faculty of Physics, Taras Shevchenko National University of Kyiv
2022 – PRESENT
Department of Physics of Metals
Educational program: Physics of Nanosystems

Erasmus+ intership | LEMTA, Université de Lorraine, CNRS, Nancy, France
2023
Simulation of thermal transport in nanostructures by molecular dynamics

DAAD (The German Academic Exchange Program) | Technical University of Chemnitz
2022
Practical course in Semiconductor Physics
Remote lab experiments and research work
Educational programs: Physics of Semiconductors and Nanostructures, Nanoelectronics

Additional course | Georgia Institute of Technology, Coursera
2020
Linear Circuits 1: DC Analysis

Additional course | Moscow Institute of Physics and Technology, Coursera
2020
We built robots and other devices on Arduino. From traffic lights to 3D printer

Additional course | National Research Nuclear University MEPhI, Coursera
2020
Physics in experiments. Part 4. Waves and optics

Bachelor's Degree | Faculty of Physics, Taras Shevchenko National University of Kyiv
2018 – 2022
Department of Physics of Metals
Educational program: Physics of Nanosystems
Subject of the bachelor's qualification work: Synthesis and properties of high-entropy oxides with unique structure and properties.

Secondary Education | Physical-Technical Lyceum, Ivano-Frankivsk
2015 – 2018
Bronze and silver medal winner of tournaments in Physics and Math

WORKING AND INTERNSHIP EXPERIENCE

Analyst| Blago Development Inc., Building Construction & Architecture company
2020 – 2021
Experience of CAD modeling for new materials in industrial and house building and design. Calculation and optimization of construction WBS, cost and estimates.

Trainee| Electronics Manufacturing Systems, Techto Electronics LLC, Denmark
2019
Acquainted with Lean Production (Toyota Production System) principles, THD/SMD automation lines work, automotive and boxbuild production site.

ACTIVITIES

Active Student self-government participant | Taras Shevchenko National University of Kyiv
2018-2021
One year as the Secretary of the Student Council.
Two years in the position of the Student Trade Union moderator.
Experience in organizing different activities for students.

Volunteer for UAF, IT frontline BI Analyst for Cyber Security of UA vs RU invasion resistance
2022

SKILLS AND PERSONAL QUALITIES

Languages

- English – Upper Intermediate, B2 certified
- Ukrainian – native

Computer Skills

- Math software (Origin), Python coding, Physical software (LAMMPS, ALAMODE)
- MS Office
- Google Workspace (G Suite)