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|  |  | **MAKSYM M. IVASHCHENKO**  **Ph.D. in Physics of Devices,**  **Elements and Systems** |
| PERSONAL DATA Ukrainian  **Born:** December 21, 1984  in Konotop, Ukraine  **Phone:** +380984302003  **E-mail:** m.ivashchenko@ki.sumdu.edu.ua  **Post address:** Uspens’ko-Troits’ka Str. 7/18, Konotop, Sumy Region, Ukraine, UA-41600  **The main scientometric indicators and links**  **[1]** **Scopus:** 126 total citations in 112 documents, h-index = 6 (February 2021. Author ID (Scopus). URL: [*49961576300*](http://www.scopus.com/authid/detail.url?authorId=49961575300)  **[2] Google Scholar:** h-index = 8  (February 2021). Author ID. URL: [*Google Scholar*](http://scholar.google.com.ua/citations?user=Aj9P0xsAAAAJ&hl=ru)  **[3] ResearchGate**. Personal Page. URL: [*ResearchGate*](https://www.researchgate.net/profile/Maksym_Ivashchenko2/publications)  **[4] Elsevier Reviewers Profile:** Recognized and outstanding reviewer (top 10 percentile) of academic publishing house Elsevier. URL: [*reviewerpage.com/ Maksym-Ivashchenko*](http://www.reviewerpage.com/Maksym-Ivashchenko)  **Mother tongue(s):**  Ukrainian, Russian  **Other language(s): ENGLISH**  [Listening] B2  [Reading] C1  [Spoken interaction] B2  [Spoken production] B2  [Writing] C1  **Areas of research interests:**  **[1]**Device’s Physics  **[2]** Solid State Physics  **[3]** II-VI Films Characterization  **[4]** Vacuum Deposition  **Organisational / managerial skills:**  **[1]**good organisational skills gained as Head of the subdivision of Scientific Association of Students, Postgraduate Students, Doctors and Young Scientists of Sumy State University  **[2]**is a Journal Referee of the next peer-reviewed journals: Vacuum; Materials Science in Semiconductor Processing; Solar Energy; Applied Physics A.  **Digital competence:**  [Information processing] independent user  [Communication] independent user  [Content creation] independent user  [Safety] independent user  [Problem solving] independent user  **PERSONAL SKILLS:**  **[1]**Skilled in critical thinking  **[2]** Collaboration  **[3]** Purposeful  **[4]** Responsibility  **[5]** Quick learner  **Other activities**  **(at present):**  **[1]**Head of Scientific association of students, Ph.D.-students, doctorals and young scientists of Konotop Institute of Sumy State University  **[2]**Associated editor of the following journals:  – “Materials Science in Semiconductor Processing” (Elsevier, Netherlands);  – “Vacuum” (Elsevier, United Kingdom);  – “Solar Energy” (Elsevier, United Kingdom);  – “Thin Solid Films” (Elsevier, Netherlands);  – “Applied Physics A” (Springer, Germany);  – “European Physics Journal Plus” (Springer, Germany);  – “Journal of Electronic Materials” (Springer, Germany).  **[3]**Member of Scientific Council of Sumy State University  **[4]**Member of Academic Council of Konotop Institute of Sumy State University  **[5]**Member of Council for ensuring the quality of higher education of Konotop Institute of Sumy State University  **[6]**Member of the Ukrainian Research Association  **[7]**Expert of the National Research Foundation of Ukraine  **HOBBIES AND INTERESTS:**  **[1]**Aquascaping  **[2]** Tourism |  | EDUCATION2008-2011: Ph.D. study, Sumy State University, Ukraine2007-2008: M.Sc. study, Sumy State University, Ukraine2006-2007: B.Sc. study, Sumy State University, Ukraine2004-2006: B.Sc. study, Konotop Institute of Sumy State University, Ukraine 2000-2004: Minor B.Sc. study, Konotop Polytechnic School (KI SSU), Ukraine EDUCATION LEVELS2008: M.Sc., specialty «Electronic Devices and Instruments» (Sumy State University, Ukraine)2007: B.Sc., specialty «Electronic Devices and Instruments» (Sumy State University, Ukraine) 2004: Minor B.Sc., specialty «Production of Electronic and Electrical Automation Tools» (Konotop Polytechnic School, Konotop Institute, Sumy State University, Ukraine) DEGREE2014: Ph.D. in Physics of Devices, Elements and Systems (Sumy State University, Ukraine)Ph.D. ThesiS Structural, optical and electro-physical properties of CdSe (ZnSe) films and heterojunctions on their base M.Sc. Thesis Formation features and physical properties of Co- and Fe-based nanoparticles and their nanostructured interfaces B.Sc. Thesis Physical features and application perspectives of GaAs quantum dots  **Minor B.Sc. Thesis**  Instrumentation of mining speakerphone: the gain and selection contacts device  **Professional experience:**  From 2018: Deputy Director in R&D, Konotop Institute, Sumy State University (Ukraine)  2017-2020: Senior Research Scientist, Research Department, National Technical University of Ukraine “Kyiv Polytechnical Institute” (Ukraine)  2017-2020: Leading Research Scientist, Research Department, Sumy State University (Ukraine)  2016-2017: Senior Research Scientist, Research Department, Sumy State University (Ukraine)  2016-2017: Senior Lecturer, Department of Electronic Devices and Automation, Konotop Institute, Sumy State University (Ukraine)  2015-2018: Vice-dean of Scientific Research, Faculty of Full-time Education, Konotop Institute, Sumy State University (Ukraine)  2015-2016: Assistant, Department of Electronic Devices and Automation, Konotop Institute, Sumy State University (Ukraine)  2013-2015: Trainee-lecturer, Department of Electronic Devices and Automation, Konotop Institute, Sumy State University (Ukraine)  2011-2012: Research Fellow, Department of Applied Physics, Sumy State University (Ukraine)  2010-2011: Assistant, Department of General and Theoretic Physics, Sumy State University (Ukraine)  2010-2011: Physics Teacher, High School № 10 (Sumy, Ukraine)  2009-2011: Junior Research Fellow, Department of General and Theoretic Physics, Sumy State University (Ukraine)  2008-2009: Senior Labor Assistant, Department of General and Theoretic Physics, Sumy State University (Ukraine)  **List of participation in research projects:**  2017-2020: 0117U007179 – The ultrasonic cavitation system for water purification  2017-2020: 0117U003929 - Synthesis and optimization the properties of Cu2ZnSn(Ge)S(Se)4 semiconductor films deposited by non-vacuum methods for designing the third generation solar cells.  2016-2018: 52.21-04.02.16-18 – Fabrication and properties optimization of photosensitive elements based on tin and zinc sulfide (oxide) films (SnS2/SnS, ZnO(S)/SnS).  2016-2019: 0116U004166 - Phase composition, electro-physical and magneto-resistive properties of metal and semiconductor film systems suitable for device's application.  2016-2019: 0116U004167 – Improving the systems of localization the methane and coal dust explosion.  2016-2018: 0116U002619 – Synthesis, investigation and properties optimization of cadmium and zinc chalcogenides doped by rare-earth and isovalent impurities.  2011-2013: M348/2011 – The usage of new materials of buffer and absorption layers for low-cost polycrystalline thin-film solar cells based on hetero-junctions (Ukrainian-Korean Grant).  2010-2012: 0110U00151 – Obtaining and investigation of cadmium telluride films and solid solutions on their base for solar cells and irradiation detectors.  2009-2011: 0109U001387 – Investigation of structural, optical and electro-physical characteristics of novel buffer layers of thin-film solar cells based on cadmium telluride.  2007-2009: 0107U00192 – Investigation of electro-physical, optical, structural characteristics of thin films and multilayered structures based on II-VI compounds and their solid solutions.  List of most recent publications:  **[1]** I.P. Buryk, M.M. Ivashchenko, A.O. Golovnia, L.V. Odnodvorets. Numerical simulation of field-effect transistor GAA Si NW FET parameters based on nanowires. *Journal of Nano- and Electronic Physics*, 12 (2020), pp. 06012-1-06012-4.  **[2]** I.P. Buryk, M.M. Ivashchenko, A.O. Holovnia, A.S. Opanasyuk. Numerical simulation of FET transistors based on nanowire and fin technologies. Proceedings of IEEE KhPI Week on Advanced Technology, 2020, pp. 257-259, 9250126.  **[3]** I.P. Buryk, A.O. Golovnia, M.M. Ivashchenko, L.V. Odnodvorets. Numerical simulation of FinFET transistors parameters. *Journal of Nano- and Electronic Physics*, 12 (2020), pp. 03005-1-03005-4.  **[4]** A.A. Sulaiman, A.K.M. Muhammed, M.M. Ivashchenko. Optical and electrical properties of n-type porous silicon, produced by electrochemical etching and study the influence of γ-irradiation. *Journal of Nano- and Electronic Physics*, 11 (2019), pp. 05025-1-05025-6.  **[5]** M.M. Ivashchenko, A.S. Opanasyuk, I.P. Buryk, D.V. Kuzmin. Numerical simulation of SnS-based solar cells. *Journal of Nano- and Electronic Physics*, 10 (2018), pp. 03004-1-03004-6  **[6]** O.V. Diachenko, O.A. Dobrozhan, A.S. Opanasyuk, M.M. Ivashchenko, T.O. Protasova, D.I. Curbatov, A. Čerškus. The influence of optical and recombination losses on the efficiency of thin-film solar cells with a copper oxide absorber layer. *Superlattices and Microstructures*, 122 (2018), pp. 476-485.  **[7]** M.M. Ivashchenko, A.S. Opanasyuk, I.P. Buryk, V.A. Lutsenko, A.V. Shevchenko. Optical properties of pure and Eu doped ZnSe films deposited by CSVS technique. *Journal of Nano- and Electronic Physics*, 9 (2017), pp. 01011-1-01011-5.  **[8]** M.M. Ivashchenko, I.P. Buryk, V.M. Latyshev, A.O. Stepanenko, K.S. Levchenko. Influence of substrate temperature on structural and optical properties of bismuth oxide thin films deposited by close-spaced vacuum sublimation. *Superlattices and Microstructures*, 88 (2015), pp. 600-608.  **[9]** M.M. Ivashchenko, A.S. Opanasyuk, V.I. Perekrestov, V.V. Kosyak, Yu.P. Gnatenko, V.M. Kolomiets. Morphological, structural, compositional properties and IR-spectroscopy of CdSe ﬁlms deposited by close-spaced vacuum sublimation. *Vacuum*, 119 (2015), pp. 81-87.  **[10]** M.M. Ivashchenko, I.P. Buryk, A.S. Opanasyuk, D. Nam, H. Cheong, Ja.G. Vaziev, V.V. Bibyk. Influence of deposition conditions on morphological, structural, optical and electro-physical properties of ZnSe films obtained by close-spaced vacuum sublimation. *Materials Science in Semiconductor Processing* 36 (2015), pp. 13-19.  **[11]** A.S. Opanasyuk, M.M. Ivashchenko, I.P. Buryk, V.A. Moroz. Working characteristics simulation of p+-CuO/p-ZnTe/n-CdSe/n-MoSe2/Mo solar cell. *Journal of Nano- and Electronic Physics* 7(2) (2015), pp. 1-5.  **[12]** Yu.P. Gnatenko, A.S. Opanasyuk, M.M. Ivashchenko, P.M. Bukivskij, I.O. Faryna. Study of the correlation between structural and photoluminescence properties of CdSe thin films deposited by close-spaced vacuum sublimation. *Materials Science in Semiconductor Processing* 26 (2014), pp. 663-668.  **[13]** Yu.P. Gnatenko, P.M. Bukivskij, I.O. Faryna, A.S. Opanasyuk, M.M. Ivashchenko. Photoluminescence of high optical quality CdSe thin films deposited by close-spaced vacuum sublimation. *Journal of Luminescence*, 146 (2014), pp. 174-177.  **[14]** A.S. Opanasyuk, D.I. Kurbatov, M.M. Ivashchenko, I.Yu. Protsenko, H. Cheong. Properties of the window layers for the CZTSe and CZTS based solar cells. *Journal of Nano- and Electronic Physics* 4(1) (2012), pp. 1-3.  **[15**] A.D. Pogrebnjak, A.K.M. Muhammed, M.M. Ivashchenko, N.M. Opanasyuk, I.V. Sudzhanskaya. Structural investigations of zinc oxide and nitride aluminum films deposited by CVD and magnetron sputtering techniques, *Physical Surface Engineering*, 10(2) (2012), pp. 177-182 (in Russian).  **[16]** M.M. Ivashchenko, A.S. Opanasyuk, N.M. Opanasyuk, S.M. Danilchenko, V.V. Starikov. Semiconductor Physics, *Quantum Electronics & Optoelectronics*, 14(2) (2011), pp. 157-163.  **[17]** M.M. Ivashchenko, A.S. Opanasyuk, S.N. Danilchenko. Structure and substructure of zinc selenide films. *Functional Materials*, 18(1) (2011), pp. 18-23.  **[18]** M.M. Ivashchenko, A.S. Opanasyuk, S.N. Danilchenko, T.G. Kalinichenko, V.L. Perevertaylo. Structural and substructural characteristics of cadmium selenide thin films. *Physics and Chemistry of Solid State*, 11(2) (2010), pp. 349-355 (in Ukrainian).  **[19]** V.V. Starikov, M.M. Ivashchenko, A.S. Opanasyuk, V.L. Perevertaylo. Surface morphology and optical properties of CdSe films, obtained by the close-spaced vacuum sublimation technique. *Journal of Nano- and Electronic Physics*, 1(4) (2009), pp. 119-126.  **[20]** I.P. Buryk, M.M. Ivashchenko, L.A. Sheshenia. Structural and Electro-physical Properties of Heterogenous Film*. Materials Based on Refractory Metals.* In Proceedings of the 4th International Conference: Nanomaterials: Application and Properties NAP-2014 (Lviv, Ukraine, September 2014), pp. 01NTF02(3).  **[21]** H. Cheong, D. Nam, A.S. Opanasyuk, M.M. Ivashchenko, D.I. Kurbatov, M.M. Kolesnyk, O.V. Klymov. Raman Investigation on ZnS, ZnSe, ZnTe Thin Films Obtained by CSVS Technique. *In Proceedings of the 2nd International Conference: Nanomaterials:* Application and Properties NAP-2014 (Alushta, Ukraine, September 2012), pp. 03TF21(3).  **[22]** N.Y. Jamil, S.N. Abdulla, A.A. K. Muhammed, A.D. Pogrebnjak, M.M. Ivashchenko. Design and Fabrication Heterojunction Solarcell of Si-CdS-ZnO Thin Film. *In Proceedings of the 2nd International Conference: Nanomaterials:* Application and Properties NAP-2014 (Alushta, Ukraine, September 2012), pp. 04NMEEE09(3).  **[23]** A.D. Pogrebnjak, A.K.M. Muhammed, M.M. Ivashchenko, N.M. Opanasyuk. Surface morphology of nanostructured ZnO and ZnSe films. *In Proceedings of the 22nd International Crimean Conference “Microwave & Telecommunication Technology* (CriMiCo’2012) (Sevastopol, Ukraine, September 2012), pp. 610-612  **[24]** O.V. Klymov, D.I. Kurbatov, A.S. Opanasyuk, M.M. Ivashchenko, M.M. Kolesnyk, S.I. Kshnyakina, H. Cheong, D.Nam. Raman investigation and electro-physical properties of II-VI wide-band gap films*. In Proceedings of the 7th International Conference “Romanian Conference Series on Advanced Materials”* (ROCAM-2012) (Brasov, Romania, August 2012), p. 103.  **[25]** P.V. Koval, M.M. Ivashchenko, A.S. Opanasyuk, H. Cheong, D.Nam. Raman spectroscopy investigations on zinc selenide thin films. *In Proceedings of the 5th International Conference “Sensor Electronics and Microsystem Technologies”* (SEMST-5) (Odessa, Ukraine, June 2012), p. 253.  **[26]** M.M. Ivashchenko, A.S. Opanasyuk, S.N. Danilchenko. Structure and substructure of CdSe and ZnSe films compounds. *In Proceedings of the 3rd International Conference on Crystal Materials* (ICCM-2010), (Kharkiv, Ukraine, June 2010), p. 201.  **[27]** M.M. Ivashchenko, A.S. Opanasyuk, S.N. Danilchenko, V.V. Starikov. Structural and optical properties of CdSe and ZnSe films. *In Proceedings of the 4th International Conference “Sensor Electronics and Microsystem Technologies” (SEMST-4)* (Odessa, Ukraine, June 2010), p. 117.  **[28]** M.M. Ivashchenko, A.S. Opanasyuk, S.N. Danilchenko, T.G. Kalinichenko, V.L. Perevertaylo. Structural and substructural characteristics of cadmium selenide thin films. *In Proceedings of the 12th International Conference on Physics and Technology of Thin Films and Nanostructures* (MKFTTPN-XII) (Synyogora, Ukraine, May 2009), p. 245.  **Recognized and outstanding reviewer (Top 10th**  **PERCENTILE) OF ACADEMIC PUBLISHING HOUSE ELSEVIER** |