

# Ключові публікації

2022

## Статті в періодичних виданнях:

1. Angelsky OV, Bekshaev AY, Zenkova CY, Ivansky DI, Zheng J and Tkachuk VM (2022) Fluorescence Record Diagnostics of 3D Rough-Surface Landscapes With Nano-Scale Inhomogeneities. *Front. Phys.* 9:787821. [doi: 10.3389/fphy.2021.787821](https://doi.org/10.3389/fphy.2021.787821)

2021

## Статті в періодичних виданнях:

1. Ushenko, V.A., Hogan, B.T., Dubolazov, A., Piavchenko, G., Kuznetsov, S.L., Ushenko, A.G., Ushenko, Y.O., Gorsky, M., Bykov, A., Meglinski, I. 3D Mueller matrix mapping of layered distributions of depolarisation degree for analysis of prostate adenoma and carcinoma diffuse tissues. *Scientific Reports*. 2021. Vol. 11, №1. P. 5162. [Scopus Preview](#)
2. Ushenko, V.A., Hogan, B.T., Dubolazov, A., Grechina, A.V., Boronikhina, T.V., Gorsky, M., Ushenko, A.G., Ushenko, Y.O., Bykov, A., Meglinski, I. Embossed topographic depolarisation maps of biological tissues with different morphological structures. *Scientific Reports*. 2021. Vol. 11, №1. P. 3871, [Scopus Preview](#)
3. Hogan, B.T., Ushenko, V.A., Syvokorovskaya, A.-V., Dubolazov, A.V., Vanchulyak, O.Y., Ushenko, A.G., Ushenko, Y.A., Gorsky, M.P., Tomka, Y., Kuznetsov, S.L., Bykov, A., Meglinski, I. 3D Mueller Matrix Reconstruction of the Optical Anisotropy Parameters of Myocardial Histopathology Tissue Samples. *Frontiers in Physics*. 2021. Vol. 9. P. 737866. [Scopus Preview](#)
4. Ushenko, V.O., Trifonyuk, L., Ushenko, Y.A., Dubolazov, O.V., Gorsky, M.P., Ushenko, A.G. Polarization singularity analysis of Mueller-matrix invariants of optical anisotropy of biological tissues samples in cancer diagnostics. *Journal of Optics (United Kingdom)*. 2021. Vol. 23, №6. P. 064004. [Scopus Preview](#)
5. Berry, M.V., Soskin, S., Brasselet, E., Freund, I., Malomed, B.A., Aksenov, V.P., Guzmán, C.R., Alexeyev, C.N., Alexeyev, A.N., Yavorsky, M.A., Tryfonyuk, L., Ushenko, A., Andrews, D.L., Torner, L., Desyatnikov, A., Miyamoto, Y., Angelsky, O., Banzer, P., Rosanov, N.N., Roux, F.S., Venediktov, V., Vlokh, R.O., Volyar, A., Egorov, Y., Rubass, A., Gbur, G., Alonso, M.A., Karimi, E., Dennis, M.R. A tribute to Marat Soskin. *Journal of Optics (United Kingdom)*. 2021. Vol. 23, №5. P. 050201. [Scopus Preview](#)
6. Bachinsky, V., Vanchulyak, O.Y., Ushenko, A.G., Ushenko, Y.A., Dubolazov, A.V., Bykov, A., Hogan, B., Meglinski, I. Scale-Selective Multidimensional Polarisation Microscopy in the Post-mortem Diagnosis of Acute Myocardium Ischemia. *SpringerBriefs in Applied Sciences and Technology*. 2021. P. 23-51. [Scopus Preview](#)
7. Bachinsky, V., Vanchulyak, O.Y., Ushenko, A.G., Ushenko, Y.A., Dubolazov, A.V., Bykov, A., Hogan, B., Meglinski, I. Materials and Research Methods. *SpringerBriefs in Applied Sciences and Technology*. 2021. P. 1-22. [Scopus Preview](#)
8. Bachinsky, V., Vanchulyak, O.Y., Ushenko, A.G., Ushenko, Y.A., Dubolazov, A.V., Bykov, A., Hogan, B., Meglinski, I. Diagnosis of Acute Coronary Insufficiency by the Method of Mueller Matrix Analysis of Myosin Myocardium Networks. *SpringerBriefs in Applied Sciences and Technology*. 2021. P. 53-87. [Scopus Preview](#)
9. Meglinski, I., Trifonyuk, L., Bachinsky, V., Vanchulyak, O., Bodnar, B., Sidor, M., Dubolazov, O., Ushenko, A., Ushenko, Y., Soltys, I.V., Bykov, A., Hogan, B., Novikova, T. Polarization Correlometry of Microscopic Images of Polycrystalline Networks Biological Layers. *SpringerBriefs in Applied Sciences and Technology*. 2021. P. 61-73. [Scopus Preview](#)

10. Meglinski, I., Trifonyuk, L., Bachinsky, V., Vanchulyak, O., Bodnar, B., **Sidor, M., Dubolazov, O., Ushenko, A.**, Ushenko, Y., Soltys, I.V., Bykov, A., Hogan, B., Novikova, T. Scale-Selective and Spatial-Frequency Correlometry of Polarization-Inhomogeneous Field. *SpringerBriefs in Applied Sciences and Technology*. 2021. P. 33-59. [Scopus Preview](#)
11. Meglinski, I., Trifonyuk, L., Bachinsky, V., Vanchulyak, O., Bodnar, B., Sidor, M., Dubolazov, O., Ushenko, A., Ushenko, Y., Soltys, I.V., Bykov, A., Hogan, B., Novikova, T. Multifunctional Stokes Correlometry of Biological Layers. *SpringerBriefs in Applied Sciences and Technology*. 2021. P. 75-96. [Scopus Preview](#)
12. Meglinski, I., Trifonyuk, L., Bachinsky, V., Vanchulyak, O., Bodnar, B., Sidor, M., Dubolazov, O., Ushenko, A., Ushenko, Y., Soltys, I.V., Bykov, A., Hogan, B., Novikova, T. Methods and Means of Polarization Correlation of Fields of Laser Radiation Scattered by Biological Tissues. *SpringerBriefs in Applied Sciences and Technology*. 2021. P. 1-15. [Scopus Preview](#)
13. Meglinski, I., Trifonyuk, L., Bachinsky, V., Vanchulyak, O., Bodnar, B., Sidor, M., Dubolazov, O., Ushenko, A., Ushenko, Y., Soltys, I.V., Bykov, A., Hogan, B., Novikova, T. Materials and Methods. *SpringerBriefs in Applied Sciences and Technology*. 2021. P. 17-31. [Scopus Preview](#)
14. Bekshaev, A.Y., Angelsky, O.V., Zheng, J., Hanson, S.G., Zenkova, C.Y.U. Erratum: Microscopic analysis of the energy, momentum and spin distributions in a surface plasmon-polariton wave. *Optical Materials Express*. 2021. Vol. 11, №8. P. 2711. [Scopus Preview](#)
15. Angelsky, O.V., Bekshaev, A.Y., Dragan, G.S., Maksimyak, P.P., Zenkova, C.Y., Zheng, J. Structured Light Control and Diagnostics Using Optical Crystals. *Frontiers in Physics*. 2021. Vol. 9, P. 715045. [Scopus Preview](#)
16. Angelsky, O.V., Zenkova, C.Y.U., Hanson, S.G., Ivansky, D.I., Tkachuk, V.M., Zheng, A.J.U.N. Random object optical field diagnostics by using carbon nanoparticles. *Optics Express*. 2021. Vol. 29, № 2. P. 916-928. [Scopus Preview](#)
17. Garazdiuk M.S., **Dubolazov O.V.**, Malanchuk S.M. Use of azimuthal-invariant Mueller-matrix images of linear dichroism of histological sections of brain substance for diagnosis of hemorrhage genesis. *Reports of morphology*. 2020. Vol. 26, №2. 2020. P. 62-66. <https://morphology-journal.com/index.php/journal/article/view/422>
18. Гараздюк М.С., **Дуболазов О.В.**, Тюленєва В.О. Судово-медична диференційна діагностика інфарктів мозку та крововиливів травматичного генезу методом 3D - Мюллер-матричної мікроскопії. *Буковинський медичний вісник* 2021. Т.25, №1 (97). С.24-30.
19. Гараздюк М.С., **Дуболазов О.В.** Судово-медична оцінка крововиливів у головний мозок травматичного та нетравматичного генезу методом Мюллер-матричної мікроскопії циркулярного дихроїзму. *Буковинський медичний вісник*. 2021. Т.25, №2 (98). 29-34.
20. Ігор Іваськевич, Олег Ванчуляк, **Олександр Олар**. Судово-медична диференційна діагностика отруєння етанолом і монооксидом вуглецю методом дифузної томографії поляризаційних зображень полікристалічних плівок крові. *Судово-медична експертиза*. 2021. № 1 С.6.
21. Олександра Литвиненко, Олег Ванчуляк, **Ірина Солтис**, Ольга Михайлова, **Артем Мотрич**. Диференційна діагностика давності утворення ушкоджень методом цифрового поляризаційного картографування мікроскопічних зображень гістологічних зрізів органів людини. *Судово-медична експертиза*. 2021. № 1 С.12.
22. Трифонюк Л., **Ушенко О.Г.**, Давиденко І.С., Полянський І.Ю., Герасименко О.І., Сулоєв К.М. Диференціальна діагностика доброкісних і злоякісних пухлин простати

методом поляризаційно-сингулярної Мюллер-матричної мікроскопії полікристалічних плівок крові. *Оптико-електронні інформаційно-енергетичні технології*. 2020. №2. С.21-28 <https://doi.org/10.31649/1681-7893-2020-40-2-21-28>

**Матеріали конференцій:**

1. O. Barauskiene, S. Zyhulia, K. Chepurna, D. Barchuk, **A. Dubolazov, I. Soltys**, "Influence varnish on color indicator of the imprints," Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 1212602 (20 December 2021); <https://doi.org/10.1117/12.2614671>
2. O. V. Angelsky, D. I. Ivanskyi, **V. M. Tkachuk**, and Jun Zheng "Modeling of optical forces in a speckle field", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 121260M (20 December 2021); <https://doi.org/10.1117/12.2615508>
3. **C.Yu. Zenkova**, D. I. Ivanskyi, **V. M. Tkachuk**, and Yan Wenjun "New methods for measuring of surface landscape", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 121260S (20 December 2021); <https://doi.org/10.1117/12.2615517>
4. Kateryna Zolotukhina and **Iryna Soltys** "The reflectance spectra of the model printing inks", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 1212610 (20 December 2021); <https://doi.org/10.1117/12.2615558>
5. T. Roik, A. Brovkin, and **A. Dubolazov** "Analysis of the parts' roughness parameters of high-speed printing equipment by optical profilometry", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 1212617 (20 December 2021); <https://doi.org/10.1117/12.2615584>
6. D. I. Ivanskyi, **V. M. Tkachuk**, Jun Zheng, A. I. Dobosh, and I. S. Mikirin "Dynamics of carbon nanoparticles distribution in reconstruction of optical field", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 121261A (20 December 2021); <https://doi.org/10.1117/12.2615628>
7. **V. G. Zhytaryuk** and **E.I. Kurek** "Gram-Charlier distribution in statistical problems of optics", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 121261B (20 December 2021); <https://doi.org/10.1117/12.2615631>
8. **Leonid Pidkamin**, Alexandr Arkhelyuk, and Yurii Dobrovolskii "Features of the use of polarized radiation to assess the structural organization of light-scattering objects", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 121261F (20 December 2021); <https://doi.org/10.1117/12.2615771>
9. Alexandr Arkhelyuk, **Leonid Pidkamin**, Oleksii Khudyi, Mykhailo Marchenko, Lidiia Khuda, **Aleksandr Ushenko**, **Aleksandr Dubolazob**, and **Artem Motrich** "Features of the scattering of polarized light by biological materials of fish", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 121261G (20 December 2021); <https://doi.org/10.1117/12.2615773>
10. **Mykhajlo Yu. Sakhnovskyj**, Miroslav T. Strinadko, Mickolay M. Dominikov, and Bogdan M. Tymochko "Dynamic interferometry method for measuring wavelength", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 121261W (20 December 2021); <https://doi.org/10.1117/12.2616223>
11. H. Kopylchuk, I. Nikolaychuk, **A. Motrich**, and **O. Ushenko** "Algorithm for diagnosing pancreatic endocrine dysfunction based on biochemical and laser polarimetric parameters", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 121261Z (20 December 2021); <https://doi.org/10.1117/12.2616526>
12. M. S. Garazdyuk, V. T. Bachinskiy, Yu. A. Ushenko, P. A. Gorodenskiy, V. K. Gantyuk, **M. M. Slyotov**, I. V. Fesiv, L. Hulei, and I. Oliinyk "Forensic medical assessment of cerebral infarction, hemorrhagic hemorrhages of traumatic genesis and determination of the

duration of their formation methods of spectral-selective laser-induced direct polarization-phase tomography", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 1212621 (20 December 2021); <https://doi.org/10.1117/12.2616659>

13. A. Litvinenko, L. Tryfonyuk, O. Pavlyukovich, N. Pavlyukovich, A. T. Stashkevich, **O. Olar, O. I. Kurek**, and V. I. Tkachuk "Polarization mapping of laser-induced monospectral fields of optically anisotropic fluorophores in forensic diagnostics of the age of the formation of damage to human organs", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 1212622 (20 December 2021);  
<https://doi.org/10.1117/12.2616662>
14. A. Yu. Litvinenko, D. Kvasnyuk, A. Ya. Vanchulyak, M. Stashkevich, **A. V. Motrich**, A. Yu. Mikhailova, **M. P. Gorskiy**, and **M. M. Slyotov** "Mueller-matrix microscopy of laser-induced monochromatic fluorescent fields of preparations of human internal organs and histological diagnostics of the time of age of damage formation", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 1212623 (20 December 2021);  
<https://doi.org/10.1117/12.2616667>
15. V. Vasyuk, A. Kalashnikov, A. Yu. Litvinenko, A. Yu. Mykhaylova, **A V. Motrich**, **A. V. Olar**, Yu. A. Ushenko, and P. Gorodenskiy "Method of laser-induced polarization reconstruction of the polycrystalline structure of molecular fluorophores histological sections in histological definition age of damage internal human organs", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 1212624 (20 December 2021);  
<https://doi.org/10.1117/12.2616670>
16. V. L. Vasyuk, A. V. Kalashnikov, V. V. Protsyuk, **I. V. Soltys**, **A. V. Motrich**, Yu. A. Ushenko, P. A. Gorodenskiy, and V. K. Gantyuk "Differential diagnosis of aseptic and septic loosening of the cup of the artificial hip joint endoprosthesis by methods of spectral-selective laser autofluorescence microscopy", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 1212625 (20 December 2021);  
<https://doi.org/10.1117/12.2616672>
17. L. Trifonyuk, A. Strashkevich, N. Pavlyukovich, A. Pavlyukovich, Yu. Tomka, **V. Zhytaryuk**, and V. I. Tkachuk "Polarization interference mapping of microscopic images of protein fluorophores in the differential diagnosis of benign and malignant prostate tumours", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 1212628 (20 December 2021); <https://doi.org/10.1117/12.2616836>
18. D. Kvasniuk, L. Trifonyuk, A. Stashkevich, N. Kozan, V. Ushenko, O. Dunaiev, V. Kryvetskyi, I. Oliinyk, **E. I. Kurek**, and V. I. Tkachuk "Detection of pathological changes in the architectonics of polycrystalline blood films using laser-induced polarization interferometry", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 1212629 (20 December 2021); <https://doi.org/10.1117/12.2616837>
19. M. Garazdyuk, V. T. Bachinsky, L. Hulei, V. A. Ushenko, **M. Slyotov**, I. V. Fesiv, I. I. Drin, and S. S. Drin "Laser-induced 3D Mueller-matrix microscopy method for forensic evaluation cerebral infarction, hemorrhagic hemorrhages of traumatic genesis", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 121262A (20 December 2021); <https://doi.org/10.1117/12.2616838>
20. H. Kopylchuk, I. Nikolaychuk, O. Voloshchuk, **A. Motrich**, and O. Konovchuk "Biochemical and laser-polarimetric markers of hepatocyte cytology syndrome under conditions of toxic damage and protein deficiency", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 121262B (20 December 2021);  
<https://doi.org/10.1117/12.2617041>
21. **O. Dubolazov**, **O. Ushenko**, **A. Motrich**, M. Gavrylyak, **I. Soltys**, **M. Gorsky**, O. Vanchulyak, and Ya. Dupeshko "3D Jones matrix layer-by-layer scanning linear and circular birefringence maps of polycrystalline polyethylene films", Proc. SPIE 12126,

Fifteenth International Conference on Correlation Optics, 121262C (20 December 2021);  
<https://doi.org/10.1117/12.2617043>

22. Jun Zheng, Zhebo Chen, **O.G. Ushenko, O. Dubolazov, O. Olar**, M. Gavrilyak, **I. Soltys**, Ch. Felde, **M. Gorsky**, N. Horodynska, O. Arkhelyuk, and O. Konovchuk "Mueller-matrix microscopy of diffuse layers of polyvinyl acetate with digital holographic reconstruction of layer-by-layer depolarization maps", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 121262F (20 December 2021); <https://doi.org/10.1117/12.2617049>
23. **O. Dubolazov, O. Ushenko, A. Motrich**, M Gavrilyak, **I. Soltys, O. Olar, M. Slytov**, and M. Matymish "Polarization phase reconstruction phase anisotropy in diagnostics of the polycrystalline structure of acrylic glass", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 121262D (20 December 2021);  
<https://doi.org/10.1117/12.2617045>
24. **O. Ushenko**, V. Ushenko, A. Nehrych, **R. Besaha**, P. Ryabiy, Ch. Felde, N. Horodynska, O. Konovchuk, and O. Vanchulyak "Polarization-interference mapping of polystyrene layers in the flaw detection of its polycrystalline structure", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 121262E (20 December 2021);  
<https://doi.org/10.1117/12.2617047>
25. Jun Zheng, Zhebo Chen, **M. Gorsky, O. Ushenko**, Yu. Galushko, N. Gorodynska, P. Ryabiy, A. Arkhelyuk, Ch. Felde, O. Vanchulyak, **M. Slytov**, and **R. Besaha** "Polarization: singular flaw detection of the microstructure of optically transparent polycarbonate layers", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 121262G (20 December 2021); <https://doi.org/10.1117/12.2617051>
26. Fedir V. Grynchuk, Ivan I. Dutka, and **Roman M. Besaha** "Diagnostics of haemostasis efficiency with laser illumination scattering pattern analysis", Proc. SPIE 12126, Fifteenth International Conference on Correlation Optics, 121262N (20 December 2021);  
<https://doi.org/10.1117/12.2618481>
27. **Sklyarchuk, V.M.**, Gnatyuk, V.A., Aoki, T. Features of dark electrical conductivity of semi-insulating p-CdTe single crystals. *Proceedings of SPIE - The International Society for Optical Engineering*. 2021. Vol. 11838. P. 1183818.  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85117942171&doi=10.1117%2f12.2594318&partnerID=40&md5=edaa6d3b83765667207982a04773797c>
28. **Sklyarchuk, V.**, Fochuk, P., Bolotnikov, A., James, R.B., Zakharuk, Z. High radiation resistant crystals for x-ray and  $\gamma$ -radiation detectors. *Proceedings of SPIE - The International Society for Optical Engineering*. 2021. Vol. 11838, P. 1183817.  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85117901713&doi=10.1117%2f12.2594082&partnerID=40&md5=7169304d2677e0ae48c15f0c4c65a966>
29. Stashkevich A.T., Kozlov S.V., **Dubolazov A.V.**, Ushenko Yu.O., Polevyi V. P., Solovey Yu.M., Chepega I.G., Prokopovich I.V., Kotyra A., Borankulova G. Yeraliyeva B. Polarization correlometry of microscopic images and polycrystalline networks of biological layers necrotic changes. *Proceedings of SPIE - The International Society for Optical Engineering*. 2021. Vol. 12040. P. 120400E.  
<https://www.spiedigitallibrary.org/conference-proceedings-of-spie/12040/120400E/Polarization-correlometry-of-microscopic-images-and-polycrystalline-networks-of-biological/10.1117/12.2617062.full>
30. Stashkevich A. T., Dunaiev O. V., Kvasniuk D. V., Polevoy V. P., Solovey Yu. M., Chepega I.G., Ushenko Yu. O., **Dubolazov O.V.**, Paliy V.G., Kisała P., Ormanbekova A., Tungatarov A. Spectral polarimetry of laser images of biological fluid layers in the differentiation of necrotic conditions. *Proceedings of SPIE - The International Society for Optical Engineering*. 2021. Vol. 12040. P. 120400C.

<https://www.spiedigitallibrary.org/conference-proceedings-of-spie/12040/120400C/Spectral-polarimetry-of-laser-images-of-biological-fluid-layers-in/10.1117/12.2613344.full>

31. Stashkevich A.T., Kozan N.R., Oliynik I.Yu., Hulei L.V., Polevoy V.P., Solovey Yu. M., Ushenko Yu.O., **Dubolazov O.V.**, Paliy V. G., Wójcik W., Duskazaev G., Zhunissova U., Jarykbassov D. Multiparameter polarization-phase microscopy of optically anisotropic networks of biological crystals. *Proceedings of SPIE - The International Society for Optical Engineering*. 2021. Vol. 12040. P. 120400F.  
<https://www.spiedigitallibrary.org/conference-proceedings-of-spie/12040/120400C/Spectral-polarimetry-of-laser-images-of-biological-fluid-layers-in/10.1117/12.2613344.full>
32. Stashkevich A.T., Wanchulyak O.Ya., Litvinenko O. Yu., Ushenko Yu.O., **Dubolazov O. V.**, Sorochan E., Zagoruiko L.V., Wójcik W., Rakhmetullina S., Denissova N., Jarykbassov D. Differential Mueller-matrix tomography of the polycrystalline structure of biological tissues with different damage durations. . *Proceedings of SPIE - The International Society for Optical Engineering*. 2021. Vol. 12040. P. 120400G.  
<https://www.spiedigitallibrary.org/conference-proceedings-of-spie/12040/120400G/Differential-Mueller-matrix-tomography-of-the-polycrystalline-structure-of-biological/10.1117/12.2617360.full>

## 2020

### *Статті в періодичних виданнях:*

1. Peyvasteh, M., Tryfonyuk, L., Ushenko, V., Syvokorovskaya, A.-V., **Dubolazov, A.**, Vanchulyak, O., **Ushenko, A.**, Ushenko, Y., Gorsky, M., Sidor, M., Tomka, Y., Soltys, I., Bykov, A., Meglinski, I. 3D Mueller-matrix-based azimuthal invariant tomography of polycrystalline structure within benign and malignant soft-tissue tumours (2020) *Laser Physics Letters*, 17 (11), стаття № 115606 [Scopus Preview](#)
2. Peyvasteh, M., **Dubolazov, A.**, Popov, A., **Ushenko, A.**, Ushenko, Y., Meglinski, I. Two-point Stokes vector diagnostic approach for characterization of optically anisotropic biological tissues (2020) *Journal of Physics D: Applied Physics*, 53 (39), стаття № 395401.
3. Trifonyuk, L., Sdobnov, A., Baranowski, W., Ushenko, V., **Olar, O.**, **Dubolazov, A.**, **Pidkamin, L.**, Sidor, M., Vanchuliak, O., Motrich, A., Gorsky, M., Meglinski, I. Differential Mueller matrix imaging of partially depolarizing optically anisotropic biological tissues (2020) *Lasers in Medical Science*, 35 (4), pp. 877-891. [Scopus Preview](#)
4. Angelsky, O.V., Maksymyk, P.P., **Zenkova, C.Y.**, Hanson, S.G., Zheng, J. Current Trends in Development of Optical Metrology (2020) *Optical Memory and Neural Networks (Information Optics)*, 29 (4), pp. 269-292. [Scopus Preview](#)
5. Angelsky, O.V., Bekshaev, A.Y., Hanson, S.G., **Zenkova, C.Y.**, Mokhun, I.I., Jun, Z. Structured Light: Ideas and Concepts (2020) *Frontiers in Physics*, 8, стаття № 114. [Scopus Preview](#)
6. Angelsky, O.V., **Zenkova, C.Y.**, Hanson, S.G., Zheng, J. Extraordinary Manifestation of Evanescent Wave in Biomedical Application (2020) *Frontiers in Physics*, 8, стаття № 159. [Scopus Preview](#)
7. Maksymyk, P.P., **Zenkova, C.Y.**, **Tkachuk, V.M.** Carbon nanoparticles. Production, properties, perspectives of use [Вуглецеві наночастинки. Виготовлення, властивості, перспективи використання] (2020) *Physics and Chemistry of Solid State*, 21 (1), pp. 13-18. [Scopus Preview](#)
8. **Sklyarchuk, V.**, Zakharuk, Z., Solodin, S., Rareko, A., Sklyarchuk, O., Fochuk, P., Bolotnikov, A., James, R.B. Effect of the Electric Field Strength on the Energy Resolution of Cr/CdTe/Pt Detectors (2020) *IEEE Transactions on Nuclear Science*, 67 (11), стаття № 9204650, pp. 2439-2444. [Scopus Preview](#)

9. Ivanitska, V.G., Dzyubinska, N.S., Bab'yuk, Yu.V., **Sklyarchuk, V.M.**, Fochuk, P.M. Chemical modification of Cd0.9Zn0.1Te surface (2020) Voprosy Khimii i Khimicheskoi Tekhnologii, 2020 (3), pp. 77-87. [Scopus Preview](#)
10. **Sklyarchuk, V.M.**, Gnatyuk, V.A., Aoki, T. Effect of CdTe crystal thickness on the efficiency of Cr/CdTe/Au Schottky-diode detectors (2020) Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 953, стаття № 163224. [Scopus Preview](#)

**Матеріали конференцій:**

1. **Dubolazov, O.**, Pavlyukovitch, O., Pavlyukovitch, N., Gurina, O., Arkhelyuk, A. Polarization interferometry of the polycrystalline structure of biological tissues (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11369, стаття № 113691P.  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081116128&doi=10.1117%2f12.2553956&partnerID=40&md5=2748ee57fd71ce197f0a5e54cd2375a8>
2. Garazdyuk, M., Savka, I., Tomka, Y., **Soltys, I.**, **Dubolazov, O.**, Dvorjak, V. Azimuthally invariant Mueller-matrix microscopy in the differential diagnosis of cerebral infarction (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11509, стаття № 115090T.  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092597091&doi=10.1117%2f12.2568436&partnerID=40&md5=b7eee0c9e5b06b7e87262133dfeed9f4>
2. Oliinyk, I., Solovey, Y., Polovyi, V., **Dubolazov, A.**, Ushenko, Y., **Soltys, I.**, **Motrich, A.** Polarization-phase mapping of the optically anisotropic component of biological tissues in the differential diagnosis of sepsis (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11718, стаття № 117180O.  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099407766&doi=10.1117%2f12.2570815&partnerID=40&md5=0cd2a08aee9f0b2cab45dbb8ce2ce983>
3. Solovey, Y., **Ushenko, O.**, **Zhytaryuk, V.**, **Dubolazov, O.**, Ushenko, V., Kovalchuk, M., Yatsko, O.  
Differential mapping of depolarization component of Mueller matrix of optically thick biological layers  
(2020) Proceedings of SPIE - The International Society for Optical Engineering, 11718, стаття № 117181F, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099393684&doi=10.1117%2f12.2571207&partnerID=40&md5=2fc93617becb8fdbd666a5275bb890d33>
4. Ivashkevich, Y., Wanchulyak, O., Bachinskiy, V., Tomka, Y., **Soltys, I.**, **Dubolazov, O.**, Dvorjak, V.

Phase reconstruction of the polycrystalline structure of internal organs tissues in the differentiation of alcohol and carbon monoxide poisoning (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11718, стаття № 117181D, .

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099353721&doi=10.11117%2f12.2571204&partnerID=40&md5=276b5e282c78d917322002130e39fdb>

5. Garazdyuk, M., Vanchulyak, O., Zavolovich, Y., Tomka, Yu., **Soltys, I., Dubolazov, O.**, Dvorjak, V.

Diffuse tomography of brain nerve tissue in the temporary monitoring of pathological changes in optical anisotropy (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11510, стаття № 115102Q, .

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092675262&doi=10.11117%2f12.2568443&partnerID=40&md5=efde7b4b71876e3a37c595f08f379489>

6. Sivokorovskaya, N., Bachinsky, V., Vanchulyak, O., **Ushenko, A., Dubolazov, A.**, Ushenko, Yu., Tomka, Yu. Polarization-phase diagnostics of volume of blood loss (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11510, стаття № 115102T, .

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092671564&doi=10.11117%2f12.2568474&partnerID=40&md5=5eb4e2cafec0cefa7b4ba7df205509ac>

7. Ivashkevich, Ya., Vanchulyak, O., Bachinsky, V., **Ushenko, O., Gorsky, M.**, Ushenko, V., **Dubolazov, O.** Multichannel polarization sensing of polycrystalline blood films in the diagnosis of the causes of poisoning (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11510, стаття № 115102R, .

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092618318&doi=10.11117%2f12.2568445&partnerID=40&md5=7e545e7a421ecf8eb93bcc5a84037f1>

8. **Ushenko, A.G., Dubolazov, A.V.**, Litvinenko, O.Y., Bachinskiy, V.T., Bin, L., Bin, G., Zhebo, C. 3D polarization correlography of object fields of networks of biological crystals (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11369, стаття № 113691M, .

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081137009&doi=10.11117%2f12.2553942&partnerID=40&md5=c2e687567754ad163188eaf1f084f722>

9. **Dubolazov, A.**, Ushenko, V., Litvinenko, O., Bachinskiy, V., Petrushak, A., Karachevtsev, A., Kovalchuk, M.L. Polarization-interference mapping of the distributions of the parameters of the Stokes vector of the object field of a biological optically anisotropic layer (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11369, стаття № 113691N, . <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081133650&doi=10.11117%2f12.2553953&partnerID=40&md5=b168773ea0debb4ff3bdb77d81dce67a>
10. **Ushenko, O.G.**, Syvokorovskaya, N., Bachinskiy, V., Vanchulyak, O., **Dubolazov, A.V.**, Ushenko, Y.O., Dovgun, A.Y. Laser autofluorescent microscopy of histological sections of parenchymatous biological tissues of the dead (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11369, стаття № 113691V, . <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081133351&doi=10.11117%2f12.2553973&partnerID=40&md5=d286f4502e9162335f3a96349a1c579f>
11. **Ushenko, A.G., Dubolazov, A.V.**, Ushenko, Y.A., Tomka, Y.Y., Karachevtsev, A.O., Sidor, M.I., Prydiy, A. Differential diagnosis of the limitation of the formation of hemorrhages of traumatic origin, cerebral infarction, ischemic and hemorrhagic genesis by polarization-phase tomography (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11369, стаття № 113691Q, . <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081120654&doi=10.11117%2f12.2553989&partnerID=40&md5=18fb1ea1a7fef7b6029e46e22930d94d>
12. Railianu, S., Solovey, Yu., Polovyi, V., **Dubolazov, A.**, Ushenko, Yu., **Soltys, I., Motrich, A., Pidkamin, L.** Vector-parametric structure of polarization images of networks of biological crystals for differential diagnosis of inflammatory processes (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11510, стаття № 115102M, . <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092627851&doi=10.11117%2f12.2568404&partnerID=40&md5=b3f6ea803aacc4ccad71c643e1d9eabc>
13. Protsyuk, V., Vasyuk, V., Vasilchishin, Y., **Ushenko, A.**, Martsenyak, I., **Dubolazov, A.**, Ushenko, Y., Tomka, Y. Differential diagnostics of aseptic and septic loosening of the cup of the endoprosthesis of the artificial hip joint by the methods of polarization tomography (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11509, стаття № 115090X, . <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092578792&doi=10.11117%2f12.2568470&partnerID=40&md5=1e2f926292535f62d5f554b0b8c32a0a>
14. Kvasnyuk, D., Penteleichuk, N., **Ushenko, A., Gorsky, M.**, Ushenko, V., **Dubolazov, O., Motrich, A., Olar, A.** Diagnosis and differentiation of joint pathology by spectral polarimetry of the parameters of the Stokes vector microscopic images of the optically active component of the synovial fluid (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11509, стаття № 115090U, . <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092566125&doi=10.11117%2f12.2568448&partnerID=40&md5=c31a6e07582768fdff7d26a5ba0fc631>
15. Solovey, M., Solovey, Y., Polovyi, V., Chepiga, I., **Dubolazov, A.**, Ushenko, Y., **Soltys, I., Motrich, A.**

- Phase tomography of the polycrystalline structure of blood films (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11483, стаття № 114830U, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092468277&doi=10.1117%2f12.2568401&partnerID=40&md5=23877881aaebfea577534eb3e5d6808>
16. Karchevtsev, A., Beaser, L., **Dubolazov, A.V.**, Lacusta, O., Grygoryshin, P., **Soltys, I.V.**, Yatsko, O.M., **Pidkamin, L.I.** Investigations of phase shift distributions between orthogonal polarization states of laser images of blood samples of cancer patients (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11369, стаття № 113691Y, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081114758&doi=10.1117%2f12.2553979&partnerID=40&md5=ad2c15bd6b36c8784568321f903c574e>
17. **Dubolazov, A.V.**, Getmantseva, N.D., Getmantsev, A.V., Ushenko, Y.O., **Gorsky, M.P.**, **Slyotov, M.M.**, **Zhytaryuk, V.G.**, Penteleichuk, N.P. Stokes-correlometric differentiation of polarization-heterogeneous images of biological tissues and some legal aspects of the use of early diagnosis of diseases (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11369, стаття № 113691W, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081113844&doi=10.1117%2f12.2553975&partnerID=40&md5=c207278bec57d4918740c1ab8590a894>
18. Sivokorovskaya, N., Bachinskyi, V.T., Vanchulyak, O.Y., **Ushenko, O.G.**, **Dubolazov, A.V.**, Ushenko, Y.O., Tomka, Y.Y., Kushnerik, L.Y. Statistical analysis of polarization images of histological cuts of parenchymatic tissues in diagnostics of volume of blood loss (2020) IFMBE Proceedings, 77, pp. 513-517.  
[https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075618332&doi=10.1007%2f978-3-030-31866-6\\_92&partnerID=40&md5=47b0893b887e413ce2fd2809990c1829](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075618332&doi=10.1007%2f978-3-030-31866-6_92&partnerID=40&md5=47b0893b887e413ce2fd2809990c1829)
19. **Ushenko, O.G.**, Syvokorovskaya, A.-V., Bachinsky, V.T., Vanchuliak, O.Y., **Dubolazov, A.V.**, Ushenko, Y.O., Tomka, Y.Y., Kovalchuk, M.L. Laser autofluorescent microscopy of histological sections of parenchymatous biological tissues of the dead (2020) IFMBE Proceedings, 77, pp. 507-511.  
[https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075607784&doi=10.1007%2f978-3-030-31866-6\\_91&partnerID=40&md5=50f4d5168f43f8d11ee9156cc9424c80](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075607784&doi=10.1007%2f978-3-030-31866-6_91&partnerID=40&md5=50f4d5168f43f8d11ee9156cc9424c80)
20. Litvinenko, A., Savka, I., Ushenko, Y., **Dubolazov, A.**, Wanchulyak, O., Gantyuk, V., Talakh, M., Bin, L., Chen, Z. Differential Mueller-matrix tomography of the polycrystalline structure of histological sections in the histological determination of the limitation of the damage formation of human internal organs (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11718, стаття № 117181B, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099400562&doi=10.1117%2f12.2571202&partnerID=40&md5=d6b9d1f2467070ec4bb777c2ac552416>
21. Railianu, S., Solovei, M., Solovey, Y., Polovyi, V., **Dubolazov, A.**, Ushenko, Y., **Soltys, I.**, **Motrich, A.**, Gantiuk, V. Statistical analysis of vector-parametric polarization images of the polycrystalline component of biological tissues with varying degrees of necrotic changes (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11718, стаття № 117180P, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099351680&doi=10.1117%2f12.2570816&partnerID=40&md5=e54b1e14982bb139617466332a1540ac>
22. Savka, I., Tomka, Y., **Soltys, I.**, **Dubolazov, A.**, Olar, O., Kovalchuk, M., Yatsko, O., **Gorsky, M.** Mueller-matrix differentiation of necrotic changes in polycrystalline structure of partially depolarizing layers of biological tissues (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11718, стаття № 117181E, .

- <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099349842&doi=10.1117%2f12.2571205&partnerID=40&md5=ca3f2c50f7c03a161a0cb389af8e0753>
23. Gutsul, A., Ushenko, V., **Soltys, I.**, Shaplavsky, M., Sokolnyuk, S., **Dubolazov, A., Ushenko, A., Motrich, A., Besaga, R.** Azimuthally invariant Mueller matrix tomography of the distribution of phase and amplitude anisotropy of biological tissues (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11510, статья № 115102S, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092675930&doi=10.1117%2f12.2568454&partnerID=40&md5=70828797bd0bf30389681830d0199fc7>
24. Bodnar, A., **Dubolazov, A.**, Pavlyukovich, A., Pavlyukovich, N., **Ushenko, A., Motrich, A., Gorsky, M.**, Tomka, Y., **Zhytaryuk, V.** 3D Stokes correlometry of the polycrystalline structure of biological tissues (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11509, статья № 115090V, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092555979&doi=10.1117%2f12.2568451&partnerID=40&md5=32c3d0e398fb8c589bad83f19ea4d90>
25. Protsiuk, V.V., Vasiyk, V.L., Vasilchysin, Y.M., Kvasnyuk, D.I., **Ushenko, A.G.**, Shaplavskiy, M.V., **Dubolazov, A.V.**, Ushenko, Y.A., Tomka, Y.Y. Differential diagnosis of aseptic and septic loosening of an artificial hip joint endoprosthesis cup using spectral-selective laser autofluorescence microscopy (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11369, статья № 113691Z, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081114212&doi=10.1117%2f12.2553990&partnerID=40&md5=973ee37eeb01f0604eca8e58c4392082>
26. Protsiuk, V.V., Vasiyk, V.L., Vasylchishyn, Y.M., **Ushenko, O.G.**, Shaplavskiy, M.V., Bodnar, O.B., **Dubolazov, A.V.**, Ushenko, Y.O., Tomka, Y.Y. Polarization tomography of synovial fluids polycrystalline layers (2020) IFMBE Proceedings, 77, pp. 497-501.  
[https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075593116&doi=10.1007%2f978-3-030-31866-6\\_89&partnerID=40&md5=4d3397779a7318522467412f601cfbf2](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075593116&doi=10.1007%2f978-3-030-31866-6_89&partnerID=40&md5=4d3397779a7318522467412f601cfbf2)
27. Garazdyuk, M., Bachinskiy, V., Vanchulyak, O., **Ushenko, A.**, Ushenko, Y., **Dubolazov, A.**, Gorodenskiy, P., Yatsko, O., Bin, L., Chen, Z. Polarization reconstruction of fluctuations in the parameters of the phase anisotropy of biological crystals networks in differentiation of cerebral infarction (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11718, статья № 117181C, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099381515&doi=10.1117%2f12.2571203&partnerID=40&md5=8c9208cf089ffaaa66a762a9b221ba71>
28. Pavlyukovich, A., Pavlyukovich, N., Sarkisova, Y., **Dubolazov, O., Ushenko, A.**, Ushenko, V., Kovalchuk, M., Solovey, Y., Railianu, S., Polovyi, V. Azimuthally invariant Mueller-matrix tomography of linear dichroism of polycrystalline networks of biological tissues (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11718, статья № 117181J, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099341467&doi=10.1117%2f12.2571213&partnerID=40&md5=25ae6405f258849650870db6d346ae69>
29. Litvinenko, A., Garazdyuk, M., Bachinskiy, V., Vanchulyak, O., **Ushenko, A.**, Ushenko, Y., **Dubolazov, A., Pidkamin, L.**, Lin, B., Chen, Z. Polarization reconstruction of birefringence of the polycrystalline component of biological tissues with different damage durations (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11509, статья № 115090P, .

- <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092593131&doi=10.1117%2f12.2568412&partnerID=40&md5=77d6f8d4a4bc30da57ed2b6652893153>
30. Gutsul, A., Ushenko, V., **Soltys, I.**, Shaplavskiy, M., Sokolnyuk, S., **Dubolazov, A.**, **Ushenko, A.**, **Motrich, A.**, **Gorsky, M.**, **Besaga, R.** Methods and means of Fourier Stokes polarimetry of networks of biological crystals (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11509, стаття № 115090W, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092560279&doi=10.1117%2f12.2568465&partnerID=40&md5=06fc56716d04d7b4478ce2cfb642cf89>
31. **Ushenko, A.**, Sarkisova, Y., **Dubolazov, A.**, Ushenko, Y., Tomka, Y., Karachevtsev, A., Sidor, M., Prydiy, A., Dvorjak, V.V., Tymchuk, K. Informativeness of the medical-physical method for analyzing the distributions of the degree of local depolarization of microscopic images of histological sections of the intestinal wall for the diagnosis of dolechosigma (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11369, стаття № 113691O, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081118279&doi=10.1117%2f12.2553954&partnerID=40&md5=05c87e5ca59c5f74f8d3fda9829bfd5a>
32. **Ushenko, A.G.**, Sarkisova, Y., Bachinsky, V.T., Vanchuliak, O.Y., **Dubolazov, A.V.**, Ushenko, Y.O., Tomka, Y.Y., **Besaga, R.M.**, Gromaszek, K., Sagymbai, A., Abdihanov, A. Diagnostics of the prescriptions of death by a method of azimuthally-invariant Mueller-matrix microscopy (2020) Proceedings of SPIE – The International Society for Optical Engineering, 11581, стаття № 115810J, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096362333&doi=10.1117%2f12.2580335&partnerID=40&md5=bb9b12820b858eb85b10b255fca7e1c1>
33. Litvinenko, A., Garazdyuk, M., Bachinsky, V., Vanchulyak, O., **Ushenko, A.**, Ushenko, Yu., **Dubolazov, A.**, Gorodensky, P., Yatsko, O., Bin, L., Zhebo, C. Multiparametric polarization histology in the detection of traumatic changes in the optical anisotropy of biological tissues (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11510, стаття № 115102O, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092616271&doi=10.1117%2f12.2568408&partnerID=40&md5=58c4cbcc947413fa581699e093e38c8b>
34. **Ushenko, O.**, Syvokorovskaya, A., Bachinsky, V., Vanchuliak, O., **Dubolazov, O.**, Ushenko, Y., Tomka, Y., **Zhytaryuk, V.**, **Pidkamin, L.**, Smolarz, A., Nursetitova, K., Turgynbekov, Y. Polarization-phase diagnostics of volume of blood loss (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11581, стаття № 115810D, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096356301&doi=10.1117%2f12.2580200&partnerID=40&md5=30b151337f9091c048f78234c2593d2c>
35. Mishalov, V.D., Syvokorovskaya, A.-V.S., Bachinskiy, V.T., Sarkisova, Y.Y., **Ushenko, A.G.**, **Dubolazov, O.V.**, Ushenko, V.A., **Motrich, A.V.**, Kalimoldayev, M., Wojcik, W., Smolarz, A., Amirgaliyeva, Z. Jones-matrix mapping of polycrystalline networks of layers of main types of amino acids (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11456, стаття № 1145606, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088010293&doi=10.1117%2f12.2569783&partnerID=40&md5=28fa846d56aa5b6110f169df75ef3e7c>
36. Sarkisova, Y., Bachinskyi, V.T., Garazdyuk, M., Vanchulyak, O.Y., Litvinenko, O.Y., **Ushenko, O.G.**, Bodnar, B.G., **Dubolazov, A.V.**, Ushenko, Y.O., Tomka, Y.Y., **Soltys, I.V.**, Foglinskiy, S.

- Differential muller-matrix microscopy of protein fractions of vitreous preparations in diagnostics of the pressure of death (2020) IFMBE Proceedings, 77, pp. 503-506.  
[https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075597112&doi=10.1007%2f978-3-030-31866-6\\_90&partnerID=40&md5=f11af080399ed9223371a163dc6ef255](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075597112&doi=10.1007%2f978-3-030-31866-6_90&partnerID=40&md5=f11af080399ed9223371a163dc6ef255)
37. **Ushenko, O.**, Syvokorovskaya, A., Bachinsky, V., Garazdyuk, M., Vanchuliak, O., **Dubolazov, O.**, Ushenko, Y., Tomka, Y., **Gorsky, M.**, **Soltys, I.**, Omiotek, Z., Kondratuk, N., Iskakova, A. Fluorescent microscopy of biological tissues of the dead with the different levels of blood loss (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11581, стаття № 115810B, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096358621&doi=10.1117%2f12.2580194&partnerID=40&md5=0cb0d88071d2dbdd175ec5ba36a918a8>
38. **Zenkova, C.Y.**, Ivanskyi, D.I., **Tkachuk, V.M.** Carbon nanoparticles for diagnostic of random speckle-fields: Hilbert transformation application (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11718, стаття № 1171805, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099405167&doi=10.1117%2f12.2567898&partnerID=40&md5=93b61da36a0adfcfd4314effcbe0b99c0>
39. Angelsky, O.V., **Zenkova, C.Y.**, Ivanskyi, D.I. Evanescent waves: Extraordinary manifestation in biomedical application (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11718, стаття № 1171808, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099340587&doi=10.1117%2f12.2568528&partnerID=40&md5=8f58cc838c18eb2a9b723adb2c83c8e9>
40. Angelsky, O., **Zenkova, C.**, Yan, W. Structured light: Peculiar properties and applications (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11369, стаття № 113690G, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081138353&doi=10.1117%2f12.2552916&partnerID=40&md5=a2df85584756275051bcf4ae37897645>
41. **Zenkova, C.Y.**, Ivanskyi, D.I., Angelska, A.O. New approaches in birefringent microplate motion peculiarities modelling (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11369, стаття № 113690I, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081122571&doi=10.1117%2f12.2553465&partnerID=40&md5=d6e1df945c4404ef1dd12bbbad559206>
42. Angelsky, O.V., **Zenkova, C.Y.**, Ivanskyi, D.I., **Tkachuk, V.M.** Using carbon nanoparticles for reconstruction of optical speckle field structure (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11509, стаття № 115090N, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092545141&doi=10.1117%2f12.2567920&partnerID=40&md5=51b308649cfba6149f58c07e368c232f>
43. Angelsky, O.V., **Zenkova, C.Y.**, Ivanskyi, D.I., Yan, W. Computer simulation of erythrocytes motion in evanescent field (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11369, стаття № 113690H,  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081115578&doi=10.1117%2f12.2553464&partnerID=40&md5=7ddc2a08979777473c8e6466403f5885>
44. **Zenkova, C.Y.**, Ryabyi, P.A., Ivanskyi, D.I., **Tkachuk, V.M.**, Yan, W. New simulation approach based on Hilbert transform for restoring the amplitude and phase distributions of random fields: Carbon nanoparticles using (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11369, стаття № 1136905, .

- <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081132460&doi=10.1117%2f12.2553220&partnerID=40&md5=93f8c866d86597dadac0ead798dfb75f>
45. **Sklyarchuk, V.M.**, Gnatyuk, V.A., Fochuk, P.M., Aoki, T. Effect of the concentration of impurities: Determining the space charge region thickness on detection properties of Cr/CdTe/Au Schottky diode detectors (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11494, статья № 1149419, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093657114&doi=10.1117%2f12.2568235&partnerID=40&md5=45fb259a1f7b6fa8cf86734cad73a33b>
46. **Sklyarchuk, V.M.**, Gnatyuk, V.A., Pylypko, V.G., Aoki, T. Schottky Diode Detectors with Low Leakage Current at High Operating Voltage (2020) Lecture Notes in Networks and Systems, 101, pp. 159-167.  
[https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078089070&doi=10.1007%2f978-3-030-36841-8\\_16&partnerID=40&md5=ac00d07c0fe1d75b2b8ec6d5cd5ce378](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078089070&doi=10.1007%2f978-3-030-36841-8_16&partnerID=40&md5=ac00d07c0fe1d75b2b8ec6d5cd5ce378)
47. Mishalov, V.D., Bachinsky, V.T., Vanchulyak, O.Ya., Zavolovitch, A.Y., Sarkisova, Y.V., **Ushenko, A.G.**, **Dubolazov, O.V.**, Zabolotna, N.I., Ushenko, V.A., Drin, Y.M., Dvorjak, V., Kotyra, A., Kalimoldayev, M. Classification of the polarization properties of polycrystalline networks of biological fluid films (2020) Proceedings of SPIE - The International Society for Optical Engineering, 11581, статья № 115811I, .  
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096356792&doi=10.1117%2f12.2580706&partnerID=40&md5=ca956abf4ef86e589661b1699847dfa4>
48. Bodnar, A. Bodnar, B., Protsyuk, V., Vasyuk, V., **Ushenko, O.**, **Zhytaryuk, V.**, Ushenko, V., **Olar, O.**, Yatsko, O. Scale-Selective Differentiation of Mueller-Matrix Images of Polycrystalline Networks of Biological Tissues and Fluids of Human Organs 2020 IEEE KhPI Week on Advanced Technology, KhPI Week 2020 - Conference Proceedings. DOI: <https://doi.org/10.1109/KhPIWeek51551.2020.9250082>
49. **Ushenko, O.**, **Zhytaryuk, V.**, Ushenko, V., **Olar, O.**, Kovalchuk, M., Talakh, M., Dvorzhak, V. Methods and Means of Polarization-Correlation Microscopy of Optically Anisotropic Biological Layers 2020 IEEE KhPI Week on Advanced Technology, KhPI Week 2020 - Conference Proceedings 9250171, pp. 459-462. DOI: [10.1109/KhPIWeek51551.2020.9250171](https://doi.org/10.1109/KhPIWeek51551.2020.9250171)

## 2019

### *Статті в періодичних виданнях:*

1. Borovkova, M., Trifonyuk, L., Ushenko, V., **Dubolazov, O.**, Vanchulyak, O., Bodnar, G., Ushenko, Y., **Olar, O.**, **Ushenko, O.**, **Sakhnovskiy, M.**, Bykov, A., Meglinski, I. Mueller-matrix-based polarization imaging and quantitative assessment of optically anisotropic polycrystalline networks (2019) PLoS ONE, 14 (5), статья № e0214494. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0214494>
2. L. Trifonyuk, A. Sdobnov, W. Baranowski, V. Ushenko, **O. Olar**, **A. Dubolazov, L. Pidkamin**, M. Sidor, O. Vanchuliak, **A. Motrich**, **M. Gorsky**, I. Meglinski Differential Mueller matrix imaging of partially depolarizing optically anisotropic biological tissues. Lasers in Medical Science., pp. 1- 15, (2019). <https://doi.org/10.1007/s10103-019-02878-2>
3. **Ushenko, A.**, Sdobnov, A., **Dubolazov, A.**, Grytsiuk, M., Ushenko, Y., Bykov, A., Meglinski, I. Stokes-Correlometry Analysis of Biological Tissues with Polycrystalline Structure (2019) IEEE Journal of Selected Topics in Quantum Electronics, 25 (1), статья № 8438957. <https://ieeexplore.ieee.org/document/8438957>

4. Ushenko, V.A., Sdobnov, A.Y., Mishalov, W.D., **Dubolazov, A.V., Olar, O.V.**, Bachinskyi, V.T., Ushenko, **A.G., Ushenko**, Y.A., Wanchuliak, O.Y., Meglinski, I. Biomedical applications of Jones-matrix tomography to polycrystalline films of biological fluids. Journal of Innovative Optical Health Sciences, Vol. 12, No. 06, 1950017 (2019) <https://doi.org/10.1142/S1793545819500172>
5. Oleg V. Angelsky; Peter P. Maksymyak; **Claudia Y. Zenkova**; Andrew P. Maksymyak; Steen G. Hanson; Dimitrov D. Ivanskyi Peculiarities of control of erythrocytes moving in an evanescent field, J. of Biomedical Optics, 24(5), 055002, 9 p. (2019). <https://doi.org/10.1117/1.JBO.24.5.055002>
6. Angelsky, O.V., **Zenkova, C.Y.**, Maksymyak, P.P., Maksymyak, A.P., Ivanskyi, D.I., **Tkachuk, V.M.**, "Peculiarities of Energy Circulation in Evanescent Field. Application for RedBlood Cells," Optical Memory and Neural Networks (Information Optics) 28(1), 11-20 (2019). <https://doi.org/10.3103/S1060992X19010028>
7. **V.M. Sklyarchuk**, V.A. Gnatyuk, T. Aoki, Depletion region in Cr/CdTe/Au Schottky diode X- and  $\gamma$ -ray detectors, *IEEE Transactions on Nuclear Science*, Vol. **66**, Issue 9 (Sep. 2019) 2140-2144. (DOI: 10.1109/TNS.2019.2935836) <https://ieeexplore.ieee.org/document/8804236>
8. Mapping of polycrystalline films of biological fluids utilizing the Jones-matrix formalism Vladimir A Ushenko, **Alexander V Dubolazov, Leonid Y Pidkamin, Michael Yu Sakhnovsky**, Anna B Bodnar, Yuriy A Ushenko, **Alexander G Ushenko**, Alexander Bykov and Igor Meglinski, Laser Physics, Volume 28, Number 2, 2018 <http://iopscience.iop.org/article/10.1088/1555-6611/aa8cd9>
9. **OV Olar**, VO Ushenko, **MY Yu Sakhnovsky**, Yu O Ushenko, **OV Dubolazov, OG Ushenko** Поляризаційно-інтерференційне картографування мереж в полікристалічних дифузних біологічних тканинах, Біофізичний вісник, 41, 41-51. <https://periodicals.karazin.ua/biophysvisnyk/article/view/10485>
10. **OV Olar**, VO Ushenko, **MY Sakhnovsky**, YO Ushenko, **OV Dubolazov**, Методи і засоби азимутально-інваріантної моллер-матричної поляриметрії оптично-анізотропних біологічних шарів, Біофізичний вісник, 41, 52-62, <https://periodicals.karazin.ua/biophysvisnyk/article/view/10486>
11. **V.M. Sklyarchuk**, Z.I. Zakharuk, M.H. Kolisnyk, A.I. Rarenko, O.F. Sklyarchuk, P.M. Fochuk. Effect of Compensation Degree on the Detecting Properties of In-doped Cd<sub>0.9</sub>Zn<sub>0.1</sub>Te crystals, PHYSICS AND CHEMISTRY OF SOLID STATE, V. 20, № 3 (2019) P. 257-263 (DOI: 10.15330/pcss.20.3.257-263) <http://journals.pu.if.ua/index.php/pcss/article/view/3888/4092>

### *Матеріали конференцій:*

1. **V.M. Sklyarchuk**, V.A. Gnatyuk, T. Aoki, Effect of the thickness of CdTe crystals on the detection properties of Cr/CdTe/Au Schottky diode detectors, *The conference on Hard X-Ray, Gamma-Ray, and Neutron Detector Physics XXI (Conference OP319), Part of 2019 SPIE Optics + Photonics: Optical Engineering + Applications*, 2019, Abstract No 11114-67, 165. (11-15 August 2019, San Diego, CA, USA). <https://www.spiedigitallibrary.org/conference-proceedings-of-spie/11114/111141S/Effect-of-the-thickness-of-CdTe-crystals-on-electrical-and/10.1117/12.2529965.short?SSO=1>
2. **V. Sklyarchuk**, P. Fochuk, S. Solodin, Z. Zakharuk, A. Rarenko et al. Mechanisms contributing to dark current across metal/CdMnTe/metal structures / Proc. SPIE 11114, Hard X-ray, Gamma-Ray, and Neutron Detector Physics XXI, 11114V (9 Sept.2019) doi:10.1117/12.2530444. <https://www.spiedigitallibrary.org/conference-proceedings-of-spie/11114/111141V/Mechanisms-contributing-to-dark-current-across-metalCdMnTemetal-structures/10.1117/12.2530444.short>

3. **V.M. Sklyarchuk**, V.A. Gnatyuk, X. Fang, T. Aoki, Effect of the thickness of CdTe crystals on electrical and detection properties of Cr/CdTe/Au Schottky-diode detectors, Proceedings of SPIE, Vol. **11114**, Hard X-Ray, Gamma-Ray, and Neutron Detector Physics XXI (Sep. 2019) 111141S-1-7. (DOI: 10.1117/12.2529965)  
<https://www.spiedigitallibrary.org/conference-proceedings-of-spie/11114/111141S/Effect-of-the-thickness-of-CdTe-crystals-on-electrical-and/10.1117/12.2529965.short>
4. Vanchulyak, O., **Ushenko, O.**, **Zhytaryuk**, V., Dvorjak, V., Pavlyukovich, O., **Dubolazov**, O., Pavlyukovich, N., Penteleichuk, N.P. Stokes-correlometry of polycrystalline films of biological fluids in the early diagnostics of system pathologies Proceedings Volume 11105, Novel Optical Systems, Methods, and Applications XXII; 1110519 (2019)<https://doi.org/10.1117/12.2529348>
5. **Ushenko, O.**, **Zhytaryuk**, V., Dvorjak, V., Martsenyak, I.V., **Dubolazov**, O., Bodnar, B.G., Vanchulyak, O.Y., Foglinskiy, S. Multifunctional polarization mapping system of networks of biological crystals in the diagnostics of pathological and necrotic changes of human organs Proc. SPIE 11087, Biosensing and Nanomedicine XII, 110870S (9 September 2019);  
<https://spie.org/Publications/Proceedings/Paper/10.1117/12.2529362?SSO=1>
6. Tomka, Y., **Gorsky, M.**, **Soltys, I.**, Talakh, M., Drin, Y., Yatsko, O., **Dubolazov**, O., Prisyaznyuk, V., Bodnar, B., Shaplavskiy, M. Spectral and selective laser autofluorescent microscopy of blood films Proceedings Volume 11105, Novel Optical Systems, Methods, and Applications XXII; 1110515 (2019) <https://doi.org/10.1117/12.2529321>
7. Bachinskiy, V., Sarkisova, Y., Vanchulyak, O., **Ushenko, O.**, **Zhytaryuk**, V., Dvorjak, V., Martsenyak, I.V., **Dubolazov**, O., Litvinenko, O., Hoholeva, T. Polarization correlometry of microscopic images of layers of biological tissues and films of biological liquids in the diagnostics of pressure of death [Proceedings Volume 11087, Biosensing and Nanomedicine XII; 110870Q \(2019\)](https://spie.org/Publications/Proceedings/Paper/10.1117/12.2529190) <https://doi.org/10.1117/12.2529190>
8. Grytsyuk, M., Tomka, Y., **Gorsky, M.**, **Soltys, I.**, Talakh, M., Drin, Y., Yatsko, O., Gurina, O., Garazdyuk, M., Litvinenko, O., **Dubolazov**, O. Muller-matrix invariants of linear and circular birefringence of polycrystalline films of biological liquids pathologically and necrotic changed human bodies [Proceedings Volume 11087, Biosensing and Nanomedicine XII; 110870N \(2019\)](https://spie.org/Publications/Proceedings/Paper/10.1117/12.2529186) <https://doi.org/10.1117/12.2529186>
9. Grytsyuk, M., Ushenko, Y., Galochkin, O., **Sakhnovskiy**, M., Kovalchuk, M., Dovgun, A., Golub, S., **Dubolazov**, O., Garazdyuk, M., Pavlyukovich, O., Pavlyukovich, N. Muller-matrix correlating invariants of phase and amplitude anisotropy of biological layers Proc. SPIE 11087, Biosensing and Nanomedicine XII, 110870R (9 September 2019);  
<https://doi.org/10.1117/12.2529358>
10. Vanchulyak, O., Ushenko, Y., Galochkin, O., **Sakhnovskiy**, M., Kovalchuk, M., Dovgun, A., Golub, S., **Dubolazov**, O., Sokolnyuk, S., Litvinenko, O., Bodnar, G. Azimuthal fractalography of networks of biological crystals Proceedings Volume 11105, Novel Optical Systems, Methods, and Applications XXII; 1110517 (2019) <https://doi.org/10.1117/12.2529337>.
11. **Motrich, A.V.**, **Dubolazov, A.V.**, **Ushenko, O.G.** Analytical modeling of polarization transformation of laser radiation of various spectral ranges by birefringent structures Proc. SPIE 11105, Novel Optical Systems, Methods, and Applications XXII, 111051A (9 September 2019);  
<https://spie.org/Publications/Proceedings/Paper/10.1117/12.2529366?SSO=1>
12. **Dubolazov, A.V.**, **Olar, O.V.**, **Pidkamin, L.Y.**, Arkhelyuk, A.D., **Motrich, A.V.**, Bachinskiy, V.T., Pavliukovich, O.V., Pavliukovich, N. Differential components of Muller matrix partially depolarizing biological tissues in the diagnosis of pathological and necrotic changes Proc. SPIE 11087, Biosensing and Nanomedicine XII, 1108713 (9 September 2019); <https://spie.org/Publications/Proceedings/Paper/10.1117/12.2529176>.
13. **Dubolazov, A.V.**, **Olar, O.V.**, **Pidkamin, L.Y.**, Arkhelyuk, A.D., **Motrich, A.V.**, Shaplavskiy, M.V., Bodnar, B.G., Sarkisova, Y., Penteleichuk, N. Polarization-phase

- reconstruction of polycrystalline structure of biological tissues [Proceedings Volume 11087, Biosensing and Nanomedicine XII](#); 1108714 (2019) <https://doi.org/10.1117/12.2529182>
14. Dubolazov, A.V., Olar, O.V., Pidkamin, L.Y., Arkhelyuk, A.D., Motrich, A.V., Petrochak, O., Bachynskiy, V.T., Litvinenko, O., Foglinskiy, S. Methods and systems of diffuse tomography of optical anisotropy of biological layers [Proceedings Volume 11087, Biosensing and Nanomedicine XII](#); 110870P (2019) <https://doi.org/10.1117/12.2529184>
15. Angelsky, O.V., Kurek, E.I., Kurek, I.G., Maksimyak, A.P., Maksimyak, P.P. Self-converging and multiplex optical traps [Proceedings Volume 11083, Optical Trapping and Optical Micromanipulation XVI](#); 1108337 (2019) <https://doi.org/10.1117/12.2529179>
16. O. V. Angelsky, C. Zenkova, D. I. Ivanskyi, V. M. Tkachuk, "Gold nanoparticles motion controlled by transverse spin momentum of evanescent waves in biomedical applications," Proc. SPIE 11083, Optical Trapping and Optical Micromanipulation XVI, 110833P (9 September 2019); [doi:10.1117/12.2534514](https://doi.org/10.1117/12.2534514) (8 p.)
17. C. Yu. Zenkova, D. I. Ivanskyi, V. M. Tkachuk, "Red blood cells motion peculiarities under the action of vertical spin of evanescent wave," Proc. SPIE 11083, Optical Trapping and Optical Micromanipulation XVI, 110833Q (9 September 2019); <https://doi.org/10.1117/12.2534515%20>(8 p.)
18. Claudia Y. Zenkova, Dmytro I. Ivanskyi, Patryk Panas, Aliya Kalizhanova, "Optical force and optical torque action in birefringent medium under the total internal reflection, Proceedings of SPIE - The International Society for Optical Engineering 11176, Photonics Applications in Astronomy, Communications, Industry, and High-Energy Physics Experiments 2019,111760P (6 November 2019); [doi: 10.1117/12.2536758](https://doi.org/10.1117/12.2536758) (7 p.)
19. Natalia Pavlyukovich, Alexander V Pavlyukovich, Petro V Prysiaznyuk, Ivanna I German, Alexander V Dubolazov, Yuriy A Ushenko, Yuriy Y Tomka, Iryna V Soltys, Alexander V Galochkin, Igor V Malyk, Andrzej Kotyra, Aliya Kalizhanova [Singular approach to the analysis of Jones matrix images of biological crystals networks](#), Proceedings of SPIE - The International Society for Optical Engineering 11176, 111762Z, Photonics Applications in Astronomy, Communications, Industry, and High-Energy Physics Experiments 2019 <https://www.spiedigitallibrary.org/conference-proceedings-of-spie/11176/111762Z/Singular-approach-to-the-analysis-of-Jones-matrix-images-of/10.1117/12.2537167.short>
20. Volodymyr D Mishalov, Viktor T Bachinsky, Oleg Ya Vanchuliak, Alina Y Zavolovitch, Yuliya V Sarkisova, Alexander G Ushenko, Sergii V Pavlov, Alexander V Dubolazov, Vladimir A Ushenko, Artem V Motrich, Yaroslav M Drin, Andrzej Kociubiński, Mashat Kalimoldayev [Jones matrix mapping of polycrystalline networks of layers of main types of amino acids](#), Proceedings of SPIE - The International Society for Optical Engineering 11176, 1117606, Photonics Applications in Astronomy, Communications, Industry, and High-Energy Physics Experiments 2019 <https://www.spiedigitallibrary.org/conference-proceedings-of-spie/11176/1117606/Jones-matrix-mapping-of-polycrystalline-networks-of-layers-of-main/10.1117/12.2536245.short>
21. N Sivokorovskaya, VT Bachinskyi, O Ya Vanchulyak, OG Ushenko, AV Dubolazov, Yu O Ushenko, Yu Ya Tomka, L Ya Kushnerik. Statistical Analysis of Polarization Images of Histological Cuts of Parenchymatic Tissues in Diagnostics of Volume of Blood Loss. In: Tiginyanu I., Sontea V., Railean S. (eds) 4th International Conference on Nanotechnologies and Biomedical Engineering. ICNBME 2019. IFMBE Proceedings, vol 77. Springer, Cham, pp. 513-517, Online ISBN 978-3-030-31866-6. [https://link.springer.com/chapter/10.1007/978-3-030-31866-6\\_92](https://link.springer.com/chapter/10.1007/978-3-030-31866-6_92)
22. VV Protsiuk, VL Vasiyk, YM Vasylchishyn, OG Ushenko, MV Shaplavskiy, OB Bodnar, AV Dubolazov, Yu O Ushenko, Yu Ya Tomka. Polarization Tomography of Synovial Fluids Polycrystalline Layers. In: Tiginyanu I., Sontea V., Railean S. (eds) 4th International Conference on Nanotechnologies and Biomedical Engineering. ICNBME 2019. IFMBE Proceedings, vol 77. Springer, Cham, pp 497-501, Online ISBN 978-3-030-31866-6. [https://link.springer.com/chapter/10.1007/978-3-030-31866-6\\_89](https://link.springer.com/chapter/10.1007/978-3-030-31866-6_89)

23. Yu Sarkisova, VT Bachinskyi, M Garazdyuk, O Ya Vanchulyak, O Yu Litvinenko, **OG Ushenko**, BG Bodnar, **AV Dubolazov**, Yu O Ushenko, Yu Ya Tomka, **IV Soltys**, S Foglinskiy. Differential Muller-Matrix Microscopy of Protein Fractions of Vitreous Preparations in Diagnostics of the Pressure of Death. In: Tiginyanu I., Sontea V., Railean S. (eds) 4th International Conference on Nanotechnologies and Biomedical Engineering. ICNBME 2019. IFMBE Proceedings, vol 77. Springer, Cham, pp. 503-506, Online ISBN 978-3-030-31866-6. [https://link.springer.com/chapter/10.1007/978-3-030-31866-6\\_90](https://link.springer.com/chapter/10.1007/978-3-030-31866-6_90)
24. **OG Ushenko**, A-V Syvokorovskaya, VT Bachinsky, O Ya Vanchuliak, **AV Dubolazov**, Yu O Ushenko, Yu Ya Tomka, ML Kovalchuk. Laser Autofluorescent Microscopy of Histological Sections of Parenchymatous Biological Tissues of the Dead. In: Tiginyanu I., Sontea V., Railean S. (eds) 4th International Conference on Nanotechnologies and Biomedical Engineering. ICNBME 2019. IFMBE Proceedings, vol 77. Springer, Cham, pp. 507-511, Online ISBN 978-3-030-31866-6. [https://link.springer.com/chapter/10.1007/978-3-030-31866-6\\_91](https://link.springer.com/chapter/10.1007/978-3-030-31866-6_91)
25. **OG Ushenko**, A-V Syvokorovskaya, VT Bachinsky, O Ya Vanchuliak, **AV Dubolazov**, Yu O Ushenko, Yu Ya Tomka, ML Kovalchuk. Laser Autofluorescent Microscopy of Histological Sections of Parenchymatous Biological Tissues of the Dead. In: Tiginyanu I., Sontea V., Railean S. (eds) 4th International Conference on Nanotechnologies and Biomedical Engineering. ICNBME 2019. IFMBE Proceedings, vol 77. Springer, Cham, pp. 507-511, Online ISBN 978-3-030-31866-6. [https://link.springer.com/chapter/10.1007/978-3-030-31866-6\\_91](https://link.springer.com/chapter/10.1007/978-3-030-31866-6_91)
26. VV Protsiuk, VL Vasiyk, YM Vasylchishyn, **OG Ushenko**, MV Shaplavskiy, OB Bodnar, **AV Dubolazov**, Yu O Ushenko, Yu Ya Tomka. Polarization Tomography of Synovial Fluids Polycrystalline Layers. In: Tiginyanu I., Sontea V., Railean S. (eds) 4th International Conference on Nanotechnologies and Biomedical Engineering. ICNBME 2019. IFMBE Proceedings, vol 77. Springer, Cham, pp 497-501, Online ISBN 978-3-030-31866-6. [https://link.springer.com/chapter/10.1007/978-3-030-31866-6\\_89](https://link.springer.com/chapter/10.1007/978-3-030-31866-6_89)

## 2018

### *Статті в періодичних виданнях:*

1. Trifonyuk, L., Baranowski, W., Ushenko, V., **Olar, O.**, **Dubolazov, A.**, Ushenko, Y., Bodnar, B., Vanchulyak, O., **Kushnerik, L.**, **Sakhnovskiy, M.** 2D-Mueller-matrix tomography of optically anisotropic polycrystalline networks of biological tissues histological sections (2018) Opto-electronics Review, 26 (3), pp. 252-259. [Scopus Preview](#)
2. Borovkova, M., Peyvasteh, M., **Dubolazov, O.**, Ushenko, Y., Ushenko, V., Bykov, A., Deby, S., Rehbinder, J., Novikova, T., Meglinski, I. Complementary analysis of Mueller-matrix images of optically anisotropic highly scattering biological tissues (2018) Journal of the European Optical Society, 14 (1), art. no. 20 [Scopus Preview](#)
3. Mapping of polycrystalline films of biological fluids utilizing the Jones-matrix formalism Vladimir A Ushenko, **Alexander V Dubolazov**, **Leonid Y Pidkamin**, **Michael Yu Sakhnovsky**, Anna B Bodnar, Yuriy A Ushenko, **Alexander G Ushenko**, Alexander Bykov and Igor Meglinski, LaserPhysics, Volume 28, Number 2, 2018 <http://iopscience.iop.org/article/10.1088/1555-6611/aa8cd9>
4. Mechanical action of the transverse spin momentum of an evanescent wave on gold nanoparticles in biological objects media / O. V. Angelsky, **C. Yu. Zenkova**, **D. I. Ivansky** // Journal of Optoelectronics and Advanced Materials. – 2018. – Т. 20. – №. 5-6. – С. 217-223. <https://joam.inoe.ro/index.php?option=magazine&op=view&idu=4213&catid=111>
5. Gnatyuk, **V. Sklyarchuk**, K. Zelenska, K. Sakaida, T. Terao, T. Aoki, Spectroscopic studies of Ni/CdTe/Au Schottky diode X/ $\gamma$ -ray detectors, *Thai Journal of Nanoscience and Nanotechnology*, Vol. 3, Issue 2 (Dec. 2018) 23-34. <http://www.nano.kmitl.ac.th/tjnn/index.php/tjnn/article/view/46/39>

6. **V.M.Sklyarchuk**, V.A.Gnatyuk, W.Pecharapa, Low leakage current Ni/CdZnTe/In diodes for X/ $\gamma$ -ray detectors, Nuclear Instruments and Methods in Physics Research A (2018), 5 pages, <https://doi.org/10.1016/j.nima.2017.10.016>
7. **М.М. Сльотов**, В.В. Мельник, О.М. Сльотов. Гетерошари анізотропного  $\alpha$ -ZnSe для фотосенсорів // Sensor Electronics and Microsystem Technologies. – 2018. – Т. 15, №2. – С. 20-27. <http://semst.onu.edu.ua/article/view/136885>
8. Luminescence of crystals ZnSe<Al>:Gd / **V.P. Makhniy**, N.D. Vakhnyak, O.V Kinzerska., **I.M.Senko** // Semiconductor Physics, Quantum Electronics and Optoelectronics. – 2018. – 21 (1).  
<http://web.a.ebscohost.com/ehost/detail/detail?vid=0&sid=26b757db-568f-4e80-8348-c6872c730d90%40sessionmgr4009&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#AN=129311090&db=a9h>

*Матеріали конференцій:*

1. Analytical modeling of polarization transformation of laser radiation of various spectral ranges by birefringent structures **A.V. Motrich, O.G. Ushenko** Proceedings Volume 10612, 1061211 (2018) <https://doi.org/10.1117/12.2305317>
2. Stokes-correlometry of polarization-inhomogeneous objects **Ushenko, O.G., Dubolazov, A.**, Bodnar, G.B., Bachynskiy, V.T., Vanchulyak, O, Proceedings Volume 10612; 106121H (2018) <https://doi.org/10.1117/12.2305355>
3. Ushenko, Y.A., Syvokorovskaya, A.V., Gorsky, M.P., Tomka, Y.A., Sokolnuik, S.O., Bakun, O., **Kushnerik, L.Y.**, Golub, S., **Besaga, R.** System of 3D Mueller-matrix reconstruction of fibrillar networks of biological tissues of various morphological structure and physiological state (2018) Proceedings of SPIE - The International Society for Optical Engineering, 10728, art. no. 107280R. DOI: <https://doi.org/10.1117/12.2320535>
4. Ushenko, Y.A., **Gorsky, M.P.**, Tomka, Y.Y., Sokolnuik, S.O., Wanchuliak, O.Y., **Kushnerik, L.Y.**, Golub, S., **Besaga, R.** Muller-matrix images of fluctuations of optical anisotropy parameters of biological diffusion layers (2018) Proceedings of SPIE - The International Society for Optical Engineering, 10977, art. no. 109773Z. DOI: <https://doi.org/10.1117/12.2323588>
5. Ushenko, Y.A., Bodnar, G.B., Oliinyk, I., Tomka, Y.Y., **Kushnerik, L.**, Golub, S. Polarization-phase cartography of polycrystalline films of biological liquids in differentiation of weak changes in optical anisotropy (2018) Proceedings of SPIE - The International Society for Optical Engineering, 10977, art. no. 109773V. DOI: <https://doi.org/10.1117/12.2323594>
6. Gavryliak M.S., Dobrovolskyi, Y.G., **Motrych, A.V.**, Arkhelyuk A.D. The research of some polygraphic paper samples's polarization characteristics Thirteenth International Conference on Correlation Optics 10612, 106120Y. 2018/1/18.  
<https://www.scopus.com/record/display.uri?eid=2-s2.0-85047459132&origin=resultslist>
7. **Pidkamen, L.I.**, Arkhelyuk, A.D. Investigation of the transmission matrix of an isotropic scattering medium outside the zone of the probing light beam. Thirteenth International Conference on Correlation Optics 10612, 106121. 2018/1/18.  
<https://www.scopus.com/record/display.uri?eid=2-s2.0-85047479262&origin=resultslist>
8. Differential 3D Mueller-matrix mapping of optically anisotropic depolarizing biological layers **Ushenko, O.G.**, Grytsyuk, M., Ushenko, V.O., Vanchulyak, O., Meglinskiy, I. Proceedings Volume 10612, Thirteenth International Conference on Correlation Optics; 106121I (2018) <https://doi.org/10.1117/12.2305329>
9. Mueller matrix mapping of biological polycrystalline layers using reference wave **A. Dubolazov, O. G. Ushenko, Yu. O. Ushenko, L. Y. Pidkamin, M. I. Sidor, M.**

- Grytsyuk, P. V. Prsyazhnyuk Proceedings Volume 10612, Thirteenth International Conference on Correlation Optics; 106121N (2018) <https://doi.org/10.1117/12.2304719>
10. Polarization-interference Jones-matrix mapping of biological crystal networks **O. G. Ushenko, O. V. Dubolazov, L. Y. Pidkamin**, M. I. Sidor, N. Pavlyukovich, O. Pavlyukovich Proceedings Volume 10612, Thirteenth International Conference on Correlation Optics; 106121G (2018) <https://doi.org/10.1117/12.2305348>
11. 3D Mueller-matrix mapping of biological optically anisotropic networks **O. G. Ushenko, V. O. Ushenko, G. B. Bodnar, V. G. Zhytaryuk**, O. G. Prydiy, G. Koval, I. Lukashevich, O. Vanchuliak Proceedings Volume 10612, Thirteenth International Conference on Correlation Optics; 106121O (2018) <https://www.spiedigitallibrary.org/conference-proceedings-of-spie/10612/106121O/3D-Mueller-matrix-mapping-of-biological-optically-anisotropic-networks/10.1117/12.2304736.short>
12. Jones-matrix tomography of biological tissues phase anisotropy in the diagnosis of uterus wall prolapse L. Trifonyuk, V. Baranovsky, **O. V. Dubolazov**, V. O. Ushenko, **O. G. Ushenko, V. G. Zhytaryuk**, O. G. Prydiy, O. Vanchulyak Proceedings Volume 10612, Thirteenth International Conference on Correlation Optics; 106121F (2018) <https://www.spiedigitallibrary.org/conference-proceedings-of-spie/10612/106121F/Jones-matrix-tomography-of-biological-tissues-phase-anisotropy-in-the/10.1117/12.2305345.short>
13. System 3D Jones-matrix polarimetry of polycrystalline films of biological fluids **A. G. Ushenko, V. G. Zhytaryuk**, M. I. Sidor, O. Ya. Wanchulyak, **A. V. Motrich, I. V. Solty**, O. V. Pavliukovich, N. Pavliukovich Proceedings Volume 10726, Nanoimaging and Nanospectroscopy VI; 1072613 (2018) <https://www.spiedigitallibrary.org/conference-proceedings-of-spie/10726/1072613/System-3D-Jones-matrix-polarimetry-of-polycrystalline-films-of-biological/10.1117/12.2320533.short>
14. Diffuse tomography of optical anisotropy of tumors of the uterus wall **A. G. Ushenko, V. G. Zhytaryuk**, M. I. Sidor, O. Ya. Wulchulyak, **A. V. Motrich, I. V. Solty**, O. V. Pavliukovich, N. Pavliukovich Proceedings Volume 10728, Biosensing and Nanomedicine XI; 107280Q (2018) <https://doi.org/10.1117/12.2320529>
15. Statistical analysis of polarization interference images of biological fluids polycrystalline films in the tasks of optical anisotropy weak changes differentiation **Yu. O. Ushenko, O. V. Dubolazov, V. O. Ushenko, V. G. Zhytaryuk, O. G. Prydiy, N. Pavlyukovich, O. Pavlyukovich** Proceedings Volume 10612, Thirteenth International Conference on Correlation Optics; 106121Q (2018) <https://doi.org/10.1117/12.2305361>
16. Correlation structure of Stokes parametric images of polycrystalline films of human biological fluids **M. Yu. Sakhnovskiy; O. I. Olar**; M. S. Garazduyk; A.-V. Syvokorovskaya; G. B. Bodnar; O. Tsyhykalo; **A. V. Dubolazov**; V. A. Ushenko Proc. SPIE 10728, BiosensingandNanomedicine XI, 107280O (5 September 2018); doi: 10.1117/12.2320512 <http://spie.org/Publications/Proceedings/Paper/10.1117/12.2320512>
17. Clinical applications of the Mueller-matrix reconstruction of the polycrystalline structure of multiple-scattering biological tissues Yu. A. Ushenko; **A. V. Dubolazov; O. V. Olar**; S. O. Sokolnyk; G. B. Bodnar; **L. Pidkamin**; O. Prydiy; **M. I. Sidor** Proc. SPIE 10728, Biosensing and Nanomedicine XI, 107280P (5 September 2018); doi: [10.1117/12.2320527](https://doi.org/10.1117/12.2320527)
18. System of differential Mueller-matrix mapping of phase and amplitude anisotropy of depolarizing biological tissues, Yu. A. Ushenko, **O. V. Olar, A. V. Dubolazov**, O. B. Bodnar, B. M. Bodnar, **L. Pidkamin**, O. Prydiy, M. I. Sidor, D. Kvasnyuk, O. Tsyhykalo Proceedings Volume 10752, Applications of Digital Image Processing XLI; 107522H (2018) <https://doi.org/10.1117/12.2320523>

19. System of biological crystals fibrillar networks polarization-correlation mapping **M. Yu. Sakhnovskiy**, A.-V. Syvokorovskaya, V. Martseniak, B. M. Bodnar, O. Tsyhykalo, **A. V. Dubolazov, O. I. Olar**, V. A. Ushenko, P. M. Grygoryshyn Proceedings Volume 10752, Applications of Digital Image Processing XLI; 107522G (2018)  
<https://doi.org/10.1117/12.2320511>
20. Polarization-interference images of optically anisotropic biological layers **M. Yu. Sakhnovskiy**, O. Yu. Wanchuliak, B. Bodnar, I. V. Martseniak, O. Tsyhykalo, **A. V. Dubolazov**, V. A. Ushenko, **O. I. Olar**, P. M. Grygoryshyn Proceedings Volume 10752, Applications of Digital Image Processing XLI; 107522F (2018)  
<https://www.spiedigitallibrary.org/conference-proceedings-of-spie/10752/2320509/Polarization-interference-images-of-optically-anisotropic-biological-layers/10.1117/12.2320509.short>
21. Optical constants and polarimetric properties of AlN thin films YA Ushenko, PD Maryanchuk, MM Solovan, **LJ Pidkamin**, VV Brus Thirteenth International Conference on Correlation Optics 10612, 106121A 2018  
[https://www.researchgate.net/publication/322594637\\_Optical\\_constants\\_and\\_polarimetric\\_properties\\_of\\_AlN\\_thin\\_films](https://www.researchgate.net/publication/322594637_Optical_constants_and_polarimetric_properties_of_AlN_thin_films)
22. Maksimyak P. P. Experimental demonstration of the vertical spin existence in evanescent waves / P. P. Maksimyak, A. P. Maksimyak, **D. I. Ivanskyi**// Proc. Thirteenth International Conference on Correlation Optics. – International Society for Optics and Photonics, 2018. – Т. 10612. – №5. – с. 1 – 8; <https://doi.org/10.1117/12.2303405>
23. Non-trivial structure of optical momentum and optical forces inherent in evanescent waves / **C. Yu. Zenkova, D. I. Ivanskyi** // Proc. Thirteenth International Conference on Correlation Optics. – International Society for Optics and Photonics, 2018. – Т. 10612. – №7. – с. 1 – 8; <https://doi.org/10.1117/12.2303555>
24. Analysis of the mechanism of the vertical spin formation for the evanescent wave in the near-surface layer of biological tissue fluid / **C. Yu. Zenkova, D. I. Ivanskyi, V. M. Tkachuk** // Proc. Optical Trapping and Optical Micromanipulation XV. – International Society for Optics and Photonics, 2018. – Т. 10723. – № 34. – с. 1 – 9.  
<https://doi.org/10.1117/12.2318538>
25. Experimental demonstration of nanoparticles motion by the vertical spin of the evanescent wave action in biological media / O. V. Angelsky, P. P. Maksimyak, A. P. Maksimyak, **D. I. Ivanskyi**, P. O. Angelsky, Bin Guo, Chen Zhebo // Proc. Optical Trapping and Optical Micromanipulation XV. – International Society for Optics and Photonics, 2018. – Т. 10723. – № 35. – с. 1 – 8. <https://doi.org/10.1117/12.2318540>
26. Digital polarization-holographic 3D reconstruction of the polycrystalline structure of blood films in the diagnosis of breast cancer Yu. A. Ushenko; **A. V. Syvokorovskaya**; **M. P. Gorsky**; Yu. Ya. Tomka; O. Bakun; D. Kvasnuyk; **L. Yu. Kushnerik**; S. Golub; R. Besaga Proc. SPIE 10728, Biosensing and Nanomedicine XI, 107280S (5 September 2018)  
<http://spie.org/Publications/Proceedings/Paper/10.1117/12.2320540>
27. Coherent light absorbing by concrete during its hardening **Gorsky, M.P., Maksimyak, P.P.** Proceedings of SPIE - The International Society for Optical Engineering Volume 10612, 2018, 106120Z <https://www.spiedigitallibrary.org/conference-proceedings-of-spie/10612/2303637/Coherent-light-absorbing-by-concrete-during-its-hardening/10.1117/12.2303637.short?SSO=1>
28. Dynamic coherent light scattering by the cement with carbon nanotubes during hydration process **Gorsky, M.P.**, Maksimyak, P.P. Proceedings of SPIE - The International Society for Optical Engineering Volume 10719, 2018, 107192W  
<https://www.spiedigitallibrary.org/conference-proceedings-of>

[spie/10719/107192W/Dynamic-coherent-light-scattering-by-the-cement-with-carbon-nanotubes/10.1117/12.2320638.short](https://doi.org/10.1117/107192W/Dynamic-coherent-light-scattering-by-the-cement-with-carbon-nanotubes/10.1117/12.2320638.short)

29. System of 3D Mueller-matrix reconstruction of fibrillar networks of biological tissues of various morphological structure and physiological state Yu. A. Ushenko, A. V. Syvokorovskaya, M. P. Gorsky, Yu. A. Tomka, S. O. Sokolnuik, O. Bakun, L. Yu. Kushnerik, S. Golub, R. Besaga Proceedings Volume 10728, Biosensing and Nanomedicine XI; 107280R (2018) <https://doi.org/10.1117/12.2320535>
30. Cement hardening investigation by method of piezoelectric photoacoustics Gorsky, M.P., Maksimyak, P.P. Proceedings of SPIE - The International Society for Optical Engineering Volume 10612, 2018, Номер статьи 10612017  
<https://www.spiedigitallibrary.org/conference-proceedings-of-spie/10612/1061217/Cement-hardening-investigation-by-method-of-piezoelectric-photoacoustics/10.1117/12.2304922.short>

## 2017

### *Статті в періодичних виданнях:*

1. Angelsky O. V. Influence of evanescent wave on birefringent microplates / O. V. Angelsky, S. G. Hanson, P. P. Maksimyak, A. P. Maksimyak, **C. Yu. Zenkova**, P. V. Polyanskii, **D.I. Ivanskyi** // Optics Express. – 2017. – T.25. – №3. – C. 2299–2311. <https://doi.org/10.1364/OE.25.002299>
2. Maksimyak P. P. Extraordinary Spin Momenta in Birefringent Structures / P. P. Maksimyak, A. P. Maksimyak, **D. I. Ivanskyi**, T. V. Kiyashchuk. // Optical Memory & Neural Networks. – 2017. – T.26. – №2. – C.157-164. <https://doi.org/10.3103/S1060992X17020059>
3. **M.M.Slyotov**, O.S.Gavaleshko, O.V.Kinzerska Preparation and Luminescence Properties of  $\alpha$ -ZnSe Heterolayers with Surface Nanostructure/ Journal of Nano- and Electronic Physics. Vol.9 №5, 05046(3pp) (2017)  
[http://jnep.sumdu.edu.ua:8080/download/numbers/2017/5/articles/Proof\\_JNEP\\_05046.pdf](http://jnep.sumdu.edu.ua:8080/download/numbers/2017/5/articles/Proof_JNEP_05046.pdf)
4. Сенютович Р. В. СУЧАСНІ РЕКОМЕНДАЦІЇ ЩОДО ЛІКУВАННЯ МІСЦЕВО-ПОШИРЕНОГО РАКУ МОЛОЧНОЇ ЗАЛОЗИ / Р. В. Сенютович, В. П. Унгурян, С. Ю. Кравчук, І. О. Малишевський, В. В. Шульгіна, **Л. Я. Кушнерик**, Ю. Я. Чупровська// Буковинський медичний вісник. - 2017. – Т. 21, – № 3 (83) – 154–160 с. [https://www.bsmu.edu.ua/files/BMV/BMV-2017-21-03-\(83\)/24.pdf](https://www.bsmu.edu.ua/files/BMV/BMV-2017-21-03-(83)/24.pdf)
5. Бачинський, В. Т., Ванчуляк, О. Я., Саркісова, Ю. В., & **Ушенко, О. Г.** (2017). Застосування нових перспективних технологій для визначення давності настання смерті в практиці судово-медичного експерта. Клінічна та експериментальна патологія, (16, № 1), 157-159.  
<https://www.bsmu.edu.ua/files/KEP/KEP-2017-01/37.pdf>

### *Матеріали конференцій:*

1. Scale-selective polarimetry of the birefringence distribution of myocardium tissue O. Vanchuliak ; O. Pavlyukovich ; O. Antonyuk ; **O. Ushenko** ; Yu. Ushenko ; G. Bodnar ; N. Pavlyukovich Proc. SPIE. 10352, Biosensing and Nanomedicine X  
<https://www.spiedigitallibrary.org/conference-proceedings-of-spie/10352/103520R/Scale-selective-polarimetry-of-the-birefringence-distribution-of-myocardium-tissue/10.1117/12.2273743.short?SSO=1>
2. Ushenko, V. O., Koval, G. D., Ushenko, Y. O., **Pidkamin, L. Y.**, Sidor, M. I., Vanchuliak, O., Meglinskiy, I. (2017, September). System of multifunctional Jones matrix tomography

- of phase anisotropy in diagnostics of endometriosis. In Applications of Digital Image Processing XL (Vol. 10396, p. 103962M). International Society for Optics and Photonics.  
<https://www.spiedigitallibrary.org/conference-proceedings-of-spie/10396/103962M/System-of-multifunctional-Jones-matrix-tomography-of-phase-anisotropy-in/10.1117/12.2273764.short>
3. O. Vanchuliak ; A. Motrich ; M. Gorsky ; Yu. Marchuk ; O. Ushenko ; Yu. Ushenko ; L. Pidkamin ; M. Sidor ; I. Meglinskiy. (2017, August). Jones matrix polarization-correlation mapping of biological crystals networks. In Biosensing and Nanomedicine X (Vol. 10352, p. 103520X). International Society for Optics and Photonics.  
<https://www.spiedigitallibrary.org/conference-proceedings-of-spie/10352/103520X/Jones-matrix-polarization-correlation-mapping-of-biological-crystals-networks/10.1117/12.2274262.short>
4. Ushenko, V. O., Vanchuliak, O., **Sakhnovskiy, M. Y.**, Dubolazov, O. V., Grygoryshyn, P., Solty, I. V., & Olar, O. V. (2017, August). System of Mueller matrix polarization correlometry of biological polycrystalline layers. In Biosensing and Nanomedicine X (Vol. 10352, p. 103520U). International Society for Optics and Photonics.  
<https://www.spiedigitallibrary.org/conference-proceedings-of-spie/10352/103520U/System-of-Mueller-matrix-polarization-correlometry-of-biological-polycrystalline-layers/10.1117/12.2273789.short>
5. Dubolazov, O. V., Trifonyuk, L., Marchuk, Y., Ushenko, Y. O., Zhytaryuk, V. G., Prydiy, O. G., L. Kushnerik, Meglinskiy, I. (2017, August). Two-point Stokes vector parameters of object field for diagnosis and differentiation of optically anisotropic biological tissues. In Biosensing and Nanomedicine X (Vol. 10352, p. 103520V). International Society for Optics and Photonics.  
<https://www.spiedigitallibrary.org/conference-proceedings-of-spie/10352/103520V/Two-point-Stokes-vector-parameters-of-object-field-for-diagnosis/10.1117/12.2273820.short>
6. Ushenko, V. O., Vanchuliak, O., **Sakhnovskiy, M. Y.**, Dubolazov, O. V., Grygoryshyn, P., Solty, I. V., ... & Antoniv, A. Polarization-interference mapping of biological fluids polycrystalline films in differentiation of weak changes of optical anisotropy. In Applications of Digital Image Processing XL (Vol. 10396, p. 103962O). International Society for Optics and Photonics.  
<https://www.spie.org/Publications/Proceedings/Paper/10.1117/12.2273870>
7. O. V. Dubolazov, V. O. Ushenko, L. Trifoniuk, Yu. O. Ushenko, V. G. Zhytaryuk, O. G. Prydiy, M. Grytsyuk; L. Kushnerik, I. Meglinskiy Methods and means of 3D diffuse Mueller-matrix tomography of depolarizing optically anisotropic biological layers Published in Proceedings Volume 10396: Applications of Digital Image Processing XL (September 2017)  
<https://spie.org/app/search/browse?Ntt=8.%09Methods%20and%20means%20of%203D%20diffuse%20Mueller-matrix%20tomography%20of%20depolarizing%20optically%20anisotropic%20biological%20layers%20&Dy=1&Nty=1&Nrpp=20>
8. Application of speckle-field images processing for concrete hardening diagnostics Mykhaylo P. Gorsky; Peter P. Maksimyak Proceedings Volume 10396, Applications of Digital Image Processing XL; 103962F (2017); doi: 10.1117/12.2273407  
<http://dx.doi.org/10.1117/12.2273407>
9. Laser radiation scattering by the cement in the process of setting and hardening Peter P. Maksimyak; Mykhaylo P. Gorsky; Andrew P. Maksimyak Author Affiliations Proceedings Volume 10395, Optics and Photonics for Information Processing XI; 103951E (2017); doi: 10.1117/12.2273863 Event: SPIE Optical Engineering + Applications, 2017, San Diego, California, United States <http://dx.doi.org/10.1117/12.2273863>

*Статті в періодичних виданнях:*

6. Yu. A. Ushenko, V. T. Bachynsky, O. Ya. Vanchulyak, **A. V. Dubolazov**, M. S. Garazdyuk, and V. A. Ushenko, "Jones-matrix mapping of complex degree of mutual anisotropy of birefringent protein networks during the differentiation of myocardium necrotic changes," Appl. Opt. 55, B113-B119 (2016) <https://www.osapublishing.org/ao/abstract.cfm?uri=ao-55-12-B113>
7. V. P. Prysyzhnyuk, Yu. A. Ushenko, **A. V. Dubolazov**, **A. G. Ushenko**, and V. A. Ushenko, "Polarization-dependent laser autofluorescence of the polycrystalline networks of blood plasma films in the task of liver pathology differentiation," Appl. Opt. 55, B126-B132 (2016) <https://www.osapublishing.org/ao/abstract.cfm?uri=ao-55-12-B126>
8. M. S. Garazdyuk, V. T. Bachinskyi, O. Ya. Vanchulyak, **A. G. Ushenko**, **O. V. Dubolazov**, and **M. P. Gorsky**, "Polarization-phase images of liquor polycrystalline films in determining time of death," Appl. Opt. 55, B67-B71 (2016) <https://www.osapublishing.org/ao/abstract.cfm?uri=ao-55-12-B67&origin=search>
9. **A. V. Dubolazov**, N. V. Pashkovskaya, Yu. A. Ushenko, Yu. F. Marchuk, V. A. Ushenko, and O. Yu. Novakovskaya, "Birefringence images of polycrystalline films of human urine in early diagnostics of kidney pathology," Appl. Opt. 55, B85-B90 (2016) <https://www.osapublishing.org/ao/abstract.cfm?uri=ao-55-12-B85&origin=search>
10. **C. Yu. Zenkova**, **M. P. Gorsky**, **P. A. Ryabiy**, and **A. O. Angelskaya**, "Additional approaches to solving the phase problem in optics," Appl. Opt. 55, B78-B84 (2016) <https://www.osapublishing.org/ao/abstract.cfm?uri=ao-55-12-B78>
11. Paul Horley, Yuri V. Vorobiev, **Victor P. Makhniy**, **Valeriy M. Sklyarchuk** Optoelectronic properties of Ni-GaP diodes with a modified surface, Physica E 83, (2016), P.227-231. <http://adsabs.harvard.edu/abs/2016PhyE...83..227H>
12. **Victor P. Makhniy**, Paul P. Holrey, Yuri V. Vorobiev, Oksana V. Kinzerska Optical properties of ZnSe(Te) with ytterbium impurity. Applied Optics, 2016, V. 55, N12, P.131-133. <https://www.osapublishing.org/ao/abstract.cfm?uri=ao-55-12-B1>
13. **Zenkova, C. Yu, M. P. Gorsky**, and **P. A. Ryabiy**. "Pseudo-phase mapping of speckle fields using 2D Hilbert transformation." Optica Applicata 46.1 (2016): 153-162. [http://www.if.pwr.wroc.pl/~optappl/pdf/2016/n01/optappl\\_4601p153.pdf](http://www.if.pwr.wroc.pl/~optappl/pdf/2016/n01/optappl_4601p153.pdf)
14. **V.P. Makhniy**, O.V. Kinzersky, I.M. Senko «Purification effects» in zinc selenide crystals doped with ytterbium from vapor phase Telecommunications and RadioEngineering. – 2016. – 75(3). – P.239-248. <http://www.dl.begellhouse.com/ru/journals/0632a9d54950b268,7631f9d56fd21b5f,61d1610604de8d18.html>
15. **V.P. Makhniy**, Yu.V. Vorobiev, **V.M. Sklyarchuk**, J. Gonzalez-Hernandez Improvement in optical band gap determinations for cadmium telluride and related compounds Telecommunications and RadioEngineering. – 2016. – 75(15). – P.1369-1376. <http://www.dl.begellhouse.com/journals/0632a9d54950b268,2a3313c513c9b0cf,7753d7c005b70dd1.html>
16. Prysyzhnyuk, V. P., **Ushenko, O. G.**, & **Dubolazov, O. V.** DIAGNOSTIC POSSIBILITIES OF THE METHOD OF MAPPING LASER POLARIZATION DISTRIBUTION ELLIPTICITY OF MICROSCOPIC IMAGES OF POLYCRYSTALLINE FILMS OF BLOOD PLASMA IN DEFINITION OF LIVER DISEASES. ОДЕСЬКИЙ МЕДИЧНИЙ ЖУРНАЛ, 21. [http://files.odmu.edu.ua/journal/OMJ\\_2016.01/m161\\_20.pdf](http://files.odmu.edu.ua/journal/OMJ_2016.01/m161_20.pdf)
17. В.П. Махний. Высокотемпературная люминесценция кристал лов ZnSe:Yb / **В.П. Махний**, О.В. Кинзерская, И.М. Сенко, А.М. Слётов // Технология и конструирование в электронной аппаратуре. – 2016. – 2,3. – С.37-40.

[http://www.solidstatephys.chnu.edu.ua/res//solidstatephys/visnyk/T3\\_V1/t29-2011.pdf](http://www.solidstatephys.chnu.edu.ua/res//solidstatephys/visnyk/T3_V1/t29-2011.pdf)

18. **Ushenko, A. G.; Dubolazov, A. V.; Ushenko, V. A.; Ushenko, Yu. A.; Sakhnovskiy, M. Yu.; Olar, O. V.; Motrich, A. V.; Angelsky, P. O.; Gorsky, M. P.** "Brief description of laser polarimetry microscopy methods of optically anisotropic biological layers," Semiconductor Physics, Quantum Electronics & Optoelectronics . 2016, Vol. 19 Issue 4, p421-426.  
<http://web.a.ebscohost.com/abstract?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=15608034&AN=120563320&h=ZEaLXNV0O6GHQsU%2b5PswxqqB%2btfqK2wy2GfB3FriTVWld7zzrt0OGHHbqZqHYtZ0Yzkdej3mJshzjN4gQmuMHw%3d%3d&crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNoProfile&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%3dehost%26scope%3dsite%26authtype%3dcrawler%26jrnl%3d15608034%26AN%3d120563320>
9. **Ushenko, A. G.; Dubolazov, A. V.; Ushenko, V. A.; Ushenko, Yu. A.; Sakhnovskiy, M. Yu.; Gorsky, M. P.**, "Azimuthally invariant Mueller-matrix methods in the diagnosis of liver disease," Semiconductor Physics, Quantum Electronics & Optoelectronics . 2016, Vol. 19 Issue 4, p404-414.  
[http://journal-spqeo.org.ua/n4\\_2016/P404-414abstr.html](http://journal-spqeo.org.ua/n4_2016/P404-414abstr.html)
10. **Ushenko, A. G.; Dubolazov, A. V.; Ushenko, V. A.; Ushenko, Yu. A.; Sakhnovskiy, M.Yu.; Pidkamin, L. Y.; Balazyuk, V. N.**, "Interconnection between phase and amplitude parameters with anisotropy of Muller-matrix invariants," Semiconductor Physics, Quantum Electronics & Optoelectronics . 2016, Vol. 19 Issue 4, p415-420  
<http://web.b.ebscohost.com/abstract?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=15608034&AN=120563319&h=e%2bj09USt4CntzLERf3JCMVqsVDQQxSIyvgv2FmVMsULgTsqDhLU6COwHHR74KGPNJ4uAIV9PxxsKPxiqwPr8yg%3d%3d&crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNoProfile&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%3dehost%26scope%3dsite%26authtype%3dcrawler%26jrnl%3d15608034%26AN%3d120563319>

#### *Матеріали конференцій:*

1. **C. Y. Zenkova; I. V. Soltys; A. O. Angelskaya;** Using of microparticles for coherent properties of optical fields diagnosing Proc. SPIE 9970, Optics and Photonics for Information Processing X, 99701O (September 14, 2016); doi:10.1117/12.2238158.  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2553634>
2. **Gorsky, M. P., P. A. Ryabyi, and D. I. Ivanskyi.** "2D Hilbert transform for phase retrieval of speckle fields." SPIE Optical Engineering+ Applications. International Society for Optics and Photonics, 2016.  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2553633>
3. **Soltys, I. V.** "The interconnection of degree of coherence and Rayleigh particles velocity motion." SPIE Optical Engineering+ Applications. International Society for Optics and Photonics, 2016.  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2553683>
4. **Ushenko, A. G., Dubolazov, A. V., Ushenko, V. A., Ushenko, Y. A., Kushnerick, L. Y., Olar, O. V., ... & Marchuk, Y. F.** (2016, September). Mueller-matrix differentiation of fibrillar networks of biological tissues with different phase and amplitude anisotropy. In SPIE Optical Engineering+ Applications (pp. 99712K-99712K). International Society for Optics and Photonics.  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2565210>
5. **Ushenko, A. G., Dubolazov, A. V., Ushenko, V. A., Ushenko, Y. A., Sakhnovskiy, M. Y., Soltys, I.V. Zhytaryuk V.H.** Olar, O. I. (2016, September). Methods and means of laser polarimetry microscopy of optically anisotropic biological layers. In SPIE Optical

- Engineering+ Applications (pp. 99712B-99712B). International Society for Optics and Photonics. <http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2565203>
6. **Ushenko, A. G., Dubolazov, A. V., Ushenko, V. A., Ushenko, Y. A., Sakhnovskiy, M. Y., Balazyuk, V. N., ... & Meglinski, I.** (2016, September). Polarization-correlation optical microscopy of anisotropic biological layers. In SPIE Optical Engineering+ Applications (pp. 99712C-99712C). International Society for Optics and Photonics.  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2565204>
  7. **Ushenko, A. G., Dubolazov, A. V., Ushenko, V. A., Ushenko, Y. A., Pidkamin, L. Y., Soltys, I. V., ... & Pavlyukovich, N.** (2016, September). Mueller-matrix mapping of optically anisotropic fluorophores of molecular biological tissues in the diagnosis of death causes. In SPIE Optical Engineering+ Applications (pp. 99712L-99712L). International Society for Optics and Photonics.  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2565211>
  8. **Ushenko, A. G., Dubolazov, A. V., Ushenko, V. A., Ushenko, Y. A., Sakhnovskiy, M. Y., Pavlyukovich, O., ... & Gorsky, M. P.** (2016, September). Azimuthally invariant Mueller-matrix mapping of optically anisotropic layers of biological networks of blood plasma in the diagnosis of liver disease. In SPIE Optical Engineering+ Applications (pp. 99701G-99701G). International Society for Optics and Photonics.  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2553648>
  9. **Ushenko, A. G., Dubolazov, A. V., Ushenko, V. A., Ushenko, Y. A., Pidkamin, L. I., Kushnerik, L. Y., ... & Grygorishin, P.** (2016, September). Fourier-Stokes polarimetry and the spatial-frequency filtering of phase anisotropy manifestations in the diagnostic tasks. In SPIE Optical Engineering+ Applications (pp. 99712G-99712G). International Society for Optics and Photonics.  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2565206>
  10. **Ushenko, A. G., Dubolazov, A. V., Ushenko, V. A., Ushenko, Y. A., Sakhnovskiy, M. Y., Pavlyukovich, N., ... & Meglinski, I.** (2016, September). Relationship of the phase and amplitude parameters with anisotropy of Muller-matrix invariants. In SPIE Optical Engineering+ Applications (pp. 99701H-99701H). International Society for Optics and Photonics.  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2553649>
  11. **M.M. Slyotov, O.S. Gavaleshko, O.M. Slyotov** Luminescence of undoped  $\langle\text{-ZnSe}$  heterolayers // Proc. of SPIE. – 2015. – Vol. 9809. – PP.98090Z-1–98090Z-5  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2474472>

**2015**

*Статті в періодичних виданнях:*

1. Angelsky, O V; **Gorsky, M P**; Hanson, S G; Lukin, V P; Mokhun, I I; Polyanskii, P V; Ryabiy, P A. Optical correlation algorithm for reconstructing phases skeleton of complex optical fields for solving the phase problem. Optics Express, Vol. 22 Issue 5, pp.6186-6193 (2014).  
<http://www.opticsinfobase.org/oe/abstract.cfm?URI=oe-22-5-6186&origin=search>
2. **Gorsky, M P**; Maksymak, P P. Cement hydration investigation by method of piezoelectric photoacoustics. Applied Optics, Vol. 53 Issue 10, pp.B159-B166 (2014).  
<http://www.opticsinfobase.org/ao/abstract.cfm?URI=ao-53-10-B159&origin=search>
3. **C. Yu. Zenkova, M. P. Gorsky**, P. A. Ryabiy, I. Gruia Different approaches to phase restoration of distant complex optical fields, Optica Applicata, vol 45 issue 2, pp.139-150, (2015). <http://www.if.pwr.wroc.pl/~optappl/article.php?lp=1192>
4. **C.Yu. Zenkova, M.P. Gorsky**, P.A. Ryabiy “Phase retrieval of speckle fields based on 2D Hilbert transform” Optical Memory and Neural Networks (Information Optics), Vol. 24, No. 4, pp. 303–308, (2015) <https://link.springer.com/article/10.3103/S1060992X15040074>

5. **V. P. Makhniy, V. M. Sklyarchuk**, Yu. V. Vorobiev , and P. P. Horley Dark Conductivity in Semi-Insulating Crystals of CdTe:Sn JOURNAL OF SEMICONDUCTOR TECHNOLOGY AND SCIENCE, VOL.15, NO.2, 243-248, 2015  
[http://www.jsts.org/html/journal/journal\\_files/2015/04/Year2015Volume15\\_02\\_10.pdf](http://www.jsts.org/html/journal/journal_files/2015/04/Year2015Volume15_02_10.pdf)
6. Statistical and fractal analyses of autofluorescence of myocardium tissue images in diagnostics of acute coronary insufficiency **O.V. Dubolazov**, M.I. Sidor, A.O. Karachevtsev Semiconductor physics, quantum electronics and optoelectronics. 2015. V.18, N.2. P. 152-157. [http://journal-spqeo.org.ua/n2\\_2015/n2\\_2015\\_contents.htm](http://journal-spqeo.org.ua/n2_2015/n2_2015_contents.htm)
7. Azimuthally invariant laser polarimetry of polycrystalline smears of biological liquids Yu.O. Ushenko, **O.V. Dubolazov**, **A.V. Motrich**, G.B. Bodnar Semiconductor physics, quantum electronics and optoelectronics. 2015. V.18, N.2. P. 158-163.  
[http://journal-spqeo.org.ua/n2\\_2015/n2\\_2015\\_contents.htm](http://journal-spqeo.org.ua/n2_2015/n2_2015_contents.htm)
8. Mueller-matrix reconstruction of parameters of phase and amplitude anisotropy in diagnostics of endometriosis and infertility **A.G. Ushenko**, M.M. Dominikov, I.I. Lakusta, G.D. Koval Semiconductor physics, quantum electronics and optoelectronics. 2015. V.18, N.2. P. 164-169 [http://journal-spqeo.org.ua/n2\\_2015/n2\\_2015\\_contents.htm](http://journal-spqeo.org.ua/n2_2015/n2_2015_contents.htm)
9. Multifunctional polarization tomography of birefringence networks of biological crystals **O.V. Dubolazov**, O.I. Olar, D.M. Burkovets Semiconductor physics, quantum electronics and optoelectronics. 2015. V.18, N.2. P. 170-174.  
[http://journal-spqeo.org.ua/n2\\_2015/n2\\_2015\\_contents.htm](http://journal-spqeo.org.ua/n2_2015/n2_2015_contents.htm)
10. Autofluorescent polarimetry in diagnostics of endometriosis and infertility **A.G. Ushenko**, G.D. Koval, D.M. Burkovets, V.O. Savich Semiconductor physics, quantum electronics and optoelectronics. 2015. V.18, N.2. P. 175-180.  
[http://journal-spqeo.org.ua/n2\\_2015/n2\\_2015\\_contents.htm](http://journal-spqeo.org.ua/n2_2015/n2_2015_contents.htm)
11. **V.P. Makhniy**, I.I. German, **V.M. Sklarchuk**. Optical properties of microporous n-GaAs. Telecommunications and RadioEngineering, 2015, T.74(B16.), p. 1467-1472.  
<http://www.dl.begellhouse.com/journals/0632a9d54950b268,35e91ba649d85d3c,6783946553e33363.html>
12. Сенсори на основі ZnMgSe / **М. М. Сльотов**, О. М. Сльотов, А. Г. Шахматова, К. С. Ульяницький // Сенсорна електроніка і мікросистемні технології. - 2015. - Т. 12, № 1. - С. 95-99. [http://nbuv.gov.ua/j-pdf/seimt\\_2015\\_12\\_1\\_12.pdf](http://nbuv.gov.ua/j-pdf/seimt_2015_12_1_12.pdf)
13. **Сльотов М. М.** Використання Cd<sub>x</sub>Mg<sub>1-x</sub>Te у фотосенсорах / **М. М. Сльотов**, О. М. Сльотов, К. С. Ульяницький // Сенсорна електроніка і мікросистемні технології. - 2015. - Т. 12, № 2. - С. 36-41. [http://nbuv.gov.ua/j-pdf/seimt\\_2015\\_12\\_2\\_5.pdf](http://nbuv.gov.ua/j-pdf/seimt_2015_12_2_5.pdf)

**Матеріали конференцій:**

1. **C.Yu. Zenkova, I.V. Soltys** The use of the Rayleigh nanoparticles to diagnose optical currents and optical fields, Proc. of SPIE Vol. 9258, 92581L-1 -92581L-7 , (2015).  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2173675>
2. O. V. Angelsky, P. P. Maksimyak, A. P. Maksimyak, **C. Yu. Zenkova** Self-action of continuous laser radiation in a water suspension with light-absorbing particles, Proc. of SPIE Vol. 9258, 92581M-1 -92581M-7, (2015)  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2173676>
3. **C.Yu. Zenkova, M.P. Gorsky**, P. A. Ryabyi, The phase problem solving by the use of optical correlation algorithm for reconstructing phase skeleton of complex optical fields, Proc. of SPIE Vol. 9258, 92582B -2-92582B-6, 2015  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2173701>
4. V. O. Ushenko , T. M. Boichuk , **O. V. Dubolazov** V. T. Bachinskiy , O. Ya. Vanchuliak Wavelet analysis of polarization maps of the myocardium tissue microscopic images in the diagnosis of the causes of death Proc. SPIE 9584, Ultrafast Nonlinear Imaging and Spectroscopy III, 958413 (August 26, 2015)  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2432475>

5. V. A. Ushenko , V. P. Prysyzhnyuk , **O. V. Dubolazov** , A. O. Karachevtsev  
Polarization-correlation microscopy of human liquid polycrystalline films in infertility diagnosis Proc. SPIE 9599, Applications of Digital Image Processing XXXVIII, 959922 (September 22, 2015)  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2444262>
6. V. O. Ushenko , V. P. Prysyzhnyuk , **O. V. Dubolazov** , O. V. Savich, Mueller-matrix invariants of optical anisotropy of the bile polycrystalline films in the diagnosis of human liver pathologies Proc. SPIE 9599, Applications of Digital Image Processing XXXVIII, 959920 (September 22, 2015)  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2444260>
7. Yu. O. Ushenko; N. V. Pashkovskaya; Y. F. Marchuk; **O. V. Dubolazov**; V. O. Savich System of polarization correlometry of polycrystalline layers of urine in the differentiation stage of diabetes Proc. SPIE 9584, Ultrafast Nonlinear Imaging and Spectroscopy III, 958414 (August 26, 2015); doi:10.1117/12.2187793  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2432476>
8. **O. G. Ushenko** ; T. M. Boichuk ; V. T. Bachinskiy ; O. Ya. Vanchuliak ; O. P. Minzer ; Yu. O. Ushenko ; **O. V. Dubolazov** ; V. O. Savich System of scale-selective tomography of myocardium birefringence Proc. SPIE 9599, Applications of Digital Image Processing XXXVIII, 95991Z (September 22, 2015); doi:10.1117/12.2187442  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2444259>
9. V. P. Prysyzhnyuk ; Yu. O. Ushenko ; **O. V. Dubolazov** ; **A. G. Ushenko** ; V. O. Savich ; A. O. Karachevtsev Autofluorescent polarimetry of bile films in the liver pathology differentiation Proc. SPIE 9599, Applications of Digital Image Processing XXXVIII, 959921 (September 22, 2015); doi:10.1117/12.2187446  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2444261>
10. **O. G. Ushenko** ; L. D. Koval ; **O. V. Dubolazov** ; Yu. O. Ushenko ; V. O. Savich; M. I. Sidor ; Yu. F. Marchuk Multifunctional polarization tomography of optical anisotropy biological layers in diagnosis of endometriosis Proc. SPIE 9599, Applications of Digital Image Processing XXXVIII, 959924 (September 22, 2015); doi:10.1117/12.2187796  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2444264>
11. **C. Yu. Zenkova, , I. V. Soltys, , P. A. Ryabiy** New Opportunities For Biomedicine 3rd International Conference on Nanotechnologies and Biomedical Engineering Volume 55 of the series IFMBE Proceedings pp 254-258, 2015  
[http://link.springer.com/chapter/10.1007/978-981-287-736-9\\_62](http://link.springer.com/chapter/10.1007/978-981-287-736-9_62)
12. **M.M. Slytov, , O.S. Gavaleshko, O.M. Slytov** Luminescence of undoped <-ZnSe heterolayers // Proc. of SPIE. – 2015. – Vol. 9809. – PP.98090Z-1–98090Z-5  
<http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=2474472>

**2014**

*Статті в періодичних виданнях:*

1. **A. G. Ushenko**, P. O. Angelsky, M. Sidor, Yu. F. Marchuk, D. R. Andreychuk, and N. V. Pashkovskaya, Spatial-frequency selection of complex degree of coherence of laser images of blood plasma in diagnostics and differentiation of pathological states of human organism of various nosology, Applied Optics. – 2014. – Vol. 53, Issue 10. – P. B172-B180.  
<http://www.opticsinfobase.org/ao/abstract.cfm?uri=ao-53-10-B172>
2. Yu. A. Ushenko, L. Yu. Trifonyuk, **A. V. Dubolazov**, and A.O. Karachevtsev, "Fourier-domain Jones-matrix mapping of a complex degree of mutual anisotropy in differentiation of biological tissues' pathological states," Appl. Opt. 53, B205-B214 (2014).  
<https://www.osapublishing.org/ao/abstract.cfm?uri=ao-53-10-B205>

3. V. A. Ushenko, **O. V. Dubolazov**, and A. O. Karachevtsev, "Two wavelength Mueller matrix reconstruction of blood plasma films polycrystalline structure in diagnostics of breast cancer," Appl. Opt. 53, B128-B139 (2014) <https://www.osapublishing.org/ao/abstract.cfm?uri=ao-53-10-B128>
4. C. Yu. Zenkova, Interconnection of polarization properties and coherence of optical fields, Applied Optics Vol. 53, Iss. 10, pp. B43–B52 (2014) <http://www.opticsinfobase.org/ao/abstract.cfm?URI=ao-53-10-B43&origin=search>
5. O. V. Angelsky, A. Ya. Bekshaev, P. P. Maksimyak, A. P. Maksimyak, S. G. Hanson, and **C. Yu. Zenkova** Self-action of continuous laser radiation and Pearcey diffraction in a water suspension with light-absorbing particles. Optics Express Vol. 22, Iss. 3, pp. 2267–2277 (2014) <http://www.opticsinfobase.org/oe/abstract.cfm?URI=oe-22-3-2267&origin=search>
6. O. V. Angelsky, A. Ya. Bekshaev, P. P. Maksimyak, A. P. Maksimyak, S. G. Hanson, and **C. Yu. Zenkova** Self-action of continuous laser radiation and Pearcey diffraction in a water suspension with light-absorbing particles Virtual Journal for Biomedical Optics (VJBO) , vol.9, iss. 4, -Apr1., 2014, [http://www.opticsinfobase.org/vjbo/virtual\\_issue.cfm](http://www.opticsinfobase.org/vjbo/virtual_issue.cfm)
7. I.V.Soltys, P.A. Ryabyi About the Problems of Optical Fields and Medium Nanodiagnostics Optical Memory and Neural Networks (Information Optics), 2014, Vol. 23, No. 3, pp. 140–148.
8. C.Y. Zenkova, I.V. Soltys, P.O. Angelsky The estimation of the degree of coherence of mutually orthogonal beams: New approaches *Optik - International Journal for Light and Electron Optics*. – 2014. – V.125, №2-3. – P. 1079–1084. [http://www.researchgate.net/publication/259093140\\_The\\_estimation\\_of\\_the\\_degree\\_of\\_coherence\\_of\\_mutually\\_orthogonal\\_beams\\_New\\_approaches](http://www.researchgate.net/publication/259093140_The_estimation_of_the_degree_of_coherence_of_mutually_orthogonal_beams_New_approaches)
9. Viktor V. Brus, **Leonid J. Pidkamin**, Maria I. Ilashchuk, Pavlo D. Maryanchuk Propolis films for hybrid biomaterial-inorganic electronics and optoelectronics. Applied Optics, Vol. 53 B121-B127, 2014 <http://www.opticsinfobase.org/ao/abstract.cfm?uri=ao-53-10-B121>
10. Лазерная поляризационная флуоресценция сетей оптически анизотропных биологических нанокристаллов / Ю. О. Ушенко, **О. В. Дуболазов**, М. И. Сидор // Вісник Національного технічного університету "ХПІ". Сер. : Нові рішення в сучасних технологіях . - 2014. - № 36. - С. 83-87. - Режим доступу: [http://nbuv.gov.ua/j-pdf/vcpinrct\\_2014\\_36\\_16.pdf](http://nbuv.gov.ua/j-pdf/vcpinrct_2014_36_16.pdf)
11. Yu. Dobrovolskyi, **L. Pidkamin**, V. Brus, V. Kuzenko Photodiode based on epitaxial silicon with high sensitivity at the wavelength 254 nm, Semiconductor Physics, Quantum Electronics & Optoelectronics, 2014. V. 17, N 2. P. 256-259. [http://www.researchgate.net/publication/267039886\\_Photodiode\\_based\\_on\\_epitaxial\\_silicon\\_with\\_high\\_sensitivity\\_at\\_the\\_wavelength\\_254\\_nm](http://www.researchgate.net/publication/267039886_Photodiode_based_on_epitaxial_silicon_with_high_sensitivity_at_the_wavelength_254_nm)
12. The effect of surface preparation on physical properties of Ni-ZnSe S. Chusnutdinov, **V. P. Makhniy**, Alekzkiewicz, Zaleszczyk, Slotov M.M., injuction Acta Physica Polonica A, 2014, 126, (5), 1076-1078. <http://przyrbwn.icm.edu.pl/APP/PDF/126/a126z5p05.pdf>
13. Structural and photoluminescent properties of TiN thin films M. N. Solovan, V. V. Brus, P. D. Maryanchuk, I. M. Fodchuk, V. M. Lorents, A. M. Sletov, **M. M. Sletov**, M. Gluba Optics and Spectroscopy, November 2014, Volume 117, Issue 5, pp 753-755 <http://link.springer.com/article/10.1134%2FS0030400X14110198>
14. ОСОБЛИВОСТІ СТРУКТУРНИХ ВЛАСТИВОСТЕЙ ГЕТЕРОШАРІВ ОКСИДУ ЦИНКУ **В.П. Махній** , М.Ф. Павлюк , М.Д. Раанський , С.В. Хуснутдінов Науковий вісник Чернівецького університету. 2014. Том 3, випуск 2. Фізика. Електроніка. [http://www.solidstatephys.chnu.edu.ua/res/solidstatephys/visnyk/T3\\_V2/t30-08got.pdf](http://www.solidstatephys.chnu.edu.ua/res/solidstatephys/visnyk/T3_V2/t30-08got.pdf)

15.  **$\alpha$ -CdTe LAYERS: GROWING AND OPTICAL PROPERTIES V. P. Makhniy, A. M. Slyotov**, M. M. Slyotov, E.V. Stez Telecommunications and Radio Engineering Volume 73, 2014 Issue 16, **1461-1470**  
<http://www.dl.begellhouse.com/journals/0632a9d54950b268,50ecbf056e787661,01fc95c770a51103.html>

*Матеріали конференцій:*

1. **Mykhaylo P. Gorsky**; Peter P. Maksimyak and Andrew P. Maksimyak, "Correlation-optical method for cement particle size definition ", Proc. SPIE 9216, Optics and Photonics for Information Processing VIII, 92161E (September 19, 2014); doi:10.1117/12.2061666; <http://dx.doi.org/10.1117/12.2061666>
2. V.O. Ushenko, V.P. Prysyazhnyuk, **O.V. Dubolazov**, A.O. Karachevtsev, **A.V. Motrich**, O.V. Sobko, O.I. Olar, Mueller-matrix processing of biological tissues polarization images and reconstruction of parameters phase and amplitude anisotropy, Proc. SPIE "Optics and Photonics for Information Processing VIII". – 2014. – Vol. 9216. – P. 92161B-1 -92161B-7 <http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=1909965&resultClick=1>
3. N. I. Zabolotna ; S. V. Pavlov ; **A. G. Ushenko** ; A. O. Karachevtsev ; V. O. Savich ; O. V. Sobko ; O. V. Olar System of the phase tomography of optically anisotropic polycrystalline films of biological fluids Proc. SPIE "Biosensing and Nanomedicine VII". – 2014. – Vol. 9166. – P. 916616-1 - 916616-7. <http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=1901287>
4. Yuriy A Ushenko, **Alexander V Dubolazov**, Artem O Karachevtsev, **Mikhail Yu Sakhnovskiy**, Liliya I Bizer, Olena B Bodnar Multidimensional Mueller Matrices Microscopy of Biological Crystal Networks Structure Proc. SPIE "Fringe 2013, Springer Berlin Heidelberg". – 2014. – P. 855-858 [http://link.springer.com/chapter/10.1007/978-3-642-36359-7\\_157](http://link.springer.com/chapter/10.1007/978-3-642-36359-7_157)
5. Yu. A. Ushenko ; **A. V. Dubolazov** ; V. S. Prysyazhnyuk ; Y. F. Marchuk ; N. V. Pashkovskaya ; **A. V. Motrich** ; O. Y. Novakovskaya Polarization-correlation analysis of maps of optical anisotropy biological layers Proc. SPIE "Biosensing and Nanomedicine VII". – 2014. – Vol. 9166. – P. 91661A-1 - 91661A-8. <http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=1901291>
6. **O. G. Ushenko** ; M. I. Sidor ; M. Garazdiuk ; M. V. Gritsiuk ; O. V. Sobko Azimuthally stable laser polarimetry of polycrystalline films of human biological fluids Proc. SPIE "Optics and Photonics for Information Processing VIII". – 2014. – Vol. 9216. – P. 92161C-1 - 92161C-10 <http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=1909966>
7. NI Zabolotna, SV Pavlov, **A.G. Ushenko**, OV Shobko, OV Savich Multivariate system of polarization tomography of biological crystals birefringence networks Proc. SPIE "Biosensing and Nanomedicine VII". – 2014. – Vol. 9166. – P. 916615-1 - 916615-7 <http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=1901286>
8. T. M. Boichuk ; V. T. Bachinskiy ; O. Ya. Vanchuliak ; O. P. Minzer ; M. Garazdiuk ; **A. V. Motrich** Statistical and fractal analysis of autofluorescent myocardium images in posthumous diagnostics of acute coronary insufficiency Proc. SPIE "Biosensing and Nanomedicine VII". – 2014. – Vol. 9166. – P. 916619-1 – 916619-8. <http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=1901290>