THE SIXTEENTH INTERNATIONAL CONFERENCE

Correlation OPTICS 2023

Yuriy Fedkovych Chernivtsi National University,
Chernivtsi, Ukraine
September 18–21, 2023

The organizers of the conference:

Yuriy Fedkovych Chernivtsi National University, Ukraine
National Academy of Science of Ukraine, Department of Physics and Astronomy
Research Institute of Zhejiang University, Republic of China
Ministry of Education and Science of Ukraine

Sponsoring Organizations:

SPIE. Society of Optics and Photonics

OPTICA Formerly OSA — Optica (formerly Optical Society of America)

International Commission for Optics

EOS European Optical Society Coherence for Europe — European Optical Society

Ukrainian Society of Pure and Applied Optics

Ваш3ір — Regional center “Laser microsurgery of the eye”

Conference Chair:

Prof. Angelsky Oleg V. (Ukraine)

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K. Bliokh (Japan)
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S. Odoulov (Ukraine)

September 18

DAY 1 CONFERENCE PROGRAM

09.30 (GMT+3)	**Opening ceremony**
	Plenary Session 1 (GMT+3) Session Chairs – M. Dennis, A. Bekshaev
10.00	**O. Angelsky** (Ukraine), **Jun Zheng** (PRC), **Zhebo Chen** (PRC) The effectiveness of cooperation between scientists of the Research Institute of Zhejiang University - Taizhou and scientists of Chernivtsi National University within the framework of the created optical research centre
10.20	**J.-Yo. Son** (Korea) **T. Venkel** (Ukraine), **B.-R. Lee** (Korea), **J. M. Rodriguez** (Korea), **J. G. Marichal-Hernandez** (Korea) **(INVITED)** Zernike coefficients of digital holographic optical elements
11.10	**K.Y. Bliokh** (Japan) **(INVITED)** Topological forms in optical, acoustic and water waves
11.40	**S. Odoulov** (Ukraine), **A. Shumelyuk** (Ukraine), **A. Volkov** (Ukraine), **D. Evans** (USA), **Y. Skrypka** (Ukraine), **A. Grabar** (Ukraine) **(INVITED)** Two-beam coupling in low symmetry crystals. How can it be optimized
13.00	Lunch
	Plenary Session 2 (GMT+3) Session Chairs – A. Desyatnikov, G. Sirat
14.00	**M. Dennis** (UK) **(INVITED)** Isotropic random electromagnetic waves revisited: optical currents and 3D zeros
14.40	**A. Bekshaev** (Ukraine) Bi-chromatic paraxial beam as a representative of spatio-temporal light fields: modelling abilities and restrictions
15.20	**W. Wang** (UK), **S. G. Hanson** (Denmark), **M. Takeda** (Japan) **(INVITED)** Towards diagnosticable random polarization: How Stokes correlations provide information content of stochastic optical fields
16.00	**L. Marrucci** (Italy) **(INVITED)** Photonic quantum-walk simulations with structured light
16.40	**A. Shevchenko** (Finland) **(INVITED)** Aberration-insensitive coherent and incoherent optical imaging systems
17.30–18.30	**Poster Session** – New applications of correlation optics in biology and medicine. Engineering, optical and biomedical devices and systems in tasks of correlation and singular optics

September 19

DAY 2

	Singular Optics
	Session 1 (GMT+3) Session Chairs – G. Gbur, I.Mokhun
09.00	**E. Brasselet** (France) (INVITED) Structured waveplates for multi-dimensional beam shaping
9.40	**T. Omatsu** (Japan) (INVITED) Laser nano/microfabrication using structured light
10.20	**M. Vasnetsov, V. Ponevchinsky, V. Pas'ko, V. Voycehovich** (Ukraine) Damping of a speckle structure in low-coherence optical field
10.40	Coffee-break
11.00	**G. Gbur** (UK) (INVITED) Theory and Experiment of an Optical Hilbert's
11.40	**V. Kumar** (India) Machine learning meets Singular Optics
12.20	**A. Desyatnikov** (Kazakhstan) (INVITED) Vortex rings reconnections in Gausian laser beams
13.00	Lunch
	Plenary Session 2 (GMT+3) Session Chairs – S. Hanson, A. Dieterlen
14.00	**P. Naglič, R. Štanc, U. Tkalec** (Slovenia) Digital holographic microscopy in reflection mode (rDHM) for precise topography determination of liquid crystal textures on micropatterned substrates
14.20	**I. Mokhun, Yu. Galushko, M. Karabchiyvskiy, Yu. Viktorovskaya** (Ukraine) Symmetry of polychromatic beams and transverse energy flows
15.00	Coffee-break
16.00	**V. Podolskiy** (USA) (INVITED) Optical Hypergratings for Focusing Vortex Beams below the Diffraction Limit
16.40	**M. Kostyrko, I. Skab, R. Vlokh** (Ukraine) Acousto-optic interaction of the optical and acoustic singular beams

September 20

DAY 3

	Optical correlation devices based on diffractive optical elements, including optical and digital holography, optical sensors. Informative content of statistical optical fields, including optical chaos, polarization optics and coherence
	Session 1 (GMT+3) Session Chairs – E. Brasselet, I. Meglinski
09.00	**L. Buettner** (Germany) **(INVITED)** Closed-Loop and Neural Network Aberration Correction Schemes for Correlation-Based Laser Velocimetry
09.40	**Michael Berry** (UK) **(INVITED)** Four geometrical-optics illusions
10.20	**A. Popiołek-Masajada** (Poland), **A. Ferrando** (Spain), **R. Markevich** (Poland), **J. Masajada** (Poland), **A. Khoroshun** (Ukraine) Vortex quadrupole trajectory seeded in Gaussian beam
11.00	Coffee-break
11.30	**S. Hanson** (Denmark), **W. Wang** (UK), **M. Takeda** (Japan) Coherence-based investigation of stellar objects: A theoretical approach
11.50	**R. Zatserkovnyi, R. Zatserkovna, V. Maik** (Ukraine) Adapting illustrations for people with low vision via edge detection methods
12.10	**V. Borovytsky, I. Avdeyonok** (Ukraine) Economical Optical Matrix to Vector Multiplier
13.00	Lunch
	Session 2 (GMT+3) Session Chairs – A. Popiołek-Masajada, V. Podolskiy
14.00	**L. Muravsky, I. Stasyshyn, T. Voronyak** (Ukraine) Surface relief retrieval by three-frame fringe projection interferometry with unknown phase shifts
14.20	**A. Kasianchuk, H. Lastivka** (Ukraine) Promising areas of integration of artificial intelligence technologies in unmanned aerial vehicles
14.40	**N. Litchinitser** (USA) **(INVITED)** Structured Light and Darkness in Nanophotonics
15.20	**M.A. Alonso** (USA) **(INVITED)** The theory of 3D polarization and its application in SMOLM
16.00–17.00	**Poster Session** – Optical correlation devices based on diffractive optical elements, including optical and digital holography, optical sensors. Informative content of statistical optical fields, including optical chaos, polarization optics and coherence. Singular Optics

September 20

DAY 3

	Optical correlation diagnostics, interferometry and microscopy of rough surfaces and random media. Advanced materials, nanomaterials and devices for optics and optoelectronics. Methods and computer algorithms for intelligent data processing. Nanooptics
	Session 1 (GMT+3) Session Chairs – O. Maslyanchuk, L. Buettner
09.00	**Xinzheng** (PRC) **(INVITED)** Visible topological lasing through a combination of topological photonics and liquid crystal photonics
09.40	**O. Filipenko, O. Sychova, S. Novoselov** (Ukraine) Modeling, Decision Support and Software for Automated Positioning of Photonic Crystal Fiber
10.00	**V. Ryukhtin** (Czech Republic) SANS technique for studying of nanoparticles in engineering solid materials
11.00	Coffee-break
11.30	**O. Maslyanchuk** (Ukraine) **(INVITED)** Halide Perovskite: A Promising Candidate for Next-Generation X-Ray Detectors
12.10	**A. Demchenko** (Ukraine) **(INVITED)** Fluortescent excitonic nanoparticles for optical studies
12.50	**O. Yermakov** (Ukraine) All-dielectric metasurfaces for polarization control and fiber in-coupling of guided light
13.10	Lunch
16.00–17.00	**Poster Session** – Optical correlation diagnostics, interferometry and microscopy of rough surfaces and random media. Advanced materials, nanomaterials and devices for optics and optoelectronics. Methods and computer algorithms for intelligent data processing. Nanooptics

September 21

DAY 4

	New applications of correlation optics in biology and medicine. Engineering, optical and biomedical devices and systems in tasks of correlation and singular optics
	Session 1 (GMT+3) Session Chairs – T. Omatsu, Xinzheng
09.00	**I. Meglinski** (Finland) **(INVITED)** Propagation of Light Carrying Orbital Angular Momentum in Tissue-like Scattering Medium
09.40	**N. Verrier, M. Debailleul, B. Simon, O. Haeberlé (France)** **(INVITED)** Tomographic diffractive microscopy: recent progress and current challenges
10.20	**S. Schabat, B. Colicchio, J.-B. Courbot, R. M'Kacher, A. Dieterlen** (France) **(INVITED)** Automated microscope image analysis for cytogenetics
11.00	**L. Muravsky, Ya. Kulynych, I. Stasyshyn** (Ukraine) Analysis of arbitrarary phase shift errors between speckle fringe patterns using Pearson correlation coefficient
12.00	Lunch
	Session 2 (GMT+3) Session Chairs – V. Kumar, O. Haeberlé
14.00	**B. Amuzescu, F. Armăşescu, R.-O. Gheorghe, M. Ghenghea, D. F. Mihăilescu, J. Ciurea, I. Gruia** (Romania) Near-infrared laser effects on sensory neuron excitability and gating of voltage-dependent sodium channels
14.20	**Yu. Ushenko, L. Trifonyuk, M. Gorsky, M. Garazdyuk, O. Dubolazov, O. Ushenko, P. Gorodensky** (Ukraine) Information stokes-correlometry method to study polarization-inhomogeneous images of optically anisotropic self-assembled soft matter films
15.00 (GMT+3)	**Closing ceremony**

New applications of correlation optics in biology and medicine. Engineering, optical and biomedical devices and systems in tasks of correlation and singular optics

BM1	M. Gorsky, A. Dubolazov, A. Ushenko, I. Panko, Ya. Struk, I. Mikirin (Ukraine) Jun Zheng (PRC) Polarization-holographic phasometry of the layered vector structure of laser object fields of soft matter polycrystalline layers
BM2	M. Gorsky, A. Dubolazov, A. Ushenko, Ya. Struk, I. Mikirin (Ukraine), Jun Zheng (PRC) 3D polarization holographic scanning of microscopic images of birefringent fibrous networks of myocardial layers
BM3	M. Gorsky, Yu. Ushenko, A. Salega, Yu. Litvinenko, I. Gordey (Ukraine), Jun Zheng (PRC) Scale-selective wavelet differentiation of layered phased maps of polarization azimuth for images of biological crystal networks
BM4	I. Soltys, Yu. Ushenko, A. Salega, Yu. Litvinenko, I. Gordey (Ukraine) Thesigrams of phase anisotropy in polycrystalline dendritic-spherulitic networks of dehydrated biological films
BM5	I. Soltys, A. Ushenko, A. Dubolazov, I. Mikirin, P. Prysyazhnyuk, D. Kvasnyuk (Ukraine) Multiscale-selective multifractal analysis of phase-inhomogeneous object fields in soft matter
BM6	Ya. Penishkevich, S. Yermolenko, O. Roslyakov (Ukraine) Diagnostic computer processing of spectral selective images of the deep layers of the retina
BM7	O. Peresunko, S. Yermolenko, S. Tsyntar, V. Kostevych, O. Roslyakov (Ukraine) Spectrophotometric determination of human papillomavirus of high carcinogenic risk as an initial stage of cervical cancer screening
BM8	O. Peresunko, Ch. Felde, S. Tsyntar, V. Kostevych, O. Konovchuk (Ukraine) Laser polarimetric differential diagnosis of uterine bleeding in postmenopausal women
BM9	O. Peresunko, N. Horodynska, S. Tsyntar, V. Kostevych, S. Lomaka (Ukraine) Differential criteria for spectral diagnosis of benign and malignant changes in ovarian tumors
BM10	I. Soltys, A. Olar, Ye. Kurek, Yu. Ushenko, A. Salega, Ya. Struk, I. Oliynyk (Ukraine) The diagnostic capabilities of polarization-correlation analysis of scattered light in biological tissues to differentiate between benign and malignant tumors
BM11	N. Getmantceva, M. Getmantcev, T. Yuzko, Yu. Odovitchena, O. Olar (Ukraine) Legal aspects of the development of optical medicine for severe systemic diseases

New applications of correlation optics in biology and medicine. Engineering, optical and biomedical devices and systems in tasks of correlation and singular optics

BM12	N. Getmantceva, A. Burka, S. Gadkevitch, V. Anatiychuk (Ukraine) Optical monitoring of systemic pathologies of the nation's health as a legal platform for a decent human life
BM13	A. Dubolazov, A. Olar, A. Litvinenko, I. Gordey, I. Oliynyk, R. Besaha (Ukraine) Methods and tools of forensic medical digital polarization histology of traumatized tissues of the deceased
BM14	C. Zenkova, D. Ivanskyi, M. Chumak (Ukraine) Model of optical axis orientation estimation in birefringent biological tissues
BM15	Zhengbing Hu (PRC), D. Uhryn, Yu. Ushenko, V. Korolenko, V. Lytvyn, V. Vysotska (Ukraine) System programming of a disease identification model based on medical images
BM16	A. Ushenko, M. Garazdyuk, A. Salega, I. Mikirin, I. Kukovska, D. Kvasnyuk (Ukraine) Forensic medical methodology of azimuthally-invariant Mueller matrix mapping of histological brain tissue sections from deceased individuals
BM17	Yu. Rohovyi, V. Savka, V. Bilookyi, M. Sheremet, A. Bocharov, K. Pryimak, O. Bilookyi (Ukraine) Integrative pathophysiological and correlation-optical study of the kidneys for the formation of tubulo-interstitial syndrome. Part 1 – Polarization and birefringence structure
BM18	Yu. Rohovyi, V. Savka, V. Bilookyi, M. Sheremet, A. Bocharov, K. Pryimak, O. Bilookyi (Ukraine) Integrative pathophysiological and correlation-optical study of the kidneys for the formation of tubulo-interstitial syndrome. Part 2. Orientational and phase structure

September 20

DAY 3

Optical correlation devices based on diffractive optical elements, including optical and digital holography, optical sensors. Informative content of statistical optical fields, including optical chaos, polarization optics and coherence. Singular Optics

D1	K. Chepurna, O. Barauskiene, S. Zyhulia, I.Soltys, O. Khmiliarchuk (Ukraine) Optical index stabilization of prints of digital printing
D2	P. Kyrychok, O. Khmiliarchuk, K. Chepurna, O. Barauskiene, O. Machynskyi (Ukraine) Providing optical characteristics of print on synthetic papers by foil stamping
D3	Ye. Avdyakov, K. Zolotukhina (Ukraine) Optical density of imprints of flexographic printing
D4	Yu. Dobrovolsky, Yu. Sorokatiy (Ukraine) Photodiode based on epitaxic silicon for measuring UV radiation with a wavelength of 254 nm
D5	V. Lipka, Yu. Dobrovolsky (Ukraine) Background light compensation algorithm in a photo-receptive device for FSO
D6	Z. Mykytyuk, M. Vistak, R. Politanskyi, Y. Kachurak, O. Shymchyshyn, I. Discovskyi (Ukraine) Development of an infrared optical sensor concept for determining the concentration of CO2
D7	T. Kazemirskiy, A. Samila (Ukraine) High power LDMOS radio frequency transmitter for NQR experiments
D8	A. Kovalenko, O. Danko, V. Danko (Ukraine) Increasing enhancement factor in wavefront shaping by means of spatial filtering
D9	M. Ohirko, V. Bernatsek, O. Kotmalova (Ukraine), Jerzy Czubak (Ukraine) Study of optical indicators of packaging products
D10	M. Trofimenko, V. Smolyar, A. Bekshaev (Ukraine) Optical methods of identifying the role of external air in the combustion of the propanebutane flame
D11	S. Yermolenko, O. Roslyakov, V. Martyniuk, V. Unguryan (Ukraine) Optical measurement technologies for detecting low levels of pollution and identifying microplastics in water
D12	O. Angelsky, D. Ivanskyi, M. Chumak (Ukraine) New polarization-interference approach for determination of polarization properties of birefringent media
D13	C. Zenkova, A. Anhelska, V. Tkachuk (Ukraine) Carbon nanoparticles for metrological control of polygraphic materials for packaging
D14	P. Ryabiy, V. Tkachuk (Ukraine) Using the Hilbert transform for the investigation of structurally heterogeneous packaging materials
D15	O. Derevyanchuk, H. Kravchenko, Ya. Derevianchuk, V. Tomash (Ukraine) Recognition images of broken window glass
D16	Ya. Kolesnyk, M. Strynadko, B. Tymochko, M. Dominikov (Ukraine) Single-position orientation of the remote antenna to the source of laser radiation
D17	R. Halyts, P. Shpatar (Ukraine) Amplification pulse signals a single-photon detector based on an avalanche photodiode

D18	I. Mokhun, Y. Galushko, Y. Viktorovskaya, M. Karabchiyvskiy (Ukraine) Formation of a polychromatic edge dislocation using the technology of computer generated holograms
D19	I. Mokhun, M. Vasnetsov, Ch. Felde, Y. Galushko, M. Karabchiyvskiy, Y. Viktorovskaya (Ukraine) Channel multiplexing of FSO-systems based on singular optics approaches
D20	A. Maksimyak, P. Maksimyak, S. Shchukin (Ukraine) Investigation of the stability of optical vortices in a low-mode optical fiber
D21	M. Gavrylyak, A. Maksimyak, P. Maksimyak, S. Shchukin (Ukraine) Formation of a phase singularity using a biaxial crystal
D22	O. Angelsky, O. Demchenko, V. Kryvetsky, N. Horodynska, I. Fesiv (Ukraine) Synthesis of carbon dots for the investigation of optical fields
D23	O. Angelsky, V. Kryvetsky, Ch. Felde, Yu. Khalavka (Ukraine) Stabilization of quantum dots by polymer microspheres in the study of optical flows
D24	M. Gavrylyak, Yu. Galushko, D. Burkovets, P. Riabyi, A. Bohdan, S. Bohdan (Ukraine) Device for automatic adjustment to zero of the interference fringe
D25	A. Arkhelyuk, L. Pidkamin, V. Kruk (Ukraine), Ion Gruia (Romania) Analysis of experimental errors of optical converters and measuring equipment based on the Mueller matrix method
D26	A. Arkhelyuk, L. Pidkamin, V. Kruk (Ukraine), Ion Gruia (Romania) Study of the influence of polarized UV radiation on the structure of amphiphilic molecules using the Mueller matrix method
D27	A. Arkhelyuk, I. Kashtanov (Ukraine) Reducing the influence of interference on the quality of communication in mobile networks
D28	A. Aleksieiev, P. Shpatar (Ukraine) A method of quantum communication using sideband-modulated infrared emission
D29	M. Gavryliak, P. Maksimyak, Ya. Struk, I. Fesiv (Ukraine) Numeric investigation 3D optical field scattered by a parabolic mirror
D30	O. Yermakov (Ukraine) New page in optical beam shifts
D31	G. Prokhorov, Yu. Dobrovolsky (Ukraine) Primary processing of an optical image on autonomous mobile optical systems using cellular automata
D32	D. Ivanskyi, P. Riabyi, M. Chumak (Ukraine) Method of determination the geometric phase for linearly birefringent medium
D33	A. Kuzmenko, O. Butok (Ukraine) Phase retrieval for arbitrary complex-valued objects using structured illumination
D34	V. Zhytaruk (Ukraine) Gram-Charlier distribution in the field of signal processing research
D35	V. Zhytaruk (Ukraine) Features of digital filters in printing technologies
D36	V. Zhytaruk (Ukraine) External geometric structure of the products
D37	O. Derevyanchuk, V. Kramar, V. Kovalchuk, H. Kravchenko, D. Kondriuk, B. Onufriichuk, A. Kovalchuk (Ukraine) Implementation of STEM education in the training of future specialists in engineering and pedagogical specialties
D38	V. Fesiv, M. Sakhnovskyi, B. Tymochko, M. Dominikov, M. Strynadko (Ukraine) Radio Frequency Conversion Optical Spectrum

Optical correlation diagnostics, interferometry and microscopy of rough surfaces and random media. Advanced materials, nanomaterials and devices for optics and optoelectronics. Methods and computer algorithms for intelligent data processing. Nanooptics

MDN1	O. Moisiuk, V. Tkach, A. Samila (Ukraine) Design and investigation of a low-noise preamplifier SPICE-model for pulsed nuclear quadrupole resonance spectroscopy
MDN2	V. Ivashko, O. Krulikovskyi, S. Haliuk, I. Safronov, A. Samila (Ukraine) Spin-crossover nanomaterials as basis for modern electronic devices
MDN3	T. Kyrychok, T. Klymenko, B. Bardovsky (Ukraine) Nanoscale fractal analysis of watermarked paper surface topography studied by atomic force microscopy
MDN4	T. Kyrychok, O. Korotenko, V. Baglai, A. Kyrychok (Ukraine) Investigation of banknotes recognition signs quality for visually impaired people
MDN5	T. Kyrychok, V. Baglai (Ukraine) Investigation of quality DLE strokes of intaglio printing plates
MDN6	V. Strutynsky, A. Gurzhii, T. Kyrycho, O. Korotenko (Ukraine) Hyperspectral analysis for the determination of tensor differential and integral characteristics of the microprofile from the topograms of the strokes printed by intaglio
MDN7	P. Kyrychok, T. Kyrychok, O. Barauskiene, T. Klymenko, N Talimonova, V. Baglai, S. Zyhulia (Ukraine) Optical and mechanical investigation of the printing equipment parts surface topography
MDN8	T. Kyrychok, V. Bagla, E. Rudenko, N. Talimonova, A. Novytska (Ukraine) Ion plasma treatment before laser engraving of brass-based intaglio printing plates surface
MDN9	M. Gorsky, E. Vatamanitsa, O. Olar, Y. Ushenko, L. Diachenko, O. Galochkin, A. Dovgun (Ukraine) Application of distributed computing for calculation of complex optical fields
MDN10	M. Gorsky, E. Vatamanitsa, O. Olar, Y. Ushenko, M. Talakh, V. Dvorzhak, M. Kovalchuk (Ukraine) Calculation of complex optical fields with the help of AWS cloud
MDN11	V. Yarema, S. Yarema, Iu. Gudyma (Ukraine) 2D spin-crossover hexagonal molecular nanoparticles
MDN12	E. Maistruk, M. Koval, I. Orletskyi, I. Koziarskyi, M. Ilashchuk, D. Koziarskyi, G. Andrushchak (Ukraine) Photoelectric properties of ITO/ZnFe2O4/n-CdTe heterostructure
MDN13	Ju. Seti, E. Vereshko, O. Voitsekhivska, M. Tkach (Ukraine) Optical properties of open multi-cascade nanostructure as an element of quantum cascade detector
MDN14	A. Tyurin, S. Zhukov, A. Bekshaev (Ukraine) Mechanisms of spectral sensitization of microsystems “CORE – AgBr SHELL”
MDN15	S. Havenko, M. Labetska, T. Telehina (Ukraine) Study of flexographic imprints using the methods of optical and electron microscopy
MDN16	M. Sorokatyi, V. Strebezhev, I. Yuriychuk, S. Nichyi (Ukraine) Preparation and laser modification of optically selective multilayer film structures on the In4Se3 , In4(Se3)1-x(Te3)x and CdSb crystals

MDN17	Tkachuk V.M., Burkovets D.M., Fesiv I.V. (Ukraine) New approach for reconstruction of the 3D landscape of an ultra-smooth surfaces
MDN18	S. Balovsyak, Kh. Odaiska, O. Yakovenko, I. Iakovlieva (Ukraine) Adjusting the «Brightness» and «Contrast» parameters of digital video cameras using artificial neural networks
MDN19	M. Kotsur, L. Vikhor (Ukraine) Simulation of thermoelectric coolers for optical electronic devices by means of optimal control methods
MDN20	M. Gavrylyak, A. Maksimyak, P. Maksimyak, S. Shchukin (Ukraine) Study of the Mueller matrix of the image of nanoobjects
MDN21	I. Fodchuk, A. Kuzmin, V. Dovganyuk, S. Balovsyak, I. Hutsuliak, M. Solodkyi, D. Makotiak, O.Tkach (Ukraine) Investigation of the defect structure of high-resistance CdTe single crystals by the methods of high-resolution X-ray diffractometry and total integral reflective power
MDN22	I. Fodchuk, M. Solodkyi, S. Balovsyak, M. Borcha, I. Hutsuliak, M. Okolita, O.Tkach (Ukraine) Local distribution of strains in synthetic diamond crystals determined by the energy spectrum normalized parameters
MDN23	I. Hutsuliak, I. Fodchuk, V. Dovganyuk, A. Kuzmin, M. Solodkyi, R. Zaplitnyy, I. Lytvynchyk, M. Okolita (Ukraine) Peculiarities of structure of yttrium iron garnet epitaxial films depending on thickness and growth conditions
MDN24	O. Derevyanchuk, Yu. Lutsiuk, V. Kramar (Ukraine) Effect of acoustic phonons on electronic and optical spectra of planar quasi-two-dimensional nanostructures
MDN25	M. Sakhnovskyi, B. Tymochko, M. Dominikov, M. Strynadko (Ukraine) Radio frequency-enabled optical spectrum transformation
MDN26	V. Pylypko, P. Fochuk, Y. Khalavka, V. Ivanitska, O. Krupko (Ukraine) Effect of the L-cysteine - citrate - sodium sulfide system composition on the luminescent properties of sulfur nanoparticles
MDN27	A. Korop, Y. Khalavka (Ukraine) Dynamic processes during the light-induced synthesis of silver nanoparticles
MDN28	Zhengbing Hu (PRC), D. Uhryn, Yu. Ushenko, O. Yatsko, O. Kodrianu (Ukraine) Corporate information system for exchange rate analysis and commodity money forecasting
MDN29	Zh. Luo (PRC), Zh. Pan (PRC), Y. Wang (PRC), W. Wang (UK) Statistics of random polarization in sea clutter with Weibull-distribution intensity
MDN30	Zhongbao Pan (PRC), Zuishuang Luo (PRC), Ying Wang (PRC), Wei Wang (UK) Statistical modeling of random polarization in K-distributed sea clutter
MDN31	D. Vanaga, M. Kalnins, U. Grinfelds, A. Treimanis (Latvia) Defect “ghosting” as a result of the interaction of paper and printing ink. From science to production
MDN32	O. Nazarenko, O. Korotenko, T. Klymenko (Ukraine) The investigation of plastic cards’ quality improvement by means of laser treatment