THE 15th INTERNATIONAL CONFERENCE
“CORRELATION OPTICS 2021”

Chernivtsi National University,
Chernivtsi, Ukraine
September 13–16, 2021

Cooperating Organizations

SPIE – International society for optics and photonics

OSA – The Optical Society

ICO – International Commission for Optics

Chernivtsi National University

Taizhou Research Institute of Zhejiang University

Відділення фізики та астрономії НАН України

Unitrade Pro LTD

Private entrepreneur **Shchukin Sergii Pavlovich**

Sponsored by

SPIE - International society for optics and photonics

OSA - The Optical Society

ICO - International Commission for Optics

EOS - European Optical Society

Chernivtsi Regional State Administration

Institute of Postdiploma Pedagogical Education

Distribution Company "Roma"

Private Clinic of Eye Microsurgery "Your Vision"

Sumitomo Electric Bordnetze

ARTON Company

Conference Chair:
Prof. Oleg V. Angelsky,
Chernivtsi National University
UKRAINE
Tel./Fax: +38(03722)44730
o.angelsky@chnu.edu.ua

International Programme Committee

Organizing Committee:

R. Besaha (Ukraine) – Chair

A. Dubolazov (Ukraine) – Chair

Zheng Jun (China)
O.Ushenko (Ukraine)
R. Politanskiy (Ukraine)
Ya. Struk (Ukraine)
P. Maksimyak (Ukraine)
V. Kramar (Ukraine)
S. Yermolenko (Ukraine)
C. Zenkova (Ukraine)
I. Soltys (Ukraine)
D. Burkovets (Ukraine)
Yu. Ushenko (Ukraine)
Ch. Felde (Ukraine)
N. Horodynska (Ukraine)
P. Riabyi (Ukraine)
Yu. Viktorovskaya (Ukraine)
M. Gavrylyak (Ukraine)
A. Arkhelyuk (Ukraine)
M. Dominikov (Ukraine)
M. Gorsky (Ukraine)
A. Motrich (Ukraine)
L. Pidkamin (Ukraine)
Yu. Galushko (Ukraine)
A. Nehrych (Ukraine)
O. Konovchuk (Ukraine)
M. Strinadko (Ukraine)
T. Venkel (Ukraine)
V. Martyniuk (Ukraine).

Chernivtsi National University,
2 Kotsyubinskogo Street,
Chernivtsi, 58012,
UKRAINE
Tel/Fax: +380372244730
Tel: +380372547173
E-mail: o.angelsky@chnu.edu.ua

Conference Program

September 13

ZOOM link: https://zoom.us/j/92297252131

9.30 - Opening ceremony

Plenary Session 1 – 10:20 (CMT+3)

ZOOM link: https://zoom.us/j/94551104530

Session Chairs – O. Angelsky

10.20 - M. Dennis (*UK*) (INVITED) The optical hypersphere and 3D polarisation skyrmions

11.00 – **J.-Yo. Son** (*Korea*), T. Venkel (*Ukraine*), J. Kim, H. Lee, G. Heo (*Korea*) (INVITED) Thermal images for visualizing crack forming processes in mortar bricks.

11.30 – K.Y. Bliokh (*Japan*) (INVITED) A new spin for acoustics

13.00 – Lunch

Plenary Session 2 – 14:00 (CMT+3)

ZOOM link: https://zoom.us/j/94257522627

Session Chairs – Ye. Fainman, K. Bliokh

14.00 – W. Yan (China) About the cooperation between Taizhou Research Institute and Chernivtsi National University

14.20 – O.Angelsky (*Ukraine*) From correlation to singular optics

14.40 – W. Wang (*UK*) (INVITED) Optical Transfer Matrix: Matrix Correlation as Frequency Domain Analysis of Polarization Imaging System

15.20 – G. Montemezzani (*France*) (INVITED) Quantum-like approaches for robust photonics

16.00 – Sh. Fainman (*USA*) (INVITED) Nanophotonics Technology for Information Systems

16.40 – S.G. Hanson (*Denmark*) (INVITED) Optimum Signal Processing: Having Optics and Electronics walking side-by-side.

September 14

Singular Optics

Plenary Session 1 – 09:00 (CMT+3)

ZOOM link: https://zoom.us/j/99227021963

Session Chair – G. Montemezzani

09.00 – E. Brasselet (*France*) (INVITED) Mechanical effects of light from structured light-matter interaction

9.40 – T. Petersen (*Australia*) (INVITED) Exploiting wavefield singularities, with applications in microscopy

10.20 – Jan Masajada (Poland) (INVITED) Two lasers optical tweezers with blinking beam – two experiments

11.20 – Y. Miyamoto (*Japan*) (INVITED) Scattered light and non-separability

12.00 – A. Desyatnikov (*Kazakhstan*) (INVITED) Topological phase dislocations in periodic lattices

12.40 – **I.Mokhun**, I.Bodyanchuk, Yu.Galushko and Yu.Viktorovskaya (*Ukraine*) Energy currents in polychromatic waves. Regularities and structure

13.00 – Lunch

Plenary Session 2 – 14:00 (CMT+3)

ZOOM link: https://zoom.us/j/96626715149

Session Chairs – M.Alonso

14.00 – **E.J. Galvez**, J.M. Freedman, T. Nguyen (*USA*) (INVITED) Einstein Beams: Light beams following gravitationally-lensed trajectories

14.40 – **M. Szatkowski**, D. Lopez-Mago, J. Masajada (*Poland*) Further development of a simultaneous message-passing protocol using Laguerre-Gaussian modes

15.00 – **H. Srinivasan**, N.K. Viswanathan *(India)* Optical bandgaps, level crossings and Berry phase in a rotating Sagnac Interferometer

15.20 – **H.J. Pandit**, V. Kumar, R.P. Singh (*India*) Charge Inversion of Polarization Correlation Vortex

15.40 – **N. Kravets**, E. Brasselet (*France*) Umbilic defects as phase masks for spectrally-agile polarizer-free vectorial vortex coronagraph

16.00 – A.Ya. Bekshaev (*Ukraine*) Spin-momentum law: Hidden vorticity of the energy flow and momentum distributions in propagating light fields

16.20 – **V. Raskatla**, V. Kumar (*India*) Deep Learning assisted OAM Modes Demultiplexing

16.40 – **B. Komal**, S. Deepa, S K Pal, S. Kumar, P. Senthilkumaran (*India*) Ellipse field to vector field singularities through diffraction

17.00 – V. Borovytsky (*Ukraine*) Three-dimensional optical transfer function of optical system: from sophisticated calculation to simple approximation

17.30 - 18.30 – Poster Session

September 15

Optical correlation devices based on diffractive optical elements, including optical and digital holography, optical sensors

Plenary Session 1 – 09:00 (CMT+3)

ZOOM link: https://zoom.us/j/93282681041

Session Chair - N.Kravets

09.00 – A. Ferrando (*Spain*) (INVITED) Phase singularities in topological photonics

09.40 – **P. Chavel**, T. Labardens, G. Obein, M. Hébert, L. Simonot, Y. Sortais (*France*) (INVITED) Evidence of the need to update the definition of the Bidirectional Reflection Diffusion Function

10.20 – M.A. Alonso (*France*/*USA*) (INVITED) Abstract spaces, mappings, and geometry in the study of optical systems

11.00 – V. Podolskiy (*USA*) (INVITED) Machine-learning-based diffractive image characterization with subwavelength resolution

11.40 – **T. Aoki**, K. Takagi, K. Toyoda, K. Tabata, A. Koike (*Japan*) (INVITED) TlBr X-ray imaging device using photon-charge counting signal processing

12.20 – V.R. Besaga (*Germany*) Construction and characterization of a non-linear interferometer for near-infrared ghost imaging

13.00 – Lunch

Plenary Session 2 – 14:00 (CMT+3)

ZOOM link: https://zoom.us/j/97881669778

Session Chairs – V. Podolskiy, Tim Lee

14.00 – **P. Yezhov**, A. Kuzmenko, A. Butok (*Ukraine*), Jin-Tae Kim (*Korea*) Double phase encoding filters for pattern recognition

14.20 – **K. Tabata**, J. Nishizawa, K. Takagi, T. Aoki (*Japan*) Development of the high-spatial-resolution scintillator type X-ray imaging sensor with grid-structured Si substrate

14.40 – **G. Arora**, Ruchi, and P. Senthilkumaran (*India*) Polarization shear interferometry with optical vortices

15.00 – Yu. Zakharov (*USA*) (INVITED) Holographic microscopy: Approaches, techniques and procedures

17.00-18.00 – Poster Session

September 15

Optical correlation diagnostics, interferometry and microscopy of rough surfaces and random media; Advanced materials, nanomaterials and devices for optics and optoelectronics

Plenary Session 1 – 09:00 (CMT+3)

ZOOM link: https://zoom.us/j/99509256741

Session Chair – S. Hanson

9.00 – H. Mimura (*Japan*) (INVITED) X-ray generation using pyroelectric crystals excited by laser light

9.40 –**M. Baránek**, T. Fordey, F. Mikeska, P. Úlehla (*Czech Republic*) (INVITED) Optical microscope with spatially structured waveplate

10.20 – T. Omatsu (*Japan*) (INVITED) Structured light induced surface relief of azoplymers

11.00 - A. Demchenko (*Ukraine*) Fluorescent carbon nanostructures: properties and applications

11.40 – T. Tudor (*Romania*) (INVITED) Conformal Lorentz transformation in polarization optics

12.20 – V. Brus (*Kazakhstan*) (INVITED) A Simple Approach for Unraveling Optoelectronic Processes in Organic Solar Cells under Short-Circuit Conditions

13.00 – Lunch

OSA/SPIE Student Chapters

ZOOM link: https://zoom.us/j/97906622560

14:00 - Mark Dennis (*UK*) Vikings in shades: navigating by skylight polarization

14.45 - V. Besaga (*Germany*) Off-axis digital holography for three-dimensional transmission microscopy: practical insights

15.30 – Viktor Brus (*Kazakhstan*) Novel Organic Photovoltaics and Optoelectronics

17.00 - 18.00 – Poster Session

September 16

New applications of correlation optics in biology and medicine

Plenary Session 1 – 09:00 (CMT+3)

ZOOM link: https://zoom.us/j/94038857672

Session Chair – Viktor BRUS

09.00 – L. Tchvialeva, Daniel C. Louie, Sunil Kalia, Harvey Lui, **Tim K. Lee** (*Canada*) (INVITED) Polarization-Based Skin Cancer Detection in vivo

09.40 – A. Vaitkuviene (*Lithuania*) (INVITED) Fluorescence diagnostics for Precision Medicine

10.20 – I. Meglinski (*Finland*) (INVITED) Imaging of blood flow with photon correlation under breaking ergodicity conditions

11.00 – Yu.O. Ushenko *(Ukraine)* Muller matrix diagnostics of laser-induced fluorescent fields of preparations of internal human organs and histological diagnostics of the time of injury

11.20 – J. Jagtap (*USA*) (INVITED) NIR-SWIR molecular imaging in small animals to study radiation impact, tumor impact on microenvironment & therapy

12.00 – O.G. Ushenko *(Ukraine)* Laser induced polarization interference mapping of microscopic images of biological layers in the differential diagnosis of benign and malignant prostate tumours

12.20 – S. Pavlov *(Ukraine)* Optical-electronic technologies for the peripheral circulation research

12.40 – N. Zabolotna *(Ukraine)* Methods and Systems of Polarization Reproduction and Analysis of the Biological Layers' Structure in the Diagnosis of Pathologies

13.00 – Closing ceremony

Posters

Informative content of statistical optical fields; Education and Training in Optics, Photonics, Telecommunications and Computer Sciences: September 14

I1 D. I. Ivanskyi, V. M. Tkachuk (*Ukraine*) Modeling of optical forces in a speckle field

I2 S. Bansal, S. Kumar Pal and P. Senthilkumaran (*India*) Transformation of polarization on higher and hybrid order Poincare spheres

I3 K. K. Gangwar, S. Bansal, P. Senthilkumaran (*India*) Selective edge enhancement by tuning the parameter of vector vortex beam

I4 B. Zhang, Xin Liu, Jun Dai, Ying Wang, and Wei Wang *(United Kingdom)* Statistics of random optical field generated by a random walk with a finite number of steps

I5 Manisha, Stuti Joshi, Saba N Khan *(United Kingdom)*, P Senthilkumaran and Bhaskar Kanseri (*India*) Non-isotropic source-induced polarization changes in vector vortex beams

I6 Mengmeng Zang, Xin Liu, Jun Dai, Ying Wang, and Wei Wang *(United Kingdom)* Visualizing probability density distribution of polarization speckle with electron cloud diagrams

I7 A. Arkhelyuk, L. Pidkamin, Yu. Dobrovolskiy (Ukraine) Features of the use of polarized radiation to assess the structural organization of light-scattering objects

I8 O.V.Angelsky, A.P.Maksimyak, P.P. Maksimyak (*Ukraine*) Revealing a scattering object from the spatial distribution of phase singularities in a speckle field

I9 I.Mokhun, O.Arkhelyuk, I.Bodyanchuk, Yu.Galushko and Yu.Viktorovskaya. (*Ukraine*) Polychromatic radially (azimuthally) polarized beam

I10 I.Mokhun, I.Bodyanchuk, Yu.Galushko and Yu.Viktorovskaya (*Ukraine*) Singular multiplexing communication channels at FSO-system

I11 A. Bekshaev (*Ukraine*) Dynamical characteristics of surface electromagnetic waves with zero or negative group velocity

I12 A.P.Maksimyak, P.P. Maksimyak (*Ukraine*) Correlation-optical method for determining the localization of phase singularities in a scattered field

New applications of correlation optics in biology and medicine :September 14

B1 V.G. Zhytaryuk (*Ukraine*) Gram-Charlier distribution in statistical problems of optics

B2 O.P. Peresunko, S.B. Yermolenko, K. Chala, N. Horodynska, D.Burkovets, Yu. Galushko (*Ukraine*) Spectrophotometry of native cytological smears from the cervix in cervical cancer screening

B3 O.P. Peresunko, S.B. Yermolenko, Ch. Felde, Yu. Galushko (*Ukraine*) Polarimetric differential diagnosis of sexually transmitted inflammatory processes of the cervix

B4 Ya.I. Penishkevich, S.B. Yermolenko, I.Mikirin, Yu. Galushko (*Ukraine*) Algorithmic processing and image control of retinal pathologies

B5 A.I Shurma, F.V. Grinchuk, A.V. Motrych, Ferenchuk E.O. (*Ukraine*) Changes in the optical density of venous blood plasma in patients with pathology of different tissues and organs of the abdominal cavity

B6 G. Kopylchuk, I. Nykolaychuk, O. Voloshyuk, A. Motrich, O. Ushenko (*Ukraine*) Biochemical and laser-polarimetric markers of hepatocyte cytolysis syndrome under conditions of toxic damage and protein deficiency

B7 G. Kopylchuk, I. Nykolaychuk, A. Motrich, O. Ushenko (*Ukraine*) Algorithm for diagnosing pancreatic endocrine dysfunction based on biochemical and laser polarimetric parameters

B8 O. Khudyi, M. Marchenko, L. Khuda, A. Kapusta, A. Ushenko, A. Dubolazov, A. Arkhelyuk, M. Tarnovetska (*Ukraine*) Polarization mapping of polycrystalline fish scale layers

B9 O. Khudyi, M. Marchenko, L. Khuda, A. Kapusta, A. Ushenko, A. Dubolazov, M. Tarnovetska (*Ukraine*) Spectra of laser-induced autofluorescence of fish mucus layers

B10 F.V. Grynchuk, I.I. Dutka, R.M. Besaga (*Ukraine*) Diagnostics of haemostasis efficiency with laser illumination scattering pattern analysis

B11 L. Khuda, O. Khudyi, L. Cheban (*Ukraine*) Optical methods for assessing the effect of DON-1R on the histological structure of fish liver

B12 L. Cheban, O. Khudyi, L. Vasina, L. Khuda, M. Marchenko (*Ukraine*) Involvement of optical methods for condition assessment of cyanobacteria cells under the action of TIO2

B13 Litvinenko A.Yu., Vanchulyak A.Ya., Strashkevich A.T., Soltis I.V., Antonyuk A., Pavlyukovich O.,Pavlyukovich N. (*Ukraine*) Forensic definition the age of the formation of damage to internal organs of a person by the method of reconstruction of optical activity using laser-induced direct fluorescence polarimetry

B14 Litvinenko A.Yu., Trifonyuk L, Pavlyukovich O., Pavlyukovich N. Strashkevich A.T., Olar O., Kurek O.I., Tkachuk V.I. (*Ukraine*) 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

B15 Litvinenko A.Yu., Kvasnyuk D., Vanchulyak A.Ya., Strashkevich M., Motrich A.V., Mikhailova A.Yu., Gorskiy M.P. (*Ukraine*) 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

B16 Vasyuk V., Kalashnikov A., Litvinenko A.Yu., Mikhailova A.Yu., Motrich A.V., Olar A.V. (*Ukraine*) Method of laser-induced polarization reconstruction of the polycrystalline structure of molecular fluorophores histological sections in histological definition age of damage internal human organs

B17 Vasyuk V.L., Kalashnikov A.V., Protsyuk V.V., Soltis I.V., Olar A.V., Motrich A.V (*Ukraine*) Differential diagnosis of aseptic and septic loosening of the cup of the artificial hip joint endoprosthesis by methods of spectral-selective laser autofluorescence microscopy

B18 Trifonyuk L., Strashkevich A., Kozlov S., Davidenko I., Poliansky I.,., Pavlyukovich N., Pavlyukovich A., Soltis I. V., Tomka Yu. (*Ukraine*) Digital microscopic mapping of laser induced polarization ellipticity maps in differential diagnostics of preparations of benign and malignant prostate tumours

B19 Trifonyuk L., Strashkevich A., Pavlyukovich N., Pavlyukovich A., Gorsky M. Yu., Tomka Yu., Zhitaryuk V., Tkachuk V. I. (*Ukraine*) Polarization interference mapping of microscopic images of protein fluorofores in the differential diagnosis of benign and malignant prostate tumours

B20 Kvasnyuk D., Trifonyuk L., Strashkevich A., Kozan N., Dunaiev O., Kryvetskyi V., Oliinyk I., Kurek A.I., Tkachuk V.I. (*Ukraine*) Detection of pathological changes in the architectonics of polycrystalline blood films using laser-induced polarization interferometry

B21 Garazdyuk M.S., Bachinsky V.T., Gorsky M.P. (*Ukraine*) Laser-induced 3d Mueller-matrix microscopy method for forensic evaluation cerebral infarction, hemorrhagic hemorrhages of traumatic genesis

B22 Garazdyuk M.S., Bachinsky V.T., Gorsky M.P. (*Ukraine*) 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

Optical correlation devices based on diffractive optical elements, including optical and digital holography, optical sensors: September 15

D1 S.L. Studzinsky, I.I. Davidenko, E.V. Mokrinskaya (*Ukraine*) Some features of information properties of polymer photoelectret thin film composites doped by triarylmethane and xanthene dyes

D2 O.V. Dubolazov, Ya.M. Drin, V.A. Ushenko, I.I. Drin, S.S. Drin (*Ukraine*) The nonlocal problem for fractal diffusion equation with respect to spatial argument

D3 M.M. Slyotov, O.G. Ushenko, O.M. Slyotov, O.V. Kinzerska, T.M. Mazur (*Ukraine*) Heterolayers a-ZnSe for devices of polarization optics

D4 V. Rusyn (*Ukraine*), A. Sambas (*Indonesia*) Simple optoelectronic chaotic generator: computer simulation and practical realization

D5 V. Rusyn (*Ukraine*), A. Sambas (*Indonesia*), M.S. Papadopoulou (*Greece*) Chaotic Lorenz system: analysis of the main information properties, circuit realization and LED visualization using Arduino

D6 V. Rusyn (*Ukraine*), Ch.H. Skiadas (*Greece*), A. Sambas (*Indonesia*) Analysis, computer modelling and LED visualization of the new modified nonlinear logistic map

D7 S.V. Nichyi, S.M. Chupyra, S.V. Bilichuk, O.M. Mysliuk, O.G. Grushka (*Ukraine*) Modernization of the electonic part of the optical processing of the electronic scanning microscope REM-100

D8 M.S. Gavryliak, A.P. Maksimyak, P.P. Maksimyak (*Ukraine*) Formation a photonic zigzag by a half cylinder

D9 P.P. Maksimyak, A.P. Maksimyak, A.L. Nehrych (*Ukraine*) Tunable microscopy illuminator by using polymer dispersed liquid crystals

D10 M.S. Gavryliak and P.P. Maksimyak, Ya.M. Struk, P. Prisyazhnyuk (*Ukraine*) Simulation of a photonic hook using a trapezoidal prism

D11 H.V. Bogatyryova, Ch. V. Felde (*Ukraine*) Correlation-optics approach for holographic associative memories problem

D12 P.P .Maksimyak, A.P. Maksimyak, A.L Nehrych. (*Ukraine*) Polymer-dispersed liquid crystals forming polarization tunable microlens

D13 O.V.Angelsky, A.P.Maksimyak, P.P. Maksimyak (*Ukraine*) Control of microbubbles in water

D14 P.M. Shpatar, O.V. Hres, H.M. Rozorinov (*Ukraine*) Single photons receiver based on avalanche photodiodes

D15 T. Roik, A. Brovkin (*Ukraine*) Analysis of the parts' roughness parameters of high-speed printing equipment by optical profilometry

D16 Zh. Kazhmuratov, T. Kyrychok (*Ukraine*) Optical methods development for banknote deterioration evaluation

D17 T. Kyrychok, T. Klymenko, O. Rybak (*Ukraine*) The AFM investigation of nanosized topography of watermarks paper surface

D18 T. Kyrychok, V. Shvalagin, G. Grodzyuk, T. Klymenko, S. Havenko, S. Khadzhynova (*Ukraine*) The spectral characteristics of biologically safe banknotes imprints varnished with addition of nanosized silver particles

D19 T. Kyrychok, N. Talimonova, O. Sokol, Y. Talimonov (*Ukraine*) Optical control of colour deviation due to ink showing through on the banknote reverse on multitoned watermarks

D20 V. Strutynskyi, P. Kyrychok, V. Oliynuk (*Ukraine*) Triangular optical system of precise positioning of ground robotic complexes

D21 E. Rudenko, T. Kyrychok, V. Panarin, M. Svavilnyi, D. Polotskyi, M.Skoryk, V. Baglai, N. Talimonova, A. Novytska (*Ukraine*) Influence of helicon discharge treatment on ensuring adhesive strength of protective PVD coating CrN on brass-based forms of intaglio printing

D22 K. Zolotukhina (*Ukraine*) The reflectance spectra of the model printing inks

D23 O. Barauskiene, S. Zyhulia, K. Chepurna, A. Dubolazov, I.Soltys (*Ukraine*) Influence varnish on color indicator of the imprints

D24 O. Dubolazov O. Ushenko, A. Motrich, M. Gavrylyak, I.Soltys, M. Gorsky, O.Vanchulyak (Ukraine) 3D jones matrix layered scanning linear and circular birefringence maps of polycrystalline polyethylene films

D25 O. Dubolazov O. Ushenko, A. Motrich, M. Gavrylyak, I.Soltys, M. Gorsky (*Ukraine*) Polarization phase reconstruction phase anisotropy in diagnostics of the polycrystalline structure of acrylic glass

D26 O. Ushenko, V. Ushenko, A. Nehrych, R. Besaha, P. Ryabiy, N. Horodynska, O.Vanchulyak (*Ukraine*) Polarization-interference mapping of polystyrene layers in the flaw detection of its polycrystalline structure

D27 O. Ushenko, O.Olar, M. Gavrylyak, I. Soltys, M. Gorsky, O. Arkhelyuk (*Ukraine*) Mueller-matrix microscopy of diffuse layers of polyvinyl acetate with digital holographic reconstruction of layer-by-layer depolarization maps

D28 O. Dubolazov, Yu. Galushko, M. Gavrylyak, M.Gorsky, P. Ryabiy, Ch. Felde, O.Arkhelyuk, O. Vanchulyak (*Ukraine*) Polarization - singular flaw detection of the microstructure of optically transparent polycarbonate layers

D29 O. Dubolazov, A.Motrich, Ch. Felde, O.Konovchuk, Yu. Galushko, P.Ryabiy, N.Horodynska (*Ukraine*) Differential laser polarization diagnostics of temperature changes in the methyl acrylates optical anisotropy

D30 O. Dubolazov, Yu. Galushko , M. Gavrylyak, M.Gorsky, P. Ryabiy, O.Arkhelyuk, Ch. Felde (*Ukraine*) Differential polarization mapping of polycrystalline networks of methyl acrylate layers

Optical correlation diagnostics, interferometry and microscopy of rough surfaces and random media; Advanced materials, nanomaterials and devices for optics and optoelectronics : September 15

M1 O.V. Angelsky, C.Yu. Zenkova, D.I. Ivanskyi, V.M. Tkachuk *(Ukraine)* Reconstruction of surface roughness by using carbon nanoparticles

M2 D. I. Ivanskyi, V. M. Tkachuk (*Ukraine*) Dynamics of carbon nanoparticles distribution in reconstruction of optical field

M3 C.Yu. Zenkova, D.I. Ivanskyi, V.M. Tkachuk, R.I. Ivanskyi (*Ukraine*) Modeling of focused Gaussian beam interaction with dipole carbon particles

M4 A.V. Tyurin, S.A. Zhukov, A.Yu. Akhmerov (*Ukraine*) Registration of three-dimensional holograms based on microsystems "core CaF2 - shell AgBr (I)"

M5 M.D. Raranskyi, A.V. Oliynych-Lysiuk, R.Yu. Tashchuk, A.Ya. Struk, O.Yu. Tashchuk (*Ukraine*) Auxetic properties of silicon dioxide single crystals

M6 O. Maslyanchuk, M. Solovan, I. Boledzyuk, I. Fodchuk, V. Gnatyuk (*Ukraine*), T. Aoki (*Japan*) Crystal defects and charge collection in CdTe-based X- and gamma-ray detectors

M7 V. Gnatyuk, O. Maslyanchuk, O. Kulyk (*Ukraine*) Charge carrier transport features of CdTe-based p-n junction-diode X/γ-ray detectors

M8 O.V. Derevyanchuk, Yu.V. Lutsiuk, V.M. Kramar (*Ukraine*) Method of analytical investigation the temperature shifts of fundamental absorption edge in semiconductor ultra-thin flats films due to acoustic phonons

M9 I.S. Hnidko, V.I. Gutsul, I.P. Koziarskyi, O.M. Makhanets (*Ukraine*) Influence of electric field on electronic optical quantum transitions in a quantum dot - quantum ring semiconductor nanostructure

M10 S.V. Balovsyak, O.V. Derevyanchuk, H.O. Kravchenko, O.P. Kroitor, V.V. Tomash (*Ukraine*) Computer system for increasing the local contrast of railway transport images

M11 V.P. Danko, O.V. Danko, A.V. Kovalenko (*Ukraine*) Simulation of wavefront shaping through scattering media

M12 A. Samila, A. Khandozhko, G. Lastivka, V. Khandozhko (*Ukraine*) Evaluation of the contribution of higher-order electron-nuclear interactions to the NQR frequencies using 115In spectra in InSe

M13 I. Fodchuk, Y. Roman, S. Balovsyak, I. Yanchuk, P. Lytvyn (*Ukraine*) Peculiarities of formation of X-ray moiré images on deformation fields created by set of concentrated forces

M14 I. Fodchuk, O. Sumariuk, Y. Roman, I. Hutsuliak, V. Romankevich (*Ukraine*) X-ray diffraction and scanning electron microscopy of concrete composites of high structural strength and density

M15 O. Maslyanchuk, I. Fodchuk, A. Kuzmin, I. Hutsuliak, M. Solodkyi, M. Solovan, O. Gudymenko (*Ukraine*) Influence of defect structure on characteristics of X- and γ-radiation detectors based on CdTe:Cl according to high-resolution X-ray diffractometry

M16 M. Borcha, I. Fodchuk, M. Solodkyi, S. Balovsyak, A. Kuzmin, O. Sumariuk (*Ukraine*) Fourier energy analysis of Kikuchi patterns for investigation of defect system of diamond crystals

M17 I. Fodchuk, I. Hutsuliak, V. Dovganyuk, A. Kuzmin, Y. Roman, M. Solodkyi, P. Lytvyn, O. Gudymenko, I. Syvorotka (*Ukraine*) X-ray investigations of structure of thick YIG epitaxial systems of different growth parameters

M18 S. I. Kuryshchuk, M. M. Solovan, A I Mostovyi (*Ukraine*) Fabrication and investigation of Graphite/p-InPSchottky-type heterojunction

M19 T.T. Kovaliuk, M.M. Solovan, A.I Mostovyi (*Ukraine*) Effect of annealing on electrical and optical properties of TiN thin films

M20 A.I Mostovyi, S.I. Kuryshchuk, T.T. Kovaliuk, I.P. Koziarskyi, M.M. Solovan (*Ukraine*) Fabrication and investigation photosensitive of Graphite/PEDOT:PSS/n-CdZnTeorganic-inorganicheterojunction

M21 D.P. Koziarskyi, E.V. Maistruk, I.P. Koziarskyi, G.O. Andrushchak (*Ukraine*) Electrical properties of photosensitive Si/ZnO heterostructure depending on temperature

M22 I.G. Orletskyi, E.V. Maistruk, I.P. Koziarskyi, D.P. Koziarskyi (*Ukraine*) UV sensitive heterojunction ZnCoO/n-GaP prepared by spray pyrolysis

M23 M.S. Kukurudziak, E.V. Maistruk (*Ukraine*) The influence of chromium sublayer on the responsivity of silicon p-i-n photodiodes.

M24 M.O. Sorokatyi, V.G. Pylypko, V.V. Strebezhev, I.M. Yuriychuk, V.M. Strebezhev (*Ukraine*) The effect of photonic correction of the In4Se3 and In4Te3 epitaxial layers structure on their optical and photoelectric characteristics

M25 M. Strynadko (*Ukraine*) Measurement of parameters of optically transparent films

M26 M.Yu. Sakhnovskyj, M.T. Strinadko, M.M. Dominikov, B.M. Tymochko (Ukraine) Dynamic interferometry method for measuring wavelength

M27 L. Muravsky, Z. Nazarchuk, T. Voronyak, I. Stasyshyn (*Ukraine*) High-speed temporal phase shifting digital speckle pattern interferometry methods for tasks of material science

M28 L. Derzhypolska, A. Derzhypolskyi (*Ukraine*) Transmission of phase informative optical signal through the optically

M29 A. Derzhypolskyi, O. Gnatovskyi, L. Derzhypolska (*Ukraine*) Stabilizing effect of random phase diffuser against wavefront distortions to the intensity distribution formed by Fourier hologram

M30 Holovatsky V.A., Holovatska N.H., Chubrei M.V. (*Ukraine*) Optical absorption, photoionization and binding energy of shallow donor impurity in spherical multilayered quantum dot

Instruction for Poster Sessions

Before the Conference:

- Make Your poster in PDF format (size A1: 594×841 mm or A0: 841×1189 mm).
- Send Your PDF poster to Email: corropt21@gmail.com

*The PDF file size must be less than 50 MB.

Your poster should include:

1. The paper title and all authors at the top of the poster
2. Contact E-mail
3. A brief introduction, goals, experimental detail, conclusions, and references, all presented in a logical and clear sequence
4. References

During the Poster Session:

Poster Session will be in Question/Answer format !!!

The procedure is the following:

1. Go to the Conference website http://icco.chnu.edu.ua in the Poster Session section.
2. Go to the page of your Poster.
3. Question/Answer in live Chat format.