

**The Ninth International Conference
“Correlation Optics 2009”**



Chernivtsi National University,
Chernivtsi, Ukraine
September 20 – 24, 2009



Topics to be covered:

- Informative content of statistical optical fields, including optical chaos and singular optics, polarization optics, coherence
- Optical correlation devices based on diffractive optical elements, including optical and digital holography, fractal optics, optical sensors
- Optical correlation diagnostics, interferometry and microscopy of rough surfaces and random media
- New applications of correlation optics in biology and medicine

Cooperating Organization:



SPIE - The International Society for Optical Engineering

Organizers:

ICO - International Commission for Optics
EOS - European Optical Society



OSA - Optical Society of America

EPS - European Physical Society

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Chernivtsi Regional State Administration, Institute of Postdiploma Pedagogical Education (Ukraine)

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The Program of the International Conference **“Correlation Optics 2009”**

21.09.09

Location: Central Building of Chernivtsi University, Red Hall

9.00 – Opening ceremony

Plenary Session – 1

Session Chairs – M.L. Calvo (Spain)

- 9.20 – **Yu. Kivshar** (Australia) (INVITED), "Slow light in periodic photonic structures"
10.00 – **S.G. Odoulov** (Ukraine) (INVITED), "Dynamics of photorefractive four-wave mixing oscillators"
10.40 – **R. Magnusson** (USA) (INVITED), "Photonic resonance effects in nanopatterned films and their applications"

11.20 – Coffee break

- 11.40 – **M. Dennis** (UK) (INVITED), "Just Above Zero: Superoscillation in Random and Controlled Fields"
12.20 – **V.V. Ponevchinsky, A.I. Goncharuk, V.I. Vasil'ev, N.I. Lebovka, M.S. Soskin** (Ukraine) (INVITED), "Optical singularities induced by carbon nanotubes in a nematic liquid crystal"

13.00 – Lunch

Plenary Session – 2

Session Chairs – Yu. Kivshar (Australia) and J. Galas (Poland)

- 14.00 – **M.L. Calvo** (Spain) (INVITED), "Holographic optical elements in photopolymerizable glass with high refractive index modulation: Emerging implementations"
14.40 – **M. Kolwas** (Poland) (INVITED), "Scattering of light on microdroplets: from plasmon excitation to surface crystal"
15.20 – **O.V. Angelsky** (Ukraine), "Singularities in polychromatic light"
16.00 – **A. Rogalski** (Poland) (INVITED), "New material systems for third generation infrared photodetectors"

19.30 – Conference dinner

22.09.09

Session 1 – Informative content of statistical optical fields, including optical chaos, singular optics, polarization optics and coherence

Location: Hotel “Bukovina” Conference Hall 1

Subsession 1 – Singular Optics

Session Chairs – M.S. Soskin (Ukraine) and T. Setälä (Finland)

9.00 – **M.J. Padgett** (UK) (INVITED), "Holographic Ghost Imaging"

9.40 – **A.S. Desyatnikov** (Australia) (INVITED), "Optical Azimuthons: experiment versus theory"

10.20 – **I.I. Mokhun, Yu. Galushko, Yu. Viktorovskaya** (Ukraine), "Poynting singularities, relationship between intensity distribution and other characteristics of vector field"

11.00 – Coffee break

11.20 – **A.Ya. Bekshaev** (Ukraine), "Orbital angular momentum as a manifestation of the light field instantaneous rotation"

11.40 – **A.V. Volyar** (Ukraine), **A.V. Valkov** (Bulgaria), "Extreme spin-orbit coupling in crystal-traveling paraxial beams"

12.00 – **V.Yu. Osipov, A.A. Buznikov** (Russia), "Composite optical vortices in the neighborhood of double nonuniformly polarized caustic cusp"

12.20 – **V. Ponevchenskii, V. Vasil'ev, M. Soskin** (Ukraine), "Controlled transformation of a vortex-free complex landscape to the singular one and vice versa"

12.40 – **V. Aksenov, F. Kanev** (Russia), "Mean energy distribution and averaged pattern of optical vortices of a partially coherent light beam propagating in a randomly inhomogeneous atmosphere"

13.00 – Lunch

Session Chairs – M. Dennis (UK) and P. Ambs (France)

14.00 – **T.A. Fadeyeva** (Ukraine), "Structural transformations in tilted Hermite and Laguerre – Gaussian beams in a uniaxial crystals"

14.20 – **A.Yu. Popov, A.V. Tyurin, A.Ya. Bekshaev** (Ukraine), "Study of spatial structure of an optical vortex by the method of electronic speckle pattern interferometry"

14.40 – **V. Vasil'ev, V. Ponevchenskii, M. Soskin** (Ukraine), "Vortex space-time skeleton of a non-stationary random light field"

15.00 – **V. Pas'ko, M. Vasnetsov, M. Soskin** (Ukraine), "Propagation of short light pulses: phase and group velocities of Gaussian beams"

15.20 – **O.V. Angelsky, O.P. Maksimyak, P.P. Maksimyak** (Ukraine), "Optical correlation diagnostics of phase singularities"

16.00 – 18.30 – Poster session (Informative content of statistical optical fields, including optical chaos and singular optics, polarization optics, coherence and Optical correlation devices based on diffractive optical elements, including optical and digital holography, fractal optics, optical sensors)

23.09.09

Session 1 – Informative content of statistical optical fields, including optical chaos, singular optics, polarization optics and coherence

Location: Hotel “Bukovina” Conference Hall 1

Subsession 2 – Coherence and Polarization

Session Chairs – S. Odoulov (Ukraine) and T. Lee (Canada)

- 9.00 – **Tero Setälä, Jani Tervo, Ari T. Friberg** (Finland) (INVITED), “Polarization modulations and electromagnetic coherence”
9.40 – **Wei Wang** (UK), **S.G. Hanson** (Denmark), **Mitsuo Takeda** (Japan) (INVITED), “Vector correlation for polarization speckle and its application to optical metrology”
10.20 – **P. Chavel** (France) (INVITED), “Spatial coherence and the localization of interference fringes”

11.00 – Coffee break

- 11.20 – **S.G. Hanson** (Denmark), **Wei Wang** (UK), **Dinish Naik, Mitsuo Takeda** (Japan) (INVITED), “Propagation of the polarization coherence matrix through complex ABCD-optical systems”
12.00 – **Jani Tervo, Tero Setälä, Ari T. Friberg** (Finland), “Degree of coherence for electromagnetic fields? – Different aspects on the controversial issue”
12.20 – **P.V. Polyanskii** (Ukraine), “Polarization degree singularities”

13.00 – Lunch

Session Chairs – D.A. Zimnyakov (Russia) and I.I. Mokhun (Ukraine)

- 14.00 – **M.T. Tavassoly** (Iran) (INVITED), “Spectral modification in diffraction and scattering”
14.40 – **T. Aoki, A. Koike, B. Shinomiya, T. Okunoyama, Y. Imura, Y. Neo, H. Mimura** (Japan) (INVITED), “Energy spectrum X-ray imaging by CdTe photon counting detector”
15.20 – **O.V. Angelsky, C.Yu. Zenkova, M.P. Gorsky, N.V. Gorodyn’ska** (Ukraine), “About the prospects of determining the degree of coherence”
15.40 – **S.B. Yermolenko, C.Yu. Zenkova, A.O. Angelskaya** (Ukraine), “Peculiarities of the polarization approach to the estimation of the degrees of intrinsic coherence”

23.09.09

Session 2 – Optical correlation devices based on diffractive optical elements, including optical and digital holography, fractal optics, optical sensors

Location: Hotel “Bukovina” Conference Hall 22

Session Chairs – S. Hanson (Denmark) and R. Magnusson (USA)

9.00 – **P. Ambs** (France) (INVITED), “A short history of optical computing: rise, decline and evolution”

9.40 – **P. Tomanek** (Czech Republics) (INVITED), “Local optical and electron characteristics of solar cells”

10.20 – **A. Dieterlen** (France) (INVITED), “Some new techniques and advances in optical 3D microscopy”

11.00 – Coffee break

11.20 – **Pedrini** (Germany) (INVITED), “Resolution enhanced technologies in digital holography”

12.00 – **J. Mait** (USA) (INVITED), “Computational Imaging”

12.40 – **R. Silvennoinen** (Finland), “Sensing of waviness of glossy and rough surface by DOE sensor”

13.00 – Lunch

Session Chairs – O.V. Angelsky (Ukraine) and A. Rogalski (Poland)

14.00 – **G.Y. Sirat** (Israel), “Novel optical devices based on conical diffraction”

14.20 – **G. Situ, P. Giancarlo, W. Osten** (Germany), “Anisotropic spiral phase filtering and image enhancement in edge detection and microscopy”

14.40 – **R. Vlokh, I. Martynyuk-Lototska** (Ukraine), “Ferroelastic crystals as effective acoustooptic materials”

15.00 – **O. Mys, O. Krupych, D. Adamenko, I. Martynyuk-Lototska, R. Vlokh** (Ukraine), “The $\text{Sn}_2\text{P}_2\text{S}_6$ crystals as new highly efficient materials for the optoelectronic application”

15.50 – **I. Sidorov, E. Nippolainen** (Finland), **S.V. Miridonov** (Mexico), **A.A. Kamshilin** (Finland), “Accuracy limit of a dynamic-speckles based measuring system”

15.40 – **Ya. Shopa, O. Vlokh, N. Ftomyn** (Ukraine), “Computerized laser polarimeter and its performance capabilities”

Cultural Program

17.00 – 20.00 – Special Session of the OSA and SPIE Student Chapters

17.00 – Prof D. Zimnyakov (Russia) (Invited Lecture), “State of the art of biomedical optics”

17.45 – Prof A. Volyar (Ukraine) (Invited Lecture), “Prospects of practical applications of singular optics”

18.30 – General discussion

24.09.09

Session 3 – Optical correlation diagnostics, interferometry and microscopy of rough surfaces and random media

Location: Hotel “Bukovina” Conference Hall 1

Session Chairs – P. Tomanek (Czech Republic) and M.J. Padgett (Scotland)

- 9.00 – **I.V. Meglinski, V.L. Kuzmin** (UK) (INVITED), "Coherent effects of multiple scattering: experiment and computer simulation"
- 9.40 – **R. Kotynski, T. Stefaniuk, P. Wrobel, T.J. Antosiewicz T. Szoplik** (Poland) (INVITED), "Superresolving metallo-dielectric flat lens"
- 10.20 – **J. Galas, D. Litwin, S. Sitarek** (Poland), "Complex characterization of wafers for helium atom scanning microscopy"
- 10.40 – **M. Dashtdar, M.T. Tavassoly** (Iran), "Measurement of roughness by determining of the threshold angle of image formation in a rough interface"

11.00 – Coffee break

- 11.20 – **H. Mimura** (Japan) (INVITED), "Filed emitter for nanovision science"
- 12.00 – **M.A. Kazarjan, I.V. Shamanin, I.V. Lomov, A.N. Lobanov, S.Yu. Dolgopolov, V. I. Pinegin** (Russia), "The laser reconnaissance of the structure of solution of salts in the liquid polar dielectrics"
- 12.20 – **X. Orlik, I. Bergoend, E. Lacot** (France), "Characterization of non Gaussian speckle fields"
- 12.40 – **Yu. Vasylykiv, O. Kvasnyuk, O. Krupych, O. Mys, O. Maksymuk, R. Vlokh** (Ukraine), "Study of transparent media with Inhomogeneous 3D stress field by imaging polarimetry"

Session 4 – New applications of correlation optics in biology and medicine

Location: Hotel “Bukovina” Conference Hall 2

Session Chairs – **M. Kolwas** (Poland) and **P. Chavel** (France)

9.00 – **T. Lee** (Canada) (INVITED), “Laser speckle and skin cancer”

9.40 – **V.V. Tuchin, D.A. Zimnyakov** (Russia) (INVITED), “Coherence-domain and polarization methods in biophotonics”

10.20 – **B. Grzegorzewski, A. Kempczyński** (Poland) (INVITED), „Particle image velocimetry in the study of red blood cell sedimentation”

11.00 – Coffee break

11.20 – **D.A. Zimnyakov** (Russia) (INVITED), “D.A. Zimnyakov, "Full-field speckle correlation analysis of non-stationary scattering systems: biomedical and industrial applications”

12.00 – **R. Silvennoinen** (Finland), **V. Vetterl, S. Hasoň** (Czech Republic), **M. Silvennoinen** (Finland), **K. Myller, J. Vanek, L. Cvrček** (Czech Republic) “Optical sensing of parameters behind attachment of human plasma fibrinogens on carbon doped titanium surfaces”

12.20 – **A.Yu. Popov, N.A. Popova, V.G. Tkachenko, A.G. Stopchanskaya** (Ukraine), “Study of biology objects phase structure by the method of electronic speckle pattern interferometry”

12.40 – **A. Ushenko, S. Yermolenko, P. Ivashko, K. Vladychenko** (Ukraine), **I. Gruia, C. Gavrilă** (Romania), “Spectropolarimetry of cancer change of biotissues”

13.00 – Lunch

14.00 – 16.00 – Poster session (Optical correlation diagnostics, interferometry and microscopy of rough surfaces and random media and New applications of correlation optics in biology and medicine)

16.00 – Closing ceremony

Poster Sessions

Session 1 – Informative content of statistical optical fields, including optical chaos, singular optics, polarization optics and coherence

No	authors	title
I-1	V.G. Shvedov, V.I. Shostka, N.V. Shostka (Ukraine)	Analysis of interference patterns of optical vortices in monochromatic and polychromatic light, which passed stochastic screen
I-2	O. Barchuk, E. Oberemok, S. Savenkov, V. Yakubchak (Ukraine)	Angle-resolved ellipsometry of subwavelength gratings
I-3	Rubass A. F., Sokolenko B.V (Ukraine)	Experimental observation of vortex precession in a rotating in an a-SiO ₂ crystal
I-4	A. F. Rubass, Yu.A. Egorov, J.V. Gubenko (Ukraine)	Experimental observation of a spin-orbit coupling in tilted beams in a LiNbO ₃ crystal
I-5	C.N. Alexeyev, A.V. Volyar, M.A. Yavorsky (Ukraine)	Optical vortices and linear azimuthons in annular photonic-crystal fibres
I-6	A.N. Alexeyev, B. P. Lapin, M.A. Yavorsky (Ukraine)	Controlling the optical angular momentum by elliptical anisotropic fibers
I-7	C.N. Alexeyev, E.V. Borshak, A.V. Volyar, M.A. Yavorsky (Ukraine)	Angular momentum conservation and coupled vortex modes in twisted optical fibres with torsional stress
I-8	K.I. Kotlyarov, T.A. Fadeyeva, O.Karakcheyeva (Ukraine)	Shaping of the complex-argument Hermite-Gaussian and Bessel-Gaussian beams in crystals
I-9	A. Bekshaev, O. Orlinska (Ukraine)	Deformation and collapse of the higher-order optical vortices obtained by large-angle diffraction in computer-generated holograms
I-10	Alexandra Arkhelyuk, A.D. Arkhelyuk (Ukraine)	Experimental modeling of optical vortices in a polychromatic field using liquid crystals
I-11	A.N. Khoroshun (Ukraine)	The theory of the simple and efficient method of the axial optical vortex beam synthesis
I-12	O.P. Maksimyak, K.I. Nestina (Ukraine)	Investigation of the field diffracted by two-dimensional fractals
I-13	I. Mokhun, Yu. Galushko, Yu. Viktorovskaya (Ukraine)	New method of elementary heterogeneously polarized field modeling
I-14	I. Mokhun, Yu. Galushko (Ukraine)	Vortices and structure of scalar field. Inverse source problems
1-15	M.U. Karelin (Bielarus)	Singular value decomposition for the resolution enhancement in near-field optics
1-16	Ch.V. Felde, A.A. Chernyshov, P.V. Polyanskii (Ukraine)	Visibility phase singularities
1-17	A.A. Chernyshov, Ch. Felde (Ukraine)	Some new experiments with scattering induced spectral changes
1-18	Ch.V. Felde, H.V. Bogatyryova, P.V. Polyanskii (Ukraine)	Informativity of the complex degree of polarization

Session 2 – Optical correlation devices based on diffractive optical elements, including optical and digital holography, fractal optics, optical sensors

No	authors	title
D-1	D.V. Podanchuk, V.P. Dan'ko, A.A. Goloborodko, N.S. Sutyagina (Ukraine)	Shack-Hartmann wavefront ensor with adaptive holographic lenslet array
D-2	G.G. Chemeresyuk, Ie.V. Brytavskiy, Y.N. Karakis (Ukraine)	Infrared radiation sensors with selective controlled sensitivity
D-3	A.A. Goloborodko, V.N. Kurashov, D.V. Podanchuk, N.S. Sutyagina (Ukraine)	Hartman wavefront scanner for determining surface features
D-4	Davidenko N.A., Davidenko I.I., Pavlov V.A, Popenaka A.N., Savchenko I.A., Shumelyuk A.N. (Ukraine)	Recording medium for polarization holography based on azobenzene polymer complex with cobalt
D-5	Davidenko N.A., Ishchenko A.A., Studzinsky S.L., Pavlov V.A., Chuprina N.G (Ukraine)	Effect of electric field on photoluminescence of composites with cation polymethine and merocyanin dyes
D-6	Davidenko N.A., Dehtyarenko S.V., Ishchenko A.A., Vreshch O.V., Kokozay V.N., Kozinetz A.V., Skryshevsky V.A., Tretyak O.V. (Ukraine)	Photoconductivity of polymeric composites based on heterometallic Cu/Fe complexes with merocyanine dyes
D-7	A. Sima, B. Ionita, P.C. Logofatu, D. Apostol, F. Garoi (Romania)	Real-time digital holographic interferometry for refractive index gradient study in liquids using a phase-only spatial light modulator
D-8	Davidenko I.I., Davidenko N.A., Pope A.N., Savchenko I.A., Sinyugina A.T., Studzinsky S.L., Tonkovieva L.S. (Ukraine)	Electrooptical properties of polymeric films doped with azobenzene dyes and metallic complexes based on 8-hydroxyquinoline
D-9	Davidenko N.A., Dehtarenko S.V., Getmanchuk Yu.P., Ishchenko A.A., Kozinetz A.V., Kostenko L.I., Mokrinskaya E.V., Studzinsky S.L., Skryshevsky V.A., Tretyak O.V., Chuprina N.G. (Ukraine)	Sensitization of photosemiconductor properties of holographic recording medium based on glycidylcarbazolecooligomers by organic dye
D-10	L. Mikhaylovskaya, A. Mykhaylovska (Ukraine)	Characteristic properties of diffraction spectra variations of light interacting with the "thick" acoustic grating
D-11	N. Grosu, P. Schiopu, I. Cristea, A. Craciun (Romania)	Optoelectronic techniques for constructive characterization of saw microdevices
D-12	Paranchych S.Yu., Paranchych L.D., Andriychuk M.D., Makogonenko V.N., Romanyuk O.S., Bilynskiy-Slotylo V.R., Romanyuk A.S. (Ukraine)	Photo-refractive crystals of CdTe:V; CdTe:V:Ge - materials for the adaptive sensor controls
D-13	A.D. Arkhelyuk, L.I. Pidkamin (Ukraine)	Optimization of experimental conditions using the Mueller matrices technique
D-14	O.V. Angelsky, A.P. Maksymyak, P.P. Maksymyak (Ukraine)	Optical tweezers on biaxial crystal
D-15	V. Denisenko, D. Fedorenko, Yu. Reznikov, E. Ouskova, V. Slusar, M. Soskin (Ukraine)	On a way of writing permanent polarization phase gratings in cells with twisted nematic liquid crystal doped by photo-absorbing dye
D-16	Yu.N. Zakharov (Russia)	Single wavelength volume hologram images coloring
D-17	M.Yu. Sakhnovskii, H.V. Bogatyryova, Ye.N. Velychko (Ukraine)	Two-channel dispersion spectrum analyzer

Session 3 – Optical correlation diagnostics, interferometry and microscopy of rough surfaces and random media

No	authors	title
M-1	A.I. Savchuk, V.I. Fediv, S.A. Savchuk, V.V..Makoviy (Ukraine)	Optical and magneto-optical diagnostics of polymer/nanoparticles colloidal solutions and composites
M-2	M. Shopa, A. Derkachova, G. Derkachov (Ukraine) , K. Kolwas (Poland)	Tear field imaging of surface plasmon manifestation on gold nanoparticles
M-3	Ya. Shopa, N. Ftomyn (Ukraine)	Systematic errors elimination in two wavelength laser polarimeter
M-4	A. Derkachova (Ukraine), A. Sozańska (Poland), G. Derkachov (Ukraine), K. Kolwas (Poland)	Motion paths and velocity distribution function of living sperm cell studied by optical methods
M-5	G. Derkachov, A. Derkachova (Ukraine), D. Jakubczyk, K. Kolwas, M. Kolwas (Poland)	Light scattering by random structure object with arrangement changing in time
M-6	Yu.G. Dobrovolskiy, V.L. Perevertaylo, B.G. Shabashcevich (Ukraine)	Clarifying coverages on the basis of tapes SnO ₂ , Si ₃ N ₄ for photodiodes of ultraviolet and visible range
M-7	Yu.G. Dobrovolskiy, L.J. Pidkamin, V.O. Petrenko (Ukraine)	Study of properties of water with the help of gas-unloading visualization
M-8	M.Yu. Sakhnovskiy, B.M. Tymochko, V.M. Rudeichuk (Ukraine)	Zeros of amplitude of "s" and "p" components of linearly polarized light at the reflection from a system "thin dielectric film - absorbing basis"
M-9	V. Makhniy, A. Maksimyak, M. Skrypyuk (Ukraine)	Optical correlation method in diagnosing the surface state of semiconductor substrates
M-10	V.S. Obraztsov, A.A. Ageychik, M.F. Danilov, O.V. Ivanova, S.M. Chilipenko (Russia)	Interferometric testing of a composite corner mirror
M-11	Huseyin Unver, Ayhan Elmali, Asli Karakas (Turkey)	Linear optical transmission measurements and computational study of linear polarizabilities, first hyperpolarizabilities of a dinuclear iron(III) complex
M-12	U. Kürüm, T. Ceyhan, A. Elmali, Ö. Bekaroğlu (Turkey)	Optical limiting response by embedding copper phthalocyanine into polymer host
M-13	A.L. Negrych, O.P. Maksymyak (Ukraine)	Investigations of light scattering by liquid crystal – polymer composites
M-14	M.P. Gorsky, A.P. Maksimyak, P.P. Maksimyak (Ukraine)	Light absorptions of concrete during its hydration
M-15	Yu. Barabash, M. Zabolotny, V. Sokolov (Ukraine)	The holographic study of photoinduced changes in the protein of bacterial reaction centers
M-16	Yu. Barabash, M. Zabolotny, D. Grinko, E. Andreev, N. Sokolov (Ukraine)	The photoinduced conformational change in macromolecules
M-17	V.G. Zhytaryuk, O.N. Manyk (Ukraine)	Optoelectronic properties of modifying glasses
M-18	V.M. Kramar, M.V. Shutak (Ukraine)	Dynamic non-linearity of absorption spectra of semiconductor nanofilms in the domain of exciton transitions
M-19	N.K. Kramar, V.M. Kramar, O.V. Pugantseva (Ukraine)	Peculiarities of InSe absorption spectra in the domain of direct exciton transitions
M-20	A. Kovalchuk (UK)	Multispectral imaging of papyri: pixel segregation by evaluation of correlation of their spectral signatures"
V-21	Ye.P. Udalov (Ukraine)	Prospects of use a contactless non-destructive testing of main pipes with application of holographic 4-D interferometer of millimeters range

Session 4 – New applications of correlation optics in biology and medicine

No	authors	title
B-1	V.I. Fediv, A.I. Savchuk, G.Yu. Rudko, I. S. Davydenko, T.A. Savchuk, E.G.Gule, S.A. Ivanchak (Ukraine)	Fluorescence sensing of biological tissue structures using Mn-doped CdS nanoparticles as biomarkers
B-2	S.B. Yermolenko, O.G. Prydij, S. Guminetsky, A.V. Motrich (Ukraine), I. Gruia, M.I. Gruia, T. Ștefănescu (Romania)	Optical and biochemical methods for the identification of cellular modifications during malignant transformations
B-3	V. Petrehus, C. Gavrilă, I. Gruia (Romania)	Image Reconstruction in Optical Tomography using Radon Transform and it's Inverse
B-4	L.J. Pidkamin, Yu.G. Dobrovolskiy (Ukraine)	The grounds of mechanism of the energy-informative influence of the biological activators on the organism of human
B-5	S. Yermolenko (Ukraine)	Polarization properties of biological crystals
B-6	S.S. Rudenko, S.G. Guminetskiy, S.B. Grichuk, A.V. Motrich (Ukraine)	Optical methods of estimating proline concentration in natural biologic environments
B-7	D.A. Zimnyakov, M.B. Khmara, M.A. Vilensky, V.V. Kozlov, R.A. Zdrajevsky, I.V. Gorfinkel (Russia)	Endoscopic speckle-based monitoring of blood microcirculation in animal and human internal organs
B-8	M.S. Gavrylyak (Ukraine)	Stochastization of backscattered laser radiation by whole blood during thrombus formation process
B-9	Yu. Barabash, M. Zabolotny (Ukraine)	The influence of the electromagnetic radiation on the rheologic properties of aqueous biological nanosrtructure solution
B-10	A.D. Mikhailova, D.A. Zimnyakov (Russia)	Aging-caused changes in polarizing properties of fibrous tissues