

## Day 1: 25<sup>th</sup> August (Sunday)

**10:00 – 19:00 Registration**

Lobby of the I.I.Mechnikov Odesa National University Recreational Complex "Chornomorka" (main building), Address: 2, Southern-Sanatorium lane, Sovinyon-1 village, Odesa

### Opening Ceremony and Plenary Session 1

Conference Hall of Grand Marine Hotel (5, Southern-Sanatorium lane, Sovinyon-1 village)

	PLENARY SESSION 1: Chairperson – M. Bondar
<b>14:00-15:00</b>	<b>Opening ceremony</b>
<b>15:00-15:45</b>	<b>L. Valkunas</b> (Vilnius, Lithuania) <i>Models and mechanisms of reversible regulation of photosynthetic light harvesting</i>
<b>15:45-16:30</b>	<b>G.I. Dovbeshko</b> (Kyiv, Ukraine) <i>Do the 2D Graphene Type Nanoparticles Destroy Amyloid Fibrils Formation in Living Systems?</i>
<b>16:30-16:55</b>	<b>N.A. Davydova</b> (Kyiv, Ukraine) <i>Polymorphism and its Manifestation in the IR Spectra of 2-Phenol-o-Cresol (1)</i>

**17:00 – Get-Together Party**

## Day 2: 26th August (Monday)

Conference Hall of Grand Marine Hotel (5, Southern-Sanatorium lane, Sovinyon-1 village)

PLENARY SESSION 2: Chairperson - L. Valkunas	
9:30-10:15	<b>H.W. Siesler</b> (Essen, Germany) <i>From Time-Resolved Measurements of Liquid Crystals, via Imaging of Biopolymer Blends and Light-Fiber Coupled Polymerization Monitoring to the Detection of Fraud by Handheld Instruments: A Journey through Non-Routine Applications of Vibrational Spectroscopy</i>
10:15-11:00	<b>M.V. Bondar</b> (Kyiv, Ukraine) <i>New Iridium(III) Metal-Organic Complexes in Solutions: Linear Photophysics and Femtosecond Nonlinear Optical Spectroscopy</i>

**11:00-11:40 – Coffee break**

### Group photo of XXIV ISSSMC Participants

PLENARY SESSION 3: Chairperson - N. Davydova	
11:40-12:25	<b>C. O. Arean</b> (Palma, Spain) <i>Structure and stability of gas adsorption complexes in porous solids as studied by IR spectroscopy – An overview of recent developments</i>
12:25-12:50	<b>V.A. Karachevtsev</b> (Kharkiv, Ukraine) <i>Adsorption of Double-Stranded Polynucleotide on Graphene/Graphene Oxide: UV-Absorption Spectroscopy and Molecular Dynamics Simulation Study (2)</i>

**13:00-14:30 – Lunch**

PLENARY SESSION 4: Chairperson – I. Dmitruk	
14:30-15:15	<b>G. Rudko</b> (Kyiv, Ukraine) <i>Optical Properties of ZnO: Bulk vs. Nano</i>
15:15-15:40	<b>M.Ya. Valakh</b> (Kyiv, Ukraine) <i>Raman Spectra of Novel Non-Linear Optical Material <math>PbGa_2Ge(S,Se)_6</math> (3)</i>
15:40-16:05	<b>M.P. Derhachov</b> (Dnipro, Ukraine) <i>Fabrication of Photonic Crystals and Nanocomposites on the Base of Synthetic Opals: Is it Really Promising? (4)</i>

**16:05-16:35 – Coffee break**

REGULAR SESSION 1: Chairperson – V. Kravchenko	
16:35-17:00	<b>P. Golub</b> (Kyiv, Ukraine) <i>Visualization of the Topological Defects in Liquid Crystal Cells (5)</i>
17:00-17:25	<b>V. Liubachko</b> (Uzhgorod, Ukraine) <i>Phonon Spectrum and Heat Transport in Metal Thio- and Senenophosphates (6)</i>
17:25-17:50	<b>A.I. Krivchikov</b> (Kharkov, Ukraine) <i>Influence Optic-Acoustic Hybridization on Thermal Properties of Molecular Solids (7)</i>

**19:00-20:30 – Poster Session 1: Crystals; Liquid Crystals; Theory;  
Methods&Applications (47)**

**I.I.Mechnikov Odesa National University Recreational Complex "Chornomorka"**

	<b>Crystals</b>
P1	<b>Yu.M. Azhniuk*</b> , A.I. Pogodin, O.P. Kokhan, I.P. Studenyak, D.R.T. Zahn <i>Raman Spectroscopy of Potassium- and Sodium-Containing Argyrodites</i>
P2	<b>T. Babuka*</b> , O.O. Gomonnai, K.E. Glukhov, L.Yu. Kharkhalis, M. Ludemann, D.R.T. Zahn <i>Physical Properties of Crystalline <math>TlIn(S_{1-x}Se_x)_2</math> Solid Solution: Theoretical and Experimental Study</i>
P3	<b>S.N. Firsunin*</b> , L.M. Babkov, T.V. Bezrodna, T.A. Gavrilko, J. Baran <i>Manifestation of Intermolecular Interaction in IR Spectra of Behenic Acid Crystal</i>
P4	<b>M.M. Kinder*</b> , L.M. Babkov, T.V. Bezrodna, L.V. Viduta, T.A. Gavrilko, J. Baran <i>IR Spectra of Rubrene and Structural-Dynamic Model of its Molecule</i>
P5	<b>T.I. Borodinova*</b> , V.I. Styopkin, S.V. Snegir, V.G. Kravets <i>Gold Nanoprisms on a Modified Glass Substrate for Enhancing Raman Spectroscopy Signal</i>
P6	<b>A.P. Bukivskii*</b> , Z.D. Kovaliuk, R.V. Gamernyk, G.B. Stryganyuk, Yu.P. Gnatenko, P.M. Bukivskii <i>Structural and Optical Studies of Layered Heterogeneous Semiconductor Crystals <math>Pb_{1-x}Mn_xI_2</math></i>
P7	<b>V.P. Chorni*</b> , V.V. Boyko, S.G. Nedilko, Yu.A. Hizhnyi, M.S. Slobodyanyk, K.V. Terebilenko, O.V. Gomenyuk, V.I. Sheludko <i>Luminescence Properties of <math>NaY(MoO_4)_2</math> Polycrystals Doped with Praseodymium(III) Ions</i>
P8	T.V. Bezrodna, <b>N.D. Curmei*</b> , G.V. Klishevich, V.I. Melnik, V.V. Nesprava, O.M. Roshchyn <i>Peculiarities of Resonant Interaction in Paired Impurity Centers of 2-Fluoronaphthalene in Naphthalene</i>
P9	<b>J. Gabrusenoks*</b> , R. Eglitis, J. Purans <i>Modeling of Vibrational Spectra of <math>Re_xW_{1-x}O_3</math> Solid Solutions</i>
P10	<b>T.V. Gorkavenko*</b> , I.V. Plyushchay, O.I. Plyushchay <i>Boron Impurities Effect on Titanium Carbide: the Atomic, Electronic and Elastic Properties</i>
P11	<b>T.V. Gorkavenko*</b> , I.V. Plyushchay <i>Ab Initio Modelling of Interaction of Transition Metal Dopants with Edge Dislocation in Silicon</i>
P12	<b>T.A. Gavrilko*</b> , I.I. Gnatyuk, N.A. Holovina, N.D. Shcherban, J. Baran, M. Drozd <i>FTIR Spectroscopy and DSC Studies of Equimolar Binary Mixtures of Saturated Fatty Acids: Stearic and Behenic Acids</i>
P13	<b>Yu. Hizhnyi*</b> , S. Nedilko, V. Chornii, I. Tupitsyna, O. Dubovik, G. Yakubovskaya <i>Revealing the Role of Defects in the Luminescence Processes in <math>Li_2MoO_4</math> Crystals by Complex Experimental and Computational Studies</i>
P14	K. Kutko, <b>V. Khrustalyov*</b> , S. Poperezhai, D. Kamenskyi <i>EPR and Far Infrared Study of Double Molybdate <math>CsGd(MoO_4)_2</math></i>
P15	<b>K.V. Kutko*</b> , S.M. Poperezhai, N.M. Nesterenko, D.L. Kamenskyi <i>Far-Infrared Spectroscopy Study of <math>KDy(MoO_4)_2</math> in Magnetic Field</i>
P16	P. Loiseau, <b>S.A. Klimin*</b> <i>Nonequivalent Ytterbium Centers in <math>BaCaBO_3F:Yb</math></i>
P17	<b>S.A. Klimin*</b> , N.N. Novikova, V.A. Yakovlev, T.V. Malin, K.S. Zhuravlev, A.M. Gilinsky <i>Percolation Threshold in the Conductivity of <math>Al_xGa_{1-x}N:Si</math> Films as Studied by IR-Reflectivity</i>
P18	<b>A.A. Lyogenkaya*</b> , G.E. Grechnev, A.S. Panfilov, I.P. Kobzar, V.O. Pashchenko, L.O. Vasylechko, V.M. Hreb, A.V. Kovalevsky <i>Electronic Structure of <math>RCoO_3</math> Compounds. Spin-Crossover Effects</i>
P19	V.O. Lysiuk, <b>S.G. Rozouvan*</b> , V.S. Stashchuk, V.V. Stukalenko <i>Linear Dielectric Response of Cobalt Iron Boron Alloys</i>
P20	<b>A.N. Ogurtsov*</b> , O.N. Bliznjuk, N.Yu. Masalitina <i>Manifestation of Crystal Size Effect in Polaritonic Luminescence from Rare-Gas Solids</i>
P21	<b>A.V. Peschanskii*</b> , T. Ya. Babuka, K.E. Glukhov, M. Makowska-Janusik, S.L. Gnatchenko, Yu.M. Vysochanskii <i>Phonon and Magnon Raman Scattering in <math>MnPS_3</math> Single Crystal</i>
P22	<b>A.V. Peschanskii</b> <i>Investigation of Magnetic Phase Transition in <math>LiNiPO_4</math> Single Crystal by Raman Scattering</i>
P23	V. Stashchuk, <b>V. Stukalenko*</b> , S. Rozouvan <i>Methods for Calculating Magneto-Optical Properties in Ferromagnetic Materials</i>
P24	<b>I.P. Studenyak*</b> , A.I. Pogodin, V.I. Studenyak, B. Grančič, P. Kúš <i>Ellipsometric Studies of <math>(Cu_{1-x}Ag_x)_7SiS_5I</math> Mixed Crystal</i>
P25	<b>T.A. Gavrilko*</b> , I.I. Gnatyuk, V.I. Styopkin, N.D. Shcherban, J. Baran, M. Drozd <i>Characterization of Solid Cationic Mixtures of Alkyltrimethylammonium Bromides and Even Saturated Fatty Acids by XRD, Differential Scanning Calorimetry and FTIR Spectroscopy</i>

P26	<b>I.G. Vertegel*</b> , E.D. Chesnokov, O.I. Ovcharenko, A.V. Bondar, A.P. Bukivskii, I.I. Vertegel, Yu.P. Gnatenko Influence of $Mn^{+2}$ Ions on Parameters of the NQR Spectrum $I^{127}$ of a Mixed Layered Semiconductor $Pb_{1-x}Mn_xI_2$
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<b>Liquid Crystals</b>	
P1	<b>S. Bugaychuk*</b> , L. Viduta, V. Styopkin, O. Boiko, L. Tarakhan Optical Linear and Nonlinear Properties of Hybrid Liquid Crystal Cells Containing Gold Island Films
P2	J. Baran, A. Dementjev, M. Drozd, <b>I. Gnatyuk*</b> , T. Gavrilko, R. Karpicz, N. Shcherban Nanoconfinement of Nematic Liquid Crystals to Mesoporous Silica Particles: Surface Interactions and Adsorbed Species Density Distribution by FTIR, Raman, and CARS Spectroscopies
P3	<b>LP. Ilchyshyn*</b> , E.A. Tikhonov Whence Has Laser Physics Led Optics to the World of Photonic Crystals?
P4	<b>Yu. Kurioz*</b> , P. Korniychuk Electrooptical Effects in Liquid Crystal Cells with Photosensitive Chalcogenide Glasses Surfaces
P5	A.A. Goryuk, V.I. Mikhaïlenko, <b>A.Yu. Popovskii*</b> Temperature Dependence of the Reflection Indicator of Wall Layers of Epitropic Liquid Crystals

<b>Theory</b>	
P1	Ya.V. Choliy, <b>M.V. Makarets*</b> Reconstruction of the Distribution Function of Implanted Ions on its Parameters
P2	<b>V.V. Ivanov*</b> , A.B. Zakharov Conductivity Effects of $\pi$ -Conjugated System in External Electrostatic Field
P3	S.P. Repetsky, I.G. Vyshyvana, S.P. Kruchinin, <b>R.M. Melnyk*</b> Influence of the Difference of the Scattering Potential of Impurity Atom and Carbon on the Energy Spectrum of Graphene
P4	<b>V.S. Ovechko</b> Kramers – Kronig Relations in Femtosecond Optical Materials Research
P5	<b>G.A. Pitsevich*</b> , A.E. Malevich, I.Yu. Doroshenko, V.E. Pogorelov Testing Anharmonicity of the H-F Vibrations in the Hydrogen Fluoride Dimer Using DFT Methods Including Dispersion Interaction
P6	<b>L.V. Shmeleva*</b> , A.D. Suprun The Wannier-Mott Exciton's Dynamic Properties without Limitations on the Magnitudes of the Wave Vectors of Carriers

<b>Methods &amp; Applications</b>	
P1	<b>V. Azovskiy*</b> , V. Yashchuk Practical Problems in the Design of a Luminescent Converter for Si Solar Cells
P2	<b>S. Baschenko*</b> , L. Marchenko, A. Negriyko, I. Matsnev, V. Khodakovskiy Laser Diode Spectra and Intensity vs Temperature: Some Examples
P3	<b>E. Gunko*</b> , J.H. Solheim, D. Petersen, F. Großberischkamp, K. Gerwert, A. Kohler, V. Skakun Mie Scattering Correction for Fourier Transform Infrared Spectroscopy of Cells and Tissues
P4	<b>A.A. Semenov*</b> , G.M. Kozhushko, T.V. Sakhno, I.V. Korotkova The Combined Effect of Ultraviolet Radiation and Ozone in Disinfecting Pool Water
P5	<b>A.S. Sizhuk</b> The Near Resonant Spectral Line Shape of Pumped High Density Atomic Vapor Coupled with Two Laser Beams
P6	<b>MA. Terentyev</b> Design of the Device for Improving Vein Blood Circulation with Electrical Current and Mechanical Pressure
P7	<b>P. Vartik*</b> , Yu. Myagchenko Transfiguration of the Properties of Water as a Solvent of the Products of Apitherapy
P8	<b>V.P. Yashchuk*</b> , E.A. Tikhonov, G.M. Telbiz, E.V. Leonenko Influence of Bulk Multiple Scattering and Diffuse Reflection at Sample Boundaries on Random Lasing
P9	<b>V.P. Yashchuk*</b> , E.A. Tikhonov, A.P. Smaliuk General Regularities of Secondary Radiation of Dyes in Strong Scattering Media
P10	<b>LE. Zhuk*</b> , A.B. Hostieva*, Y.O. Myagchenko Use of Water Catholytes to Reduce Environmental Load

## Day 3: 27th August (Tuesday)

Conference Hall of Grand Marine Hotel (5, Southern-Sanatorium lane, Sovinyon-1 village)

PLENARY SESSION 5: Chairperson – V. Yashchuk	
9:30-10:10	<b>O.A. Marchenko</b> (Kyiv, Ukraine) <i>Scanning Tunneling Microscopy of Organic Monolayers on Atomically Flat Surfaces</i>
10:10-10:50	<b>J.V. Grazulevicius</b> (Kaunas, Lithuania) <i>Photoluminescent and Electroluminescent Properties of Organic Donor-Acceptor Molecular Materials</i>

### 10:50-11:20 – Coffee break

PLENARY SESSION 6: Chairperson – V. Karachevtsev	
11:20-12:05	<b>V. Gulbinas</b> (Vilnius, Lithuania) <i>Pulsed Pumping Reveals Spectacular Perovskite Electroluminescence Dynamics</i>
12:05-12:45	<b>A. Kadashchuk</b> (Kyiv, Ukraine) <i>Optoelectronic Properties of Hybrid Organic-Inorganic Perovskite Films</i>
12:45-13:05	<b>S.L. Yefimova</b> (Kharkiv, Ukraine) <i>Mechanisms of LnVO<sub>4</sub>:Eu<sup>3+</sup> Nanoparticle Catalytic Activity (8)</i>

### 13:10-14:30 – Lunch

PLENARY SESSION 7: Chairperson – L. Lisetski	
14:30-15:15	<b>A.P. Demchenko</b> (Kyiv, Chernivtsi, Ukraine) <i>Photophysics and Spectroscopy Modulated by Excitation Energy in Condensed Media</i>
15:15-15:40	<b>D. Rutkauskas</b> (Vilnius, Lithuania) <i>Wide-Field Second Harmonic Generation Microscopy Using a High Power Medium Pulse Repetition Rate Laser (9)</i>
15:40-16:05	<b>V.M. Kadan</b> (Kyiv, Ukraine) <i>Upconversion and Photodarkening Effects of Femtosecond Laser Filamentation in Er-doped Chalcohalide Glass (10)</i>

### 16:05-16:35 – Coffee break

REGULAR SESSION 2: Chairperson – T. Gavrliko	
16:35-17:00	<b>M. Drozd</b> (Wroclaw, Poland) <i>X-Ray Crystallography and Vibrational Investigations of New Organic Complexes for Nonlinear Optics (11)</i>
17:00-17:25	<b>S.G. Stepanian</b> (Kharkiv, Ukraine) <i>Conformational Behavior of Highly Flexible Molecules Isolated in Inert Gas Matrices: Case of Alanine-Glycine Dipeptide (12)</i>
17:25-17:50	<b>V.P. Yashchuk</b> (Kyiv, Ukraine) <i>Possibilities of SRS-RL effect usage in Raman spectroscopy (13)</i>

## 19:00-20:30 – Poster Session 2: Molecules; Biomolecules&Polymers (44)

I.I.Mechnikov Odesa National University Recreational Complex "Chornomorka"

<b>Molecules</b>	
P1	<b>D.O. Dorohoi*</b> , A.C. Morosanu, D. Babusca, C. Cheptea The Excited Dipole Methods of Some Azo-Benzene Molecules Estimated by a Variational Method
P2	<b>D. Babusca</b> , A.C. Morosanu, D.G. Dimitriu, D.O. Dorohoi <b>Spectral Study of Intermolecular Interactions in Polar Solutions</b>
P3	D. Babusca, <b>A.C. Morosanu</b> , D.G. Dimitriu, D.O. Dorohoi Aminoacid Derivatives Containing Rest of 1,2,4-Triazole-3,4-Disubstituted with Potential Antitumoral Activity
P4	<b>I. Doroshenko*</b> , A. Vasylieva, O. Doroshenko, P. Teselko Hydrogen-bonded Water Clusters in Calcium Hydroxyapatite
P5	<b>B. Eshchanov*</b> , Sh. Otajonov, G. Mukhamedov, O. Karpova Manifestation of Oscillatory Movements in the Spectra of Raman Scattering of Light in Some Aromatic Fluids
P6	<b>R. Jasiunas*</b> , R. Xia, Zh. Fei, N. Drigo, F.D. Bobbink, Zh. Huang, M. Franckevicius, V. Gulbinas, M. Mensi, X. Fang, C. Roldán-Carmona, M.K. Nazeeruddin, P.J. Dyson Suspending Thermal Degradation in Metalorganic Perovskite Solar Cells
P7	H.A. Xushvaktov, <b>A. Jumabaev*</b> , G. Murodov, A. Absanov, G. Sharifov Aggregation of Molecules in Liquid Ethylene Glycol, its Formations in the Raman Spectra and Non-Empirical Calculations
P8	D. Khropost, <b>Y. Myagchenko*</b> , M. Oleksiienko Influence of Water Saturation with Hydrogen on its Properties as Solvent and Extractor
P9	<b>N.E. Kornienko*</b> , O.L. Pavlenko Multiple Fermi Resonances in Liquid Benzol
P10	<b>V.N. Makhlaichuk</b> Manifestation of Cluster Excitations in Dielectric Properties of Liquid Water
P11	L. Meyliev, B. Kuiliev, <b>I. Doroshenko*</b> Intermolecular Interactions in Gaseous Monohydric Alcohols
P12	K.G Tokhadze, <b>G. Murodov*</b> , A. Amonov, G. Nurmurodov Investigation of the Weak Hydrogen Bonded $H_2CO \cdots HX (X=F, Cl)$ Complexes by Means of Quantum Mechanical Methods
P13	A.O. Gerasov, <b>A.P. Naumenko*</b> , O.D. Kachkovsky Polymethine Type of Electron Transitions in Merocyanine Derivatives of Aminocoumarine
P14	<b>V.V. Sagan*</b> , V.A. Konstantinov, A. V. Karachevtseva, V.P. Revyakin Heat Transfer in Halogen-Substituted Ethanes: Freon HFC-152a
P15	<b>S.A. Shapovalov*</b> , V.K. Ponomarov, N.O. Mchedlov-Petrosyan The "Associate of Dyes + Surfactant" Systems: Spectroscopy and Computer Simulati
P16	<b>S.A. Shapovalov</b> Dimerization of Cyanine Dyes: Results of Quantum-Chemical Simulation
P17	<b>Y. Syetov</b> Theoretical Evaluation of Two-Photon Absorption Properties of Benzoxazoles Undergoing Excited State Intramolecular Proton Transfer
P18	<b>A. Tsyganenko*</b> , O. Pestsov, R. Belykh, R. Novikov, M. Shelyapina, V. Petranovski Manifestations of Intermolecular Interactions in the IR Spectra of Adsorbed Species
P19	D. Vashchuk, <b>I. Doroshenko*</b> , A. Vasylieva Effect of Argon Environment on Vibrational Spectra of Tert-Butanol
P20	<b>A. Vasylieva*</b> , I. Doroshenko I, V. Pogorelov Argon Matrix Effect on IR Spectra of Small Water Clusters from Quantum-Chemical Calculations
P21	D. Volyniuk, K. Leitonas I, J. Simokaitiene, M.D. Thiyagarajan, U.M. Balijapalli, M. Pathak, K. Sathiyarayanan, <b>J.V. Grazulevicius*</b> Performances of a New Iridium (III) Complex in Orange Phosphorescent and White Hybrid OLEDs
P22	<b>T.V. Zashvailo*</b> , V.I. Kushnirenko Photoactivity of Silver Ions in Solutions of Organic Compounds

<b>Biomolecules&amp;Polymers</b>	
P1	L.Yu. Babiy, <b>L.Yu. Vergun*</b> , Yu.F. Zabashta Light Scattering in a Dilute Solution of Hydroxypropylmethylcellulose
P2	L. Dagys, V. Klimavicius, <b>V. Balevicius*</b> Solid-State NMR Study of Local Disorder Nearby Proton Motion Path in Low-Dimensional H-Bonded Proton-Conducting Materials



P3	<b>S.R. Bobrovnik*</b> , L.Yu. Vergun, O.S. Svechnikova Influence of the Value of the External Load on the Mechanism of Ice Melting
P4	<b>K.I. Bublikova*</b> , I.M. Klimenko, O.S. Sereda, Y.O. Myagchenko Influence of Weak Magnetic Fields on the Optical Properties of Water and its Catholytes
P5	<b>O. Gnatyuk*</b> , G. Dovbeshko, I. Polovyi, D. Kolesnik, O. Pyaskovskaya, G. Solyanik, A. Dementjev, R. Karpicz, O. Posudievsky 2D-Boron Nitride Nanoparticles and Doxorubicin Interaction with Cancer Cells: CARS Imaging and FTIR Spectroscopy
P6	<b>G.V. Grygorova*</b> , V.K. Klochkov, S.L. Yefimova, Yu.V. Malyukin Physicochemical Investigation of the Complexation between Melatonin and Randomly Methylated $\beta$ -Cyclodextrin in Solution and in Solid State
P7	<b>T.O. Hushcha</b> Allosteric Effects of Ligands Binding to Human Serum Albumin as Studied by Chemical Relaxation Spectroscopy Methods
P8	<b>A.O. Kostetskyi*</b> , Yu.P. Piryatynski, A.B. Verbitsky, P.M. Lutsyk The Influence of Defects and Temperature on Photoluminescence of Nanostructured Melanin
P9	<b>V.M. Kravchenko*</b> , Yu.P. Rud, L.P. Buchatski, Ye.Yu. Stepanenko, V.M. Yashchuk Spectroscopic Studies of Infectious Pancreatic Necrosis Virus, its Major Capsid Protein and RNA
P10	<b>V.Yu. Kudrya*</b> , A.P. Naumenko, I.Ya. Dubey, V.V. Negrutska, Yu.S. Kreminska, V.M. Kravchenko Spectral-Luminescent Manifestation of Guanine Complexes in Telomere Fragment at Low Temperatures
P11	<b>V.Yu. Kudrya*</b> , A.P. Naumenko, V.M. Yashchuk, Y. Mely, Ya.O. Gumenyuk Low Temperature Luminescent Studies of Emissive Guanine Substitute for Biopolymers Detection
P12	A. Kovalchuk, Ya. Kobzar, I. Tkachenko, <b>Yu. Kurioz*</b> , V. Nazarenko, O. Shekera, V. Shevchenko Optical Properties of New Core-Fluorinated Azo-Containing Poly(azomethine)s with Ether Linkages and Aliphatic Moieties in the Main Chain
P13	<b>A.I. Lesiuk*</b> , O.P. Dmytrenko, T.O. Busko, O.L. Pavlenko, I.P. Pundyk, T.M. Pinchuk-Rugal, M.P. Kulish, V.I. Chegel, A.M. Lopatynskyi, M.I. Kanyuk Study of the Interaction of Bovine Serum Albumin with Gemcitabine
P14	<b>A.A. Vialtseva*</b> , L.Yu. Vergun, Yu.F. Zabashta Molecular Mobility in a Concentrated Glucose Solution under the Influence of a Weak Magnetic Field
P15	V. Sugakov, <b>N. Ostapenko*</b> , Yu. Ostapenko, O. Kerita About Mechanism of Charge Carriers Release from Traps Stimulated by Molecular Vibrations in Silicon Organic Polymers
P16	<b>LO. Polovyi*</b> , G.I. Dovbeshko, O.P. Gnatyuk, T.O. Hanulia The Effect of 2D WS <sub>2</sub> Nanoparticles on Protein Secondary Structure and Amyloid Formation
P17	<b>A.M. Rashevskaya*</b> , J.G. Terentieva Comparison of Absorption Spectra in Conformers of NAD(P)
P18	<b>G.Yu. Rudko*</b> , O.F. Isaieva, E.G. Gule, V.I. Fediv, A.O. Kovalchuk, A.M. Yaremko Modification of Polyvinyl Alcohol Properties by Embedded ZnO Nanoparticles
P19	<b>O.A. Ryazanova*</b> , I.M. Voloshin, A. Yu. Glamazda, L.V. Dubey, I.Ya. Dubey, V.A. Karachevtsev Spectroscopic Study on Binding of a Tricationic <i>meso</i> -Porphyrin to Double-Stranded Synthetic Polynucleotides
P20	<b>O.A. Ryazanova*</b> , I.M. Voloshin, V.N. Zozulya Spectroscopic Study on Binding of TMPyP <sup>4+</sup> Porphyrin to Single-Stranded poly(rA)
P21	V.A. Pashynska, <b>S.G. Stepanian*</b> , A. Gomor Formation of Noncovalent Complexes of Antimalarial Artemisinin-type Agents with Ascorbic Acid and Membrane Phospholipids: Joint Mass Spectrometry and Quantum Chemical Study
P22	<b>E.L. Usenko*</b> , V.A. Valeev, V.A. Sorokin Peculiarities of Zn <sup>2+</sup> Ion Interactions with Single-Stranded PolyC in Neutral Solution

## Day 4: 28th August (Wednesday)

I.I.Mechnikov Odesa National University Recreational Complex "Chornomorka"(main building), 2,  
Southern-Sanatorium lane, Sovinyon-1village

PLENARY SESSION 8: Chairperson – M. Drozd	
9:30-10:15 Lecture 12	<b>V.M. Yashchuk</b> (Kyiv, Ukraine) <i>Peculiarities of Electronic and Vibronic Excitations Transfer in Organic Media and Hybrid Nanosystems. Some Fundamental and Applied Problems</i>
10:15-10:40	<b>A.V. Sorokin</b> (Kharkiv, Ukraine) <i>Exciton Self-Trapping in TDBC J-Aggregates in Thin Polymer Films</i> (14)
10:40-11:05	<b>N.V. Kurnosov</b> (Kharkiv, Ukraine) <i>Characterization of Graphene Oxide and Single-walled Carbon Nanotubes Composites: Raman Spectroscopy and Conductivity Temperature Dependence</i> (15)

### 11:05-11:35 – Coffee break

PLENARY SESSION 9: Chairperson – A. Kadashchuk	
11:35-12:20	<b>L.N. Lisetski</b> (Kharkiv, Ukraine) <i>Bridging the Gap between Dispersed Nanoparticles and Low Solubility Dopants in Liquid Crystal Media</i>
12:20-12:45	<b>S.S. Smola</b> (Odesa, Ukraine) <i>Steady State and Time-Resolved Fluorescence Studies of a Series of Modified 3-(2-Pyridyl)-1,2,4-Triazoles</i> (16)
12:45-13:05	<b>A.N. Samoilov</b> (Kharkiv, Ukraine) <i>Optical Transmittance and Luminescence Studies of Liquid Crystal Dispersions of CeO<sub>2</sub> Nanoparticles</i> (17)

### 13:00-14:30 – Lunch

REGULAR SESSION 3: Chairperson – N. Berezovska	
14:30-14:50	<b>G.A. Pitsevich</b> (Minsk, Belarus) <i>Rigid-Non-Rigid Transition in the Hydrogen Trioxide Molecule Predicted by the Calculation of its Torsional Spectrum at the CCSD(T)/cc-pVQZ Level of Theory</i> (18)
14:50-15:10	<b>V.P. Yashchuk</b> (Kyiv, Ukraine) <i>Lasing of rhodamine 6G in waveguide ultra-thin film</i> (19)
15:10-15:30	<b>S.N. Poperezhai</b> (Kharkiv, Ukraine) <i>Magnetic Resonance Properties of ErAl<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub> Crystal</i> (20)



**16:00-18:00 – Poster Session 3: Nanoobjects; Surfaces and Films (45)**  
**(with coffee break)**

I.I.Mechnikov Odesa National University Recreational Complex "Chornomorka"

	<b>Nanoobjects</b>
P1	<b>L.V. Batyuk*</b> , V.P. Berest Effect of Temperature on Dielectric Relaxation Processes in Nanoparticle Suspensions
P2	<b>T.V. Bezrodna*</b> , O.I. Antonenko, L.F. Kosyanchuk, O.M. Roshchin, V.I. Bezrodnyi, V.V. Nesprava, A.M. Negriyko, A.O. Yaskovets Efficient Organo-Inorganic Nanocomposites Based on Xanthene Dyes and Silicon Dioxide Doped Polymer
P3	<b>O.N. Bliznjuk*</b> , N.Yu. Masalitina, A.N. Ogurtsov IR and X-ray Investigation of Mixed Oxides Fe–Co–O Nanoparticles as Ammonia Oxidation Catalyst Prepared by Sol-Gel Method: Effect of Calcination Temperatures
P4	<b>LM. Dmytruk*</b> , Y.A. Vikhrova, A.M. Dmytruk, N.I. Berezovska Structure, Energy Spectrum and Luminescent Properties of 0D Perovskites in Zeolite Matrix
P5	<b>O. Chukova*</b> , S.A. Nedilko, S.G. Nedilko, A. Slepets, T. Voitenko, M. Androulidaki, A. Papadopoulos, E. Stratakis Luminescent Spectroscopy of Lanthanum Vanadate Nanoparticles Doped with Europium and Erbium Ions
P6	<b>V.N. Ermakov*</b> , V.I. Podolska, Z.R. Ulberg Spectroscopy of Bacteria Synthesized Nanoparticles
P7	<b>A.Yu. Glamazda*</b> , S.G. Stepanian, M.V. Karachevtsev, A.M. Plokhotnichenko, L. Adamowicz, V.A. Karachevtsev Low-Dimensional Carbon Nanohybrids
P8	<b>K.A. Hubenko*</b> , S.L. Yefimova, P.O. Maksimchuk, N.S. Kavok, V.K. Klochkov, Yu.V. Malyukin Switchable Redox Activity of LnVO <sub>4</sub> :Eu <sup>3+</sup> (Ln=Gd, Y, La) Nanoparticles
P9	<b>O.F. Isaieva*</b> , V.V. Naumov, V.V. Shymanovska, E.G. Gule, G.Yu. Rudko Excitation Dependent Photoluminescence of Nanostructured TiO <sub>2</sub> Powder Modified with Phenothiazine
P10	<b>M.V. Karachevtsev*</b> , V.A. Karachevtsev Interaction of Single Walled Carbon Nanotube with Graphene: Molecular Dynamics Study
P11	L.I. Karbivska, <b>V.L. Karbivskyy*</b> , S.S. Smolyak Peculiarity of the Electronic Structure of Calcium Apatite
P12	<b>R.S. Kolodka*</b> , A.J. Ramsay, I. Dmytruk Quantum Control of Ground State Exciton Qubits in Single Quantum Dots
P13	O.M. Nadtocha, P.A. Virych, A.P. Naumenko, <b>N.V. Kutsevol*</b> Hydrogel-Silver Nanoparticle Composites for Biomedical Applications
P14	<b>M.Yu. Losytskyy*</b> , L.P. Buchatsky, T.V. Beregova, O.B. Shcherbakov, V.M. Kravchenko, V.M. Yashchuk Formation of Cerium Fluoride Nanoparticle - Melanin Nanosystem Evidenced by Luminescent Studie
P15	<b>Yu.V. Lutsiuk</b> , V.M. Kramar Analytical Calculation of the Acoustic Phonons Spectra and Group Velocities in the Quasi-2D-nanostructures
P16	<b>E.V. Manuilov*</b> , T.A. Khalyavka, N.D. Shcherban, V.V. Shymanovska, V.V. Permyakov, S.N. Shcherbakov Effect of Cerium Ions on the Photocatalytic Properties of Mesoporous BaTiO <sub>3</sub> /TiO <sub>2</sub> Nanocomposites
P17	<b>N.Yu. Masalitina*</b> , O.N. Bliznjuk, A.N. Ogurtsov XRD Investigation of Cerium-Containing Mn-Cu Mixed Oxide Catalyst for Ammonia Oxidation to N <sub>2</sub> O
P18	<b>A. Naumenko*</b> , N. Kutsevol, V. Chumachenko, Iu. Harahuts Spectroscopic Characterization of Hybrid Nanosystems "D-g-PAA/Au Nanoparticle/Chlorin e6/Dox"
P19	T.V. Bezrodna, G.V. Klishevich, V.I. Melnyk, <b>V.V. Nesprava*</b> , O.M. Roshchin, J. Baran, M. Drozd Effects of Surface-Extended Inorganic Particles on Phase Transitions and Spectral Luminescence Properties of 5CB Liquid Crystal
P20	<b>M. Olenchuk*</b> , T. Hanulia, O. Perederii, A. Nikolenko, G. Dovbeshko Synthesis and Properties of DNA Based Photonic Crystals
P21	<b>A.P. Onanko*</b> , M.P. Kulish, O.P. Dmitrenko, T.M. Pinchuk-Rugal, M.A. Aleksandrov, D.V. Charny, Y.A. Onanko Peculiarity of Elastic Characteristics of Nanocomposites of Multiwalled Carbon Nanotubes, Colouring Agents and Polyethylene, Polyvinyl Chloride, Porous Polystyrene
P22	D. Babusca, L. Sacarescu, <b>L. Popescu*</b> , D.O. Dorohoi, D. Creanga Photochemical Synthesis of Silver Nanoparticles and Their Impact on the Environment
P23	C. Morosanu, <b>L. Popescu*</b> , D. Dorohoi, D. Creanga Study of Some Interface Phenomena Related to Magnetic Nanograins Stabilization in Fluid Suspensions by Using Organic Coating Molecules
P24	<b>V. Shymanovska*</b> , L. Kernazhitsky, T. Gavrilko, N. Shcherban, T. Khalyavka, V. Naumov Diffuse Reflectance UV-Visible Absorption Spectra of Hybrid TiO <sub>2</sub> /PTZ Composites
P25	O. Chukova, S.A. Nedilko, S.G. Nedilko, <b>A. Slepets*</b> , T. Voitenko IR-Spectroscopy of Partially Substituted (La,Ca)VO <sub>4</sub> : Eu <sup>3+</sup> , Er <sup>3+</sup> Nanoparticles
P26	L.I. Karbivska, S.S. Smolyak, <b>V.L. Karbivskyy*</b> , D.A. Savchenko Synthesis, Morphological Features and Electronic Structure of Composites Based on Hydroxyapatite and Ultradispersed Graphite

P27	<b>S.G. Stepanian*</b> , V.A. Karachevtsev, L. Adamowicz Structure and Vibrational Spectra of the MoS <sub>2</sub> – Nucleic Acid Bases Complexes: a Computational Study
P28	I. Ovsiienko <sup>1</sup> , L. Matzui <sup>1</sup> , T. Len <sup>1</sup> , D. Naumova <sup>2</sup> , O. Syvolozhnyi Infrared Spectroscopy of Functionalized Nanocarbon Particles with Different Structure
P29	<b>A.V. Tomchuk*</b> , O.A. Yeshchenko, V.V. Kozachenko, A.P. Naumenko, Yu.L. Slominskii, R.J. Knize, M. Haftel, A.O. Pinchuk Enhancement of Photoluminescence and Extinction of Light in Gold Nanoparticles/Shellac-Dye/Gold Film Planar Plasmonic Cavity
P30	N.V. Kurnosov, <b>LM. Voloshin*</b> , V.A. Karachevtsev DNA Nucleotides-Assisted Exfoliation and Dispersion of Few-Layer MoS <sub>2</sub> : Spectroscopy Control

<b>Surfaces and Films</b>	
P1	<b>N.I. Berezovska*</b> , I.M. Dmitruk, O.P. Stanovyi, A.M. Dmytruk, I.V. Blonskiy, O.M. Mishchenko, M.V. Pogorielov Sensitivity of Physical Properties and Local Biological Reactions of Metals and Alloys Surfaces to Ultrafast Laser Treatment
P2	<b>V. Borysiuk*</b> , S. Nedilko, Yu. Hizhnyi Mechanisms of CrO <sub>4</sub> <sup>2-</sup> Anions Adsorption on the Surface of Carbon Nanostructures : a DFT Approach
P3	A.P. Bukivskii <sup>1*</sup> , Yu.P. Gnatenko <sup>1</sup> , P.M. Bukivskii <sup>1</sup> , Yu.P. Piryatinski <sup>1</sup> , I.V. Fesyeh <sup>2</sup> , V.V. Lendel <sup>2</sup> Kinetics and Lifetime Distributions of PbCdI <sub>2</sub> Films Photoluminescence
P4	<b>O.I. Datsenko*</b> , S. Golovynskiy, L. Seravalli, G. Trevisi, P. Frigeri, I. Golovynska, Baikui Li, Junle Qu InAs/InGaAs Structures with InAs Quantum Dot Array Confined by InAlAs Nano-Barriers: Deep Levels and Photoelectric Properties
P5	<b>R. Gegevičius*</b> , M. Franckevičius, M. Treideris, V. Gulbinas Photocurrent Gain Enhancement in Planar Perovskite Photodetectors Based on Interdigitated Combs of Electrodes
P6	<b>S. Golovynskiy*</b> , O.I. Datsenko, L. Seravalli, G. Trevisi, P. Frigeri, I. Golovynska, Baikui Li, Junle Qu Defect Levels in Metamorphic InAs/InGaAs Quantum Dot Structures
P7	E.S. Hrabovsky, I.M. Dmitruk, <b>N.I. Berezovska*</b> , A.M. Dmytruk, I.V. Blonskiy Wavelength Dependence of the Period of Surface Structures Induced by Harmonics of Ti:Sapphire Femtosecond Laser
P8	D.Y. Nikolaieva, <b>V.V. Honcharov*</b> , V.O. Zazhigalov The Use of Spectroscopy to Study Surfaces Modified by Ionic Implantation
P9	S.O. Kryvoruchko, A.O. Kryvoruchko, <b>V.V. Honcharov*</b> , V.O. Zazhigalov Investigation of the Characteristics of Nanoscale Steel Implant Layers
P10	<b>V.P. Makhniy*</b> , M.M. Berezovskiy, V.V. Melnyk, V.M. Sklyarchuk, M.M. Slyotov Luminescence of 6H-SiC:Te Diffusion Layers
P11	<b>A.O. Kozak*</b> , V.I. Ivashchenko, O.K. Porada, P.L. Scrynskyy, L.A. Ivashchenko, T.V. Tomila, V.S. Manzhara, O.M. Fesenko FTIR and Raman Investigations of the Si-C-N Films Deposited by Magnetron Sputtering
P12	M.M. Melnichenko <sup>*1</sup> , K.V. Svezhentsova Advances in Applications of Nanostructured Silicon as a New Multifunctional Material
P13	<b>V.A. Odarych*</b> , L.V. Poperenko, I.V. Yurgelevych Structure of Natural Film on Porous Silicon Surface by Ellipsometry
P14	<b>S.G. Orlovskaia*</b> , O.N. Zuy Study of the Growth of Crystalline Oxide Structures on the Surface of Tungsten in the Air
P15	I.A. Shaykevych, V.V. Lendel, <b>L.Yu. Melnichenko*</b> Interference of Ultrashort Radio Waves in a Two-layer Thin-film System

**19:00 – Conference Dinner**

## Day 5: 29th August (Thursday)

I.I.Mechnikov Odesa National University Recreational Complex "Chornomorka"(main building),  
2, Southern-Sanatorium lane, Sovinyon-1 village

REGULAR SESSION 4: Chairperson – T. Bezrodna	
9:30-9:55	<b>S.A. Klimin</b> (Troitsk, Moscow, Russia) <i>"Optical spectroscopy of Kramers ions in studying rare-earth francisites <math>Cu_3RE(SeO_3)_2O_2Cl</math>" (21)</i>
9:55-10:20	<b>D.S. Stepaniuk</b> (Kharkiv, Ukraine) <i>The Virtual Screening and Quantum Chemical Modeling for the Spectral Properties of <math>\pi</math>-Conjugation Systems (22)</i>
10:20-10:45	<b>L.V. Budianska</b> (Kharkiv, Ukraine) <i>Application of Model Lipid Membranes to the Problem of Drug-Membrane Interactions (23)</i>
10:45-11:10	<b>L.Yu. Vergun</b> (Kyiv, Ukraine) <i>Light Scattering in Glycerol under the Action of a Constant Magnetic Field and UV radiation (24)</i>

**11:10-11:40 –Coffee break**

REGULAR SESSION 5: Chairperson – I. Doroshenko	
11:35-12:00	<b>V.Ya. Gotsulskiy</b> (Odesa, Ukraine) <i>Surprising Properties of Alcohols from the Methanol Homologous Series and Thermodynamic Properties of Alcohols and Water on Their Coexistence Curves (25)</i>
12:00-12:25	<b>S.G. Nedilko</b> (Kyiv, Ukraine) <i>Glass–Ceramics Luminescent Transformers for WLEDs Application (26)</i>
12:25-12:45	<b>G. Telbiz</b> (Kyiv, Ukraine) <i>Nanospectroscopy and Proton Transport Phenomena of TiO<sub>2</sub>/Nafion Nanocomposites (27)</i>
<b>12:45-13:10- Closing Ceremony: M.V. Bondar</b>	

**13:15-14:30 – Lunch**

**15:00-18:00 – Excursion**

## Day 6: 30th August (Friday)

**Departure of participants of XXIV ISSSMC**