

5th International Conference
NANOBIOPHYSICS: Fundamental and Applied Aspects
N B P - 2017

CONFERENCE PROGRAM

2 OCTOBER, MONDAY

8.30-10.00

Registration

10.00-10.15

OPENING OF THE CONFERENCE

CONFERENCE HALL

PLENARY LECTURES OF INVITED SPEAKERS

Chair

Prof. Karachevtsev V.A.

10.15-10.45

**IN SITU ENGINEERING OF EXCITONS IN
BIOLOGICAL NANOSTRUCTURES**
Freiberg A.

L1

10.45-11.15

**INNOVATIVE POINT-CONTACT NANOSENSORS
FOR REAL-TIME DETECTION OF
HELICOBACTER PYLORI VIRULENT STRAINS**
**Kamarchuk G.V., Pospelov A.P., Gudimenko V.A.,
Garbuz D.A., Kamarchuk L.V.**

L2

11.15-11.45

**CHARACTERISTIC FEATURES OF KINETIC
PROCESSES IN BIONANOSYSTEMS**
Petrov E.G., Teslenko V.I.

L3

11.45-12.20

Coffee break

CONFERENCE HALL**PHYSICAL ASPECTS OF BIOMOLECULAR
NANOSYSTEMS**

*Chair**Prof. Freiberg A.*

- 12.20-12.40** **PARTICULAR FEATURES OF STRUCTURAL
AND PHYSICAL CHARACTERISTICS OF
NUCLEOSOMAL DNA** **O1**
Shestopalova A.V., Zhitnikova M.Yu.
- 12.40-13.00** **NEW APPROACH TO NANOPARTICLE
APPLICATION IN PHOTODYNAMIC THERAPY:
PHYSICAL ASPECT** **O2**
Yefimova S.L., Tkacheva, T.N., Bepalova I.I.,
Malyukin Yu.V.
- 13.00-13.20** **BIONANOSTRUCTURES BASED ON CLUSTER
CRYSTALLIZATION OF THE SOLUTIONS WITH
WEAK INTERACTION BETWEEN COMPONENTS** **O3**
Osetsky, A.I., Sevastianov S.S.
- 13.20-13.40** **DISTINCTION IN INDIVIDUAL AND JOINT
MEMBRANOTROPIC ACTION OF CALCIUM
AND MAGNESIUM STEARATES** **O4**
Budianska L.V., Vashchenko O.V., Kasian N.A.,
Lisetski L.N.

13.40-14.30*Time for Lunch*

CONFERENCE HALL**PLENARY LECTURES OF INVITED SPEAKERS**

*Chair**Prof. Petrov E.G.*

- 14.30-15.00** **DNA AS A TEMPLATE FOR
NANOTECHNOLOGICAL DEVELOPMENTS** **L4**
Kasyanenko N.A., Bakulev V.M., Sokolov P.A.
- 15.00-15.30** **UNDERSTANDING PHYSICAL MECHANISMS OF
REGULATING THE DNA ACTIVITY AT THE
NANOSCALES** **L5**
Volkov S.N.

15.30-16.00 **J-AGGREGATES OF CYANINE DYES:
PROSPECTS FOR MOLECULAR AND CELLULAR
RESEARCH** **L6**
Demchenko A.P., Panas I.D., Bricks Yu.L.,
Slominskii Yu.L.

16.00-16.20 *Coffee break*

CONFERENCE HALL **BIOMOLECULES ON NANOPARTICLES AND
NANOSTRUCTURED SURFACES**

Chair *Prof. Kasyanenko N.A., Prof. Shestopalova A.V.*

16.20-16.40 **INFLUENCE OF ORTOVANADATES-BASED
NANOPARTICLES ON FUNCTIONAL ACTIVITY
OF TRANSFORMED AND NORMAL STEM CELLS** **O5**
Goltsev A.N., Malyukin Y.V., Babenko N.N., Gaevskaya
Yu.A., Bondarovich N.A., Dubrava T.G., Ostankov M.V.,
Kovalenko I.F., Klochkov V.K., Kavok N.S.

16.40-17.00 **DNA STRUCTURE AND CONFORMATION IN
CONFINED VOLUME AND ON THE
NANOSTRUCTURED SURFACE** **O6**
Dovbeshko G.I.

CONFERENCE HALL **PHYSICAL ASPECTS OF BIOMOLECULAR
NANOSYSTEMS**

17.00-17.20 **INTERACTION OF SLOW ELECTRONS WITH
DNA MOLECULES** **O7**
Sukhoviya M.I., Shafranyosh M.I., Perchak I.I.,
Marchuk V.M., Birdus S.E., Shafranyosh I.I.

17.20-17.40 **CONFORMATIONAL IMPACT ON TWIST-
STRETCH COUPLING IN DNA DEFORMATIONS** **O8**
Kanevska P.P., Volkov S.N.

17.40-18.00 **IRRADIATION WITH HIGH-ENERGY
ELECTRONS – THE WAY TO INCREASE THE
THERAPEUTIC EFFICACY OF DOXORUBICIN
AND CONIUM** **O9**
**Zabolotnyy M.A., Dovbeshko G.I., Orel V.E.,
Kyashko V.A., Kirkilevskaya L.N.**

18.00 *Welcome Party*

3 OCTOBER, TUESDAY

CONFERENCE HALL PLENARY LECTURES OF INVITED SPEAKERS

Chair *Prof. Lisetsky L.N.*

9.30-10.00 **GRAPHENE FOR WHITE LIGHTING** **L7**
**Strek W., Tomala R., Marciniak L., Lukaszewicz M.,
Cichy B., Gerasymchuk Y., Hreniak D.**

10.00-10.30 **INTERACTION OF NITROGEN BASES AND** **L8**
OLIGONUCLEOTIDES WITH GRAPHENE AND
GRAPHENE OXIDE
Karachevtsev V.A., Karachevtsev M.V., Stepanian S.G.

10.30-11.00 *Coffee break*

**CONFERENCE HALL NANOBIOHYBRIDS FORMED BY
NANOCARBON MATERIALS WITH BIOOBJECTS**

Chair *Prof. Strek W.*

11.00-11.20 **SPECTROSCOPIC STUDIES OF DNA-WRAPPED** **O10**
CARBON NANOTUBES ALIGNED IN THE
STRETCHED GELATINE FILM
**Glamazda A.Yu., Plokhotnichenko A.M., Leontiev V.S.,
Karachevtsev V.A.**

11.20-11.40	STRUCTURE AND VIBRATIONAL SPECTRA OF GRAPHENE OXIDE: AB-INITIO MODELING Stepanian S.G.	O11
11.40-12.00	INTERACTION OF THIOL COMPOUNDS WITH SINGLE-WALLED CARBON NANOTUBES: PHOTOLUMINESCENCE AND RAMAN SPECTROSCOPY STUDY Kurnosov N.V., Leontiev V.S., Karachevtsev V.A.	O12
12.00-12.20	BIOMOLECULES IN THE LOW TEMPERATURE INERT MATRICES AND GRAPHENE OXIDE FILMS: STRUCTURES AND VIBRATIONAL SPECTRA Ivanov A.Yu., Rubin Yu.V., Stepanian S.G., Karachevtsev V.A.	O13

Presentations of Sponsors

12.20-12.40	INTRODUCTION ABOUT OSA AND SPIE SOCIETIES Gamayunova N.V.	O14
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12.40-14.00 *Time for Lunch*

CONFERENCE HALL **PLENARY LECTURES OF INVITED SPEAKERS**

<i>Chair</i>	<i>Prof. Demchenko A.P.</i>	L9
14.00-14.30	UNUSUAL PROPERTIES OF G-QUADRUPLEX MOTIFS: FROM LIVING SYSTEMS TO NANOBIO TECHNOLOGY Víglašký V.	
14.30-15.00	MOLECULAR PLASMONICS: BIOMOLECULAR ASPECTS Chegel V.I., Lopatynskiy A.M. , Lytvyn V.K., Mogylnyi I.V.	L10

15.00-15.30 **FROM COULTER CELL COUNTER TO SINGLE MOLECULE PLASMONIC NANOPORE SENSOR** **L11**
Choi S.S., Yong-Sang Kim, Nam Kyou Park

15.30-15.50 *Coffee break*

**CONFERENCE HALL THEORETICAL CALCULATIONS AND
COMPUTER MODELING OF NANOBIOSYSTEMS**

Chair *Prof. Víglaský V.*

15.50-16.10 **CARRIER BEHAVIOR IN FUNCTIONALIZED CNT WITH CHARGE TRANSFER BETWEEN CNT AND MOLECULES** **O15**
Lykah V.A., Syrkin E.S.

16.10-16.30 **STRUCTURAL REASONS FOR STABILIZATION OF POLYOXYMETHYLENE - CARBON NANOTUBE NANOCOMPOSITE IN AQUEOUS MEDIUM** **O16**
Kosevich M.V., Zobnina V.G., Boryak O.A., Shelkovsky V.S., Chagovets V.V., Stepanian S.G., Karachevtsev V.A.

16.30-16.50 **LIGAND-INDUCED DNA CONFORMATIONAL CHANGES IN MINOR GROOVE COMPLEXES STUDIED BY MOLECULAR DYNAMICS SIMULATION** **O17**
Miroshnychenko K.V., Shestopalova A.V.

16.50-17.10 **COMPLEXES OF HYDROGEN PEROXIDE AND DNA PHOSPHATE GROUP IN QUANTUM CHEMICAL CALCULATIONS** **O18**
Piatnytskyi D.V., Volkov S.N.

17.10-17.30 **RESPIRATOR MECHANISM FOR CYANIDE DESTRUCTION BY BACTERIA** **O29**
Ermakov V.N.

17.30- 18.00

Poster Session 1

**P1-
P25**

18.00

Social Event (Conference Dinner)

4 OCTOBER, WEDNESDAY

CONFERENCE HALL PLENARY LECTURES OF INVITED SPEAKERS

Chair *Prof. Choi S.S., Prof. Sukhoviya M.I.*

9.30-10.00 JOINT ACTION OF DRUGS IN MODEL L12
MEMBRANES

**Lisetski L.N., Vashchenko O.V., Kasian N.A.,
Budianska L.V.**

10.00-10.30 NANOBIOPHYSICS IN BIONANOTECHNOLOGY L13
AND NANOPHARMACY

**Ogurtsov A.N., Bliznjuk O.N., Masalitina N.Yu.,
Kleshchev N.F.**

10.30-11.00 AMYLOID FIBRILS: PRO ET CONTRA L14

Trusova V.M., Gorbenko G.P.

11.00-11.20 *Coffee break*

CONFERENCE HALL APPLIED ASPECTS OF NANOBIOPHYSICS

Chair *Prof. Ogurtsov A.N.*

11.20-11.40 WHY USING COMPUTERS IN CANCER O19
RESEARCH ? WHEN EXPERIMENTS CANNOT
GO FURTHER

Ramseyer C.

11.40-12.00 NEW THERAPEUTIC APPLICATIONS FOR O20
CYCLIC ANTIMICROBIAL PEPTIDES

Berest V.P.

12.00-12.20 SENSING REACTIVE OXYGEN SPECIES USING O21
Ce³⁺ LUMINESCENCE OF CERIUM DIOXIDE
NANOCRYSTALS

**Seminko V.V., Maksimchuk P.O., Bepalova I.I.,
Okrushk, E.N., Kononets N.V., Malyukin Yu.V.**

12.20-12.40 **DYNAMIC LIGHT SCATTERING, SPECTRAL AND ZIGZAG PATTERN ANALYSIS OF SOLUTIONS AND FILMS OF BSA WITH FeCl₃** **O22**
Glibitskiy D.M., Gorobchenko O.A., Zibarov A.M.,
Cheipesh T.A., Nikolov O.T., Roshal A.D.,
Semenov M.A., Glibitskiy G.M.

12.40-13.00 **MONOMOLECULAR MULTILAYER STRUCTURES AND THEIR ELECTROCHEMICAL FUNCTIONING** **O23**
Jelali V.V.

13.00-14.00 *Time for Lunch*

CONFERENCE HALL

Special Session

Chair *Prof. Dovbeshko G.I.*

14.00-14.10 **INTRODUCTION of the project HORIZON 2020 project "Asymmetry of biological membrane: theoretical, experimental and applied aspects"**
(690853 — assymcurv — H2020-MSCA-RISE-2015/
H2020-MSCA-RISE-2015)
Ramseyer C.

14.10-14.30 **NUMERICAL SIMULATIONS OF CURVED AND ASYMMETRIC MEMBRANES: CURRENT STATE AND PERSPECTIVES** **O25**
Ramseyer C., Yesylevskyy S.

14.30-14.50 **VIBRATIONAL "SIGNATURES" OF LIPID CELLULAR MEMBRANE MIMETICS** **O24**
Dovbeshko G.I., Gnatyk O.P., Boiko V.V.,
Ivanchenko P.A., Martra G., Foley S., Bogdanov M.

14.50-15.10 **LUMINESCENT NANO-PARTICLES AS MARKERS IN BIOLOGICAL MATERIALS** **O26**
Berzina B., Trinkler L., Korsaks V.

15.10-15.30 **TRANSFORMATIONS OF PHOTOSYNTHETIC
EXCITONS DUE TO VARIOUS STRESS FACTORS** **O27**
Freiberg A.

15.30-15.50 **SYNTHESIS AND BIOMEDICAL APPLICATIONS
OF 2D CARBIDES (MXenes)** **O28**
**Gogotsi O., Zahorodna V., Balitskiy V., Zozulya Y.,
Gogotsi H., Brodnikovskiy M., Gubynskiy M.,
Fedorov V., Alhabebe M., Anasori B., Gogotsi Y.**

15.50- 17.00	Poster Session 2	P26- P50
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17.00

Round Table

Conference Closing

5 OCTOBER, THURSDAY

Social Program

(City walking tour or excursion to Feldman Ecopark)

POSTER SESSION 1
3 October, Tuesday

**BIOMOLECULES ON NANOPARTICLES
AND NANOSTRUCTURED SURFACES**

- P1 SYNTHETIC PHOSPHOLIPIDS ABSORBED ON NANOCRYSTALLINE DIAMOND SUBSTRATES: IR AND LUMINESCENT SPECTRAL PROPERTIES**
Dovbeshko G., **Boiko V.***, Gnatyk O., Artemenko A.
- P2 ENHANCED BACTERICIDAL AND ANTITUMOR ACTIVITY OF BINARY AG/CU AND AG/AU NANOCOMPOSITES**
Petrik I., Mukha Iu., Shmarakov I., Rudenko A., **Eremenko A.***
- P3 ISOLATION OF BSA AND DNA FROM THE SOLUTION USING MAGNETITE NANOPARTICLES UNDER THE ACTION OF EXTERNAL MAGNETIC FIELD**
Gladkovskaya N.A.*, Dukhopelnikov E.V., Pesina D.A., Bereznyak E.G.
- P4 MODELING AND SPECTROSCOPIC STUDIES OF THERMORESPONSIVE POLYMER WITH EMBEDDED GOLD NANOPARTICLES**
Glamazda A.Yu.*, Chumachenko V.A., Stepanian S.G., Plokhotnichenko A.M., Adamowicz L., Karachevtsev V.A., Kutsevol N.V.
- P5 USE OF NANOCOMPOSITE COATINGS WITH VARIOUS PHYSICAL AND CHEMICAL CHARACTERISTICS FOR CULTIVATION OF MESENCHYMAL STROMAL CELLS**
Goltsev A.N.*, Dubrava T.G., Rassokha I.V., Ostankova L.V., Ostankov M.V1, Safonov V.I., Zykova A.V.
- P6 BIOETHANOL PERSPECTIVE TRANSFORMATIONS OVER GRAPHENE SUPPORTED CeO₂ CATALYST**
Klimkiewicz R.*, Mišta W., Kraszkiwicz P., V. Boiko V., G. Dovbeshko G.

P7 INTERACTION OF BORON NITRIDE NANOPARTICLES WITH CANCER CELLS

Pavlyshyn V.*, Dovbeshko G., Gnatyuk O., Ershov A., Posudievsky O.

P8 SELF-ASSEMBLY OF PHEOPHORBIDE-a ON POLY-L-LYSINE MATRIX

Ryazanova O.A.*, Zozulya V.N., Voloshin I.M., Karachevtsev V.A.

P9 RADIATION OF URACIL MOLECULES ON THE SURFACE UNDER ELECTRON BEAM

Shafranyosh I.I.*, Mitropolsky I.E., Kuzma V.V., Svida Yu.Yu., Sukhoviya M.I., Petruljak V.I.

P10 MASS SPECTROMETRIC IMAGING OF SOAP BUBBLES SHELLS UNDER THE CONDITIONS OF LASER DESORPTION/IONIZATION AS A NANOTECHNOLOGY TOOL

Shelkovsky V.S.*, Kosevich M.V., Zobnina V.G., Chagovets V.V., Boryak O.A.

P11 ON A SPECIFIC STATE OF C60 FULLERENE IN N-METHYL-2 PYRROLIDONE SOLUTION: MASS SPECTROMETRY STUDY

Snegir S.V.*, Nastasienko N.S., Kuzmenko M.O., Kyzyma O.A., Tropin T.V., Petrenko V.I., Aksenov V.L., Korobov M.V., Avdeev M.V.

PHYSICAL ASPECTS OF BIOMOLECULAR NANOSYSTEMS

P12 DETERMINATION OF THE DEGREE OF HYDRATION OF NANODIAMONDS IN AQUEOUS MEDIUM

Batyuk L.V.*, Kizilova N.N., Berest V.P.

P13 INTERACTION OF 18-CROWN-6 HOST WITH BIOGENIC POLYAMINE GUESTS: DISCRIMINATION OF NANOCLUSTERS FORMATION BY THE GUEST SIZE

Boryak O.A.*, Kosevich M.V., Chagovets V.V., Orlov V.V.

- P14 EFFECT OF OPTICALLY INDUCED NANO-STRUCTURING OF AMINO ACIDS IN AQUEOUS SOLUTION**
Degtyareva O.V.*, Afanasiev V.N., Terpugov E. L.
- P15 MOLECULAR NANOCLUSTERS IN AQUEOUS SOLUTIONS OF LYOTROPIC LIQUID CRYSTALS**
Doroshenko I.Yu.*, Vaskivskiy Ye.V., Doroshenko O.P., Pogorelov V.Ye., Balevicius V.
- P16 SELECTIVE BINDING OF NEW CATIONIC PORPHYRIN DERIVATIVE TO QUADRUPLEX DNA**
Didan Yu.V., Dubey L.V.1, Negrutcka V.V.1, **Dubey I.Ya.***
- P17 NANOCOMPOSITE CaWO₄ IN MESOPOROUS SPHERES SiO₂ FOR X-RAY INDUCED PHOTODYNAMIC THERAPY**
Hubenko K.O.*, Bepalova I.I., Yefimova S.L., Malyukin Yu.V., Mateychenko P.V.
- P18 NANOSYSTEMS SYNTHESIZED IN BRANCHED PNIPAM MATRICES FOR BIOMEDICAL APPLICATION**
Kutsevol N.V.*, Chumachenko V.A., Harahuts Yu.I., Naumenko A.P., Rawiso M.
- P19 MECHANISTIC STUDY OF NANOBIOCOMPLEXES OF ANTIVIRAL AGENT TILORONE WITH NUCLEOSIDES BY ELECTROSPRAY IONIZATION MASS SPECTROMETRY**
Pashynska V.A.*, Kosevich M.V., Gomory A., Vekey K., Zholobak N.M.
- P20 STUDY OF PHOTOINDUCED CHANGES IN BACTERIAL REACTION CENTERS BY WAVELET ANALYSIS**
Serdenko T.V.*, Barabash Yu.M., Knox P.P.
- P21 ANALYSIS OF THE CATALYTIC BIOMACROMOLECULE UNDER NONEQUILIBRIUM CONDITIONS BY SYSTEM OF DIFFERENTIAL EQUATIONS**
Serdenko T.V.*, Barabash Yu.M., Knox P.P.
- P22 THE LUMINESCENCE OF GUANINE MOLECULES UNDER THE ELECTRON BEAM**
Shafranyosh I.I.*, Svida Yu.Yu., Shafranyosh M.I., Margitich M.O., Sukhoviya M.I., Petruljak V.I.

- P23 IR-SPECTRA OF BIOMOLECULES IN NONREGULAR CONDENSED MEDIUM**
Marsagishvili T., **Tatishvili G.***, Matchavariani M., Ananiashvili N., Kikabidze-Gachechiladze M., Metreveli J., Tskhakaia E.
- P24 PHOTO-INDUCED PROCESSES AND REACTION DYNAMICS IN BACTERORHODOPSIN**
Terpugov E. L.*, Degtyareva O.V.
- P25 CONTACT PROFILES IN DNA GROOVES FOR NUCLEOTIDES WITH B- AND A-LIKE SUGARS: DNA-PROTEIN COMPLEXATION**
Zhitnikova M.Yu. *, Shestopalova A.V.

POSTER SESSION 2
4 October, Wednesday

NANOBIOHYBRIDS FORMED BY NANOCARBON MATERIALS WITH BIOOBJECTS

- P26 EFFECT OF COLD PLASMA TREATMENT ON THE SORPTION OF HYDROGEN BY GRAPHENE-BASED CARBON MATERIALS**
Kaliuzhnyi I.A.*, Dolbin A.V., Esel'son V.B., Gavrilko V.G., Vinnikov N.A., Basnukaeva R.M., Khlistyuck M.V.
- P27 NANOHYBRIDS FORMED BY NEUTRAL OR CATIONIC PORPHYRINS WITH GRAPHENE: DFT AND MOLECULAR DYNAMICS STUDY**
Karachevtsev M.V.*, Stepanian S.G., Valeev V.A., Adamowicz L., Karachevtsev V.A.
- P28 IMPACT OF AGGREGATION OF SINGLE-WALLED CARBON NANOTUBES ON THEIR LUMINESCENT PROPERTIES**
Plokhotnichenko A.M.*, Leontiev V.S., Karachevtsev V.A.

THEORETICAL CALCULATIONS AND COMPUTER MODELING OF NANOBIOSYSTEMS

- P29** **QUANTUM-CHEMICAL SIMULATION OF CARBON NANOPARTICLES**
Ananina O.Yu.*, Yanovsky A.S.
- P30** **NONCARBON NANOTUBES AS THE POTENTIAL CONTAINERS FOR TARGETED DRUG DELIVERY**
Cheranovskii V.O.*, Ezerskaya E.V.
- P31** **DFT MODELING OF THE INTERACTION OF BODIPY-BASED TELOMERASE INHIBITORS WITH G-QUADRUPLEX DNA**
Ilchenko M.M., Kovtun Yu.P., Dubey I.Ya.*
- P32** **QUANTUM CHEMICAL STUDY OF INTERACTION OF NEW ACRIDINE DERIVATIVES WITH DNA QUADRUPLEX OF HYBRID-2 TOPOLOGY**
Ilchenko M.M., Dubey I.Ya.*
- P33** **LOOP-LIKE STRUCTURE REGULATING LIGAND BINDING BY HUMAN SERUM ALBUMIN**
Hushcha T.O.*, Shchechkin I.Ye.
- P34** **ON THE MECHANISM OF FACILITATION OF SPONTANEOUS MUTATIONS IN WATER-PRE-OPENED A-T BASE PAIR**
Kryachko E.S.*, Volkov S.N.
- P35** **MODELING OF PHYSICO-CHEMICAL PROPERTIES OF THE COMPLEXES OF 5-FLUOROURACIL ANTICANCER DRUG WITH GRAPHENE OXIDE**
Rubin Yu.V.*, Ivanov A.Yu., Belous L.F., Karachevtsev V.A.

APPLIED ASPECTS OF NANOBIOPHYSICS

- P36** **ELECTRIC CURRENT GENERATION BY BACILLUS SUBTILIS AND LACTOBACILLUS PLANTARUM BACTERIAL CELLS IN MICROBIAL FUEL CELLS**
Kotsyumbas I.Y., Kushnir I.M., Savka M.I., Bilyy O.I.*, Ferensovych Ya.P., Grechukh T.Z.

- P37 BN NANOPARTICLES INTERACTION WITH DNA MOLECULES DURING IONIZING RADIATION**
Gnatyuk O.P., **Dovbeshko G.***, Neimash V.B.,
Posudievsky O.Yu., Pavlyshyn V. O., Kusura O.V.
- P38 INTERACTION OF DOXORUBICIN WITH BOVINE SERUM ALBUMIN UNDER CONDITIONS OF PHOTO-INDUCED PLASMONIC ENHANCEMENT**
Dmytrenko O.P., Kulysh M.P., **Goncharenko N.A.***,
Pavlenko O.L., Zabolotnyi M.A., Chegel V.I., Lopatynskyi A.M.,
Chekman I.S.
- P39 DEVELOPMENT AND IN VITRO ANALYSIS OF A NEW BIODEGRADABLE NANO HAP/TCP/CHITOSAN COMPOSITE FOR BIOMEDICAL APPLICATION**
Kalinkevich O.V.*, Sklyar A.M., Kalinkevich A.N.,
Kuznetsov V.N., Danilchenko S.N.
- P40 NANOSTRUCTURED AND ULTRADISPERSE MATERIALS: PRODUCTION BY MEANS OF IMMERSSED ELECTRIC DISCHARGE AND APPLICATION FOR BIOLOGY AND MEDICINE**
Lapshin S.A.*, Lopatko K.G., Zhylytsov A.V., Tmenova T.A.,
Veklich A.N., Boretskij V.F., Lopatko S.K., Cressault Y.,
Valensi F., Trach V.V.
- P41 ELECTROCHEMILUMINESCENT METHOD OF TRYPTOPHAN DETECTION FOR ASSAY OF BIOLOGICAL SAMPLES**
Lysak N.M. *, Snizhko D.V., Zholudov Yu.T., Xu G.
- P42 AMILOID FIBRILS FORMATION INDUCED BY CARBON NANOTUBES**
Olenchuk M.V.*, Dovbeshko G., Gnatyuk O., Posudievsky O.Yu.
- P43 ELECTROCHEMILUMINESCENT METHOD FOR POLYACENES DETECTION USING SEMICONDUCTOR QUANTUM DOTS**
Sushko O.A.*
- P44 GdVO₄:Eu₃⁺ NANOPARTICLES – METHYLENE BLUE COMPLEXES FOR PHOTODYNAMIC THERAPY**
Tkacheva T.N.*, Yefimova S.L., Maksimchuk P.O., Kavok N.S.,
Klochkov V.K., Borovoy I.A., Malyukin Yu.V.

- P45** **INFRARED LASER INDUCED WHITE EMISSION OF**
 $Y_{2(1-x)}Nd_{2x}Si_2O_7$
Tomala R.*, Hreniak D., Streck W.
- P46** **EFFECT OF HIGH-ENERGY IRRADIATION ON DNA–**
DOXORUBICIN COMPLEX
Zapolska Y.*, Dovbeshko G., Gnatyuk O., Neimash V.
- P47** **AROMATIC POLYIMIDES MAXIMIZING π -STACKING**
INTERACTIONS WITH CARBON NANOTUBES BY
MEDIATING THEIR BACKBONE CONFORMATIONS
Zhang B.*, Heck B., Pfohl T., Biskup T., Reiter G.
- P48** **FORMATION OF DOUBLY CHARGED NANOCLUSTERS**
OF POLYAMINES WITH POLYETHYLENE GLYCOL
UNDER ELECTROSPRAY CONDITIONS
Zobnina V.G.*, Kosevich M.V., Boryak O.A., Vekey K.,
Gomory A.
- P49** ***IN VITRO* STUDY OF EFFECT OF AU NANOPARTICLES**
ON IMMUNOPHENOTYPE AND SYNTHETIC
PROCESSES IN MESENCHYMAL STROMAL CELLS
N.A. Volkova*, E.V. Pavlovich, A.N. Goltsev
- P50** **COMPOSITION AND ABSORBANCE SPECTRA OF**
METAL OXIDES' SOLUTIONS IN DEEP EUTECTIC
SOLVENTS BASED ON CHOLINE BITARTRATE
Sakhno T.V.*, Barashkov N.N., Irgibaeva I.S., Mantel A.,
Aldongarov A.