



**BAKU STATE
UNIVERSITY**

8th INTERNATIONAL CONFERENCE
**MODERN TRENDS
IN PHYSICS**

DEDICATED TO THE 100th ANNIVERSARY
OF NATIONAL LEADER HEYDAR ALIYEV

NOVEMBER 30 - DECEMBER 1, 2023

**BAKU STATE UNIVERSITY
BAKU, AZERBAIJAN**



PROGRAMME





8th INTERNATIONAL CONFERENCE “MTP-2023”

MODERN TRENDS IN PHYSICS

DEDICATED TO THE 100th ANNIVERSARY OF
NATIONAL LEADER HEYDAR ALIYEV

November 30 – December 1, 2023

BAKU STATE UNIVERSITY | AZERBAIJAN

November 30, Thursday

OPENING CEREMONY

Main Academic Building, 3rd Floor, Main Hall

[Link to session](#)

09:00 - 10:00	Registration
10:00 - 11:00	Opening Ceremony/Group Photo

PLENARY SESSION

Chairperson: Mais Suleymanov (Azerbaijan)

Main Academic Building, 3rd Floor, Main Hall

[Link to session](#)

11:00 - 11:25	Innovative applications of advanced 2D materials
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Stefano Bellucci

INFN National Laboratory of Frascati, Italy

11:25 - 11:50	Physics of doubly heavy baryons Tahmasib Aliyev Middle East Technical University, Türkiye
11:50 - 12:15	Fundamental and applied physics with reactor neutrinos Evgeniy Yakushev Joint Institute for Nuclear Research, Russia
12:15 - 12:40	Comparative analysis of membrane properties of human lung carcinoma and normal cells: relevance for drug delivery Oktay Gasimov Institute of Biophysics, Azerbaijan
12:40 - 14:00	Lunch

November 30, Thursday

KEYNOTE SPEAKER'S SESSION

Chairpersons: Amirullah Mamedov (Türkiye),
Sajida Abdulvahabova (Azerbaijan)

Academic Building III, 1st Floor, Round Hall

[Link to session](#)

14:00 - 14:25	<p>Magnetohydrodynamic Kelvin–Helmholtz instabilities of supersonic shear layers with finite interface thickness and heat flux in anisotropic space plasmas</p> <p>Dzhalilov N.¹, Ismayilli R.F.² ¹Shamakhy Astrophysical Observatory, Azerbaijan ²Center for Mathematical Plasma-Astrophysics, Belgium</p>
14:25 - 14:50	<p>Thermodynamic signatures and phase transitions in high-energy hadronic and nuclear collisions (<i>online</i>)</p> <p>Ajaz M.¹, Waqas M.², Alrebdi H.³, Badshah M.¹ ¹Abdul Wali Khan University, Pakistan ²Hubei University of Automotive Technology, China ³Princess Nourah bint Abdulrahman University, Saudi Arabia</p>
14:50 - 15:15	<p>Travelling of Sine-Gordon solitons in network of Josephson junction arrays</p> <p>Askerzade I.N.^{1,3}, Matrasulov D.U.², Salati M.¹ ¹Ankara University, Türkiye ²Turin Polytechnic University in Tashkent, Uzbekistan ³Institute of Physics, Azerbaijan</p>

15:15 - 15:40	Extended linear-sigma model: mass spectrum of charmed mesons (<i>online</i>) Tawfik A.N.¹, Ahmadov A.I.² ¹ Future University in Egypt, Egypt ² Baku State University, Azerbaijan
15:40 - 16:00	Coffee Break Academic Building III, 1st Floor

November 30, Thursday

PARALLEL SESSIONS

**Session 1-1: Theoretical and High Energy Physics/
Space Sciences and Astrophysics**

Chairpersons: Nazim Huseynov (Azerbaijan),
Kamala Alisheva (Azerbaijan)

Academic Building II, 3rd Floor, Room № 303

[Link to session](#)

16:10 - 16:25	<p>The search for a rare process for Higgs boson production by applying a new evolutionary algorithm which construct a optimized Neural Network in an irregular hyperparameter space</p> <p>Huseynov N.A.^{1,2}, Boyko I.R.², Yeletskikh I.V.², Didenko A.R.², Koval O.A.² ¹Institute of Physics, Azerbaijan ²Joint Institute for Nuclear Research, Russia</p>
16:25 - 16:40	<p>Geography of observation of the own reflected radiation</p> <p>Rustamov R.B. Institute of Physics, Azerbaijan</p>
16:40 - 16:55	<p>Exploring the cross sections of direct reactions in the SU(5) representation</p> <p>Abdulvahabova S.G.¹, Afandiyeva I.G.², Ahmedov R.A.² ¹Baku State University, Azerbaijan ²Azerbaijan State University of Oil and Industry, Azerbaijan</p>

16:55 - 17:10	<p>Search for the experimental signature of the strings at the LHC</p> <p>Suleymanov M.K. Baku State University, Azerbaijan</p>
17:10 - 17:25	<p>Frequency of transverse and longitudinal thermomagnetic waves in certain anisotropic conducting media</p> <p>Maharramova A.A., Hasanov E.R. Baku State University, Azerbaijan</p>
17:25 - 17:40	<p>Spectral investigations of the Algol-type binary star U Sagittae</p> <p>Rustamov B.N.^{1,2}, Mikailov Kh.M.¹, Alisheva K.I.¹, Mammadova S.O.², Aliyeva V.I.² ¹Baku State University, Azerbaijan ²Shamakhy Astrophysical Observatory, Azerbaijan</p>
17:40 - 17:55	<p>Axial-vector charge radius of nucleons in the soft-wall model of holographic QCD at finite temperature</p> <p>Nasibova N.A.¹, Mamedov Sh.A.² ¹Institute of Physics, Azerbaijan ²Baku State University, Azerbaijan</p>
17:55 - 18:10	<p>Metallicity of the star HR 4294(A5III)</p> <p>Samedov Z.A.^{1,2}, Rajabova S.Sh.¹, Rustem U.R.², Hajiyeva G.M.² ¹Baku State University, Azerbaijan ²Shamakhy Astrophysical Observatory, Azerbaijan</p>

November 30, Thursday

PARALLEL SESSIONS

Session 1-2: Materials Science and Engineering

Chairpersons: Stefano Bellucci (Italy),
Lala Gahramanli (Azerbaijan)

Academic Building II, 2nd Floor, Room № 205

[Link to session](#)

16:10 - 16:25 Investigating the structural and optical properties of $\text{Cu}_x\text{Co}_{3-x}\text{O}_4$ nanoparticles synthesized by sonochemical method

Mammadyarova S.J., Muradov M.B., Eyvazova G.M., Balayeva O.O.

Baku State University, Azerbaijan

16:25 - 16:40 Double quadratic photodetection based GaAs/AlGaAs stepped quantum well in a terahertz and far infrared range (*online*)

Salhi W.¹, Rajira A.¹, Samyh A.¹, Akabli H.², Abounadi A.¹, Almaggoussi A.¹

¹Cadi Ayyad University, Marrakech

²Hassan first University, Morocco

16:40 - 16:55 DLTS spectroscopy of radiation defects in silicon with platinum impurity (*online*)

Utamuradova Sh.B., Rakhmanov D.A.

National University, Uzbekistan

16:55 - 17:10	<p>Two-dimensional energy structure of Schottky diodes</p> <p>Mamedov R.K., Aslanova A.R. Baku State University, Azerbaijan</p>
17:10 - 17:25	<p>Self-powered transmission line monitoring sensors based on triboelectric nanogenerators with magnetic nanoparticles/nylon nanocomposite films.</p> <p>Gulahmadov O.G., Muradov M.B., Mamedov H.M., Gahramanli L.R., Jiseok K. Baku State University, Azerbaijan</p>
17:25 - 17:40	<p>Acoustic Weyl metamaterials-based space-time crystals with topological states</p> <p>Ozer Z.¹, Mamedov A.M.^{2,3}, Ozbay E.² ¹Mersin University, Türkiye ²Bilkent University, Türkiye ³Baku State University, Azerbaijan</p>
17:40 - 17:55	<p>Controlling the uncontrollable: quantum control of open system dynamics (<i>online</i>)</p> <p>Kallush Sh.^{1,2}, Dann R.¹, Kosloff R.¹ ¹Holon Academic Institute of Technology, Israel ²Herber University of Jerusalem, Israel</p>
17:55 - 18:10	<p>Synthesis of AgNWs/PVA nanocomposite and examination of the impact of sulfidation on its structural characteristics</p> <p>Addayeva Z.R., Muradov M.B., Eyvazova G.M., Mammadyarova S.J., Baghirov M.A. Baku State University, Azerbaijan</p>

November 30, Thursday

PARALLEL SESSIONS

Session 1-3: Condensed Matter Physics/Biophysics

Chairpersons: Sadiyar Ragimov (Azerbaijan),
Iman Askerzade (Türkiye)

Academic Building II, 3rd Floor, Room № 307

[Link to session](#)

16:10 - 16:25	<p>The use of multi-quantum absorption for the study of semiconductor multilayer structures</p> <p>Salmanov V.M., Huseynov A.G., Mamedov R.M., Hasanova L.G., Mahammadov A.Z., Ahmadova F.Sh., Mammadova T.A. Baku State University, Azerbaijan</p>
16:25 - 16:40	<p>Electronic band structure of $Cd_{1-x}Fe_xSe$</p> <p>Mehrabova M.A.^{1,2}, Allahyarov E.A.^{3,4}, Hasanov N.H.⁵, Gasimova N.R.⁶ ¹Azerbaijan Technical University, Azerbaijan ²Institute of Radiation Problems, Azerbaijan ³Heinrich-Heine University Dusseldorf, Germany ⁴Macromolecular Science, CWRU Cleveland, USA ⁵Baku State University, Azerbaijan ⁶Azerbaijan University of Architecture and Construction, Azerbaijan</p>
16:40 - 16:55	<p>CdS nanoparticles synthesized by laser ablation</p> <p>Jafarov M.A., Salmanov V.M., Huseynov A.G., Mamedov R.M., Abasova A.Z., Jahangirova S.A., Ahmadova F.Sh., Mammadova T.A. Baku State University, Azerbaijan</p>

<p>16:55 - 17:10</p>	<p>State of the art in cancer therapy: combined therapy and the main factors limiting or enhancing the efficacy of proton therapy (<i>online</i>)</p> <p>Chirakadze A.¹, Mitagvaria N.¹, Chubinidze G.¹, Dvali N.¹, Khuskivadze N.¹, Shanidze R.², Abuladze M.², Palavandishvili G.³</p> <p>¹Caucasus International University, Georgia ²Kutaisi International University, Georgia ³Georgian Technical University, Georgia</p>
<p>17:10 - 17:25</p>	<p>Alkali metal salt solution based synergistic cancer therapy combined with anticancer metal oxide nanoparticles: acute toxicity study (<i>online</i>)</p> <p>Chubinidze G.¹, Mitagvaria N.¹, Chirakadze A.¹, Dvali N.¹, Khuskivadze N.¹, Chichua T.¹, Chikadze N.², Khomeriki I.³, Buachidze Z.³, Abuladze M.⁴</p> <p>¹Caucasus International University, Georgia ²Tbilisi State University, Georgia ³Georgian Technical University, Georgia ⁴Kutaisi International University, Georgia</p>
<p>17:25 - 17:40</p>	<p>Band structure, dielectric function, and reflection coefficient of chain TlGaTe₂</p> <p>Abdullayev A.P.¹, Gafarova D.M.¹, Musazade I.V.¹, Ismayilov T.I.²</p> <p>¹Azerbaijan University of Architecture and Construction, Azerbaijan ²Military Institute named after H. Aliyev, Azerbaijan</p>
<p>17:40 - 17:55</p>	<p>Electronic and magnetic properties of Ag-doped (6,0) single-walled ZnO nanotubes</p> <p>Jafarova V.N.¹, Mamedov N.T.²</p> <p>¹Azerbaijan State Oil and Industry University, Azerbaijan ²Institute of Physics, Azerbaijan</p>

December 1, Friday

PLENARY SESSION

**Chairpersons: Nazim Mammadov (Azerbaijan),
Atilla Akdemir (Türkiye)**

Academic Building III, 1th Floor, Round Hall

[Link to session](#)

09:20 - 09:45	Development of selective inhibitors for the tumor-associated carbonic anhydrases Atilla Akdemir Istinye University, Türkiye
09:45 - 10:10	Acoustic metamaterials for aeronautic applications: a review Amirullah Mamedov Bilkent University, Türkiye
10:10 - 10:35	Janus materials: Indirect (Λ-Γ)- to - indirect (K- Γ) crossover in few monolayer MoS_2 Nazim Mammadov Institute of Physics, Azerbaijan
10:35 - 11:00	Design and development of advanced multicomponent bulk metallic glassy alloys for technological applications Mekhrabov A.O.¹, Akdeniz M.V.² ¹ Azerbaijan Technical University, Azerbaijan ² Middle East Technical University, Türkiye
11:00 - 11:20	Coffee Break Academic Building III, 1th Floor

December 1, Friday

KEYNOTE SPEAKER'S SESSION

**Chairpersons: Jadranka Gilev (Macedonia),
Mustafa Muradov (Azerbaijan)**

Academic Building III, 1th Floor, Round Hall

[Link to session](#)

11:20 - 11:45	Repulsion driven metallic phase in the ground state of the half-filled T-T' ionic Hubbard chain <i>(online)</i> Rossini G.L.¹, Japaridze G.I.² ¹ Universidad Nacional de La Plata, Argentina ² Ilia State University, Georgia
11:45 - 12:10	Monte Carlo predictions for K^* (892)$^\circ$ and ϕ(1020)$^\circ$ mesons production at LHC energies in hadron-hadron and heavy ion collisions <i>(online)</i> Yasir A.S. COMSATS University Islamabad, Pakistan
12:10 - 12:35	IR laser-induced ablative deposition of polymer-based composites. Gilev J.B. Ss. Cyril and Methodius University in Skopje, Macedonia
12:35 - 13:00	Earth-abundant compound semiconductors for solar energy conversion Schorr S. Helmholtz-Zentrum Berlin for Materials and Energy, Germany, Free University of Berlin, Institute of Geological Sciences, Germany
13:00 - 14:00	Lunch

December 1, Friday

PARALLEL SESSIONS

**Session 2-1: Theoretical and High Energy Physics/
Space Sciences and Astrophysics**

**Chairpersons: Rustam Rustamov (Azerbaijan),
Mamed Rajabov (Azerbaijan)**

Academic Building II, 3rd Floor, Room № 303

[Link to session](#)

14:10 - 14:25	Knocking out of neutron by the proton from nucleus Abdulvahabova S.G., Bayramova T.O. Baku State University, Azerbaijan
14:25 - 14:40	Spectral observations of the symbiotic star AG PEGASI Mikhailov Kh.M.¹, Rustamova A.B.², Rustamov B.N.^{1,2}, Alekberov I.A.² ¹ Baku State University, Azerbaijan ² Shamakhy Astrophysical Observatory, Azerbaijan
14:40 - 14:55	Study of the associative production of the Higgs boson with the Z-boson using MVA methods (online) Ahmadov F.N. Institute of Physics, Azerbaijan Joint Institute for Nuclear Research, Russia

14:55 - 15:10	<p>Temperatures of the central stars of planetary NEBULAE NGC 2392, NGC 1535, NGC 3242, IC 418</p> <p>Alili A.H., Alisheva K.I., Mikailov Kh.M. Baku State University, Azerbaijan</p>
15:10 - 15:25	<p>Prompt photon production in bremsstrahlung at NICA energies</p> <p>Alizada M.R.¹, Ahmadov A.I.¹, Arbuzov A.B.² ¹Baku State University, Azerbaijan ²Joint Institute for Nuclear Research, Russia</p>
15:25 - 15:45	<p>Coffee Break Academic Building II, 1th Floor</p>
15:45 - 16:00	<p>$f_2(1270)$ tensor meson coupling constant from the hard-wall AdS/QCD</p> <p>Hashimli Z.I.¹, Mamedov S.A.^{1,2,3} ¹Institute of Physics, Azerbaijan ²Baku State University, Azerbaijan ³Khazar University, Azerbaijan</p>
16:00 - 16:15	<p>On the direct correspondence between the trigonometric Pöschl-Teller potential wall and the quantum singular oscillator with the position-dependent mass</p> <p>Nagiyev Sh.M., Jafarov E.I. Institute of Physics, Azerbaijan</p>
16:15 - 16:30	<p>Could quark stars be a source of ultra-high energy cosmic rays?</p> <p>Suleymanov M.K. Baku State University, Azerbaijan</p>

<p>16:30 - 16:45</p>	<p>π meson-Σ baryon coupling constant in the hard-wall AdS/QCD model</p> <p>Taghiyeva Sh.I.^{1,2}, Mamedov Sh.A.^{1,3} ¹Baku State University, Azerbaijan ²Shamakhy Astrophysical Observatory, Azerbaijan ³Institute of Physics, Azerbaijan</p>
<p>16:45 - 17:00</p>	<p>Application of the distorted-wave approximation to the electron's scattering on the atoms</p> <p>Mirabutalibov M.M., Aliyeva M.B. Azerbaijan State University Oil and Industry, Azerbaijan</p>
<p>17:00 - 17:15</p>	<p>Singularity attenuation in general relativity with quantized fundamental metric (<i>online</i>)</p> <p>Tawfik A.¹, Dabash T.², Alshehri A.³ ¹Future University, Egypt ²Tanta University, Egypt ³Hafr Elbaten University, Saudi Arabia</p>

December 1, Friday

PARALLEL SESSIONS

Session 2-2: Materials Science and Engineering

Chairpersons: Schorr Susan (Germany),
Jafarov Maarif (Azerbaijan)

Academic Building II, 2nd Floor, Room № 205

[Link to session](#)

14:10 - 14:25	<p>Synthesis of nickel nanoparticles with magnetic properties using the carbothermy method <i>(online)</i></p> <p>Bohatyrenko V.A.¹, Kamenskyh D.S.², Tkachenko T.V.², Khimach N.Y.² ¹Dragomanov Ukrainian State University, Ukraine ²V.P. Kukhar Institute Bioorganic Chemistry and Petrochemistry, Ukraine</p>
14:25 - 14:40	<p>Synthesis and characterization of VSi₂-SiC nanocomposite powders <i>(online)</i></p> <p>Dondash D.O. Osmaniye Korkut Ata University, Türkiye</p>
14:40 - 14:55	<p>Nanoparticle fabrication of GeBi₂Te₄ van der Waals compound via the ball-milling method <i>(online)</i></p> <p>Mehtiyeva Kh.Z.¹, Amiraslanov I.R.^{1,2}, Aliev Z.S.^{1,2} ¹Baku State University, Azerbaijan ²Institute of Physics, Azerbaijan</p>

<p>14:55 - 15:10</p>	<p>Graphene oxide-polyvinyl alcohol nanofibrous composites: electrical properties</p> <p>Khanmamadova E.A.¹, Abaszade R.G.¹, Jafarov M.A.², Safarov R.Y.³</p> <p>¹Azerbaijan State Oil and Industry University, Azerbaijan ²Baku State University, Azerbaijan ³French-Azerbaijani University, Azerbaijan</p>
<p>15:10 - 15:25</p>	<p>Effects of Se/(Sn+Zn+Sn) ratio on the properties of single-step electrodeposited Cu₂ZnSnSe₄ thin films (<i>online</i>)</p> <p>El Otmani R.^{1,2}, El Khouja O.⁴, El Manouni A.¹, Galca A.C.⁴, Almaggoussi A.^{2,3}</p> <p>¹Hassan II University, Morocco ²Cadi Ayyad University, Morocco ³Mohammed VI Polytechnic University, Morocco ⁴National Ins. of Materials Physics, Romania</p>
<p>15:25 - 15:45</p>	<p>Coffee Break Academic Building II, 1th Floor</p>
<p>15:45 - 16:00</p>	<p>Interaction of α-In₂Se₃ crystals with 4-aminopyridine</p> <p>Rahimli A.B.¹, Aliev Z.S.^{1,2}, Amiraslanov I.R.^{1,2}</p> <p>¹Institute of Physics, Azerbaijan ²Baku State University, Azerbaijan</p>
<p>16:00 - 16:15</p>	<p>Micro-pixel high Z semiconductor materials as imaging detectors (<i>online</i>)</p> <p>Guliyev E.G, Hamzayeva R.H. Redlen Technologies, Canada</p>

16:15 - 16:30	<p>Comparative acoustic analysis of five renowned operatic tenors</p> <p>Bruseldorf A.S. Azerbaijan National Conservatory, Azerbaijan</p>
16:30 - 16:45	<p>Influence of gamma radiation on the crystallization of PVS/CdS nanocomposites</p> <p>Gasimova A.I., Nuriyev M.A. Institute of Radiation Problems, Azerbaijan</p>
16:45 - 17:00	<p>Band gap and wave propagation on PVDF based topological Hausdorff and Sierpinski dimension of quasi-fractal phononic crystals: finite elements analysis</p> <p>Palaz S.¹, Ozer Z.², Mamedov A.M.^{3,4}, Ozbay E.³ ¹Harran University, Türkiye ²Mersin University, Türkiye ³Bilkent University, Türkiye ⁴Baku State University, Azerbaijan</p>
17:00 - 17:15	<p>Raman Studies on Si/PS nanocomposite</p> <p>Pashayev B.G., Surxayli A.E., Shirinova H.A Baku State University, Azerbaijan</p>

December 1, Friday

PARALLEL SESSIONS

Session 2-3: Condensed Matter Physics

Chairpersons: Rena Kasumova (Azerbaijan),
Vusal Mammadov (Azerbaijan)

Academic Building II, 2nd Floor, Room № 307

[Link to session](#)

14:10 - 14:25	Laser ablation ZnCdO thin films Jafarov M.A., Mammadov H.M., Mammadov V.U., Nasirov E.F. Baku State University, Azerbaijan
14:25 - 14:40	The effect of characteristic lengths on the nonstationary conversion of frequencies of ultra short light pulses Amirov Sh.Sh. Baku State University, Azerbaijan Azerbaijan Medical University, Azerbaijan Khazar University, Azerbaijan
14:40 - 14:55	Solution of reduced equations for the propagation of an ultrashort laser pulse in a metamaterial Ahmadova A.R., Kasumova R.J., Safarova G.A. Baku State University, Azerbaijan
14:55 - 15:10	Influence of rare earth metals on electrophysical properties of GeS layered monocrystalline Dashdemirov A.O., Alekperov A.S. Azerbaijan State Pedagogical University, Azerbaijan

15:10 - 15:25	<p>Comparison of the physical properties of Cd_xZn_{1-x}S-based nanocomposite materials produced via sonochemical and SILAR approaches</p> <p>Gahramanli L.R.¹, Muradov M.B.¹, Eyvazova G.M.¹, Kukovecz Á.² ¹Baku State University, Azerbaijan ²MTA-SZTE "Lendület" Porous Nanocomposites Research Group, Hungary</p>
15:25 - 15:45	<p>Coffee Break Academic Building II, 1th Floor</p>
15:45 - 16:00	<p>Preparation of GO/AgNWS nanocomposite and investigation of the effect of sulfidation and its structure and optical characteristics</p> <p>Baghirov M.A., Muradov M.B., Eyvazova G.M., Mammadyarova S.J., Ahmadov X.I. Baku State University, Azerbaijan</p>
16:00 - 16:15	<p>Promising carbons from lignocellulosic raw materials and their processing waste (<i>online</i>)</p> <p>Doroshenko S.O.¹, Tkachenko T.V.¹, Tamarkina Y.V.², Kucherenko V.O.², Jafarov M.A.³, Kamenskyh D.S.^{1,4}, Povazhny V.A.¹, Yevdokymenko V.O.¹ ¹V.P. Kukhar Institute of Bioorganic Chemistry and Petrochemistry, Ukraine ²L.M. Litvinenko Institute of Physical-Organic and Coal Chemistry, Ukraine ³Baku State University, Azerbaijan ⁴V.Bakul Institute for Superhard Materials, Ukraine</p>

December 1, Friday

PARALLEL SESSIONS

Session 2-4: Biophysics

Chairpersons: Ismat Ahmadov (Azerbaijan),
Guzel-Akdemir Ozlen (Türkiye)

Academic Building II, 2nd Floor, Room № 203

[Link to session](#)

14:10 - 14:25	Modification of SLC-0111 as novel carbonic anhydrase inhibitors Guliyeva L., Trawally M., Demir-Yazıcı K., Guzel-Akdemir O. Istanbul University, Türkiye
14:25 - 14:40	Radiobiological research at JINR accelerators Bugay A.N. Joint Institute for Nuclear Research, Russia
14:40 - 14:55	Interaction mechanism of Glycyrrhizin for the COVID-19 treatment Galandarli L.E., Akverdieva G.A. Baku State University, Azerbaijan
14:55 - 15:10	Dark-induced chlorofill degradation in cotton plants seedlings Ahmadov I.S., Eyvazova G.M., Hasanova F.V., Babanlı S.T. Baku State University, Azerbaijan

15:10 - 15:25	Structural organization of lactoferroxine C Agayeva L.N., Abdinova A.A., Akhmedova S.R., Akhmedov N.F. Baku State University, Azerbaijan
15:25 - 15:45	Coffee Break Academic Building II, 1th Floor
15:45 - 16:00	Ultrastructural characteristics of the accumulation of iron nanoparticles in intestine and liver of common carp (Cyprinus Carpio Linnaeus, 1758) Mammadov Ch.A., Hajiyeva A.D., Khalilov R.I. Baku State University, Azerbaijan
16:00 - 16:15	Temperature-induced phase transitions of lipids extracted from human lung carcinoma and normal cells. Aydemirova A.H.¹, Bakhishova M.J.¹, Aslanov R.B.¹, Melikova L.A.^{1,2}, Gasymov O.K.¹ ¹ Institute of Biophysics, Azerbaijan ² National Centre of Oncology, Azerbaijan
16:15 - 16:30	Molecular modeling applied to the new chemical compounds. Akverdieva G.A., Demukhamedova S.D. Baku State University, Azerbaijan
16:30 - 16:45	Refractometric investigation of the hydration process in electrolytes Masimov E.A., Pashayev B.G., Shahbazova G.M., Teymurova J.Z Baku State University, Azerbaijan

<p>16:45 - 17:00</p>	<p>Non-lethal testing of the acute toxicity of newly developed combined cancer treatment modalities against chick embryos and warm-blooded mammals (<i>online</i>)</p> <p>Mitagvaria N.¹, Chirakadze A.¹, Chubinidze G.¹, Dvali N.¹, Khuskivadze N.¹, Shanidze R.², Abuladze M.², Khomeriki I.³, Tserodze K.³</p> <p>¹Caucasus International University, Georgia ²Kutaisi International University, Georgia ³Georgian Technical University, Georgia</p>
<p>17:00 - 17:15</p>	<p>Alkali metal salt solution based combined cancer therapy and the “High PH therapy” concept (<i>online</i>)</p> <p>Khuskivadze N.¹, Chubinidze G.¹, Mitagvaria N.¹, Chirakadze A.¹, Dvali N.¹, Chichua T.¹, Abuladze M.², Khomeriki I.³, Buachidze Z.³</p> <p>¹Caucasus International University, Georgia ²Kutaisi International University, Georgia ³Georgian Technical University, Georgia</p>
<p>17:15 - 17:30</p>	<p>Isotopic enriched boron and boron nitride nanomaterials for proton-boron capture and boron neutron capture therapy of cancer (<i>online</i>)</p> <p>Dvali N.¹, Khuskivadze N.¹, Chubinidze G.¹, Mitagvaria N.¹, Chirakadze A.¹, Chichua T.¹, Chikadze N.², Khomeriki I.³, Buachidze Z.³</p> <p>¹Caucasus International University, Georgia ²Tbilisi State University, Georgia ³Georgian Technical University, Georgia</p>

17:30 - 17:45	<p data-bbox="322 116 997 308">Visible light and infrared oviscopic study, plethysmography and sonography of bird embryos and long-term monitoring of behavioural and physiological parameter of white rats in testing of acute toxicity of drugs (<i>online</i>)</p> <p data-bbox="322 355 941 467">Chichua T.¹, Dvali N.¹, Khuskivadze N.¹, Chubinidze G.¹, Mitagvaria N.¹, Chirakadze A.¹, Chikadze N.², Khomeriki I.³, Buachidze Z.³</p> <p data-bbox="322 475 832 507">¹Caucasus International University, Georgia</p> <p data-bbox="322 512 692 544">²Tbilisi State University, Georgia</p> <p data-bbox="322 549 776 574">³Georgian Technical University, Georgia</p>
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November 30, Thursday

POSTER SESSION

09:00 - 10:00

Main Academic Building, 3rd Floor

1	The production of AAA-bosons in e^-e^+-annihilation Abdullayev S.K., Gojayev M.Sh. Baku State University, Azerbaijan
2	Current oscillations in semiconductors Rzayeva U.Sh, Hasanov E.R. Baku State University, Azerbaijan
3	Analytical solution of the Dirac equation for the linear combination of the Manning-Rosen and Yukawa potential in the case of exact spin symmetry Ahmadov A.I., Aslanova S.M. Baku State University, Azerbaijan
4	Paired spin correlations of electrons, positrons and γ - quanta in the process of photology of e^-e^+ - pairs on nuclei with account of recoil effects and nuclei structure Rajabov M.R. Baku State University, Azerbaijan
5	Optical properties of $PbMoO_4$ crystals determined by spectroscopic ellipsometry. Darvishov N.H.¹, Rustamov F.A.¹, Mamedov M.Z.¹, Gasanly N.M.^{1,2} ¹ Baku State University, Azerbaijan ² Middle East Technical University, Türkiye

6	<p>The temperature dependent dielectrical properties of PtSi/nSi Schottky diodes</p> <p>Afandiyeva I.M.¹, Lebedeva N.N.¹, Akhundov Ch.G.¹, Bagirova S.E.¹, Babayeva R.F.²</p> <p>¹Baku State University, Azerbaijan ²Azerbaijan State University of Economics, Azerbaijan</p>
7	<p>Activation energy of gamma-irradiated HDPE+%A-AL₂O₃ nanocomposites</p> <p>Nabieva A.N.</p> <p>Institute of Radiation Problems, Azerbaijan</p>
8	<p>Dielectric properties of polypropylene/ZnO based nanocomposites.</p> <p>Nuriyeva S.G., Gasimova J.N., Shirinova H.A, Karimova A.H., Gahramanli L.R.</p> <p>Baku State University, Azerbaijan</p>
9	<p>Electrical conductivity of FeGa_{0.4}In_{1.6}Se₄ crystal in alternating electric field.</p> <p>Niftiyev N.N.¹, Mammadov F.M.^{1,2}, Aghayeva R.M.¹, Muradov M.B.³</p> <p>¹Azerbaijan State Pedagogical University, Azerbaijan ²Institute of Catalysis and Inorganic Chemistry, Azerbaijan ³Baku State University, Azerbaijan</p>
10	<p>Nickel-containing thermoplastic elastomer nanocomposites based on polypropylene</p> <p>Guliyeva T.M., Kurbanova N.I.</p> <p>Institute of Polymer Materials, Azerbaijan</p>

11	<p>Obtaining and studying the properties of nanocomposites based on a mixture of polyethylenes of high and low pressure with metal-containing nano fillers</p> <p>Mamedova G.H.¹, Kurbanova N.I.² ¹Azerbaijan State Oil and Industry University, Azerbaijan ²Institute of Polymer Materials, Azerbaijan</p>
12	<p>Photoluminescence spectra of polycrystalline CVD ZnSe when changing the wavelength of excitation light</p> <p>Musayev M.A.¹, Huseynov J.I.², Askerov D.J.¹, Abbasov I.I.¹, Hadiyeva A.A.¹, Mammadova A.J.³, Hasimova N.N.¹ ¹Azerbaijan State Oil and Industry University, Azerbaijan ²Azerbaijan State Pedagogical University, Azerbaijan ³Institute of Biophysics, Azerbaijan</p>
13	<p>Electronic Raman scattering in Hg_{1-x}Cd_xTe</p> <p>Ismayilov T.H.¹, Zeynalova S.I.^{1,2} ¹Baku State University, Azerbaijan ²Institute of Physics, Azerbaijan</p>
14	<p>Thermoelectric effects in superlattices due to electron scattering by short-range potential.</p> <p>Figarova S.R.¹, Huseynov H.I.² ¹Baku State University, Azerbaijan ²Azerbaijan University of Architecture and Construction; Azerbaijan</p>
15	<p>To the temperature dependence of photoconductivity in GeS layered monocrystalline of Er additive atoms effect</p> <p>Alekperov A.S.¹, Ilyasova T.I.², Ismailov M.I.³ ¹Azerbaijan State Pedagogical University, Azerbaijan ²Azerbaijan University of construction and architecture, Azerbaijan ³Nakhchivan State University, Azerbaijan</p>

16	<p>Temperature dependence of the kinetic coefficients of Bi_{0.97}Sb_{0.03} alloy</p> <p>Musayev A.A.¹, Yuzbashov E.R.² ¹National Aviation Academy, Azerbaijan ²Institute of Physics, Azerbaijan</p>
17	<p>Comparative adsorption study of Fe(III) ions onto odified adsorbents</p> <p>Eyyubova E.E., Nagiyev Kh.J., Chyragov F.M. Baku State University, Azerbaijan</p>
18	<p>Spatial structure of the HUMEN β-CASOMORPHIN-7 molecule</p> <p>Akhmedov N.A., Agayeva L.N., Ismailova L.I. Baku State University, Azerbaijan</p>
19	<p>Structure of the iron oxide Fe_xO_y complexes with glucose and Di-glucose</p> <p>Abbasova G.C., Hajiyeva L.S. Baku State University, Azerbaijan</p>
20	<p>EPR and TEM studies of biological systems</p> <p>Nasibova A.N.¹, Khalilov R.I.² ¹Baku State University, Azerbaijan ²Institute of Radiation Problems, Azerbaijan</p>
21	<p>Structural characteristics of KI in aqueous solution</p> <p>Pashayev B.G. Baku State University, Azerbaijan</p>
22	<p>Urea-ethanol-water systems research by viscosimetry method</p> <p>Hajiyeva Sh.N.¹, Ahmedova A.B.¹, Orucova N.F.², Babayeva F.Kh.¹ ¹Baku State University, Azerbaijan ²Azerbaijan Technology University, Azerbaijan</p>

23	<p>Structure and conformation of macromolecular chain in WATER-PEG-KI systems</p> <p>Masimov E.A., Pashayev B.G., Hajiyeva Sh.N. Baku State University, Azerbaijan</p>
24	<p>Synthesis and structural properties of chitosan and cross-linked chitosan coated magnetite nanoparticles for anticancer applications</p> <p>Karimova A.H.¹, Mehdiyeva A.R.¹, Yagublu V.Sh.², Nuriyeva S.G.¹, Shirinova H.A.¹, Gahramanli L.R.¹ ¹Baku State University, Azerbaijan ²University of Heidelberg, Germany</p>
25	<p>The role of spectral trajectory corresponding to voice energy maxima in person identification</p> <p>Aliyev L.P.¹, Gaziyeva N.G.², Guliyeva S.K.¹ ¹Forensic Expertise Centre of the Ministry of Justice, Azerbaijan ²Institute of Linguistics, Azerbaijan</p>
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28	<p>Spectral trajectory reflection of the influence of neighboring sounds on the energy maximum F2 of a vowel sound</p> <p>Aliyev L.P.¹, Gaziyeva N.G.², Guliyeva I.I.¹, Aghamaliyeva A.V.¹</p> <p>¹Forensic Expertise Centre of the Ministry of Justice, Azerbaijan ²Institute of Linguistics, Azerbaijan</p>
29	<p>MoS₂ thin film: preparation technology and characterization</p> <p>Bagiyev E.A.</p> <p>Institute of Physics, Azerbaijan</p>
30	<p>The effect of nickel oxide nanoparticles on the structure and properties of nanocomposites based on high-pressure polyethylene containing multiwalled carbon nanotubes</p> <p>Kurbanova N.I.¹, Mirzoev N.A.¹, Zeynalov E.B.², Gadzhieva F.V.³, Gahramanli L.R.³</p> <p>¹Institute of Polymer Materials, Azerbaijan ²Institute of Catalysis and Inorganic Chemistry, Azerbaijan ³Baku State University, Azerbaijan</p>
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33	<p>Electrical properties of porous-Si/nano-Cd_{0.4}Zn_{0.6}S heterojunctions</p> <p>Mamedov H.M.¹, Shah S.I.², Mansimova F.B.¹ ¹Baku State University, Azerbaijan ²University of Delaware, USA</p>
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41	<p>Effect of thermal treatment methods on magnetic hysteresis properties of Fe-Ni-Si-B based amorphous magnets</p> <p>Abdullayev A.P., Rafiyev N.M., Isayeva A.A., Asgarova G.Z. Azerbaijan University of Architecture and Construction, Azerbaijan</p>
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51	<p>Spatial structure of heptapeptide molecule</p> <p>Ismailova L.I., Akhmedov N.A. Baku State University, Azerbaijan</p>

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54	<p>Molecular modeling of ILE-TRP dipeptide</p> <p>Rahimzade S.G., Akverdieva G.A. Baku State University, Azerbaijan</p>
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65 Study of the spectrum of Nova Sco 2023 during the outburst period

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66 Joint surface ionization of CsCl molecules and Ba atoms on the surface of rhenium covered with a graphite monolayer

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