IX INTERNATIONAL SYMPOSIUM ON SPECIALTY POLYMERS

Dedicated to the 95th anniversary of Academician E.A. Bekturov
and the 75th anniversary of Prof. S. Kudaibergenov

PROGRAM



7-9 October 2026

Almaty, Kazakhstan

Professor Esen A. Bekturov
Member of National Academy of Science of Kazakhstan

Professor Esen A. Bekturov was an outstanding Kazakh scientist, a prominent specialist in physical chemistry and polymer science, Doctor of Chemical Sciences, Professor, and Academician of the National Academy of Sciences of the Republic of Kazakhstan. His pioneering research laid important foundations for the development of polymer physical chemistry in Kazakhstan and contributed to its international recognition.

Esen A. Bekturov was born on December 14, 1931, in Tashkent into the family of Academician A.B. Bekturov. He graduated with honors from S.M. Kirov Kazakh State University in 1954 and began his scientific career at the Institute of Chemical Sciences of the Academy of Sciences of the Kazakh SSR under the supervision of Academician M.I. Usanovich. In 1958, he defended his Candidate of Sciences dissertation on phase equilibria in binary liquid systems.

In the early 1960s, Professor Bekturov turned his attention to polymer science. His studies of polymer solutions and the hydrodynamic behavior of macromolecules contributed to understanding their molecular characteristics and behavior in solution.

A major part of Academician Bekturov's scientific legacy is associated with water-soluble polymers, polyelectrolytes, polyampholytes, interpolymer complexes, and polymer hydrogels. Under his leadership, systematic studies were conducted on the hydrodynamic and conformational properties of polyelectrolytes, complex formation involving macromolecules, and the influence of environmental factors on polymer interactions. His research on synthetic polyampholytes contributed to understanding the relationship between macromolecular charge, conformation, and solution properties.

Professor Bekturov and his colleagues made significant contributions to the study of interpolymer complexes formed through hydrogen bonding, electrostatic interactions, and other non-covalent forces. His research also covered stimuli-responsive polymer hydrogels, including their response to pH, temperature, solvent composition, and magnetic fields. These studies opened new possibilities for functional polymer systems and their applications.

Academician Bekturov published more than 600 scientific works, including 18 inventions, around 100 articles in international journals, and about 30 monographs. His books were published in Russia, Poland, Japan, and Germany, and his works on polymer solutions, water-soluble polymers, polyampholytes, and interpolymer complexes made an important contribution to polymer physical chemistry.

An essential part of his legacy was the establishment of a strong scientific school in polymer chemistry. Under his supervision, 35 Candidate of Sciences, 9 doctoral, and 7 master's theses were successfully completed. His students continued developing polymer science in Kazakhstan and internationally.

His achievements were recognized with numerous distinctions, including the State Prize of the Kazakh SSR in Science and Technology and the title "Honored Worker of Science and Technology of the Republic of Kazakhstan." In 2003, he was elected an Academician of the National Academy of Sciences of the Republic of Kazakhstan.

The IX International Symposium on Specialty Polymers (ISSP 2026) commemorates the 95th anniversary of Academician Esen A. Bekturov, honoring his outstanding contribution to polymer science. His scientific ideas, school, and traditions continue through his students and subsequent generations of polymer scientists.

Professor Sarkyt E. Kudaibergenov

Professor Sarkyt E. Kudaibergenov is a distinguished Kazakh scientist in polymer physical chemistry, Doctor of Chemical Sciences, Professor, and an internationally recognized expert in synthetic polyampholytes and specialty polymers.

Born on May 20, 1951, in the Semipalatinsk Region of Kazakhstan, he graduated from the Faculty of Chemistry of S.M. Kirov Kazakh State University in 1973, specializing in Physical Chemistry. His scientific career in polymer chemistry developed under the guidance of outstanding scientists, Academician E.A. Bekturov and Academician S.R. Rafikov. He defended his Candidate of Sciences dissertation in 1980 and his Doctor of Chemical Sciences dissertation at M.V. Lomonosov Moscow State University in 1991.

For more than five decades, Professor Kudaibergenov's research has focused on fundamental and applied aspects of polyelectrolytes, polyampholytes, interpolymer complexes, stimuli-responsive hydrogels, polymer nanocomposites, and functional polymer materials. A major area of his research is devoted to synthetic polyampholytes as simple models of proteins and polypeptides. According to Web of Science Clarivate Analytics, he has been recognized as a world leader in the field of synthetic polyampholytes. His research also covers applications of specialty polymers in the petroleum industry, petrochemistry, catalysis, nanotechnology, biotechnology, medicine, and environmental protection.

In 1999, Professor Kudaibergenov founded and became Director of the Institute of Polymer Materials and Technology, which has developed into an important center for polymer science in Kazakhstan. Polymer technologies developed under his leadership have undergone pilot-scale and industrial testing at oil fields in Kazakhstan. He has led and participated in numerous national and international research projects, including INTAS, the NATO Science for Peace and Security Programme, and Horizon 2020, and has collaborated with leading research institutions in Europe, the United States, and Asia.

Professor Kudaibergenov is the author of more than 500 scientific publications, including 25 monographs, textbooks and teaching manuals, 13 book chapters, 37 review articles, and approximately 130 papers in international peer-reviewed journals. He is also the author and co-author of 45 inventor's certificates and patents, including international patents. His major scientific works include English-language monographs on synthetic polyampholytes published by Springer, Kluwer Academic/Plenum Publishers, and CRC Press.

An important part of Professor Kudaibergenov's legacy is his scientific school. Under his supervision, 1 doctoral, 10 Candidate of Sciences, and 7 PhD dissertations have been successfully defended. His students and colleagues continue to advance polymer science in Kazakhstan and internationally.

His scientific achievements have been recognized with numerous awards, including the State Prize of the Kazakh SSR in Science and Technology, the K.I. Satpayev Prize, the badge "For Merits in the Development of Science of the Republic of Kazakhstan," and the "Best Researcher" Award. He has also been included in the Top 2% of the World's Scientists according to the Stanford University database. In 2025, he became a member of the National Council for Science and Technology under the President of the Republic of Kazakhstan.

ISSP 2026 celebrates Professor Kudaibergenov's lifelong dedication to polymer science, his scientific school, and his outstanding contribution to strengthening Kazakhstan's presence in the international scientific community.

The IX International Symposium on Specialty Polymers (ISSP 2026) is dedicated to two significant anniversaries — the 95th anniversary of Academician Esen A. Bekturov and the 75th anniversary of Professor Sarkyt E. Kudaibergenov. This symbolic connection reflects the continuity of Kazakhstan's polymer science: from the foundations established by Academician Bekturov to its further development and international recognition through the work of Professor Kudaibergenov and subsequent generations of researchers.

PROGRAMME
OF THE IX INTERNATIONAL SYMPOSIUM ON SPECIALTY POLYMERS
07-09 October 2026, Almaty, Kazakhstan

October 07, 2026 (Day 1)

Location: *Beremzhanov Hall Faculty of Chemistry and Chemical Technology of al-Farabi Kazakh National University, 71 al-Farabi Avenue, Almaty*

08.30 – 09.30	**Registration of participants**
09.30 – 10.00	**Welcome Address** **Prof. Alina K. Galeyeva,** Vice-Rector, Farabi University, Kazakhstan **Prof. Galiya S. Irmukhametova**, Co-Chair of the Conference Organizing Committee, Farabi University, Kazakhstan **Prof. Vitaliy V. Khutoryanskiy**, Co-Chair of the Conference Organizing Committee, Reading School of Pharmacy, UK Brief Biographical Notes on E.A. Bekturov and S.E. Kudaibergenov **Dr. Gulnar B. Bekturova** Spouse of E.A. Bekturov Group Photo of Conference Participants
10.00 – 10.15	**Presentation of the books** Gibratty Gumyr (Ғибратты Ғұмыр) Gylym Tylsymyna Zhol (Ғылым Тылсымына Жол) about Prof. S. Kudaibergenov
10.15 – 10.45	**Plenary Session Chair: Prof. Galiya Irmukhametova**
	Plenary Lecture **Prof. Hiroyuki Nishide**, Waseda University, Japan REDOX-ACTIVE AND WATER-SOLUBLE POLYELECTROLYTES TOWARDS ELECTRIC ENERGY-RELATED DEVICES
10.45 – 11.15	**Plenary Lecture** **Prof. Heikki Tenhu**, University of Helsinki, Finland TUNING PROPERTIES OF POLYCATIONS WITH COUNTERIONS
11.15 – 11.45	***Coffee Break***
11.45 – 12.15	**Plenary Lecture** **Prof. Nurxat Nuraje,** Nazarbayev University, Kazakhstan FROM SPECIALTY POLYMER DESIGN TO ADVANCED APPLICATIONS: ZWITTERIONIC AND CONDUCTING POLYMERS
12.15 – 12.45	**Plenary Lecture** **Prof. Vitaliy V. Khutoryanskiy,** University of Reading, UK INTERPOLYMER COMPLEXES: PAST, PRESENT AND EMERGING FRONTIERS

12.45 – 13.00	**Key Note Lecture** **Prof. Zulkhair A. Mansurov,** Institute of Combustion Problems, Almaty, Kazakhstan FUNCTIONAL NANOMATERIALS FOR ENERGY, ENVIRONMENT AND SAFETY
13.00 – 14.00	***Lunch Break***
14.00 – 14.30	**Plenary Session Chair: Prof. Vitaliy Khutoryanskiy**
	Plenary Lecture **Prof. Sarkyt E. Kudaibergenov,** Institute of Polymer Materials and Technology, Almaty, Kazakhstan POLYAMPHOLYTES: PAST, PRESENT, PERSPECTIVES
14.30 – 14.55	**Key Note Lecture** **Prof. Rouslan I. Moustafine,** Kazan State Medical University, Kazan, Russia INTERPOLYMER INTERACTIONS AS A STRATEGY FOR THE DESIGN AND CONTROLLED RELEASE OF DRUG DELIVERY SYSTEMS
14.55 – 15.20	**Key Note Lecture** **Prof. Abdumutalib Atakhanov** Institute of Polymer Chemistry and Physics of Uzbekistan Academy of Sciences, Tashkent, Uzbekistan NANOCELLULOSE AS A PLATFORM FOR ADVANCED FUNCTIONAL MATERIALS: FROM ISOLATION AND MODIFICATION TO EMERGING APPLICATIONS
15.20 – 15.45	**Key Note Lecture** **Prof. Irina I. Semina,** Kazan State Medical University, Kazan, Russia IN VIVO EXPERIMENTS AS AN ESSENTIAL APPROACH FOR EVALUATING DRUG DELIVERY SYSTEMS EFFECTIVENESS
15.45 – 16.10	**Key Note Lecture** **Prof. Yerkeblan M. Tazhbayev,** Buketov University, Karaganda, Kazakhstan POLYSACCHARIDE NANOPLATFORMS FOR CONTROLLED DRUG DELIVERY
16.10 – 16.40	***Coffee Break***
16.40 – 18.00	**Campus Tour of Farabi University**

October 08, 2026 (Day 2)

Location: *Beremzhanov Hall Faculty of Chemistry and Chemical Technology of al-Farabi Kazakh National University, 71 al-Farabi Avenue, Almaty*

09.00 – 09.30	**Plenary Session Chair: Dr. Daulet Kaldybekov**
	Plenary Lecture **Prof. Vladimir I. Lozinskiy** A.N. Nesmeyanov Institute of Organoelement Compounds, RAS, Moscow, Russia PVA-BASED COMPOSITE CRYOGELS FILLED WITH DISPERSED PARTICLES OF SPECIFIC MORPHOLOGY AND PHYSICO-CHEMICAL PROPERTIES
09.30 – 10.00	**Plenary Lecture** **Prof. Gulzhan I. Dzhardimalieva,** Institute of Problems of Chemical Physics RAS, Moscow, Russia DESIGN AND APPLICATIONS OF FUNCTIONAL HYBRID MOF SYSTEMS
10.00 – 10.25	**Plenary Lecture** **Prof. Randall Seright,** New Mexico Tech, USA EXPLORING THE EXTENSION OF HPAM POLYMERS IN POROUS MEDIA USING VARIATIONS IN SALINITY, HARDNESS AND POLYMER CONCENTRATION
10.25 – 10.50	**Key Note Lecture** **Prof. Kamila A.Kydyraliyeva,** Moscow Aviation Institute, Moscow, Russia HYBRID SYSTEMS BASED ON HUMIC ACIDS: FROM DATA-DRIVEN DESIGN APPROACHES TO SPECIFIC FUNCTIONAL MATERIALS
10.50 – 11.10	**Contributed Lecture** **Prof. Salimgerey Adilov,** Nazarbayev University, Astana, Kazakhstan HYDROGEN GAS SENSOR BASED ON NANOSTRUCTURED POLYANILINE
11.10 – 11.40	*Coffee Break*
~~11.40 – 12.00~~	~~**Contributed Lecture**~~ ~~**Prof. Talkybek K. Jumadilov,** Bekturov Institute of Chemical Sciences, Almaty, Kazakhstan~~ ~~SYNERGISTIC SORPTION OF GALLIUM(III) AND SCANDIUM(III) IONS BY THE INTERGEL SYSTEM OF POLY(ACRYLIC ACID) AND POLY(4-VINYLPYRIDINE) HYDROGELS~~
12.00 – 12.20	**Contributed Lecture** **Dr Iskander Gussenov,** Institute of Polymer Materials and Technology, Almaty, Kazakhstan FRACTURE PLUGGING WITH GELLAN GUM: LABORATORY AND FIELD OBSERVATIONS

12.20 – 12.40	**Contributed Lecture** **Dr Daulet Kaldybekov,** Farabi University, Almaty, Kazakhstan IMPROVING GELATIN'S MUCOADHESION THROUGH CHEMICAL MODIFICATION WITH UNSATURATED ANHYDRIDES
12.40 – 13.00	**Contributed Lecture** **Dr Alexey Klivenko,** Shakarim University, Semey, Kazakhstan POLYELECTROLYTE COMPLEXES OF BIOPOLYMERS TO ACCELERATE THE CULTIVATION OF PINE SEEDLINGS
	Contributed Lecture **Dr Guzel Abilova**., K. Zhubanov Aktobe Regional University, Aktobe, Kazakhstan POLY(2-ETHYL-2-OXAZOLINE)-BASED MUCOADHESIVE FILMS FOR OCULAR AND VAGINAL DRUG DELIVERY
13.00 – 14.00	***Lunch Break***

Section Session

Section Session I Chair: Dr Laura Agibayeva ***Location: Ergozhin Hall, Faculty of Chemistry and Chemical Technology, 2nd Floor***	
14.00 – 14.15	**Dr Danelya Makhayeva,** Farabi University, Almaty, Kazakhstan POLYMER-IODINE COMPLEXES: A STUDY ON INTERACTION AND ANTIMICROBIAL EFFECTS OF SELECTED POLY(2-ALKYL-2-OXAZOLINES)
14.15 – 14.30	**Dr Ekut S.Karieva,** Tashkent Pharmaceutical Institute, Tashkent, Uzbekistan STUDY OF THE EFFECT OF STRUCTURING AGENT CONCENTRATION ON CERTAIN STRUCTURAL-MECHANICAL CHARACTERISTICS OF A MULTICOMPONENT PHARMACEUTICAL SYSTEM
14.30 – 14.45	**Arailym Daribay,** Buketov Karaganda National Research University, Karaganda, Kazakhstan EFFECT OF THIOL-TO-ACRYLATE RATIO ON THE MUCOADHESION OF POLYMERIC NANOPARTICLES SYNTHESIZED BY CLICK CHEMISTRY
14.45 – 15.00	**Zhansaya Kozhantayeva,** Farabi University, Almaty, Kazakhstan NITRIC OXIDE-RELEASING ORGANOSILICA NANOPARTICLES FOR INTRAOCULAR PRESSURE REDUCTION
15.50 – 15.10	**Ramina Makhpirova**, Farabi University, Almaty, Kazakhstan PVA-BASED BIOHYBRID HEMOSTATIC HYDROGELS CONTAINING KAOLIN, CHITOSAN, SODIUM ALGINATE, AND CALCIUM IONS

15.10 – 15.20	**Saiara Tairova,** Farabi University, Almaty, Kazakhstan CREATION OF NEW DRUG DELIVERY SYSTEMS FOR THE TREATMENT OF EYE DISEASES USING MUCOADHESIVE POLYMERS
15.20 – 15.30	**Zhansaya Zhankyzy, Akerke Shyngysbayeva,** Farabi University, Almaty, Kazakhstan COPPER-CONTAINING POLYMER COMPLEX COMPOUNDS FOR PLANT PROTECTION
15.30 – 15.40	**Uldana Toktauova,** Farabi University, Almaty, Kazakhstan MODIFICATION OF BIOPOLYMERS WITH KERATINS OBTAINED FROM SHEEP WOOL AND INVESTIGATION OF THEIR PROPERTIES
15.40 – 15.50	**Aiaru Tynybekova,** Farabi University, Almaty, Kazakhstan FLOCCULATION OF KAOLIN SUSPENSIONS USING A COPOLYMER OF TRIMETHYLAMMONIUM PROPYL METHACRYLAMIDE AND DIMETHYL ACRYLAMIDE
15.50 – 16.00	**Moldir A. Saulimbay,** Satbayev University, Almaty, Kazakhstan PREPARATION AND CHARACTERIZATION OF ULTRATHIN LbL FILMS BASED ON CHITOSAN–GELLAN GUM POLYELECTROLYTE COMPLEXES
Section Session II Chair: Dr Iskander Gussenov ***Location: Beremzhanov Hall Faculty of Chemistry and Chemical Technology***	
14.00 – 14.15	**Dr. Yerbolat Magazov,** National Laboratory Astana, Astana, Kazakhstan CONTINUOUSLY POROUS POLYPYRROLE-MoS2-CoS2/CNT ELECTROCATALYSTS FOR ELECTROCHEMICAL WATER SPLITTING
14.15 – 14.30	**Dr. Olzat Toktarbaiuly,** National Laboratory Astana, Astana, Kazakhstan FUNCTIONAL POLYMER COATINGS FOR SUPERHYDROPHOBIC AND SELF-CLEANING SURFACES
14.30 – 14.45	**Dr. Nurbatyr Mukhamedgazy,** Institute of Polymer Materials and Technology, Almaty, Kazakhstan COMPARATIVE STUDY OF OIL RECOVERY USING SALT TOLERANT TERNARY POLYAMPHOLYTE AND HYDROLYZED POLYACRYAMIDE
14.45 – 15.00	**Dr. Arshyn Zhengis,** National Laboratory Astana, Nazarbayev University, Astana, Kazakhstan FUNCTIONAL POLYMERIC MEMBRANES FOR ADVANCED WATER PURIFICATION
15.00 – 15.15	**Dr. Indira Kurmanbayeva,** Abai Kazakh National Pedagogical University, Chemistry Department, Almaty, Kazakhstan CATALYTIC PERFORMANCE OF SUPPORTED Pd-PEG/ZnO CATALYST FOR HYDROGENATION REACTION

15.15 – 15.30	**Dr. Dana Kanzhigitova,** National Laboratory Astana, Nazarbayev University, Astana, Kazakhstan SIDE-CHAIN HYDROLYSIS AS A STRATEGY FOR TUNING CHARGE TRANSPORT AND ELECTROCHROMIC PROPERTIES OF PRODOT-BASED CONDUCTING POLYMERS
15.30 – 15.40	**Aigerim Imash,** Institute of Combustion Problems, Almaty, Kazakhstan: POLYANILINE-BASED NANOCOMPOSITES FOR ROOM-TEMPERATURE GAS SENSING
15.40 – 15.50	**Gulim Imekova,** National Laboratory Astana, Nazarbayev University, Astana, Kazakhstan ZWITTERIONIC COPOLYMERS FOR ENHANCED OIL RECOVERY UNDER HIGH-SALINITY CONDITIONS
15.50 – 16.00	**Akezhan Balgarayev,** Farabi University, Almaty, Kazakhstan CATALYTIC CONVERSION OF POLY(ETHYLENE TEREPHTHALATE) WASTE USING MODIFIED SEWAGE-SLUDGE-DERIVED MATERIALS
16.00 – 16.15	**Sponsor Company Representative** **IC Lab,** Astana Kazakhstan
16.15 – 16.45	***Coffee Break***
16.45 – 17.45	**POSTER SESSION** **Session Chair: Dr Zarina Kenessova**
17.45 – 18.15	**Closing Session and Awards Ceremony**
19.00 – 00.00	**Gala Dinner** for participants (only via invitation)

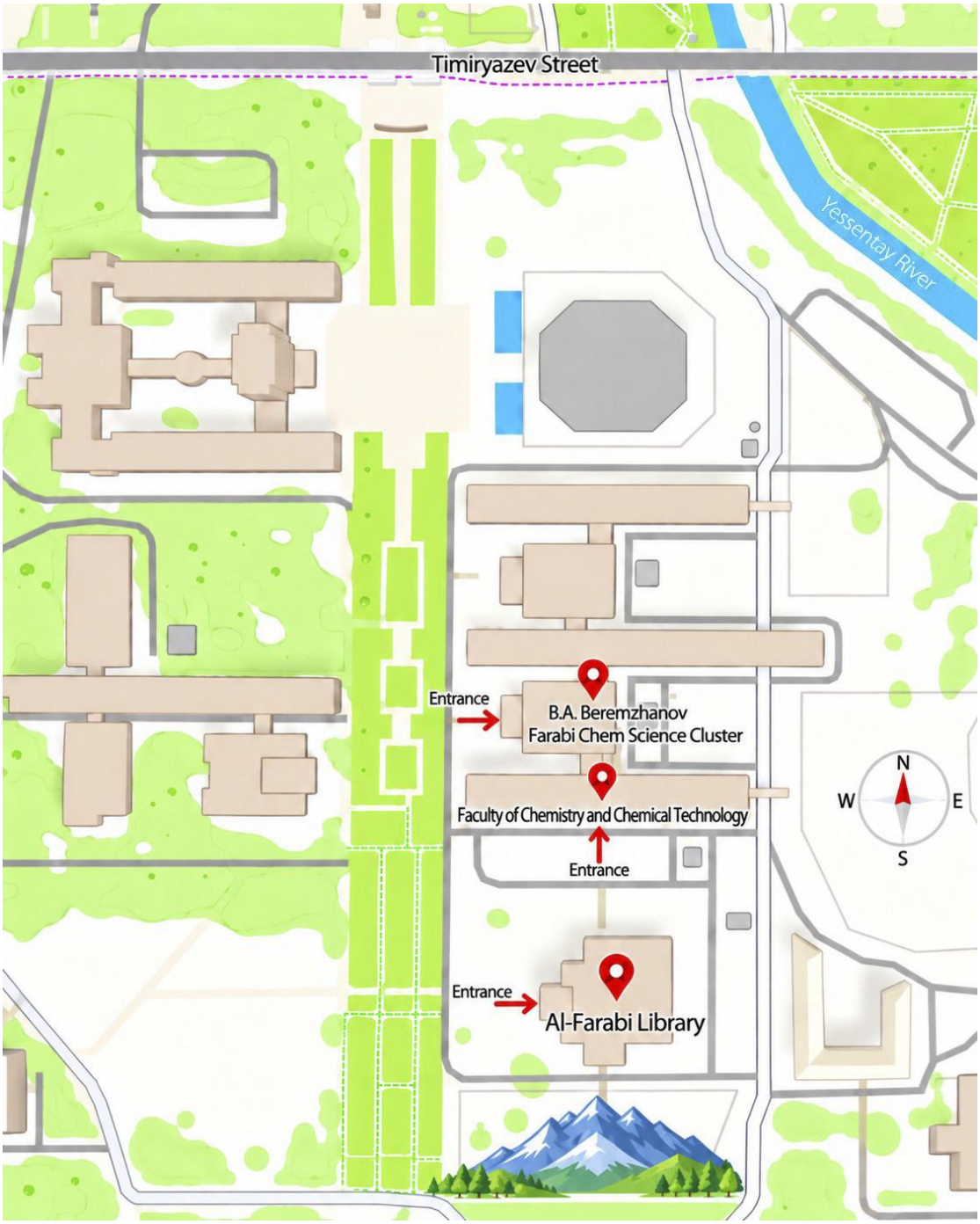
<u>October 09, 2026 (Day 3)</u>

09.00 – 16.30 **Cultural Program at Etno AUL**

Meeting Point: *Main entrance of the Faculty of Chemistry and Chemical Technology of al-Farabi Kazakh*
National University, 71 al-Farabi Avenue, Almaty

Departure of Participants

CAMPUS MAP


Timiryazev Street
Yessentay River
Entrance
B.A. Beremzhanov
Farabi Chem Science Cluster
Faculty of Chemistry and Chemical Technology
Entrance
Entrance
Al-Farabi Library
N
W
E
S

LIST OF POSTERS

1	A.Naizabayev[1,2], S.Akhmetova[1], E.Talgatov[1], A.Auyezkhanova[1]- [1]D.V. Sokolsky Institute of Fuel, Catalysis and Electrochemistry JSC, Almaty, Kazakhstan, [2]Kazakh-British Technical University JSC, Almaty, Kazakhstan **INFLUENCE OF P4VP CONTENT ON THE PROPERTIES OF Pd/γ-Al_2O_3 HYDROGENATION CATALYSTS**
2	E. Talgatov[1], S. Saryuisin [1,2], E. Sailaubay [1], A. Zamanbekova[1] [1]D.V. Sokolsky Institute of Fuel, Catalysis and Electrochemistry JSC, Almaty, Kazakhstan [2]Abai Kazakh National Pedagogical University, Almaty, Kazakhstan **EFFECT OF APTES FUNCTIONALIZATION ON PECTIN IMMOBILIZATION ON SILICA**
3	Ye. Nassikhatuly Buketov Karaganda National Research University, Karaganda, Kazakhstan **EFFECT OF POLYMERIZATION INITIATION METHOD ON THE FORMATION OF P(NVP-co-AA)-BASED POLYMERIC MICRONEEDLES**
4	I. Nurgaliev, M. Marasulov, U. Eliyev, A. Hamzayev, N. Ashurov Institute of polymer chemistry and physics Academy of sciences of the Republic of Uzbekistan, Tashkent, Uzbekistan **RADIATION-HARDENED FLEXIBLE PEROVSKITE PHOTOVOLTAICS FOR ORBITAL APPLICATIONS: MULTISCALE MODELING OF PROTON-INDUCED DISPLACEMENT DAMAGE**
5	N. Burkhanova [1], Z. Abrarova[1], A. Abilkasimov[2] and I. Nurgaliev[1] [1]Institute of polymer chemistry and physics Academy of sciences of the Republic of Uzbekistan, Tashkent, Uzbekistan. [2]Kimyo international university in Tashkent, Tashkent, Uzbekistan. **TUNING THE MOLECULAR ELECTRONIC STRUCTURE OF POLYSACCHARIDES: A COMPARATIVE DFT STUDY OF CHEMICALLY MODIFIED CHITOSAN AND CELLULOSE DERIVATIVES**
6	B. Tursynova[1,2], A. Yu. Ten[1], N.A. Ibragimova[3], G.A. Mun[2], V.K. Yu[1] [1]A.B. Bekturov Institute of Chemical Sciences, Almaty, Kazakhstan [2]Al-Farabi KazNU, Faculty of Chemistry and Chemical Technology, Almaty, Kazakhstan [3]Al-Farabi KazNU, Faculty of Biology and Biotechnology, Almaty, Kazakhstan **GELLAN GUM AS A MULTIFUNCTIONAL BIOPOLYMER MATRIX FOR AGRICULTURAL AND TOPICAL DELIVERY SYSTEMS**
7	R.N. Tuleyeva[1], D.B. Kaldybekov[1,2] [1]Institute of Polymer Materials and Technologies, Almaty, Kazakhstan [2]Al-Farabi Kazakh National University, Almaty, Kazakhstan **POLYMER-STABILIZED GOLD NANOPARTICLES FOR PLASMONIC PHOTOTHERMAL INHIBITION OF EHRLICH TUMOR GROWTH**
8	A.K. Kaiaidarova[1*], V.V. Bobrova[2], A.V. Kasperovich[2], S.A. Efremov[1] [1]Al-Farabi Kazakh National University, Almaty, Kazakhstan [2]Belarusian State Technological University, Minsk, Belarus

	A NEW FUNCTIONAL ADDITIVE FOR KINETIC REGULATION AND REINFORCEMENT OF ELASTOMERIC COMPOSITIONS
9	A.E. Piterskiy, A.B. Balgarayev, N.A. Zabara, S.V. Nechipurenko Al-Farabi Kazakh National University, Almaty, Kazakhstan **CATALYTIC PYROLYSIS OF POLYETHYLENE TEREPHTHALATE AND POLYSTYRENE USING Fe-MODIFIED KAOLIN**
10	Y. Seisenov[1], E. Shatabayeva[1], D. Kaldybekov[1,2], S. Kudaibergenov[2], V. Khutoryanskiy[3] [1] Department of Chemistry and Chemical Technology, Farabi University, 050040 Almaty, Kazakhstan [2] Institute of Polymer Materials and Technology, 050019 Almaty, Kazakhstan [3] Reading School of Pharmacy, University of Reading, Whiteknights, RG6 6DX Reading, United Kingdom **PHENYLBORONIC ACID-FUNCTIONALISED GELATIN/PVA FILMS FOR ENHANCED VAGINAL MUCOADHESION**
11	E. Mun[1], B. Zhaisanbayeva[1], Ye. Sabituly[2], D. Zhakenova[1], A. Akpay[2] [1] Department of Chemistry, Nazarbayev University, Astana, Kazakhstan [2] School of Medicine, Nazarbayev University, Astana, Kazakhstan **PROMISING ENDEMIC PLANTS OF KAZAKHSTAN IN APPLICATION TO PHARMACOLOGY AND TOXICOLOGY**
12	Ibrayev N.Kh., Amanzholova G.S., Aimagambetova A.A. Institute of Molecular Nanophotonics, Karaganda National Research University named after academician Ye.A. Buketov , Karaganda, Kazakhstan **PLASMON-ENHANCED SINGLET OXYGEN GENERATION IN A POLYMER MATRIX**
13	B. Zhaisanbayeva[1], E. Mun[1], A. Zhuraliyeva[1], D. Galym[2] [1] Department of Chemistry, Nazarbayev University, Astana, Kazakhstan [2] School of Medicine, Nazarbayev University, Astana, Kazakhstan **THREE-DIMENSIONAL SPHEROID AND CLUSTEROID SYSTEMS FOR EVALUATING NANOPARTICLE PERMEABILITY**
14	Abiyeva A.M., Makhayeva D.N. Al-Farabi Kazakh National University, Kazakhstan **COMPLEXATION OF POLY(2-ALKYL-2-OXAZOLINES) WITH POLYCARBOXYLIC ACIDS FOR THE DELIVERY OF POORLY WATER-SOLUBLE DRUGS**
15	D.E. Manzhelenov, D.N. Makhayeva Al-Farabi Kazakh National University, Almaty, Kazakhstan **TECHNOLOGY FOR PRODUCING NANOPARTICLES BASED ON A COMPLEX OF A NATURAL POLYMER AND A SURFACTANT**
16	Z.B. Orazova, PhD B.E. Savdenbekova Al-Farabi Kazakh National University, Almaty, Kazakhstan **ANTIBACTERIAL POLYELECTROLYTE MULTILAYER COATINGS FOR ORTHOPEDIC IMPLANT SURFACES: INFLUENCE OF ACTIVE AGENTS, FILM ARCHITECTURE AND SURFACE PROPERTIES**
17	I. Askaruly[1,2], P. I. Urkimbayeva[1], Z. A. Kenessova[1]

	[1]Al-Farabi Kazakh National University, Almaty, Kazakhstan [2]Syntek LLP, Almaty, Kazakhstan **SYNTHESIS AND CHARACTERIZATION OF ACRYLATE POLYMER-BASED EMULSION FOR SOIL STABILIZATION AND DUST SUPPRESSION**
18	E. Mun, B. Zhaisanbayeva, Z. Kemalkhan, I. Kulik, A. Serikzhanova Department of Chemistry, Nazarbayev University, Astana, Kazakhstan **FUNCTIONALIZED ORGANOSILICA NANOPARTICLES FOR ANTICANCER DRUG DELIVERY**
19	A.N.Yessirkepova[1], P.I.Urkimbayeva[1], Z.A.Kenessova[1], M.B.H Othman[2] [1] Department of Chemistry and Chemical Technology, Farabi University, 050040 Almaty, Kazakhstan [2] School of Chemical Sciences, University Sciences Malaysia, Gelugor, Malaysia **CHEMICALLY INITIATED SYNTHESIS OF PVA-NVCL-HEA COPOLYMERS FOR POTENTIAL BIOMEDICAL APPLICATIONS**
20	Zh.Q. Zeinolla[1], A.B.Qoishybai[1], A. Amanzholkyzy[1], Sh.N. Zhumagaliyeva[1] [1]Al-Farabi Kazakh National University, Almaty, Kazakhstan **SORPTION PROPERTIES OF A BIOCOMPOSITE BASED ON BENTONITE AND INULIN**
21	A.A. Aldamuratova, A. Amanzholkyzy, A. Nurmukhametov, Sh.N. Zhumagaliyeva Al-Farabi Kazakh National University, Almaty, Kazakhstan **PREPARATION AND CHARACTERIZATION OF HYDROXYPROPYL METHYLCELLULOSE-BASED COMPOSITE FILMS**
22	A.A. Berdaly[1], A.T. Akhmediya[1], L.E. Agibayeva[1], R.G. Kondaurov[2] [1]al-Farabi Kazakh National University, Almaty, Kazakhstan [2]International Engineering and Technology University, Almaty, Kazakhstan **MOLECULAR IMPRINTING: SYNTHESIS OF ION IMPRINTED POLYMER FOR SORPTION OF RARE-EARTH METAL**
23	D.T. Abduletip[1], A.T. Marat[1], G.S. Irmukhametova[1], V.V. Khutoryanskiy[2] [1]al-Farabi Kazakh National University, Almaty, Kazakhstan [2]University of Reading, Reading, United Kingdom **GELLAN GUM–CETYLPYRIDINIUM BROMIDE COMPLEXES: DRUG SOLUBILIZATION, ANTIMICROBIAL EFFICACY AND BIOSAFETY**
24	D.T. Abduletip[1], Zainab Dala-ali[2], G.S. Irmukhametova[1], V.V. Khutoryanskiy[2, 3] [1]Department of Chemistry and Chemical Technology, Farabi University, Almaty, Kazakhstan [2]Reading School of Pharmacy, University of Reading, Reading, UK [3]Physicochemical, Ex Vivo and Invertebrate Tests and Analysis Centre (PEVITAC), University of Reading, Reading , UK **ANTIMICROBIAL AND TOXICOLOGICAL PROPERTIES OF CHITOSAN–SURFACTANT SYSTEMS: EFFECT OF ALKYL CHAIN LENGTH**
25	S.N. Sagatov, Kh.S. Rafikova Kazakh National Research Technical University named after K.I. Satbayev, 050013, Republic of Kazakhstan, Almaty, Satbayeva Street, 22

	DEVELOPMENT OF A BIODEGRADABLE THERMOPLASTIC STARCH-BASED COMPOSITE
26	Amanzhol A.A., Khavilkhairat B., Rakhmetullayeva R.K. al-Farabi Kazakh National University, Almaty, Kazakhstan **PREPARATION AND STUDY OF A STARCH-BASED BIODEGRADABLE POLYMER COATING MATERIAL FOR PRESERVING LEGUMINOUS PLANTS**
27	S.B. Zhukusheva[3], K.S. Maksotova[1,2*], G.S. Tatykhanova[1,3], D.N. Akbayeva[1,2] [1] Institute of Polymer Materials and Technology, Almaty, Kazakhstan [2] Al-Farabi Kazakh National University, Almaty, Kazakhstan [3] Satbayev University, Almaty, Kazakhstan **SYNTHESIS AND CHARACTERIZATION OF POLYMER-STABILIZED GOLD NANOPARTICLES FOR THE PREPARATION OF AuNP-CONTAINING CRYOGELS**
28	U. Nakan[a], M. Yermaganbetov[a], M. Nursultanov[a], A. Suleimenova[b] [a]Institute of Geology and Oil & Gas Business, Satbayev University, 050013, Almaty, Kazakhstan. [b]Faculty of Chemistry and Chemical Technology, Al-Farabi Kazakh National University, 050040, Almaty, Kazakhstan **PREPARATION AND CHARACTERIZATION OF NANOCRYSTALLINE CELLULOSE-BASED HYBRID COMPOSITE MATERIALS**