

**List of oral presentations planned for all six topics
of Frumkin Symposium-2024**

Slot's number	Name of participant	Title of presentation
Topic 1: General and Theoretical Aspects of Electrochemistry		
O1-1	Safonov V.A. Lomonosov, Moscow State University, Moscow	A model description of the potential distribution at the interface of a renewable graphite electrode with electrolyte solutions
O1-2	Spasov D.D., NRC "Kurchatov Institute", Moscow	Study of platinum electrocatalysts on carbon support using Frumkin adsorption isotherms
O1-3	Kozaderov O.A., Voronezh State University, Voronezh	Kinetics of nucleation and growth during cathodic co-deposition of zinc and nickel from ammonium chloride electrolytes
O1-4	Filippov V.L., Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Moscow	Copper galvanic replacement process in ethaline-based solutions
O1-5	Shestakov A.F., FRC of Problems of Chemical Physics and Medicinal Chemistry, Russian Academy of Sciences, Chernogolovka	Quantum chemical modelling reductive metallation of organic cathode materials
O1-6	Mareev S.A., Kuban State University, Krasnodar	Two-dimensional model of the process of anodic oxidation of organic pollutants with bulk anode
O1-7	Stulov Yu.V., Tananaev Institute of Chemistry, Kola Science Center of Russian Academy of Sciences, Apatity	Theoretical-experimental study of charge transfer process in samarium-containing melts
O1-8	Popov A.G., Moscow Institute of Physics and Technology, Dolgoprudny	Autoencoder network for analysis of electrochemical impedance of lithium-ion batteries
Topic 2: Electrochemical Materials Science		
O2-1	Kuriganova A.B., Platov South Russian State Polytechnic University, Novocherkassk	Production of electro- and catalytically active materials by pulse electrolysis
O2-2	Belenov S.V., Southern Federal University, Rostov-on-Don	Influence of heat treatment on the structure and activity of PtCu/C electrocatalysts on different carbon carriers
O2-3	Korchagin O.V., Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Moscow	Tolerant catalysts for hydrogen oxidation in alkaline environments
O2-4	Manzhos R.A., FRC of Problems of Chemical Physics and Medicinal Chemistry of Russian Academy of Sciences, Chernogolovka	Electrolytic dispersion of alloys. Production of composite PdNi-electrocatalysts of methanol oxidation reaction
O2-5	Kochergin V.K., FRC of Problems of Chemical Physics and Medicinal Chemistry of Russian Academy of Sciences, Chernogolovka	One-step plasma-assisted electrochemical synthesis of nanocomposites of graphene structures with cobalt/manganese oxides – promising electrocatalysts of oxygen reduction reaction
O2-6	Kholin K.V., Kazan National Research Technological University, Kazan, Arbuzov Institute of Organic and Physical Chemistry, FRC Kazan Scientific Center, Russian Academy of Sciences, Kazan	Electrocatalytic reduction of CO ₂ with copper-containing nanostructured electrode and sodium pectate complexes
O2-7	Khanin D.A., NRNU Moscow Engineering Physics Institute, Moscow	Preparation of Pd(Mo ₂ C) composite by electroless palladium deposition method, its catalytic properties and stability in anodic range of potentials

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O2-8	Kokin A.A., Skolkovo Institute of Science and Technology, Moscow	Specific functioning of bifunctional electrocatalysts based on nickel sulphide under conditions of cyclic change of the electrode process
O2-9	Kushnir S.E., Lomonosov Moscow State University, Moscow	Photonic crystal structures based on anodic aluminium oxide
O2-10	Sapozetova N.A., Lomonosov Moscow State University, Moscow	Photocatalysts based on anodic titania photonic crystals
O2-11	Lebedeva M.V., Novosibirsk State University, Novosibirsk	Polyaniline/carbon composite as electrodes for supercapacitors
O2-12	Kuzmin S.M., Krestov Institute of Solution Chemistry, Russian Academy of Sciences, Ivanovo	Electrochemical methods for porphyrin semiconductor films formation and investigation
O2-13	Kabanova V.A., Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Moscow	Electrodeposition of photoactive layers based on polypyrrole and zinc phthalocyaninate
O2-14	Krokhalev A.V., Volgograd State Technical University, Volgograd	Influence of phase composition of materials of "TI-FE" system with increased titanium content on their hydrogen capacity
O2-15	Orlova E.I., Lomonosov Moscow State University, Moscow, NRC Kurchatov Institute, Moscow	Synthesis and physical properties of the oxygen-conducting $MLn_4Mo_3O_{15}F$ ($M = Li, Na, K, Ln = La-Dy$) compounds family
O2-16	Gavrilin I.M., Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Moscow	Electrochemical formation of nanostructures based on germanium
O2-17	Ivanova N.A., NRC Kurchatov Institute, Moscow	Applicability of structured carbon materials for performance and durability improvement of the PEMFC electrodes
O2-18	Gnedkov A.S., Institute of Chemistry of Far-Eastern Branch of Russian Academy of Sciences, Vladivostok	Hybrid coatings of a new generation with the function of targeted delivery of active components on the surface of magnesium alloys
O2-19	Grushevskaya S.N., Voronezh State University, Voronezh	Photoelectrochemistry of copper oxides anodically formed on brasses with different phase composition
O2-20	Brodskiy V.A., Mendeleev Russian state University of Chemical Technology of Russia, Moscow	The use of electrode materials based on PbO_2 doped with TiO_2 as a replacement for RTO anode in the electroflotation process
O2-21	Kushkhov Kh.B., Berbekov Kabardino-Balkarian State University, Nalchik	Investigation the joint electrochemical reduction mechanism of rare-earth ions and iron triad metals in the $KCl-NaCl-CsCl$ eutectic melt
O2-22	Kuznetsov S.A., Tananaev Institute of Chemistry of the Federal Research Centre "Kola Science Centre of the Russian Academy of Sciences", Apatity	Niobium and tantalum in molten salts: twins or brothers?
O2-23	Kolokolov D.I., Novosibirsk State University, Novosibirsk, Boreskov Institute of Catalysis of Siberian Branch of Russian Academy of Sciences, Novosibirsk,	Ionic mobility in the composite (ionic liquids)@MOF electrolytes probed by solid state NMR
O2-24	Yusupova A.R., Ufa Institute of Chemistry, Ufa Federal Research Centre, Russian Academy of Sciences, Ufa	Structure and properties of solvate complex of lithium tetrachloroaluminate with sulfur dioxide
O2-25	Aleshina V.Kh., Mendeleev Russian University of Chemical Technology, Moscow	Galvanic metallization of holes of multilayer printed circuit boards
Topic 3: Electrochemical Energy Conversion and Storage		
O3-1	Nefedkin S.I., NRU Moscow Power Engineering Institute, Moscow	Physicochemical methods of studies of electrochemical energetics technologies

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O3-2	Shcheglov P.A., JSC Golembiovsky Scientific Production Association "Pribor", Moscow	Fast-activating reserve power sources: the role of physico-chemical properties of electrode materials in the improvement of discharge performance
O3-3	Rychagov A.Y., Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Moscow	Ways to suppress of self-discharge in a non-flowing zinc-bromine battery
O3-4	Nikitina V.A., Center for Energy Science and Technology, Skolkovo Institute of Science and Technology, Moscow	The influence of the crystal structure of nickel and iron-based electrocatalysts on their activity in oxygen evolution reaction in alkaline media
O3-5	Ulihin A.S., Institute of Solid State Chemistry and Mechanochemistry, Siberian Branch of Russian Academy of Sciences, Novosibirsk	Lithium-ion conductive materials based on N-methyl-N-propylpiperidinium salt
O3-6	Chernysheva D.V., Platov South-Russian State Polytechnic University, Novocherkassk	N, S co-doped carbon electrode materials from plant biomass chemical processing wastes
O3-7	Asmolov E.S., Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Moscow	Self-diffusiophoresis of catalytic microswimmers
O3-8	Potapov A.M., Institute of High Temperature Electrochemistry, Ural Branch of the Russian Academy of Sciences, Ekaterinburg	Electrochemical simulators of Am ²⁺ and Cm ³⁺ ions in a molten LiCl-KCl eutectic
Topic 4: Electroanalysis. Sensors and Biosensors		
O4-1	Mikhelson K.N., Chemistry Institute of Saint-Petersburg State University, Saint-Petersburg	Ion-selective electrodes in non-zero current mode: can we use the Nernst equation if current flows through the electrode?
O4-2	Zilberg R.A., Ufa University of Science and Technology, Ufa	Enantioselective sensors: analytical capabilities and prospects
O4-3	Bashkirov P.V., Research Institute for Systems Biology and Medicine, Moscow	Sensing of molecules and molecular machines with elastic nanopores
O4-4	Keresten V.M., Chemistry Institute of Saint-Petersburg State University, Saint-Petersburg	The study of the potentiometric response of ion-selective electrodes containing two neutral ionophores and ion-exchanger
O4-5	Porfireva A.V., Kazan Federal University, Butlerov Institute of Chemistry, Kazan	Conditions for depositing of electroactive coatings based on dyes from deep eutectic solvents
Topic 5: Bioelectrochemistry and Bioenergetics. Organic Electrochemistry		
O5-1	Burmistrova D.A., Astrakhan State Technical University, Astrakhan	Redox-transformations of H ₂ S, RSH and RSSR in the presence of organocatalysts
O5-2	Ustyuzhanin A.O., Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow	Electrochemical carboxylation using carbon dioxide
O5-3	Polyakov M.V., Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow	Electrochemical behavior of cyclic ozonide and aminoperoxide in acetonitrile medium on gold
O5-4	Molotkovskiy R.J., Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Moscow	The effectiveness of protein-free fusion of lipid droplets is determined by the lipid composition of their shells
O5-5	Sumarokova M.V., Research Institute for Systems Biology and Medicine, Moscow	Changing in the shape of the lipid membrane by interaction of amphipathic helices and conical lipids
O5-6	Pavlov R.V., Research Institute for Systems Biology and Medicine, Moscow	Impact of S-protein fusion peptides of coronaviruses on the stability and shape of lipid membranes

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O5-7	Pinigin K.V., Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Moscow	Molecular dynamics method for determination of elastic parameters of multicomponent lipid membranes
Topic 6: Electrochemistry of Membranes		
O6-1	Filippov A.N., Gubkin University, Moscow	Permeability of charged macroporous glasses
O6-2	Ryzhkov I.I., Institute of Computational Modelling, Siberian Branch of Russian Academy of Sciences, Krasnoyarsk, Siberian Federal University, Krasnoyarsk	Electro / baromembrane process for separation of ionic dyes solutions using electrically conductive membranes
O6-3	Vorotyntsev M.A., Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Moscow, FRC of Problems of Chemical Physics & Medicinal Chemistry, Russian Academy of Sciences, Chernogolovka	Express method for determination of crossover parameters of solute electroactive components
O6-4	Pismenskaya N.D., Kuban State University, Krasnodar	Mechanisms of ion transfer in ion exchange membrane/ampholyte solution systems in electrodialysis
O6-5	Gorobchenko A.D., Kuban State University, Krasnodar	Non-stationary phosphate transport through an Anion-exchange membrane during electrodialysis: Experiments and modeling
O6-6	Krykin M.D., Mendeleev University of Chemical Technology of Russia, Moscow	The appearance of electrical phenomena in an energetic substance under shock loading