

Scientific seminar *ADVANCED MATERIALS TO REDUCE THE IMPACT OF TOXIC CHEMICALS ON THE ENVIRONMENT AND HEALTH*

Chisinau, 21 September 2023

Acknowledgements. *The event is organized within the State Program 2020-2023, project „Reducing the impact of toxic chemicals on the environment and health by using adsorbents and catalysts obtained from local raw materials” (DISTOX, no. 20.80009.7007.21).*

Online event (<https://meet.google.com/cvq-scbw-yom>)

Chisinau time UTC/GMT +3 hours

Seminar Program

9:00-9:15

Opening of the seminar sessions. Welcome messages

Tudor Lupascu - moderator

Academician, Professor, Director of the Centre of Ecological Chemistry and Environmental Protection, Institute of Chemistry of MSU

Gheorghe Duca

Academician, Professor, Director of the Centre of Physical and Inorganic Chemistry, Institute of Chemistry of MSU

Maria Gonta

Dr. habilitate, Professor, Faculty of Chemistry and Chemical Technology of Moldova State University

9:15-12:00

Oral presentations

9:15-9:30

Tudor Lupascu, Oleg Petuhov, Raisa Nastas, Mihail Ciobanu, Nina Timbaliuc, Tatiana Mitina, Irina Ceban (Ginsari), Lucian Lupascu, Nina Boldurescu
ACTIVATED CARBONS – EFFICIENT ADSORBENTS FOR THE PROTECTION OF THE ENVIRONMENT AND HUMAN HEALTH

9:30-9:45

Inga Zinicovscaia, Nikita Yushin, Doina Humelnicu, Dmitrii Grozdov, Maria Ignat, Ionel Humelnicu
ADSORPTION CAPACITY OF SILICA SBA-15 AND TITANOSILICATE ETS-10 TOWARD INDIUM IONS

9:45-10:00

Vasile Gutsanu, Oleg Petuhov, Alina-Mirela Ipate, Gabriela Lisa, Maria Botnaru
COMPOSITES – PRECURSORS FOR OBTAINING NEW SORBEMTS AND CATALISTS

10:00-10:15

Igor Povar, Oxana Spinu
ASSESSING THE THERMODYNAMIC EQUILIBRIA IN SOILS

- 10:15-10:30 **Tatyana Kouznetsova**, Elizaveta Kopysh, Natalia Melnikova, Ivan Tsarev, Alexey Kondrashev, Darya Pechenka, Andrei Ivanets
SYNTHESIS OF NANOSTRUCTURED SILICA WITH COMBINED MICRO- AND MESOPOROSITY AS BISMUTH CARRIER
- 10:30-10:45 **Oleg Petuhov**, Tudor Lupascu, Titus Vlase, Nina Boldurescu
CARBONACEOUS ADSORBENTS FROM SOLID INDUSTRIAL WASTE
- 10:45-11:00 **Oleg Bogdevici**, Inna Rastimesina, Olga Postolachi, Elena Culighin, Elena Nicolau, Valentina Vorona
ENVIRONMENTAL FRIENDLY SOLUTIONS FOR THE REMEDIATION OF POPs CONTAMINATED SITES
- 11:00-11:15 **Maria Gonta**, Larisa Mocanu, Ion Popaz
REMOVAL MIXTURE OF DRUGS IN AQUEOUS SOLUTION BY USING TITANIUM DIOXIDE PHOTOCATALYST
- 11:15-11:30 **Petru Spataru**, Maria Sandu, Alexandru Visnevschi, Igor Povar
EVALUATING THE IMPACT OF AQUATIC POLLUTANTS THROUGH LABORATORY SIMULATIONS WITH AMMONIUM INITIATION: A METHODOLOGICAL APPROACH
- 11:30-11:45 **Iurie Scutaru**, Aliona Sclifos
THE EFFICIENCY OF EXPERIMENTAL ACTIVATED CHARCOAL OF VEGETABLE ORIGIN IN IMPROVING THE QUALITY OF WINES
- 11:45-12:00 **Lucian Lupascu**, Oleg Petuhov, Tudor Lupascu
ADSORPTION OF *BACILLUS SUBTILIS* AND *BACILLUS CEREUS* GRAM-POSITIVE BACTERIA ON ENTEROSORBENTS OBTAINED FROM APRICOT HUSKS

9:00-13:00 Posters Presentations/Discussions (flexible format)

Nina Timbaliuc, Tudor Lupascu
ADSORPTION OF O-NITROPHENOL ON LOCAL CARBONIC ADSORBENTS

Irina Ceban (Ginsari), Raisa Nastas, Tudor Lupascu
ADSORPTION OF CAFFEIC ACID ON ACTIVATED CARBONS

Igor Povar, Oxana Spinu
USING BUFFER THEORY TO ASSESS IONIC POLLUTANT REDUCTION IN SOILS

Olha Semeshko, Nataliya Stolyarchuk, Veronika Tomina, **Inna Melnyk**
EUROPIUM(III) ION REMOVAL FROM WATER USING SILICA ADSORBENTS: INFLUENCE OF N-CONTAINING GROUPS AND STRUCTURING AGENTS

Natalia Kobylinska, **Oksana Dudarko**
DEVELOPMENT OF SBA-BASED ADSORBENTS FOR URANIUM REMOVAL FROM NATURAL AND WASTEWATER

Viktoriiia Kyshkarova, Inna Melnyk
SILICA-BASED HYBRIDS AS HIGHLY EFFECTIVE ADSORBENTS FOR THE REMOVAL OF Ni(II) AND Mn(II) IONS FROM AQUEOUS SOLUTIONS

Nina Timbaliuc, Tudor Lupascu
PILOT STUDIES OF PHENAZONE ADSORPTION ON CARBONIC ADSORBENT AC-K

Nataliia Stoliarchuk, Veronika Tomina, **Inna Melnyk**
SYNTHESIS AND CHARACTERISATION OF DIETHYLENETRIAMINE-PHENYLENE-BRIDGED POLYSILSESQUOXANE AS SORPTION MATERIAL

Barbara Gawdzik, Przemysław Pączkowski
SYNTHESIS AND CHARACTERIZATION OF POLYMERIC AND CARBON MATERIALS FOR SEPARATION APPLICATIONS

Mikhail Gorbachev, **Natalia Gorinchoy**, Iolanta Balan
DFT STUDY OF STRUCTURAL FEATURES OF CAFFEIC ACID AND QUERCETIN RESPONSIBLE FOR REALIZATION OF POSSIBLE SYNERGISTIC EFFECT IN THEIR JOINT REACTION WITH THE CATION-RADICAL ABTS*⁺

Tatiana Isac-Guțul, Elena Tutovan
PHOTODEGRADATION OF DOXYCYCLINE BY ADVANCED OXIDATION PROCESSES (AOP) IN WATER SOLUTIONS

Angela Lis, Viorica Gladchi, Elena Bunduchi
THE INFLUENCE OF ISONIAZID ON THE SELF-PURIFICATION CAPACITY OF AQUATIC SYSTEMS

Elisaveta Snezhkova, Oleg Borovetki, Alexey Sydorenko, Kvitoslava Bardakyvska, Natalya Lukianova, Olena Voronina
THE EFFECT OF LONG-TERM ORAL ADMINISTRATION OF ACTIVATED CHARCOAL ON THE OCCURRENCE OF TUMORS AND THE MORPHOLOGY OF INTERNAL ORGANS IN RATS

Irina Ceban (Ginsari), **Raisa Nastas**
ADSORPTION OF TANNIC ACID ON ACTIVATED CARBONS WITH DIFFERENT SURFACE CHEMISTRY

Iurie Scutaru, Aliona Scifos, Vasile Arhip, Larisa Necla, Tatiana Covaliuc
THE IMPACT OF EXPERIMENTAL ACTIVATED CHARCOAL ON THE ANTIOXIDANT POTENTIAL AND ANTIOXIDANT STABILITY OF FETEASCA NEAGRA WINE

Irina Ceban (Ginsari), Eugenia Moraru, Raisa Nastas
THE REDOX PROPERTIES OF ACTIVATED CARBONS EVALUATED BY THE ABTS CATION-RADICAL METHOD

Tudor Lupascu, **Mihail Ciobanu**, Oleg Petuhov
THE CATALYTIC ACTIVITY OF CARBON CATALYSTS IMPREGNATED WITH MANGANESE, COPPER, AND COBALT IONS

Maria Cocu, Polina Bourosh, Victor Kravtsov, Olga Danilescu, Ion Bulhac
MONONUCLEAR NICKEL(II) AND COPPER(II) COMPLEXES WITH SCHIFF BASE LIGANDS DERIVED FROM QUINOLINE-8-ALDEHYDE AND S-METHYLISOTHIOSEMICARBAZONES

Natalia Chiobanu, Fliur Macaev
ENVIRONMENTAL CONDITIONS IN THE SYNTHESIS OF MONASTROL

Igor Povar, Oxana Spinu
CHEMICAL SYNERGISM DEFINED: INSIGHTS INTO COMPLEX INTERACTIONS

Tatiana Mitina, Nadejda Bondarenco, Diana Grigoras, Tudor Lupascu
EVALUATION OF WATER QUALITY IN WATER SOURCES IN THE SOUTH OF THE
REPUBLIC OF MOLDOVA

Petru Spataru, Francisco Fernandez, Tudor Spataru, Igor Povar
CORRELATION BETWEEN RAINWATER CHEMICAL COMPOSITION AND ITS EROSION
PROPERTIES

Petru Spataru
SORPTIVE PROPERTIES OF SUBAQUATIC SEDIMENT FRACTIONS IN A
EUTROPHICATED LAKE

Iurie Panfil
THERE IS AN OPPORTUNITY TO REDUCE EMISSION OF NO_x AND GHG ON ANY
THERMAL POWER PLANT IF THEY USE NATURAL GAS AS FUEL

Mihaela-Corina Bucur
NATIONAL STRATEGY ON EDUCATION FOR THE ENVIRONMENT AND CLIMATE
CHANGE 2023-2030

13:00 Closing of the seminar