

## Conference Program

*May 17, Tuesday*

**9:00 – 9:45 Registration of participants**

**10:00 – 10:10 Opening of the Conference in the Chuiko Institute of Surface Chemistry of NAS of Ukraine**

*Academician of NAS of Ukraine, Professor M.T. Kartel*

### **Oral Session 1**

*Chair:*                   *Professor M.T. Kartel*

**10:10 – 10:35 V.M. Gun'ko<sup>1</sup>, E.M. Pakhlov<sup>1</sup>, V.I. Zarko<sup>1</sup>, J. Skubiszewska-Zięba<sup>2</sup>. Infrared spectroscopy as a tool for textural and structural characterization of individual and complex fumed oxides (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv, <sup>2</sup>Faculty of Chemistry, Maria Curie-Skłodowska University, Lublin, Poland*).**

**10:35 – 11:00 Yu.L. Zub. Sol-gel chemistry and nanotechnology** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).

**11:00 – 11:20 coffee break**

### **Oral Session 2**

*Chair:*                   *Professor Yu.L. Zub*

**11:20 – 11:40 A.M. Fainleib<sup>1</sup>, V.A. Bershtein<sup>2</sup>, K.G. Gusakova<sup>1</sup>, D. Kirilenko<sup>2</sup>, P.N. Yakushev<sup>2</sup>, V.A. Ryzhov<sup>2</sup>, N.S. Lavrenyuk<sup>1</sup>. Subnanosizing - a novel approach to densely crosslinked cyanate esters/silica composites obtained by sol-gel synthesis** (<sup>1</sup>*Institute of Macromolecular Chemistry, NAS of Ukraine, Kyiv, <sup>2</sup>Ioffe Institute, RAS, Russia, St.-Petersburg*)

**11:40 – 12:00 N. Smirnova. Nanosized TiO<sub>2</sub>-based mixed oxide films for environmental photocatalysis** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).

**12:00 – 12:20 Yu. Bolbukh<sup>1</sup>, P. Klonos<sup>2</sup>, P. Pissis<sup>2</sup>, V. Tertykh<sup>1</sup>. Study of thermomechanical properties of composites based on sol-gel silica and 2-hydroxyethylmethacrylate** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv, <sup>2</sup>National Technical University of Athens, Physics Department, Greece*).

**12:20 – 12:40 Y.Y. Shlapa, S.O. Solopan, A.G. Belous. Synthesis of weakly agglomerated (La,Sr)MnO<sub>3</sub> nanoparticles and creation of the organic-inorganic composite structures based on them** (*Vernadsky Institute of General and Inorganic Chemistry, NAS of Ukraine, Kyiv*).

**12:40 – 13:00 O. Linnik<sup>1</sup>, N. Chorna<sup>1</sup>, N. Smirnova<sup>1</sup>, N. Stefan<sup>2</sup>, I.N. Mihailescu<sup>2</sup>. Pulsed laser deposited TiO<sub>2</sub> based films: synthesis, electronic structures and photocatalytic activity** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv, <sup>2</sup>National Institute for Lasers, Plasma and Radiation Physics, Ilfov, Romania*).

**13:00 – 14:00 break**

## **Oral Session 3**

*Chair:*                   **Professor V.M. Rozenbaum**

**14:00 – 14:20 M. Studziński<sup>1</sup>, Yu.M. Bolbukh<sup>2</sup>, R.B. Kozakevych<sup>2</sup>, V.A. Tertykh<sup>2</sup>. Synthesis and structure investigation of porous and nonporous materials with enhanced magnetic permeability (<sup>1</sup>Planar Chromatography Department, Chair of Physical Chemistry, Faculty of Chemistry, Maria Curie-Skłodowska University, Lublin, Poland, <sup>2</sup>Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv).**

**14:20 – 14:40 O.A. Khaynakova<sup>1</sup>, N.G. Kobylinska<sup>2</sup>, M. Diaz-Garcia<sup>1</sup>, V.N. Zaitsev<sup>2</sup>. Magnetic chelating nanocomposites: synthesis, functionalization and analytical implications for solid phase extraction (<sup>1</sup>Department of Analytical and Physical Chemistry, University of Oviedo, Spain, <sup>2</sup>Department of Analytical Chemistry, Taras Shevchenko National University of Kyiv, Ukraine).**

**14:40 – 15:00 O.M. Odnovolova<sup>1</sup>, D.S. Sofronov<sup>1</sup>, S.M. Desenko<sup>1</sup>, A.A. Beda<sup>2</sup>. Characteristics of formation of iron and manganese oxide particles and their sorption properties (<sup>1</sup>STC «Institute for Single Crystals», NAS of Ukraine, Kharkiv, <sup>2</sup>Taras Shevchenko National University of Kyiv, Ukraine).**

**15:00 – 15:20 N.O. Perlova<sup>1</sup>, O.V. Perlova<sup>1</sup>, Yu.S. Dzyazko<sup>2</sup>, V.F. Sazonova<sup>1</sup>, I.Yu. Halutskaya<sup>1</sup>. Removal of the uranium(VI) compounds from model solutions with sorbents of different nature (<sup>1</sup>Faculty of Chemistry, Odessa I.I. Mechnikov National University, Ukraine, <sup>2</sup>Vernadsky Institute of General and Inorganic Chemistry, NAS of Ukraine, Kyiv).**

**15:20 – 15:40 V.S. Kuts. Nanoclusters (SiC)<sub>n</sub> as a base of nanostructured materials for electrodes of lithium-ion batteries (Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv).**

**15:40 – 16:00 coffee break**

**16:00 – 17:00 Poster session I (1-73)**

*May 18, Wednesday*

## **Oral Session 4**

*Chair:*                   **Professor V.M. Gun'ko**

**10:00 – 10:20 N.O. Mchedlov-Petrossyan<sup>1</sup>, N.N. Kamneva<sup>1</sup>, V.V. Tkachenko<sup>1</sup>, A.I. Marynin<sup>2</sup>, E. Osawa<sup>3</sup>. The interfacial properties and colloidal behaviors of detonation nanodiamond species in water (<sup>1</sup>Department of Physical Chemistry, Kharkov V. Karazin National University, Ukraine, <sup>2</sup>National University of Food Technologies, Kyiv, Ukraine, <sup>3</sup>NanoCarbon Research Institute, Ltd, AREC (Asama Research Extension Center), Faculty of Textile Science and Technology, Shinshu University, Nagano, Japan).**

**10:20 – 10:40 A. Derylo-Marczewska, M. Blachnio, A.W. Marczewski. Effect of structural and surface properties of adsorbent on adsorption equilibria and kinetics (Faculty of Chemistry, Maria Curie-Skłodowska University, Lublin, Poland).**

**10:40 – 11:00 A.W. Marczewski, M. Sęczkowska, A. Deryło-Marczewska. Temperature effects in adsorption equilibrium and kinetics of selected aromatic compounds on active carbons (Maria Curie-Skłodowska University, Lublin, Poland).**

**11:00 – 11:20 L.V. Henao-Holguin<sup>1</sup>, V. Meza-Laguna<sup>1</sup>, E.V. Basiuk<sup>2</sup>, V.A. Basiuk<sup>1</sup>, T.Yu. Gromovoy<sup>3</sup>. One step covalent functionalization of C<sub>60</sub> and pristine multi-walled carbon nanotubes with crown ethers (**<sup>1</sup>*Instituto de Ciencias Nucleares, Universidad Nacional Autonoma de Mexico,* <sup>2</sup>*Centro de Ciencias Aplicadas y Desarrollo Tecnologico, Universidad Nacional Autonoma de Mexico, Mexico,* <sup>3</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv).*

**11:20 – 11:40 coffee break**

#### **Oral Session 5**

*Chair:* **Professor A.M. Eremenko**

**11:40 – 12:00 M. Sęczkowska, A.W. Marczewski, A. Deryło-Marczewska, A. Chrzanowska. Study of adsorption of selected organics from aqueous solutions on active carbon in the multicomponent system (Faculty of Chemistry, Maria Curie-Skłodowska University, Lublin, Poland).**

**12:00 – 12:20 Ya.V. Panasiuk, G.V. Korzhak, A.E. Raevskaya, O.L. Stroyuk. Photocatalytic hydrogen production in systems based on hydrazine (dimethylhydrazine) and graphitic carbon nitride (L.V. Pysarzhevsky Institute of Physical Chemistry, NAS of Ukraine, Kyiv).**

**12:20 – 12:40 D.M. Haliarnyk, O.M. Bakalinska, M.T. Kartel. Carbon nanomaterials as catalysts in reactions of organic peroxides decomposition (Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv).**

**12:40 – 13:00 O.A. Viltsaniuk<sup>1</sup>, P.V. Belyaev, N.M. Rezanova<sup>2</sup>, R.A. Lutkovskyi<sup>1</sup>. Nanocomposite suture materials and drugs for prevention and treatment of postoperative purulent complications and inflammatory diseases (**<sup>1</sup>*Vinnytsya National Pirogov Memorial Medical University,* <sup>2</sup>*Kyiv National University of Technology And Design, Ukraine).*

**13:00 – 14:00 break**

#### **Oral Session 6**

*Chair:* **Professor V.A. Tertykh**

**14:00 – 14:20 A. Chrzanowska<sup>1</sup>, A. Deryło-Marczewska<sup>1</sup>, A.W. Marczewski<sup>2</sup>, M. Sęczkowska<sup>1</sup>. Analysis of structure and morphology of the MCF surface with adsorbed protein molecules (**<sup>1</sup>*Department of Physicochemistry of Solid Surface,* <sup>2</sup>*Department of Radio- and Colloid Chemistry, Faculty of Chemistry, Maria Curie-Skłodowska University, Lublin, Poland).*

**14:20 – 14:40 L.M. Soldatkina, M.A. Zavrichko. Adsorption of anionic dyes on corn stalks modified with polyaniline: kinetics and thermodynamic studies (Odessa I.I. Mechnikov National University, Ukraine).**

**14:40 – 15:00 G.M. Starukh. ZnAl layered double hydroxide sorbent/photocatalyst for removal of negatively and positively charged organic compounds** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).

**15:00 – 15:20 N.O. L.M. Soldatkina, V.O. Novotna. Adsorption of anthocyanins from the chokeberry extracts on bentonite** (*Odessa I.I. Mechnikov National University, Ukraine*).

**15:20 – 15:40 A.A. Yanovska<sup>1,2</sup>, S.B. Bolshanina<sup>2</sup>, A.S. Stanislavov<sup>1</sup>, A.K. Soni<sup>3</sup>. Hydroxyapatite-alginate microspheres loaded with nimesulide for biomedical application** (<sup>1</sup>*Institute of Applied Physics, NAS of Ukraine, Sumy*, <sup>2</sup>*Sumy State University, Ministry of Education and Science of Ukraine*, <sup>3</sup>*Kusum Pharm, Sumy, Ukraine*).

**15:40 – 16:00 coffee break**

**16:00 – 17:00 Poster session II (74-144)**

**17:00 Conference Closing**

#### **Poster presentations:**

##### **1. Theory of chemical structure and reactivity of solid surface**

1. **E.M. Demianenko**, A.G. Grebenyuk, V.V. Lobanov, V.A. Tertykh. **Progressive surface alkoxylation at interaction of silica with dialkyl carbonates** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
2. **V. Galyshev<sup>1,2</sup>**, R. Kozakevych<sup>2</sup>, M. Kartel<sup>2</sup>. **Sorption properties of cellulose and lignocellulose materials towards sodium diclofenac** (<sup>1</sup>*Department of Ecology and Plant Polymers Technology, National Technical University of Ukraine “KPI”*, <sup>2</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
3. **A.G. Grebenyuk. Quantum chemical study on pressure-induced phase transitions in arsenic nanoparticles in confined space** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
4. **N.V. Nikolenko<sup>1</sup>**, S.I. Okovytyy<sup>2</sup>, I.S. Samchileev<sup>1</sup>, A.V. Dubenko<sup>1</sup>, V.A. Solovov<sup>1</sup>. **Charge-controlled adsorption for wide-gap polar adsorbents** (<sup>1</sup>*Ukrainian State Chemical Technology University, Dnipropetrovsk*, <sup>2</sup>*Oles Honchar Dnipropetrovsk National University, Ukraine*).
5. **N.D. Paliychuk**, T.R. Tatarchuk. **Surface properties of spinel cobalt ferrite** (*Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk, Ukraine*).
6. R.V. Garmash<sup>1</sup>, A.Yu. Chernyak<sup>1</sup>, Yu.A. Beznosyk<sup>1</sup>, **O.V. Smirnova<sup>2</sup>**, A.G. Grebenyuk<sup>2</sup>, V.V. Lobanov<sup>2</sup>. **Quantum chemical studies on O<sub>2</sub> and H<sub>2</sub>O molecules adsorption on the anatase face (001)** (<sup>1</sup>*National Technical University of Ukraine “KPI”*, <sup>2</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
7. **A.V. Vakaliuk<sup>1</sup>**, L.M. Grishchenko<sup>1</sup>, T.M. Bezugla<sup>1</sup>, V.Z. Radkevich<sup>2</sup>. **Modification of carbon fibres with S-containing functional groups** (<sup>1</sup>*Taras Shevchenko National University of Kyiv, Ukraine*, <sup>2</sup>*Institute of Physical Organic Chemistry National Academy of Sciences of Belarus, Minsk*).

## 2. Physical chemistry of surface phenomena

8. **L.S. Andriyko<sup>1</sup>, V.I. Zarko<sup>1</sup>, V.M. Gun'ko<sup>1</sup>, A.I. Marynin<sup>2</sup>, A.I. Ukrainets<sup>2</sup>. Kosmotropes effect of Cl<sup>-</sup> and NO<sub>3</sub><sup>-</sup> anions on colloidal properties of nanosilica (**<sup>1</sup>*Chuiko Institute of Surface Chemistry, <sup>2</sup>National University of Food Technology, Kyiv, Ukraine).*
9. **L.S. Andriyko<sup>1</sup>, V.I. Zarko<sup>1</sup>, V.M. Gun'ko<sup>1</sup>, A.I. Marynin<sup>2</sup>, A.I. Ukrainets<sup>2</sup>. The graphene oxide dispersity in aqueous medium (**<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, <sup>2</sup>National University of Food Technology, Kyiv, Ukraine).*
10. T. Lupașcu, N. Timbaliuc, **A. Beshliu.** Study of the surface chemistry of activated carbon obtained by chemical activation (*Institute of Chemistry, Academy of Sciences of Moldova*).
11. **T. Budnyak<sup>1</sup>, D. Sternik<sup>2</sup>, Yu. Bolbukh<sup>1</sup>, A. Deryło-Marczewska<sup>2</sup>, V. Tertykh<sup>1</sup>. Hybrid materials based on chitosan and sol-gel silicas (**<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv, <sup>2</sup>Maria Curie-Skłodowska University, Lublin, Poland).*
12. **V. Chernii<sup>1</sup>, I. Tretyakova<sup>1</sup>, Y. Dovbii<sup>1</sup>, S. Korobko<sup>1</sup>, O. Severynovska<sup>2</sup>, R. Czerwieniec<sup>3</sup>. Synthesis and mass spectrometric fragmentation of the phthalocyanine complexes of zirconium and hafnium with out-of-plane coordinated protocatechuiic aldehyde (**<sup>1</sup>*Vernadsky Institute of General and Inorganic Chemistry, NAS of Ukraine, <sup>2</sup>Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv, <sup>3</sup>Universitat Regensburg, Institut für Physikalische und Theoretische Chemie, Regensburg, Germany).*
13. **A. Chrzanowska<sup>1</sup>, A. Deryło-Marczewska<sup>1</sup>, A.W. Marczewski<sup>2</sup>, M. Sęczkowska<sup>1</sup>. Synthesis and characterization of MCFs with tunable porous structure for immobilization of biopolymers (**<sup>1</sup>*Department of Physicochemistry of Solid Surface Faculty of Chemistry, Maria Curie-Skłodowska University, <sup>2</sup>Department of Radio- and Colloid Chemistry, Faculty of Chemistry, Maria Curie-Skłodowska University, Lublin, Poland).*
14. **T.Ia. Datsko, V.I. Zelentsov.** Effect of microstructure of modified diatomite on its adsorption properties (*The Institute of Applied Physics of the Academy of Sciences of Moldova*).
15. V.M. Rozenbaum<sup>1</sup>, **M.L. Dekhtyar<sup>2</sup>, L.I. Trakhtenberg<sup>3</sup>, S.H. Lin<sup>4</sup>.** Photoinduced diffusion molecular transport (**<sup>1</sup>Chuiko Institute of Surface Chemistry, NAS of Ukraine, <sup>2</sup>Institute of Organic Chemistry NAS of Ukraine, Kyiv, <sup>3</sup>Semenov Institute of Chemical Physics of RAS, Moscow, <sup>4</sup>Department of Applied Chemistry, National Chiao Tung University, Hsinchu, Taiwan).**
16. **E.N. Fadieiev, S.S. Smola, N.V. Rusakova.** Luminescent properties of hybrid materials based on silicon dioxide and β-diketonato-1,10-phenanthroline complexes of Eu(III) (*A.V. Bogatsky Physico-Chemical Institute, NAS of Ukraine, Odessa*).
17. I.A. Shpak, **S.S. Fomanyuk, G.Y. Kolbasov.** Gasochromic properties of V<sub>2</sub>O<sub>5</sub>/Pt-films (*Vernadsky Institute of General and Inorganic Chemistry, NAS of Ukraine, Kyiv*).
18. O.A. Dudarko<sup>1</sup>, **A.R. Gaidai<sup>2</sup>, V.V. Sliesarenko<sup>1</sup>, N.A. Prybora<sup>2</sup>, Yu.L. Zub<sup>1</sup>.** Synthesis of mesoporous materials for extraction of heavy and rare-earth metal ions (**<sup>1</sup>Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv, <sup>2</sup>National Pedagogical Dragomanov University, Kyiv, Ukraine).**
19. **O.I. Gichan.** Influence of the mass transfer function on dynamic instabilities of a model electrocatalytic process (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).

20. **M. Ignatovych.** **Doped lithium tetraborate as advanced luminescent materials: spectroscopy and dosimetric characteristics** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
21. **V.I. Kanevskii<sup>1</sup>**, V.M. Rozenbaum<sup>1</sup>, V.S. Sidorenko<sup>2</sup>, D.I. Pobokin<sup>1</sup>. **Influence of surface plazmon resonance on distribution of Poynting vector in the presence of gold nanocylinder** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>*Faculty of Radiophysics, Taras Shevchenko National University of Kyiv, Ukraine*).
22. **V.N. Kaurkovska**, A.G. Grebenyuk. **Theoretical study on transformations of formic acid on vanadium dioxide surface** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
23. **M.O. Khodykina<sup>1</sup>**, K.D. Pershina<sup>2</sup>, K.A. Kazdobin<sup>1</sup>. **Electrochemical properties of composites based on the system of the immobilized enzyme preparation *Raphanus sativus l. Var. Niger* – graphene** (<sup>1</sup>*Vernadsky Institute of General and Inorganic Chemistry NAS of Ukraine*, <sup>2</sup>*Joint Department of Electrochemical Energetics NAS of Ukraine, Kyiv*).
24. **T.O. Kiose<sup>1,2</sup>**, K.O. Golubchik<sup>1,2</sup>, T.L. Rakytyska<sup>1</sup>, R.M. Dlubovskiy<sup>2</sup>, A.L. Kara<sup>1</sup>, V.Y. Volkova<sup>1</sup>. **Structural-adsorption characteristics of natural and chemically modified clinoptilolite** (<sup>1</sup>*Faculty of Chemistry, Odessa I.I. Mechnikov National University*, <sup>2</sup>*Physico-Chemical Institute of Environment and Human' Protection, Odessa, Ukraine*).
25. O.Ye. Tsomyk, **T.Ye. Korochkova**, V.M. Rozenbaum. **Brownian rotor as a high-temperature ratchet** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
26. **M.V. Kosevich**, O.A. Boryak, V.V. Chagovets, V.S. Shelkovsky, V.V. Orlov. **Mass spectrometric study of silver nanoclusters production in ethylene glycol medium** (*B. Verkin Institute for Low Temperature Physics and Engineering of NAS of Ukraine, Kharkov*).
27. **T. Lupascu<sup>1</sup>**, R. Nastas<sup>1</sup>, A. Ivanets<sup>2</sup>, L. Postolachi<sup>1</sup>, T. Azarova<sup>2</sup>, V. Rusu<sup>1</sup>, T. Kuznetsova<sup>2</sup>, O. Petuhov<sup>1</sup>, I. Ginsari<sup>1</sup>, T. Goreacioc<sup>1,3</sup>. **Porous structure of active carbons modified with manganese compounds** (<sup>1</sup>*Institute of Chemistry of Academy of Sciences of Moldova, Chisinau*, <sup>2</sup>*Institute of General and Inorganic Chemistry, National Academy of Sciences of Belarus, Minsk*, <sup>3</sup>*Institute of Ecology and Geography of Academy of Sciences of Moldova, Chisinau*).
28. **B.V. Lytovchenko**, O.Yu. Semchuk, O.O. Havryliuk. **Heat transfer in porous media** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
29. **F.D. Manilevich**, L.F. Kozin, A.I. Lisogor, A.V. Kutsyi. **Electrochemical and surface investigations of carbide cathodes for hydrogen evolution from water** (*Vernadsky Institute of General and Inorganic Chemistry, NAS of Ukraine, Kyiv*).
30. **R. Nastas<sup>1</sup>**, T. Lupascu<sup>1</sup>, L. Postolachi<sup>1</sup>, V. Rusu<sup>1</sup>, O. Petuhov<sup>1</sup>, I. Ginsari<sup>1</sup>, T. Goreacioc<sup>1,2</sup>. **Active carbons modified with manganese compounds** (<sup>1</sup>*Institute of Chemistry of Academy of Sciences of Moldova, Chisinau*, <sup>2</sup>*Institute of Ecology and Geography of Academy of Sciences of Moldova, Chisinau*).
31. **O. Petuhov.** **Comparative study of hydrogen and nitrogen adsorption onto microwave activated carbon** (*Institute of Chemistry of Academy of Sciences of Moldova, Chisinau*).
32. V.M. Gun'ko<sup>1</sup>, V.I. Zarko<sup>1</sup>, O.V. Goncharuk<sup>1</sup>, A.K. Matkovsky<sup>1</sup>, **O.S. Remez<sup>1</sup>**, J. Skubiszewska-Zieba<sup>2</sup>. **Nature and morphology of fumed oxides and features of interfacial phenomena** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>*Maria Curie-Sklodowska University, Lublin, Poland*).

33. **G.G. Repich**<sup>1</sup>, O.V. Severynovska<sup>2</sup>, S.I. Orsyk<sup>1</sup>, V.I. Pekhnyo<sup>1</sup>. **Features fragmentation of mono- and binuclear transition metal complexes under conditions of MALDI mass spectrometry** (<sup>1</sup>Vernadsky Institute of general and inorganic chemistry, NAS of Ukraine, <sup>2</sup>Chuko Institute of surface chemistry, NAS of Ukraine, Kyiv).
34. **V.F. Sazonova, M.A. Kozhemiak.** **Adsorption of the tributylphosphate on aluminium oxide** (Faculty of Chemistry, Odessa I.I. Mechnikov National University, Ukraine).
35. **M. Sęczkowska**, A.W. Marczewski, A. Deryło-Marczewska, A. Chrzanowska. **Comparison of adsorption of benzoic acid and its derivatives on active carbon** (Faculty of Chemistry, Maria Curie-Skłodowska University, Lublin, Poland).
36. L.A. Karachevtseva<sup>1</sup>, K.A. Parshyn<sup>1</sup>, O.V. Mischanchuk<sup>2</sup>, **V.O. Pokrovskiy**<sup>2</sup>. **Temperature programmed desorption mass spectrometry in studies of local chemical states in structures of macroporous silicon covered by the layer of microporous silicon** (<sup>1</sup>V.Ye. Lashkaryov Institute of Semiconductor Physics, NAS of Ukraine, <sup>2</sup>Chuko Institute of Surface Chemistry, NAS of Ukraine, Kyiv).
37. **V.O Pokrovskiy**<sup>1</sup>, O.V. Ischenko<sup>2</sup>. **Mass spectrometry in heterogeneous catalysis** (<sup>1</sup>Chuko Institute of Surface Chemistry, NAS of Ukraine, Kyiv, <sup>2</sup>Taras Shevchenko National University of Kyiv, Ukraine).
38. **A.F. Tymchuk.** **The surfactants adsorption by natural sorbents** (Odessa I.I. Mechnikov National University, Ukraine).
39. **O. Yershova**, V. Konovalova, T.G. Meshkova. **Magnetically-active polysulfone membranes** (National University of „Kyiv-Mohyla Academy”, Ukraine).
40. **M.G. Zhludenko**, O.A. Bieda, E.V. Ischenko. **Activity of bulk and Al<sub>2</sub>O<sub>3</sub>-supported Co/Ni catalysts for carbon dioxide methanation** (Taras Shevchenko National University of Kyiv, Ukraine).

### 3. Chemistry, physics and technology of nanomaterials

41. P.P. Gorbyk, I.V. Dubrovin, **N.V. Abramov**, D.V. Shaban. **Carbon modified single-domain nanoparticles of solid solutions (Fe<sub>1-x</sub>Co<sub>x</sub>)Fe<sub>2</sub>O<sub>4</sub>.** (Chuko Institute of Surface Chemistry, NAS of Ukraine, Kyiv).
42. **D. Aravopoulou**<sup>1</sup>, M. Souli<sup>1</sup>, K. Kyriakos<sup>2</sup>, A. Miasnikova<sup>3</sup>, J. Adelsberger<sup>2</sup>, A. Meier-Koll<sup>2</sup>, A.M. Bivigou-Kouumba<sup>3</sup>, A. Laschewsky<sup>3</sup>, C.M. Papadakis<sup>2</sup>, A. Kyritsis<sup>1</sup>. **Thermal, dielectric and structural studies on thermoresponsive polymers of complex architecture** (<sup>1</sup>Department of Physics, National Technical University of Athens, Greece, <sup>2</sup>Physik-Department, Technische Universitet, Munchen, <sup>3</sup>Department of Chemistry, Universitet Potsdam, Germany).
43. **E.V. Basiuk**<sup>1</sup>, I.J. Ramirez-Calera<sup>1</sup>, V. Meza-Laguna<sup>2</sup>, E. Abarca-Morales<sup>1</sup>, T.Yu. Gromovoy<sup>3</sup>, V.A. Basiuk<sup>2</sup>. **Solvent-free functionalization of carbon-based nanomaterials with amines: from fullerene C<sub>60</sub> to buckypaper** (<sup>1</sup>Centro de Ciencias Aplicadas y Desarrollo Tecnologico, Universidad Nacional Autonoma de Mexico, <sup>2</sup>Instituto de Ciencias Nucleares, Universidad Nacional Autonoma de Mexico, Mexico, <sup>3</sup>Chuko Institute of Surface Chemistry, NAS of Ukraine, Kyiv).
44. **L.A. Belyakova.** **Chemical construction of catalytic active sites on the surface of ceramic membrane materials** (Chuko Institute of Surface Chemistry, NAS of Ukraine, Kyiv).
45. **V.M. Bogatyrov**<sup>1</sup>, M.V. Galaburda<sup>1</sup>, O.I. Oranska<sup>1</sup>, M.V. Borysenko<sup>1</sup>, J. Skubiszewska-Zięba<sup>2</sup>. **Synthesis and adsorption of methylene blue by Ni/C nanocomposites** (<sup>1</sup>Chuko Institute of Surface Chemistry, NAS of Ukraine, Kyiv, <sup>2</sup>Faculty of Chemistry, Maria Curie-Skłodowska University, Lublin, Poland).

46. **M.V. Bondarenko**, T.A. Khalyavka, S.V. Camyshan. **Photocatalytic properties of titanium dioxide modified with carbon** (*Institute for Sorption and Problems of Endoecology, NAS of Ukraine, Kyiv*).
47. **T.I. Borodinova**<sup>1</sup>, V.I. Styopkin<sup>2</sup>, Ya.Y. Lopatina<sup>2</sup>, V.E. Kutsenko<sup>2</sup>, A.A. Vasko<sup>2</sup>. **Formation of gold nanoprisms on mica surface** (<sup>1</sup>*F.D. Ovcharenko Institute of Biocolloid Chemistry, NAS of Ukraine*, <sup>2</sup>*Institute of Physics, NAS of Ukraine, Kyiv*).
48. **N.V. Bortnyk**, A.V. Brichka, O.M. Bakalinska, S.Ya. Brichka, M.T. Kartel. **Catalase-mimetic activity of nanoporous carbon KAU decorated with nanoceria** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
49. **T.M. Budnyak**<sup>1</sup>, M. Błachnio<sup>2</sup>, A. Deryło-Marczewska<sup>2</sup>, A.W. Marczewski<sup>2</sup>, V.A. Tertykh<sup>1</sup>. **Application of chitosan-silica hybrid composites for removal of dyes from aqueous solutions** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv, Ukraine*, <sup>2</sup>*Maria Curie-Skłodowska University, Lublin, Poland*)
50. **T.M. Budnyak**<sup>1</sup>, A. Gładysz-Płaska<sup>2</sup>, A.V. Strizhak<sup>3</sup>, Ie.V. Pylypchuk<sup>1</sup>, D. Sternik<sup>2</sup>, M. Majdan<sup>2</sup>, I.V. Komarov<sup>3</sup>, V.A. Tertykh<sup>1</sup>. **Uranium(VI) sorption by silica with grafted phosphonic acid derivatives** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>*Faculty of Chemistry, Maria Curie-Skłodowska University, Lublin, Poland*, <sup>3</sup>*Taras Shevchenko National University of Kyiv, Ukraine*).
51. **N. Chorna**, O. Linnik, N. Smirnova. **Synthesis, optical and photocatalytic properties of mesoporous iron-doped titania films** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
52. **Kh.V. Demydova**<sup>1</sup>, O.I. Demchyna<sup>1</sup>, I.Yu. Yevchuk<sup>1</sup>, T.F. Samoylenko<sup>2</sup>. **Viscoelastic properties of organic-inorganic composites based on acrylic monomers and TEOS** (<sup>1</sup>*Department of Physico-chemistry of Fossil Fuels L.M. Lytvynenko Institute of Physico-organic Chemistry and Coal Chemistry, NAS of Ukraine, Lviv*, <sup>2</sup>*Institute of Macromolecular Chemistry, NAS of Ukraine, Kyiv*).
53. **N.M. Dolaberidze**, V.G. Tsitsishvili, N.A. Mirdzveli, M.O. Nijaradze. **Synthesis of nanozeolite-like material** (*Petre Melikishvili Institute of Physical and Organic Chemistry of Ivane Javakhishvili Tbilisi State University, Georgia*).
54. P.P. Gorbyk<sup>1</sup>, O.P. Dmytrenko<sup>2</sup>, **I.V. Dubrovyn**<sup>1</sup>, T.O. Busko<sup>2</sup>, I.S. Matviichuk<sup>2</sup>. **Synthesis and structure of TiO<sub>2</sub> thin nanocomposite films** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>*Department of Physics, Department of Physics Functional Materials, Taras Shevchenko National University of Kyiv, Ukraine*).
55. **L. Dzubenko**<sup>1</sup>, O. Sapyanenko<sup>1</sup>, P. Gorbyk<sup>1</sup>, V. Plavan<sup>2</sup>, N. Rezanova<sup>2</sup>. **The features of fiber-forming processes in the melts of polypropylene-polyvinyl alcohol-glycerol-hydrophobic silica** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>*Kyiv National University of Technologies & Design, Ukraine*).
56. **L. Eprikashvili**, I. Rubashvili, T. Kordzakhia, M. Zautashvili. **Removal of volatile and tobacco-specific N-nitrosamines from tobacco smoke using Georgian natural zeolites** (*Ivane Javakhishvili Tbilisi State University; Petre Melikishvili Institute of Physical and Organic Chemistry, Tbilisi, Georgia*).
57. **G.V. Fedorenko**, L.P. Oleksenko, N.P. Maksymovych, I.P. Matushko, G.I. Skolyar, O.P. Ripko. **Nanosized Pd/SnO<sub>2</sub> materials for adsorption semiconductor sensors to methane** (*Department of Chemistry, Taras Shevchenko National University of Kyiv, Ukraine*).
58. **K. Gdula**<sup>1</sup>, E. Skwarek<sup>1</sup>, A. Dąbrowski<sup>1</sup>, I.V. Melnyk<sup>2</sup>, Y.L. Zub<sup>2</sup>. **Adsorption kinetic of Ag(I) ions onto mono-functionalized polysiloxanes with magnetic properties** (<sup>1</sup>*Faculty of Chemistry, Maria Curie-Skłodowska University, Lublin, Poland*, <sup>2</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).

59. **K. Gdula**, A. Dąbrowski, E. Skwarek. **Adsorption of Ag(I) ions onto amine-functionalized magnetic nanoparticles** (*Faculty of Chemistry, Maria Curie-Skłodowska University, Lublin*).
60. **K. Gdula**<sup>1</sup>, E. Skwarek<sup>1</sup>, A. Dąbrowski<sup>1</sup>, I.V. Melnyk<sup>2</sup>, Y.L. Zub<sup>2</sup>. **Electrochemical properties of mono-functionalized polysiloxanes with magnetic properties** (<sup>1</sup>*Faculty of Chemistry, Maria Curie-Skłodowska University, Lublin, Poland*, <sup>2</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
61. B.M. Gorelov<sup>1</sup>, **A.M. Gorb**<sup>2</sup>, O.I. Polovina<sup>2</sup>, S. Wacke<sup>3</sup>, Z. Czapla<sup>3</sup>. **Nanosized oxide filler's impact on dielectric β-relaxation in unsaturated polyester resin** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>*Taras Shevchenko National University of Kyiv, Ukraine*, <sup>3</sup>*Department of Physics, Opole University of Technology, Poland*).
62. K. Gusakova<sup>1</sup>, **O. Grigoryeva**<sup>1</sup>, O. Starostenko<sup>1</sup>, A. Fainleib<sup>1</sup>, D. Grande<sup>2</sup>. **Effect of porosity on thermal characteristics of thin film materials based on cyanate ester resins** (<sup>1</sup>*Institute of Macromolecular Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>*Institut de Chimie et des Matériaux Paris-Est, UMR 7182 CNRS – Université Paris-Est Creteil Val-de-Marne, France*).
63. **O. Grigoryeva**, O. Starostenko, L. Bardash, A. Fainleib. **Thermostable polymeric nanomaterials obtained by *in situ* method** (*Institute of Macromolecular Chemistry, NAS of Ukraine, Kyiv*).
64. **M. Grochowicz**, M. Maciejewska. **Synthesis of polymeric microspheres with grafted poly(geranyl methacrylate) chains** (*Department of Chemistry, Faculty of Chemistry, Maria Curie-Skłodowska University, Lublin, Poland*).
65. **K. Gusakova**<sup>1</sup>, A. Fainleib<sup>1</sup>, O. Grigoryeva<sup>1</sup>, O. Starostenko<sup>1</sup>, V. Sakhno<sup>2</sup>, A. Borzakovskiy<sup>2</sup>, E. Espuche<sup>3</sup>, F. Gouanve<sup>3</sup>, D. Grande<sup>4</sup>. **Designing track etched nanoporous films from polycyanurate-based thermosets** (<sup>1</sup>*Institute of Macromolecular Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>*Institute of Nuclear Research, NAS of Ukraine, Kyiv*, <sup>3</sup>*Université de Lyon, Université Lyon 1, CNRS-UMR 5223 Ingénierie des Matériaux Polymeres*, <sup>4</sup>*Institut de Chimie et des Matériaux Paris-Est, UMR 7182 CNRS – Université Paris-Est Creteil Val-de-Marne, France*).
66. **N.A. Havrylyuk**. **Graphene oxide as filler in polymer nanocomposites** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
67. **O.O. Havryliuk**, O.Yu. Semchuk. **Theoretical calculations of the temperature field distribution in the silicon periodic nanostructures during thermal annealing** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
68. L.V. Karabanova, **L.A. Honcharova**. **POSS-containing nanocomposites based on sequential semi-interpenetrating polymer networks** (*Institute of Macromolecular Chemistry, NAS of Ukraine, Kyiv*).
69. **O.M. Kaminskiy**<sup>1</sup>, N.V. Kusyak<sup>1</sup>, A.L. Petranovska<sup>2</sup>, S.P. Turanska<sup>2</sup>, P.P. Gorbyk<sup>2</sup>. **Adsorption of Au<sup>3+</sup> ions from water solutions by Fe<sub>3</sub>O<sub>4</sub>/HA nanocomposites** (<sup>1</sup>*Ivan Franko Zhytomyr State University, Ukraine*, <sup>2</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
70. **A.V. Karakurkchi**, N.D. Sakhnenko, M.V. Ved', A.S. Gorohivskiy. **Nanostructured catalytic cobalt containing PEO-coatings on alloy AL25** (*National Technical University "Kharkiv Polytechnic Institute", Ukraine*).
71. **G.N. Kashin**, I.V. Dubrovin, P.P. Gorbyk. **Nanosized structures of zinc oxide: methods of fabrication, properties and perspectives of applications** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).

72. **A. Khodko**<sup>1</sup>, N. Kachalova<sup>1</sup>, Iu. Mukha<sup>2</sup>, S. Snegir<sup>2</sup>. **Solvent effects on cyclization dynamics of diarylethene derivatives** (<sup>1</sup>Institute of Physics, NAS of Ukraine, <sup>2</sup>Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv).
73. **I.S. Kolesnyk**, O.Ya. Dzhodzhik, V.V. Konovalova, A.F. Burban. **Modification of polysulfone membrane surface with SnO<sub>2</sub> nanoparticles by “layer-by-layer” method** (National University of “Kyiv-Mohyla Academy”, Ukraine).
74. **D. Korytko**, N. Volvach, S. Gryn, S. Alekseev. **Nanosized non-porous silicon carbide surface chemistry** (Taras Shevchenko National University of Kyiv, Ukraine).
75. **O.S. Kukolevska**<sup>1</sup>, I.I. Gerashchenko<sup>1</sup>, E.M. Pakhlov<sup>1</sup>, T.I. Yushchenko<sup>2</sup>. **Synthesis and research of nanocomposites with regulated drug release on basis of poly(2-hydroxyethyl methacrylate)** (<sup>1</sup>Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv, <sup>2</sup>Vinnytsia National Pyrogov Memorial Medical University, Ukraine)
76. **A.P. Kusyak**<sup>1</sup>, A.L. Petranovska<sup>2</sup>, S.P. Turanska<sup>2</sup>, P.P. Gorbyk<sup>2</sup>. **Adsorption of La<sup>3+</sup> ions with nanocomposites based on single-domain Fe<sub>3</sub>O<sub>4</sub> modified with SiO<sub>2</sub>, TiO<sub>2</sub>** (<sup>1</sup>Ivan Franko Zhytomyr State University, Ukraine, <sup>2</sup>Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv).
77. **O.M. Lavrynenko**, O.Yu. Pavlenko, Yu.S. Shchukin, P.O. Kosorukov. **Stabilization of the spinel ferrite nanoparticles with oleic acid species involved as a surfactant** (F.D. Ovcharenko Institute of Bio-Colloid Chemistry, NAS of Ukraine, Kyiv).
78. **B.O. Linova**<sup>1</sup>, S.D. Kobylanska<sup>1</sup>, A.G. Bilous<sup>1</sup>, I.O. Dulina<sup>2</sup>. **Influence of processing conditions on the quality of Li<sub>1,3</sub>Al<sub>0,3</sub>Ti<sub>1,7</sub>(PO<sub>4</sub>)<sub>3</sub> films with NASICON structure** (<sup>1</sup>Vernadsky Institute of General and Inorganic Chemistry, NAS of Ukraine, <sup>2</sup>Institute for Problems in Materials Science, NAS of Ukraine, Kyiv).
79. Yu. Bolbukh<sup>1</sup>, **T. Lupascu**<sup>2</sup>, I. Povar<sup>2</sup>, S. Rogalsky<sup>3</sup>, V. Tertykh<sup>1</sup>, M. Rusu<sup>2</sup>. **Hybride polymer composites with incorporated biologically active substances: spectral studies** (<sup>1</sup>Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv, <sup>2</sup>Institute of Chemistry of the Academy of Sciences of Moldova, Chisinau, <sup>3</sup>Institute of Bioorganic Chemistry and Petrochemistry, NAS of Ukraine, Kyiv).
80. L.A. Belyakova, **D.Yu. Lyashenko**. **Silicas with thiosemicarbazide groups for cation sorption from nitrate solutions** (Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv).
81. **M. Maciejewska**, J. Osypiuk-Tomasik, B. Podkościelna, M. Grochowicz. **Synthesis, characterization and modification of porous DMN-GMA microspheres** (Faculty of Chemistry, Maria Curie-Skłodowska University, Lublin, Poland).
82. **R.V. Mazurenko**, N.V. Abramov, S.N. Makhno, P.P. Gorbyk. **Nickel ferrite nanoparticles modified with copper iodide: synthesis, structural, electrical and magnetic properties** (Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv).
83. **I.V. Melnyk**<sup>1,2</sup>, N.V. Stolyarchuk<sup>2</sup>, Yu.L. Zub<sup>2</sup>, M. Vaclavikova<sup>1</sup>. **Regulation of the porosity and the surface layer structure of silica nanoparticles with bifunctional surface layer using one-step sol-gel technique** (<sup>1</sup>Institute of Geotechnics, SAS, Kosice, Slovak Republic, <sup>2</sup>Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv).
84. **O. Mykhailenko**. **Formation of double-walled nanotube-*bis*(cyclopentadienyl)nickel complexes by “host-guest” type** (Taras Shevchenko National University of Kyiv, Ukraine).
85. **D.B. Nasiedkin**, A.G. Grebenyuk, Yu.V. Plyuto. **Silicate coatings for high-temperature corrosion protection of steel** (Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kiev).

86. **O.I. Oranska**, Yu.I. Gornikov. **Solid-state reactions in composites Nd<sub>2</sub>O<sub>3</sub>–fumed silica with different content of Nd<sub>2</sub>O<sub>3</sub>** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
87. Yu.K. Pirkyy, **T.M. Panchyshyn**, A.V. Gaidin, A.S. Tupchienko. **Formation of platinum nanoparticles on the carbon black** (*Vernadsky Institute of General and Inorganic Chemistry, NAS of Ukraine, Kyiv, Ukraine*)
88. **I.S. Petrik**<sup>1</sup>, A.M. Eremenko<sup>1</sup>, N.P. Smirnova<sup>1</sup>, A.V. Rudenko<sup>2</sup>, Y.S. Marikvas<sup>2</sup>. **Structural and optical properties of antibacterial materials based on Ag and Ag/Cu nanoparticles** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine*, <sup>2</sup>*Institute of Urology, National Academy of Medical Sciences of Ukraine, Kyiv*).
89. **Yu.K. Pirkyy**, O.S. Krupennikova, L.F. Sharanda, V.M. Ogenko. **Catalytically active silica-containing films based on CNT with Pd and Co for oxygen reaction** (*Vernadsky Institute of General and Inorganic Chemistry, NAS of the Ukraine, Kyiv*).
90. **E.N. Poddenezhny**<sup>1</sup>, O.V. Davidova<sup>1</sup>, N.E. Drobyshevskaya<sup>1</sup>, A.A. Boiko<sup>1</sup>, A.A. Alexeenko<sup>1</sup>, M.V. Borysenko<sup>2</sup>. **Starch-based biodegradable composite materials with polypropylene and plasticisers** (<sup>1</sup>*Sukhoi Gomel State Technical University, Belarus*, <sup>2</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
91. **E.N. Poddenezhny**<sup>1</sup>, O.V. Davidova<sup>1</sup>, N.E. Drobyshevskaya<sup>1</sup>, A.A. Boiko<sup>1</sup>, A.A. Alexeenko<sup>1</sup>, A.V. Pavlenok<sup>1</sup>, M.V. Borysenko<sup>2</sup>. **Preparation of powdered luminescent materials based on yttrium oxide and yttrium-aluminum garnet by a new combustion method** (<sup>1</sup>*Sukhoi Gomel State Technical University, Belarus*, <sup>2</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
92. **L. Postolachi**, V. Rusu, T. Lupascu. **Characterisation of natural and modified Ghidirim diatomite (Republic of Moldova)** (*Institute of Chemistry of Academy of Sciences of Moldova*).
93. **S.L. Prokopenko**, G.M. Gunja, S.N. Makhno, P.P. Gorbyk. **Electrophysical properties of heterostructures PbS/CdS** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
94. **I. Protsak**<sup>1</sup>, M. Studziński<sup>2</sup>, Yu. Bolbukh<sup>1</sup>, V. Tertykh<sup>1</sup>. **Chromatographic study of fragmentation products of polymethylphenylsiloxane** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>*Faculty of Chemistry, Maria Curie-Sklodowska University, Lublin, Poland*)
95. **I.V. Pylypchuk**<sup>1</sup>, A.L. Petranovska<sup>1</sup>, S.P. Turanska<sup>1</sup>, **O.M. Korduban**<sup>2</sup>, P.P. Gorbyk<sup>1</sup>. **Synthesis of polyfunctional boron-gadolinium-containing magnetosensitive nanocomposites** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine*, <sup>2</sup>*G.V. Kurdyumov Institute for Metal Physics, NAS of Ukraine, Kyiv*).
96. V.M. Gun'ko<sup>1</sup>, V.I. Zarko<sup>1</sup>, O.V. Goncharuk<sup>1</sup>, A.K. Matkovsky<sup>1</sup>, **O.S. Remez**<sup>1</sup>, J. Skubiszewska-Zieba<sup>2</sup>. **Influence of external conditions on the textural characteristics of fumed metal and metalloid oxides and their composites** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>*Maria Curie-Sklodowska University, Lublin, Poland*).
97. **N.M. Rezanova**<sup>1</sup>, Y.O. Budash<sup>1</sup>, V.Y. Bulakh<sup>1</sup>, L.S. Dzubenko<sup>2</sup>, O.O. Sapyanenko<sup>2</sup>, P.P. Gorbyk<sup>2</sup>. **Compatibilization effect in nanofilled polymer blends** (<sup>1</sup>*Kyiv National University of Technologies & Design, Ukraine*, <sup>2</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
98. **N.V. Roik**, L.A. Belyakova, M.O. Dziazko. **Kinetic and equilibrium studies of doxorubicin adsorption on MCM-41-type silica surface** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).

99. **N.D. Sakhnenko**, M.V. Ved', A.V. Galak. **Modified titanium oxide coatings for environmental technologies** (*National Technical University "Kharkiv Polytechnical Institute", Ukraine*)
100. **D.P. Savitskyi**. **Extraction of graphene oxide from natural coal** (*Dumanskii Institute of Colloid and Water Chemistry, NAS of Ukraine, Kyiv*).
101. Yu. Grebel'na<sup>1,2</sup>, S. Makhno<sup>1</sup>, **Yu. Sementsov**<sup>1</sup>. **An effective method for graphene nanoplatelets production by anode oxidation of expanded graphite** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>«TMSpetsmash», Kyiv).
102. A.V. Vasin<sup>1</sup>, D.V. Kisel<sup>1</sup>, Yu.P. Piryatinsky<sup>2</sup>, G.Ya. Rudko<sup>1</sup>, E.G. Gule<sup>1</sup>, V.Ya. Degoda<sup>3</sup>, V.A. Tertykh<sup>4</sup>, Y.M. Bolbukh<sup>4</sup>, **S.V. Sevostianov**<sup>4</sup>, S.P. Starik<sup>5</sup>, V.S. Lysenko<sup>1</sup>, A.N. Nazarov<sup>1</sup>, D.V. Savchenko<sup>6</sup>. **The effect of pyrolysis of organic and organosilicon surface groups in fumed silica on photoluminescent properties** (<sup>1</sup>*Lashkaryov Institute of Semiconductor Physics, NAS of Ukraine*, <sup>2</sup>*Institute of Physics, NAS of Ukraine*, <sup>3</sup>*Physical faculty of Taras Shevchenko National University of Kyiv*, <sup>4</sup>*Institute of Surface Chemistry, NAS of Ukraine*, <sup>5</sup>*Bakul Institute of Superhard Materials, NAS of Ukraine*, <sup>6</sup>*Physico-Mathematical Faculty, National Technical University "KPI", Kyiv, Ukraine*).
103. A.V. Sviatogor<sup>1</sup>, P.Y. Vezdenetskyi<sup>1</sup>, **S.V. Shulga**<sup>1</sup>, D.L. Starokadomsky<sup>2</sup> V.M. Ogenko<sup>1</sup>. **Physical and mechanical properties of graphene/epoxy composites** (<sup>1</sup>*Vernadsky Institute of General and Inorganic Chemistry, NAS of Ukraine*, <sup>2</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
104. **S.V. Shulga**, P.Y. Vezdenetskyi, V.M. Ogenko. **The "electronic nose" sensor based on chemically modified graphene structures** (*Vernadsky Institute of General and Inorganic Chemistry NAS of Ukraine, Kyiv*).
105. **V.V. Sliesarenko**<sup>1</sup>, Y.S. Fetisova<sup>2</sup>, O.A. Dudarko<sup>1</sup>, Yu.L. Zub<sup>1</sup>. **Template synthesis of bifunctional mesoporous silica containing phosphonic and carboxylic groups** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>*Faculty of Chemistry, National University of «Kyiv-Mohyla Academy», Ukraine*).
106. **S.S. Smola**, E.N. Fadieiev, N.V. Rusakova. **Lanthanide aminopolycarboxylates in hybrid silica nanomaterials: synthesis and spectroscopic properties** (*A.V. Bogatsky Physico-Chemical Institute, NAS of Ukraine, Odessa*).
107. **E.V. Sokovykh**, L.P. Oleksenko, N.P. Maksymovych, I.P. Matushko, V.P. Ruchko, O.P. Ripko. **Selectivity of gas sensors based on Pd/SnO<sub>2</sub> materials in impulse heating mode** (*Department of Chemistry, National Taras Shevchenko University of Kyiv, Ukraine*).
108. **E.D. Solovyova**, O.P. Fedorchuk, A.G. Belous. **Synthesis and properties of thick nanocrystalline films of M-type barium ferrite and nickel ferrite with spinel structure** (*Vernadsky Institute of General and Inorganic Chemistry, NAS of Ukraine, Kyiv*).
109. **O.M. Starostenko**<sup>1</sup>, O.P. Grigoryeva<sup>1</sup>, A.M. Fainleib<sup>1</sup>, S. Koutsoumpis<sup>2</sup>. **Nanoporous and microporous thermostable polyamidoimide/polyurethane films: structure and properties** (<sup>1</sup>*Institute of Macromolecular Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>*Physics Department, National Technical University of Athens, Greece*).
110. **I. Sulym**<sup>1</sup>, D. Sternik<sup>2</sup>, L. Oleksenko<sup>3</sup>, L. Lutsenko<sup>3</sup>, M. Borysenko<sup>1</sup>, A. Derylo-Marczewska<sup>2</sup>. **Characterization of CeO<sub>2</sub>–ZrO<sub>2</sub>/SiO<sub>2</sub> nanocomposites by Raman, XPS and HREM techniques** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>*Faculty of Chemistry, Maria Curie-Skłodowska University, Lublin, Poland*, <sup>3</sup>*Department of Chemistry, Taras Shevchenko National University of Kyiv, Ukraine*).

111. **I.M. Trofymchuk**, N.V. Roik, L.A. Belyakova.  **$\beta$ -Cyclodextrin-MCM-41 silica as promising adsorbent for the trace amounts removal of aromatics from water** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
112. **G.P. Tsintskaladze**, T.V. Sharashenidze, M.A. Dzagania, N.B. Pirtskhalava, N.O. Burkashvili. **Zeolitic nanomaterials accumulated with nitrate ions in agriculture** (*Ivane Javakhishvili Tbilisi State University, Petre Melikishvili Institute of Physical and Organic Chemistry, Tbilisi, Georgia*).
113. **G. Tsintskaladze**, O. Lomtadze, M. Burjanagze, T. Sharashenidze, V. Gabunia, N. Shalvashvili. **Anti-corrosion and anti-fungal sulfur-zeolite nanoadditives for concrete for special purposes** (*Ivane Javakhishvili Tbilisi State University, Petre Melikishvili Institute of Physical and Organic Chemistry, Tbilisi, Georgia*).
114. A.M. Fainleib<sup>1</sup>, O.M. Starostenko<sup>1</sup>, **A.V. Vashchuk**<sup>1</sup>, O.P. Grygoryeva<sup>1</sup>, S.P. Rogalsky<sup>2</sup>, D. Grande<sup>3</sup>. **Novel nanoporous polycyanurates created using ionic liquids as porogen** (<sup>1</sup>*Institute of Macromolecular Chemistry, NAS of Ukraine*, <sup>2</sup>*Institute of Bioorganic Chemistry and Petrochemistry, NAS of Ukraine, Kyiv*, <sup>3</sup>*Institut de Chimie et des Matériaux Paris-Est, UMR 7182 CNRS – Université Paris-Est Creteil Val-de-Marne, France*).
115. **O. Vassiliadi**, A. Panagopoulou, A. Kyritsis, P. Pissis. **Calorimetric study of collagen-water systems over wide range of hydration levels** (*National Technical University of Athens, Greece*).
116. **E.F. Voronin**, L.V. Nosach, V.M. Gun'ko, M.V. Borysenko. **Effect of mechanical treatment of nanoscale hydrophilic and hydrophobic silicas on their thickening efficiency in a nonpolar medium** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
117. Y.I. Sachanova, **I.Yu. Yermolenko**, N.D. Sakhnenko, M.V. Ved. **Composition and morphology of Fe-Co-Mo electrolytic alloys** (*National technical university “Kharkiv polytechnic institute”, Ukraine*).
118. **K.G. Yunuskhodjaeva**<sup>1</sup>, M.G. Ismailova<sup>2</sup>, B.A. Imamaliev<sup>2</sup>. **Biochemical tests of new lignin enterosorbent** (<sup>1</sup>*Uzbek Chemical and Pharmaceutical Research Institute, Tashkent*, <sup>2</sup>*Tashkent Pharmaceutical Institute, Uzbekistan*).

#### 4. Medical, biological and biochemical aspects of research of highly disperse materials

119. **G.V. Beketov**, V.P. Kyslyi, A.I. Liptuga, O.V. Shynkarenko. **Chemical modification of polystyrene surface for ELISA applications** (*Lashkaryov Institute of Semiconductor Physics, NAS of Ukraine, Kyiv*).
120. **V.M. Bogatyrov**, S.M. Makhno, M.V. Galaburda, O.I. Oranska, Yu.I. Gornikov, P.P. Gorbyk. **Synthesis and electrical properties of copper/silica-containing carbon nanocomposites** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
121. **V.M. Bogatyrov**<sup>1</sup>, M.V. Galaburda<sup>1</sup>, O.I. Oranska<sup>1</sup>, O.M. Zaichenko<sup>2</sup>, K.S. Tsyganenko<sup>2</sup>, Ya.I. Savchuk<sup>2</sup>. **Influence of photochemical aging on biocidal activity of Ag-containing silica** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine*, <sup>2</sup>*Zabolotny Institute of Microbiology and Virology, NAS of Ukraine, Kyiv*).
122. **K.O. Filatova**<sup>1,2</sup>, V. Sedlarik<sup>2</sup>, A. Di Martino<sup>2</sup>, A. Golovan<sup>1</sup>, T.V. Krupska<sup>1</sup>, V.V. Turov<sup>1</sup>. Chitosan-functionalized spherical nanosilica matrix as drug delivery system (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>*Center of Polymer Systems, University Institute, Tomas Bata University in Zlin, Czech Republic*).

123. **M.V. Galaburda<sup>1</sup>, V.M. Bogatyrov<sup>1</sup>, T. Lupascu<sup>2</sup>, N.V. Kokosha<sup>3</sup>, I. Povar<sup>2</sup>.**  
**Stabilization of Enoxil in the polymer matrix** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>*Institute of Chemistry, Academy of Sciences of Moldova, Chisinau, Republic of Moldova*, <sup>3</sup>*"International Center for Medical Technologies Implementation" ltd.*).
124. **A.P. Golovan**, T.V. Krupska, I.V. Siora, N.Y. Klymenko, O.A. Novikova, V.V. Turov.  
**Influence of nanosilica powder on winter wheat germination capacity** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
125. **O.O. Kazakova. A quantum-chemical study of the antioxidant properties of natural phenolic compounds** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
126. **N.O. Khemych<sup>1</sup>, S.V. Prokhorenko<sup>1,2</sup>, M.G. Popryaga, O.V. Shynkarenko<sup>3</sup>,**  
**R. Wojnarowska-Nowak<sup>2</sup>. Improvement analysis system of the signal transmission parameters estimation analysis by the signal reflection from the thermal albedo deviations surfaces** (<sup>1</sup>*Lviv Polytechnic National University, Ukraine*, <sup>2</sup>*Centre for Microelectronics and Nanotechnology, University of Rzeszow, Poland*, <sup>3</sup>*Institute of Semiconductor Physics, NAS of Ukraine, Kyiv*).
127. **Ie.V. Pylypchuk<sup>1</sup>, G.V. Khmil<sup>2</sup>, S.V. Gorobets<sup>2</sup>, P.P. Gorbyk<sup>1</sup>.** **Hydroxyapatite self-assembly from simulated body fluid on carboxylated surface of Ti-containing alloys** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*, <sup>2</sup>*National Technical University of Ukraine "Kyiv Polytechnic Institute"*).
128. **N.Y. Klymenko**, I.V. Siora, E.A. Novikova, A.P. Golovan, T.V. Krupskaya, V.V. Turov.  
**Nanosilica-yeast cells based system for remediation of water** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
129. **R.B. Kozakevych<sup>1</sup>, Yu.M. Bolbukh<sup>1</sup>, V.A. Tertykh<sup>1</sup>, T.I. Petriv<sup>2</sup>, V.V. Medvedev<sup>2</sup>,**  
**O.A. Rybachuk<sup>3</sup>, R.G. Vasyliev<sup>4,5</sup>.** **Development of chitosan/carbon nanotubes composites for neural tissue engineering** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine*, <sup>2</sup>*Romodanov Institute of Neurosurgery NAMS of Ukraine*, <sup>3</sup>*Bogomolets Institute of Physiology NAS of Ukraine*, <sup>4</sup>*State Institute of Genetic and Regenerative Medicine NAMS of Ukraine*, <sup>5</sup>*Biotechnological laboratory ilaya\_regeneration, Medical company ilaya, Kyiv, Ukraine*).
130. **S.P. Turanska<sup>1</sup>, A.P. Kusyak<sup>1</sup>, A.L. Petranovska<sup>1</sup>, S.V. Gorobez<sup>2</sup>, V.V. Turov<sup>1</sup>,**  
**P.P. Gorbyk<sup>1</sup>.** **Investigation of cytotoxic activity of magnetic-controlled nanocomposites based on doxorubicin** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine*, <sup>2</sup>*National Technical University of Ukraine «Kyiv Polytechnic Institute», Kyiv*).
131. **I.V. Laguta<sup>1</sup>, O.N. Stavinskaya<sup>1</sup>, R.V. Ivannikov<sup>2</sup>, O.I. Dzyuba<sup>2</sup>.** **Screening the plants of Orchidaceae Juss. family for the antioxidant properties of the leaves extracts** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine*, <sup>2</sup>*M.M. Gryshko National Botanic Garden, NAS of Ukraine, Kyiv*).
132. **N.O. Lipkovska**, V.M. Barvinchenko, M.T. Kartel. **A new approach to complex standardization of silica – multiherbal nanodispersed preparations** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
133. **O.M. Lisova**, S.N. Makhno, P.P. Gorbik. **Effect of microwave low intensity electromagnetic wave on the vital activity of yeast cells in the presence of graphene** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
134. **Iu. Mukha**, N. Vityuk, G. Eremenko, N. Ostapchuk, Ie. Pylypchuk, P. Gorbyk.  
**Synthesis of tryptophan-stabilized Fe<sub>3</sub>O<sub>4</sub>/Ag core-shell nanoparticles** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).

135. **O. Otychenko**<sup>1,2</sup>, A. Parkhomeny<sup>1</sup>, T. Babutina<sup>1</sup>, I. Uvarova<sup>1,2</sup>. **Influence of technological conditions on the physical and chemical properties of biogenic hydroxyapatite doped with ferromagnetic additives** (<sup>1</sup>*Frantsevich Institute for Problems in Materials Science, Kyiv, <sup>2</sup>National Technical University of Ukraine «Kyiv Polytechnic Institute»*).
136. **N. Petrov**. **The study of physicochemical properties of oxidized enotannins** (*Institute of Chemistry, Academy of Sciences of Moldova, Chisinau*).
137. **E. Skwarek**<sup>1</sup>, Y. Bolbukh<sup>2</sup>, V. Tertykh<sup>2</sup>, W. Janusz<sup>1</sup>. **Synthesis and properties of hydroxyapatite/MWCNTs composites** (<sup>1</sup>*Faculty of Chemistry, Maria Curie-Skłodowska University, Lublin, Poland, <sup>2</sup>Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
138. T. Lupascu, **N. Timbaliuc**, A. Gonța, N. Petrov. **Obtaining and characterization of enotannins by physicochemical methods** (*Institute of Chemistry, Academy of Sciences of Moldova, Chisinau*).
139. V.M. Bogatyrov<sup>1</sup>, M.V. Galaburda<sup>1</sup>, O.I. Oranska<sup>1</sup>, M.V. Borysenko<sup>1</sup>, **K.S. Tsyganenko**<sup>2</sup>, Ya.I. Savchuk<sup>2</sup>, O.M. Zaichenko<sup>2</sup>. **Synthesis and biocidal properties of Cu-containing nanocomposites** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, <sup>2</sup>Zabolotny Institute of Microbiology and Virology, NAS of Ukraine, Kyiv*).
140. **O.O. Viltsaniuk**. **Justification enterosorption nanodispersed silica drugs use in complex treatment of community-acquired pneumonia at patients with immunosuppression** (*Vinnytsya National Pirogov Memorial Medical University, Ukraine*).
141. **N. Vityuk**<sup>1</sup>, Iu. Mukha<sup>1</sup>, G. Grodzyuk<sup>2,3</sup>, A. Eremenko<sup>1</sup>. **Bimetallic gold/silver alloy nanoparticles prepared in the presence of tryptophan** (<sup>1</sup>*Chuiko Institute of Surface Chemistry, NAS of Ukraine, <sup>2</sup>L. V. Pisarzhevskii Institute of the Physical Chemistry, NAS of Ukraine, <sup>3</sup>NanoMedTech LLC, Kyiv, Ukraine*).
142. **N.N. Vlasova**. **Amino acid adsorption onto nanocrystalline ceria surface** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).
143. **N.A. Volkova**, E.V. Pavlovich, M.S. Yukhta, A.N. Goltsev. **Effect of gold nanoparticles on morphological and functional characteristics of bone marrow mesenchymal stromal cells** (*Laboratory of Biotechnology and Applied Nanotechnology, Department of Cryopathophysiology and Immunology, Institute for Problems of Cryobiology and Cryomedicine, NAS of Ukraine, Kharkov*).
144. **T. Kulik**, B. Palianytsia. **Application of temperature-programmed desorption mass spectrometry to study the interaction of dextran polymeric chains with fumed silica surface** (*Chuiko Institute of Surface Chemistry, NAS of Ukraine, Kyiv*).