

European Federation of Corrosion  
National Academy of Sciences of Ukraine  
Ukrainian Association of Corrosionists  
Karpenko Physico-Mechanical Institute  
Ivan Franko Lviv National University  
Ivano-Frankivsk National Technical University of Oil and Gas



**XV International Conference**  
***Problems of Corrosion and Corrosion Protection***  
***of Materials***

***“CORROSION-2020”***

***(the 461st event of the European Federation of***  
***Corrosion)***

**(to the 110th anniversary of birth H.V.Karpenko)**

# **PROGRAM**

**October 15–16, 2020**

**Lviv**  
**UKRAINE**

## ***DEAR COLLEAGUES!***

We have the honour of inviting you to take part in the XV International Conference “Problems of Corrosion and Corrosion Protection of Materials” (***CORROSION-2020***) to be held in Lviv, October 15–16, 2020 (Lviv Palace of Arts, 17, Kopernika St.).

### ***Transportation***

*From Central train station:* Tram № 1 to “Main Post Office” stop

*From Lviv Airport:* Trolley-bus № 29 to stop “University”.

***Registration of participants*** and guests will take place at Lviv Palace of Arts (17, Kopernika St.) **on October, 15 from 8.00 a.m.**

### ***Participation***

- Oral presentation
- Poster presentation
- Online participation (conference materials will be sent to all participants who have paid the full registration fee but were unable to participate in the meeting)
- Correspondence participation (participants’ report materials will be included into the book of abstracts and the conference proceedings)

### ***Conference presentation guidelines***

The working languages of the conference are Ukrainian and English (all posters and slides for the oral presentations must be prepared in English).

- Slides of oral presentations shall be prepared in MS PowerPoint format.
- Participants selected for oral presentations shall attend the conference via the online platform Google Meet. We will send the link to this platform via e-mail prior to the conference. Participants may send a ready presentation to the organizing committee. We recommend preparing the presentation in MS PowerPoint and include an audio recording to explain the slides. Duration of the presentation should not exceed 15 minutes.
- The recommended poster size is A1 (portrait). For online presentation posters should be sent to the organizing committee in pdf format (one A4 page).

## ***PROGRAM COMMITTEE***

**V. Pokhmurskii** (Ukraine) – Chairman;  
**M. Khoma** (Ukraine) – Vice-Chairman;  
**R. Baessler** (Germany); **F. Danilov** (Ukraine); **I. Dmytrakh** (Ukraine); **I. Zin** (Ukraine); **L. Kwiatkowski** (Poland); **V. Korolev** (Ukraine); **Ye. Kryzhanivskiy** (Ukraine); **A. Krolikowska** (Poland); **V. Kublanovskiy** (Ukraine); **O. Kuntiyi** (Ukraine); **S. Lyon** (UK); **Th. Lampke** (Germany); **O. Liniucheva** (Ukraine); **E. Lunarska** (Poland); **Z. Nazarchuk** (Ukraine); **H. Nykyforchyn** (Ukraine); **O. Reshetnyak** (Ukraine); **M. Sakhnenko** (Ukraine); **M. Ferreira** (Portugal); **J. Fernandes** (Portugal); **J. Chen** (China); **O. Chygyrynets** (Ukraine); **G. Schmitt** (Germany); **G. Yarmukhamedova** (Kazakhstan).

## ***ORGANIZING COMMITTEE***

*S. Korniy* – Chairman;  
*V. Vynar* – Vice-Chairman;  
*L. Boichyshyn*; *Kh. Vasyliv*; *M. Ved*; *I. Vynar*; *R. Dzhala*; *O. Zvirko*;  
*O. Narivskiy*; *L. Nyrkova*; *I. Pohrelyuk*; *H. Pokhmurska*;  
*A. Syrotiyuk*; *L. Frankevych*; *V. Chervatyuk*; *O. Yaskiv*.

## ***CONFERENCE SECRETARIAT***

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Conference “Problems of Corrosion and Corrosion  
Protection of Materials” (Corrosion-2020)  
is supported by

*Lviv Oblast Council*



*SPC Halychyna*



*SEC “Techno-Resurs”*



*SE Gazotermic*



*LLC “Technological Center  
for Anti-Corrosion  
Protection of Metals”*



October 15, 2020

### Opening Session

Greeting of Conference Participants

**Z. Nazarchuk**

9.30–10.00

*Director of Physico-Mechanical Institute of NAS of Ukraine, Academician of NAS of Ukraine*

**V. Pokhmurskii**

*President of Ukrainian Association of Corrosionists, Corresponding Member of the NAS of Ukraine*

### PLENARY LECTURES

#### CHAIR – O. Zvirko

10.00–10.20 Zin I., Pokhmurskii V., Korniy S., Danyliak M.–O., Kytsya A., Bilyi L., Bazyljak L. **Aluminium alloy corrosion inhibition by zeolite/ phosphate pigment** // *PhMI of NAS of Ukraine*

10.20–10.40 Ved' M., Karakurkchi H., Sakhnenko M., Bohdanova K., Horokhivskiyi A. **Functional PEO-coatings on valve metals in corrosion protection technologies and environmental catalysis** // *NTU “KhPI”*

10.40–11.00 Pavlik V., Boča M. **Influence of chromium salts on corrosion of Incoloy 800 H/HT alloy in fluoride eutectic melt flinak** // *Institute of Inorganic Chemistry, Slovak Academy of Sciences, Slovak Republic*

11.00–11.20 Kityk A., Protsenko V., Danilov F., Pavlik V., Boča M. **Effect of electropolishing of metals and alloys in a deep eutectic solvent on their corrosion characteristics** // *USUChT, Dnipro; Institute of Inorganic Chemistry, Slovak Academy of Sciences*

11.20–11.40 Vasylyv Kh., Khoma M., Vynar V., Ryabtsev I., Ratska N., Ivashkiv V., Holovchuk M. **Tribocorrosion properties of Fe-Ni based plasma-powder coatings** // *PhMI of NAS of Ukraine; EWI*

11.40–12.00 Wiegand M., Opel O., Neumann K., Zargari M. **Corrosion monitoring during commissioning of heating and cooling systems in new real estate** // *West Coast University of Applied Sciences, Germany; Steinbeis Innovationszentrum energie+, Germany*

12.00–12.30

**COFFEE BREAK, PHOTOGRAPHY**

## PLENARY LECTURES

### CHAIR – I. Zin

- 12.30–12.50 Khoma M., Pokhmurskii V., Chuchman M., Datsko B., Ratska N. **Corrosion and hydrogenation of 17G1SU steel in hydrogen sulfide media of different concentrations** // *PhMI of NAS of Ukraine*
- 12.50–13.10 Nykyforchyn H., Zvirko O., Tsyruynyk O. Kret N. **Peculiarities of hydrogen-induced delamination fracture of gas pipeline** // *PhMI of NAS of Ukraine*
- 13.10–13.30 Ledovskykh V., Vyshnevska Yu., Brazhnyk I., Levchenko S. **Mechanism of the oxidative and salt passivators coaction within binary inhibitive mixtures** // *National Aviation University; NTUU “KPI”; Institute for Renewable Energy; Gimasi SA Ukraine R&D Centre, Switzerland*
- 13.30–13.50 Tymus M., Korniy S., Zin I., Khlopyk O., Danyliak M.-O. **Corrosion protection of carbon steel by composition based on natural polysaccharide** // *PhMI of NAS of Ukraine*
- 13.50–14.10 Sakhnenko N., Ved’ M., Yermolenko I., Yar-Mukhamedova G., Karakurkchi H. **Physic-mechanical properties of iron based nanocrep** // *NTU “KhPI”; Al-Farabi Kazakh University, Kazakhstan*
- 14.10–14.30 Pohrelyuk I., Melnyk Kh. **Corrosion resistance of c.p. titanium and Ti-6Al-4V alloy prepared by powder metallurgy in aqua solutions of hydrochloric acid** // *PhMI of NAS of Ukraine*
- 14.30–16.00 **LUNCH // Poster section**

## SESSION

### CHAIR – M. Khoma

- 16.00–16.15 Bilyy O., González-Sánchez J., De León Gomez C.A. **Assesment of localized corrosion resistance of duplex stainless steel 2205** // *Centre for Corrosion Research of Autonomous University of Campeche, Mexico*
- 16.15–16.30 Korolov V., Korolov P. **Instruments for improving the management of corrosion protectability of industrial facilities** // *Donbas center of technological safety «V.M. Shimanovsky Ukrinstalkon»; «Studiya komfortu» LTD*

- 16.30–16.45 Vasyliiev G., Herasymenko Yu. **Improving plate heat exchangers performance with application of ultrasound vibration // NTUU “KPI”**  
Veselyiv’ska H., Ivasenko I., Posuvailo V., Koval’chuck I., Vynar V. **Influence of parameters of plasma-electrolyte oxidation of D16 alloy on corrosion resistance of synthesized coatings // PhMI of NAS of Ukraine**
- 16.45–17.00 Nyrkova L., Osadchuk S., Kovalenko S., Klymenko A., Labur T. **The influence of heat treatment on the corrosion resistance of the welded joints of aluminum alloy of the system Al-Mg-Si-Cu // EWI**
- 17.00–17.15 Kuntyi O., Shepida M., Zozula G. **Obtaining of porous silicon and silicon nanowires by contact corrosion etching of nanostructures Si/MNPs // Lviv Polytechnic NU**
- 17.15–17.30

**18.00**

**WELCOME PARTY**

**October 16, 2020**

**SESSION**

**CHAIR – M. Sakhnenko**

- 9.00–9.15 Yapontseva Yu., Maltseva T., Kublanovsky V. **Corrosion properties of electrolytic coatings of CoW, CoRe and CoWRe alloys // IGICH**  
Bäßler R., Stoljarova A., Regenspurg S. **Deposition of brine components on materials in geothermal conditions // Freie Universität Berlin, Institute for Chemistry and Biochemistry, Germany; BAM – Bundesanstalt für Materialforschung und -prüfung, Germany; GFZ - German Research Centre for Geosciences, Germany**
- 9.15–9.30 Maizelis A., Bairachnyi B. **Corrosion resistance of [(Zn-Ni)<sub>1</sub>/(Zn-Ni)<sub>2</sub>]<sub>n</sub> coatings in comparison with Zn-Ni alloy coatings // NTU “KhPI”**
- 9.30–9.45 Solovei S., Knysh V., Nyrkova L., Kiryan V., Osadchuk S. **Fatigue life of welded joints with the combined effects of high-frequency peening and corrosion environment // EWI**
- 9.45–10.00 Maksimov S., Radzievskaya A., Nyrkova L., Osadchuk S. **Corrosion resistance of welded joints made by underwater wet welding // EWI**
- 10.00–10.15

- 10.15–10.30 Narivskiy O., Zhuravskiy M., Belikov S., Mardarevych R., Ratska N. **Providing the reliability of sealing the heat transmission tubes in the boards of the heat exchangers** // LLC “Ukrspetsmash”; AEK “Energoatom”; NU”Zaporizhia Polytechnic”; PhMI of NAS of Ukraine
- 10.30–10.45 Uchanin V., Aleschenko O., Chervatyuk V. **High-voltage spark inspection of nonconductive anticorrosive coatings on metallic substrate** // PhMI of NAS of Ukraine
- 10.45–11.30 **COFFEE BREAK**

## **CORROSION PROTECTION OF OIL AND GAS INDUSTRY AND CHEMICAL EQUIPMENT (ROUND TABLE)**

### **CHAIR – O.Narivskiy**

- 11.30–11.45 Dzhala R., Verbenets' B., Dzhala V., Mytsyk A., Savula R. **The corrosion control of underground pipelines by measurements of currents and potentials** // PhMI of the NAS of Ukraine
- 11.45–12.00 Prokopchuk S., Nyrkova L., Osadchuk S., Goncharenko L. **Stress-corrosion of welded joints of pipe steel, obtained by different methods of welding** // EWI
- 12.00–12.15 Klymenko A., Kovalenko S., Kuzmenko V. **Corrosion of galvanized pipes in hot water systems** // EWI
- 12.15–12.30 Dergach T., Suhomlin G. **Theoretical and technological methods of increasing corrosion resistance of tubes made of low-alloy steels for the gas-and-oil producing industry** // Prydniprovska State ACEA
- 12.30–12.45 Poberezhny L., Chudyk I., Hrytsanchuk A., Poberezhna L., Markhalevych V., Tkachuk O. **Influence of formation water mineralization on drilling pipe corrosion** // IFNTUOG
- 12.45–13.00 Osadchuk S., Nyrkova L., Beskorovainyi E. **Demands' analysis of requirements document in the field of corrosion protection concerning the level of protective potentials and residual corrosion rate of main pipelines** // EWI; JSC «Ukrtransnafta»
- 13.00–14.00 **LUNCH// Poster section**



## SESSION

### CHAIR – S. Korniy

- 14.00–14.15 Lisovyi P., Nyrkova L., Goncharenko L., Osadchuk S., Kostin V. **Sensitivity to stress-corrosion cracking of low-carbon 09G2S steel in near-neutral pH under cathodic polarisation** // *EWI*
- 14.15–14.30 Kovalenko Yu., Tokarchuk V. **Corrosion resistance of cement matrix modified by cellulose ether** // *NTUU “KPI”*
- 14.30–14.45 Vynar V., Khoma M., Vasylyv Kh., Ratska N., Ivashkiv V., Chuchman M., Datsko B. **Effect of temperature and carbon dioxide pressure on corrosion and corrosion-mechanical destruction of pipe steels in model seam water** // *PhMI of NAS of Ukraine*
- 14.45–15.00 Netrebko V., Volchok I. **Improving the corrosion resistance of wear-resistant cast irons** // *Zaporizhzhia NTU*
- 15.00–15.15 Dzhala R., Yuzevych V., Lozovan V. **Corrosion modeling in defect on pipeline metal surface taking into account the seasonal change of temperature** // *PhMI of NAS of Ukraine*
- 15.15–15.30 Lopachak M., Khrushchuk Kh., Dnistryan V., Boichyshyn L., Reshetnyak O. **Corrosion resistance of amorphous metal alloys  $Co_{72}Si_{11}B_{12}$  as electrodes in hydrogen evolution reactions in alkaline solution** // *Ivan Franko NU of Lviv*
- 15.30–15.45 Khrushchuk Kh., Hula T., Boichyshyn L. **Influence of nanostructuring on corrosion properties of Al-based amorphous metallic alloys** // *Ivan Franko NU of Lviv*
- 16.00 **GENERAL DISCUSSION.  
CLOSING OF CONFERENCE**

**October 15, 2020**  
**POSTER SECTION**  
**12.00–18.30**

- 1–01 Danilov F., Butyrina T., Samokhina V., Vakulenko V., Romanenko S., Protsenko V. **Improvement of corrosion resistance of nickel and nickel–copper alloys via their electropolishing in a deep eutectic solvent** // *USUChT, Dnipro*
- 1–02 Ivashkiv V., Ratska N., Datsko B., Maksishko Yu., Dyachuk A. **Corrosion resistance of 17Mn1Si steel in the environment with different hydrogen sulfide concentrations** // *PhMI of NAS of Ukraine*
- 1–03 Hertsyk O., Kovbuz M., Hula T., Korniy S., Pandiak H. **Influence of an alternating magnetic field on the electrochemical characteristics of amorphous alloys in sulfuric acid** // *Ivan Franko NU of Lviv; PhMI of NAS of Ukraine; Ukrainian National Forestry University*
- 1–04 Lesiuk G., Zvirko O., Duda M., Tsyrunlyk O., Junik K. **Effect of hydrogen on interfacial strength of hybrid composite materials** // *Wroclaw Univ. of Science and Technology; PhMI of NAS of Ukraine*
- 1–05 Świątek Z., Ozga P., Hara A., Szczerba M., Bonchuk O. **Barrier properties of the graphene layer in corrosive processes of the system: electrolytic layer (Zn, Mo) on a steel substrate** // *Institute of Metallurgy and Material Science PAS, Poland; Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NAS of Ukraine*
- 1–06 González-Sánchez J., Bilyy O., Sánchez Cruz T., Dzib Perez L. **Assessment of fracture behavior of dissimilar welding of Inconel 600** // *Centre for Corrosion Research of Autonomous University of Campeche*
- 1–07 Fedirko V., Pohrelyuk I., Melnyk Kh., Kukhar I. **The influence of stress on the corrosion processes of Cr18Ni10Ti steel into liquid lead** // *PhMI of NAS of Ukraine*
- 1–08 Shliakhetka Kh., Pohrelyuk I., Savvakina D. **Electrochemical behaviour of sintered Ti-6Al-4V titanium alloy of different structural state in 20% aqueous solution of hydrochloric acid** // *PhMI of NAS of Ukraine; Kurdyumov Institute for Metal Physics of NAS of Ukraine*
- 1–09 Pohrelyuk I., Tkachuk O., Proskurnyak R. **Effect of temperature of nitride oxidation on corrosion resistance of Ti64 alloy in 0.9% sodium chloride solution** // *PhMI of NAS of Ukraine*
- 1–10 Egorova L., Larin V., Datsenko V. **Research of chemical dissolution of beryllium bronze at proportional etching in various electrolytes** // *National Automobile and Highway University of Kharkiv; Scientific RI of Chemistry, Vasylii Karazin NU of Kharkiv*

- 1–11 Schmitt G., Gommlich T., Kuhl L., Schrems P. **Real-time online corrosion monitoring in the field – new ecn evaluation technology** // *IFINKOR-Institute for Maintenance and Corrosion Protection Technologies gGmbH, Germany; IPS Elektroniklabor GmbH & Co KG, Germany*
- 1–12 Shvets V., Talash V., Rudenko Yu. **Corrosion-electrochemical behavior in solution of 3 % NaCl titanium carbide TiC<sub>x</sub> and the effect of preliminary cathodic polarization on it** // *IPMS*
- 1–13 Svirská L., Krechkovská H., Student O., Kurnat I. **Propensity to the corrosive-fatigue fracture of the long term operated 34KHN3M steel** // *PhMI of NAS of Ukraine*
- 1–14 Maksymiv O., Kyrlyiv V., Chaikovs'kyi B. **Contact fatigue of structural steels with surface nanocrystalline structure in corrosive media** // *PhMI of NAS of Ukraine; Gzhytskyi NU of Veterinary Medicine and Biotechnologies*
- 1–15 Voyevodin V., Vasilenko R., Bortnitskaya M., Klimenko I., Kolodiy I., Kuprin A., Leonov S., Rostova G., Tikhonovsky M., Tolmachova G. **Structure, mechanical properties, oxidation and corrosion resistance of Fe-Cr-Al based alloys** // *NScC “KhIPhT”*
- 1–16 Sharanda L., Nasiedkin D., Nazarchuk M., Grebenyuk A., Plyuto Yu. **Quantum chemical modelling of degradation of corrosion protective polysiloxane coatings** // *Chuiko Institute of Surface Chemistry of NAS of Ukraine*
- 1–17 Shcherbakova L., Iefimov M., Kuprin V., Chugunova S. **Study of the structure, mechanical and corrosive characteristics of the aluminum intermetallic** // *IPMS*
- 1–18 Zozula G., Kuntiyi O., Korniy S. **Obtaining of porous-Cu/Ag-nano surfaces by dealloing and galvanic replacement procesys** // *Lviv Polytechnic NU; PhMI of NAS of Ukraine*
- 1–19 Stashchuk M., Ivasyk H., Maturin Y. **Differential equations of the effect of stresses onto electric potentials in a filled with a substance crack-type defect** // *PhMI of NAS of Ukraine; Lviv Polytechnic NU; Drohobych Ivan Franko State Pedagogical University*
- 1–20 Hvozdyuk M., Hembara T. **Impact of corrosive medium on fatigue strength of basalt reinforcement** // *PhMI of NAS of Ukraine; State University of Life Safety*
- 1–21 Hembara O., Chepil O., Sapuzhak Ya., Hembara N., Grynenko M. **Effect of corrosion environment on metal creep** // *PhMI of NAS of Ukraine*
- 1–22 Mazurek A., Trzaska M. **Corrosion properties of composite coatings Ni /diamond** // *Lukasiewicz Research Network – Institute of Precision Mechanics, Poland*

- 1–23 Skroban K., Gajewska-Midzialek A., Trzaska M. **Electrodeposition and characterization of Ni/Si<sub>3</sub>N<sub>4</sub> composite coatings** // *Lukasiewicz Research Network – Institute of Precision Mechanics, Poland*
- 1–24 Kublanovsky V., Globa N., Nikitenko V., Babenkov E., Shmatok Yu. **Electrochemical parameters of tin films as lithium-ion battery anode materials** // *IGICh; Joint Department of Electrochemical Energy Systems of NAS of Ukraine*
- 1–25 Bersirova O., Kublanovsky V. **Electrodeposition and corrosion properties of nanocrystalline Ni-Re alloy coatings** // *IGICh*
- 1–26 Kalinkevich O., Zinchenko E., Oleshko O., Sklyar A., Chivanov V., Simka W., Mishchenko O., Pogorielov M., Danilchenko S. **The effect of chitosan coatings on the corrosion resistance of Ti-Zr alloy with peo-coated surface** // *Institute for Applied Physics, NAS of Ukraine; Sumy State University; Sumy State Pedagogical University; Silesian University of Technology; NanoPrime*
- 1–27 Koshevar V., Shkadratsova V. **Complex anti-corrosion coating for the protection of metal products** // *State Scientific “Institute of General and Inorganic Chemistry National AS of Belarus”, Laboratory of Colloid Chemistry of Lyophobic Systems*
- 1–28 Aksimentyeva O., Martynyuk G., Horbenko Yu., Malynych S., Filipsonov R. **Polymer-magnetite thermosetting composites with protective and antiradar functions** // *Ivan Franko NU of Lviv; Rivne State Humanitarian University; Hetman Petro Sahaidachnyi National Army Academy*
- 1–29 Pokhmurs'ka H., Student M., Veselivs'ka H., Zadorozhna Kh., Gvosdetskii V. **Corrosion-electrochemical behaviour of sic laser modified 7075 aluminium alloy in neutral water solutions** // *PhMI of NAS of Ukraine*
- 1–30 Belous V., Vasilenko R., Voyevodin V., Klimenko I., Kuprin A., Ovcharenko V., Krasnorutsky V., Zuyok V., Kushtym Ya. **Corrosion and oxidation resistance of vacuum arc chromium coatings on zr1nb alloy** // *NScC “KhIPhT”*
- 1–31 Lobach K., Kolodiy I., Sayenko S., Voyevodin V., Zuyok V. **Corrosion resistance of SiC (Cr) ceramics composite in hydrothermal conditions** // *NScC “KhIPhT”; Karazin Kharkiv NU*
- 1–32 Poltavets V., Vargalyuk V. **Development and application of MnO<sub>x</sub>-based composite films** // *Oles Honchar Dnipro NU*
- 1–33 Shtefan V., Kanunnikova N., Smyrnov A., Shepil T. **Corrosion resistance of AISI 304 steel from compositional oxide coatings** // *NTU “KhPI”; Joint stock company “Ukrainian institute for design of refining and petrochemical plants “UKRNAFTOKHIMPROECT”*

- 1-34 Sevidova E., Stepanova I., Pupan L., Gutsalenko Yu., Kamchatna-Stepanova K. **Influence of plasma electrolytic coatings on electrochemical corrosion activity of aluminum alloys in technological environment of grinding processes** // *NTU "KhPI"*
- 1-35 Zaverach Ie. **Corrosion and catalytical properties of Ni-Cu alloys deposited from citrate electrolyte** // *Khmelnytskyi NU*
- 1-36 Prikhna T., Ilnytska H., Lavrinenko V., Smokvyna V., Zaitseva I., Zakora A. **Research of corrosion resistance high-strength diamond grinding powders** // *Bakul Institute for Superhard Materials of NAS of Ukraine*
- 1-37 Baranovska O., Bagliuk G., Talash V. **Electrochemical and corrosion properties of the multi-component composite of the TiH<sub>2</sub>-FeSiMn-B<sub>4</sub>C system** // *IPMS*
- 1-38 Shishkina Yu., Bagliuk G., Talash V., Rudenko Yu. **Corrosion behaviour of aluminium-based composites prepared by hot forging** // *IPMS*
- 1-39 Mordyuk B., Vasylyev M., Filatova V., Khripta N., Makeyeva I. **Effect of ultrasonic impact treatment on the corrosion resistance of biomedical and industrial alloys** // *Kurdyumov Institute for Metal Physics of NAS of Ukraine*
- 1-40 Tsybulia S., Starchak V., Ivanenko K., Bujalska N., Machulskii G., Kostenko I. **Innovating technology of the surface hardening with the ecological safety steel corrosion protection** // *NU «Chernihiv Polytechnica»; NU «Chernihiv Collegium» Named T.G. Shevchenko*
- 1-41 Kondrashova S., Saprykin E., Naumyk V. **Development of a high effective diffusion metalization method of cast iron and steel chemical equipment parts** // *Berdiansk Mechanical Engineering College of NU "Zaporizhia Polytechnic"; NU "Zaporizhia Polytechnic"*
- 1-42 Skrebtsov A., Kononenko Y., Omelchenko O., Shliakhetka Kh. **Research of corrosion rate of additive growing parts** // *NU «Zaporizhzhia Polytechnic»; PhMI of NAS of Ukraine*
- 1-43 Voyevodin V., Fedirko V., Trush V., Lukyanenko A., Tikhonovsky M., Stoev P., Panov V. **Influence of thermochemical treatment modes on the oxidation process of fuel cladding tubes from Zr-1%Nb alloy** // *NScC "KhIPhT"; PhMI of NAS of Ukraine*
- 1-44 Kapuścińska A., Kwiatkowski L. **Comparative studies of calcium phosphate coatings formed on Mg-RE and Mg-Ca magnesium alloys** // *Lukasiewicz Research Network - Institute of Precision Mechanics, Poland*

- 1-45 Ved' M., Sakhnenko N., Yermolenko I., Sachanova Yu. **The corrosion resistance of galvanic Fe-Co-Mo coatings** // *NTU "KhPI"*
- 1-46 Nenastina T., Ved' M., Sakhnenko N., Proskurina V., Zubanova S. **Corrosion resistance of composite alloy coatings of cobalt with refractory metals** // *Kharkiv National Highway University; NTU "KhPI"*
- 1-47 Chen J., Chen T. **Creep model of concrete under sulfate attack** // *School of Mechanical Engineering and Mechanics, Ningbo University, China*
- 1-48 Buket O., Bilousova N., Andriychuk O., Kushmyruk A. **Features of the influence of ionic composition and electrolyte concentration on the polarization resistance of aluminum alloys corrosion** // *NTUU "KPI"*
- 1-49 Ogenko V., Dubrovina L. **Protective coatings for steel from graphene-containing glue composites based on adhesives** // *IGICh*
- 1-50 Nemchuk O., Semenov P., Hredil M. **Electrochemical and corrosion properties of the operated steel of portal crane** // *PhMI of NAS of Ukraine*

**October 16, 2020**  
**POSTER SECTION**  
**10.45–16.00**

- 2–01 Zin I., Korniy S., Khlopyk O., Karpenko O., Tymus M., Pokynbroda T. **Aluminum alloy corrosion inhibition by technical glycerol** // *PhMI of NAS of Ukraine; DIPhChFF IP*
- 2–02 Vorobyova V., Chygyrynets' O. **Evaluation of inhibition efficiency of apricot pomace extract as a polyfunctional corrosion inhibitor of steel** // *NTUU "KPI"*
- 2–03 Kurmakova I., Korolev O., Bondar O., Sizaya O., Makey O. **Peculiarities of inhibitory action of secondary amines on structural steel corrosion in acid chloride medium** // *Shevchenko NU «Chernihiv Colehium»; State Science RI of Armament and Military Technics Testing and Certifications; LLC Research and Production Enterprise UKRORGSYNTTEZ*
- 2–04 Polutrenko M., Maruschak P. **Inhibitory protection of pipe steels from the combined effects of sulfate reducing and tionic bacteria** // *IFNTUOG; Ternopil Ivan Puluj NTU*
- 2–05 Pokynbroda T., Karpenko O., Hnatush S., Moroz O., Lubenets V., Zin' I. **Thiosulfonates and rhamnolipids as biocorrosion inhibitors** // *Department of Physical Chemistry of Fossil Fuels INPOCCC, NAS of Ukraine; Ivan Franko NU of Lviv; Lviv Polytechnic NU; PhMI of NAS of Ukraine*
- 2–06 Slobodyan Z., Mahlatiuk L., Kupovych R. **Peculiarities of the protective action of plant – based inhibitors in different pH solution** // *PhMI of NAS of Ukraine*
- 2–07 Slobodyan Z., Il'nytskyj Z., Mahlatiuk L., Kupovych R. **Corrosion behavior of 20 steel, copper, brass in inhibited acid solutions for heat-power equipment cleaning** // *PhMI of NAS of Ukraine; Scientific-Production Company "HALYCHYNA"*
- 2–08 Mardarevych R., Zin I., Korniy S., Bilyi L., Kovalevych V., Duriagina Z. **Intercalation of nanoporous oxide coating on aluminium alloy by corrosion inhibitors** // *PhMI of NAS of Ukraine; Lviv Polytechnic NU*
- 2–09 Demchenko N., Tkachenko S., Vasylchenko A., Derevianko S., Tretyak A. **Inhibition of low-carbon steel biocorrosion by ZnO nanoparticles** // *Shevchenko NU "Chernihiv Colehium"; Institute of Agricultural Microbiology and Agro-industrial Production of NAS of Ukraine*

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- 2–31 Dzhala R., Dikmarova L., Dzhala V., Verbenets' B. **Electromagnetic control of underground pipelines insulation** (presentation of the monograph) // *PhMI of NAS of Ukraine*

## LIST OF SYMBOLS

ACEA	Academy of Civil Engineering and Architecture
NAS	National Academy of Sciences
DIPhChFF IP	Department of Lytvynenko Institute of Physico-Organic Chemistry and Coal Chemistry
EC	Engineering Center
EWI	Paton Electric Welding Institute of NAS of Ukraine
IFNTUOG	Ivano-Frankivsk National Technical University of Oil and Gas
IGICH	V. I. Vernadskii Institute of General and Inorganic Chemistry
IPMS	Francevych Institute for Problems of Materials Science
JSC	Joint-Stock Company
LLC	Limited Liability Company
NAS of Ukraine	National Academy of Sciences of Ukraine
NScC “KhIPhT”	National Science Center “Kharkiv Institute of Physics and Technology”
NTU	National Technical University
NTU “KhPI”	National Technical University “Kharkiv Polytechnic Institute”
NTUU “KPI”	National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”
NU	National University
PhMI	H.V. Karpenko Physico-Mechanical Institute, Lviv
PJSC	Public Joint-Stock Company
RI	Research Institute
SC	State Company
SE	State Enterprise
USUCHT	Ukrainian State University of Chemical Technology

**Note:** *If the country, represented by the reporter, is not mentioned, read Ukraine.*