

**European Federation of Corrosion
National Academy of Sciences of Ukraine
Ministry of Education and Science of Ukraine
Ukrainian Association of Corrosionists
Karpenko Physico-Mechanical Institute
Ivan Franko Lviv National University**



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

“CORROSION-2022”

(the 490th event of the European Federation of Corrosion)

PROGRAM

November 15–17, 2022

Lviv

UKRAINE

DEAR COLLEAGUES!

We are honoured to invite you to participate in the XVI International Conference “Problems of Corrosion and Corrosion Protection of Materials” (***CORROSION-2022***) which will be held on November 15–17, 2022 at Karpenko Physico-Mechanical Institute of the NAS of Ukraine in Lviv (5, Naukova St.).

Registration of participants and guests will take place at Karpenko Physico-Mechanical Institute of the NAS of Ukraine (5, Naukova St.) **on November, 15 from 9.00 a.m.**

Participation

- Oral presentation
- Poster presentation
- Online participation
- Correspondence participation (participants’ report materials will be included into the book of conference abstracts)

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

Presentation templates

- Oral presentations shall be presented in *MS PowerPoint* format.
- Participants selected for online presentations shall attend the conference via the online platform **ZOOM**. We will send the link to this platform via e-mail prior to the conference. ***The programme is scheduled in the local time zone: UTC +2:00 hours (Eastern European Time)***.
- Posters should be sent to the organizing committee in *pdf* format in advance (one A4 page, landscape orientation).

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CONFERENCE SECRETARIAT

M.-O. Danyliak
O. Khlopyk
Yu. Rizun

Information by tel.: +38 032 263 80 96
+38 032 229 63 85
+38 067 139 06 96

E-mail: corrosion2022.lviv@gmail.com
Web site: <https://www.ipm.lviv.ua/corrosion2022/>

CONFERENCE TOPICS

- ◆ fundamental aspects of corrosion and modeling;
- ◆ corrosion-mechanical destruction of materials;
- ◆ corrosion-resistant materials and coatings;
- ◆ inhibitors and anti-corrosion pigments;
- ◆ testing methods and corrosion monitoring;
- ◆ corrosion protection of industrial equipment;
- ◆ corrosion of alternative energy equipment.

CONFERENCE IS SUPPORTED BY



Company profile:

Guangzhou Tianheng Innovation Technology Co., LTD., with a total registered capital of 50 million US dollars, includes Foshan Advanced Material Technology Co., LTD., Foshan Mechanical Equipment Co., LTD., Foshan Biotechnology Co., LTD., and has an investment company in Kiev, Ukraine. Main development directions: Investment in high-tech research and development, industrialization of science and technology projects, training new generation of scientists. Headquartered in Guangdong New Material Industry Base (Foshan), a total of 10,000 square meters of space for research and development centers and laboratories.

We are looking for technical partners. If you are interested, please send your personal profile and project description to the following address:

E-mail: 65503201@qq.com
WhatsApp/Viber: +380984669338

November 15, 2022

Opening Session

Greeting of Conference Participants

Prof. Zinoviy Nazarchuk

Director of Physico-Mechanical Institute of NAS of Ukraine;

10.00–10.15

Dr. Joerg Vogelsang

*President of European Federation of Corrosion,
Switzerland;*

Dr. Agnieszka Krolikowska

President of Polish Corrosion Society, Poland

PLENARY LECTURES

CHAIR – Prof. Olha Zvirko

10.20–10.40 **Tsisar V.** Corrosion of steels in Pb-Bi eutectic as applied to MYRRHA reactor – current status of research // *Belgian Nuclear Research Centre (SCK.CEN); Nuclear Materials Science (NMS), Structural Materials (SMA), Mol, Belgium*

10.40–11.00 **Nykyforchyn H., Tsyurulnyk O., Venhryniuk O., Voloshyn V., Zvirko O.** Degradation of fatigue and corrosion fatigue strength of structural steels under long-term operation // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine*

11.00–11.20 **Zin I., Korniy S., Khlopyk O., Tymus M.** Corrosion protection of aluminium alloy by composition based on natural biopolymer // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine*

11.20–11.40 **Akid R.** Application of cellular automaton-extended finite element analysis (CAXFEM) for the prediction of pit-induced fatigue // *The University of Manchester, School of Materials, United Kingdom*

11.40–12.10

COFFEE BREAK, PHOTOGRAPHY

PLENARY LECTURES

CHAIR – Dr. Ivan Zin

12.10–12.30 **Lavrys S., Pohrelyuk I., Veselivska H., Danyliak M.-O., Shliakhetka Kh.** Electrochemical behavior of VT20 titanium alloy fabricated by different technologies // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine; Centre for Advanced Materials Application SAS, Bratislava, Slovakia*

- Lamaka S., Feiler C., Würger T., Vaghefinazari B., Mei Di., Winkler D., Meissner R., Zheludkevich M.** Shifting the paradigm of corrosion inhibition research, showcase magnesium // *Institute of Surface Science, Helmholtz-Zentrum Hereon, Geesthacht, Germany; Institute of Polymers and Composites, Hamburg University of Technology, Hamburg, Germany; Zhengzhou University, Zhengzhou, China; La Trobe University, Bundoora, Australia; Institute for Materials Science, Faculty of Engineering, Kiel University, Germany*
- 12.30–12.50
- Ferreira M.C., Zomorodian A., Della Noce R., Montemor M.F., J.C.S Fernandes.** Corrosion protection of magnesium alloys for biomedical applications // *Instituto Superior Técnico, University of Lisbon, Portugal; Centro de Química Estrutural - CQE, Lisbon, Portugal*
- 12.50–13.10
- Popova K., Prošek T., Reiser M., Kouřil M., Šefl V., Hoseinpoor M.Z.** Application of electrical resistance sensors for real-time corrosion monitoring in atmosphere // *University of Chemistry and Technology Prague, Technopark Kralupy; Czech Republic; University of Chemistry and Technology Prague, Czech Republic*
- 13.10–13.30
- Dzioba I., Lipiec S., Tsyrlunyk O., Zvirko O.** Assessment of susceptibility of casing steels with different microstructure to hydrogen embrittlement and brittle fracture // *Kielce University of Technology, Poland; Karpenko Physico-Mechanical Institute of the NAS of Ukraine*
- 13.30–13.50
- 13.50–14.40 LUNCH // Poster section**

PLENARY LECTURES

CHAIR – Prof. Hryhorii Nykyforchyn

- Zvirko O., Chmelko V., Yadzhak N., Glatzel U.** Peculiarities of hydrogen induced damaging of ferrite-pearlite steel under operation // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine; Institute of Applied Mechanics and Mechatronics, Slovak University of Technology; University of Bayreuth, Germany*
- 14.40–15.00
- Kelly R., Katona R., Burns J., Schaller R.** A Search for Electrochemical Similitude in SCC Testing // *University of Virginia, Department of Materials Science and Engineering, USA*
- 15.00–15.30

- 15.30–15.50 **González Sánchez J.** The importance of opening the scope of international collaborative research for the centre for corrosion research of the Autonomous University of Campeche, Mexico // *Centre for Corrosion Research of Autonomous University of Campeche, Mexico*
- 15.50–16.10 **Lesiuk G., Cristiane Caroline Campos Lopes, Olaleye K., Duda Sz., Zielonka P. Hermes Carvalho.** Mechanical and corrosion performance of composite rebars subjected to a corrosive condition // *Wroclaw University of Science and Technology, Poland; Federal University of Minas Gerais, Department of Structural Engineering, Brazil*
- 16.10–16.30 **Dabala M., Yazpadanah A.** Effect of grindig-induced residual stresses on SCC initiation in AM 316L steel // *University of Padova, Department of Industrial Engineering, Italy*
- 16.30–17.00 **COFFEE BREAK // Poster section**

PLENARY LECTURES

CHAIR – Prof. Hanna Pokhmurska

- 17.00–17.20 **Dittes A., Mehner T., Friedrich S., Awiszus B., Lampke T.** A quantitative model for the corrosion rate of cold-rolled, metastable, stainless steel 316L in dependence of the surface roughness, microstructure and residual-stress state // *University of Technology Chemnitz, Germany; Institute for Machine Tools and Productions Processes, Chemnitz University of Technology, Germany*
- 17.20–17.40 **Lesiuk G., Nykyforchyn H., Zvirko O., Hredil M., Olaleye K., Grabiszewski K.** Effect of the special technological environment on fatigue crack growth in ferrite-pearlite steels // *Wroclaw University of Science and Technology, Poland; Karpenko Physico-Mechanical Institute of the NAS of Ukraine*
- 17.40–18.00 **Serafin D., Rudowicz A., Kwiatkowski L., Wierzba B.** Corrosion resistance of Mg and Mg-Ca binary alloys in simulated orthopaedic applications // *Łukasiewicz Research Network – Institute of Precision Mechanics, Poland*
- 18.00–18.20 **Gajewska-Midzialek A., Skroban K., Cieślak G., Dąbrowski A., Gostomska M., Ciczszwili T., Pęsko E., Kapuścińska A., Trzaska M., Buczko Z.** Microstructure and corrosion resistance of Ni-B matrix composite coatings with boron as a dispersion phase produced by electroless plating // *Łukasiewicz Research Network – Institute of Precision Mechanics, Poland*

November 16, 2022

SESSION

CHAIR – Ph.D. Viktoriya Podhurska

- 9.30–9.45 **Vasyliiv Kh., Khoma M., Vynar V., Chuchman M., Ivashkiiv V., Ratska N.** The effect of temperature and pressure of hydrogen sulfide and carbon dioxide on the corrosion of pipeline steel Q125 in a model brine water // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine*
- 9.45–10.00 **Maksymiv O., Kyryliv V., Zvirko O.** Corrosion resistance of carbon steel with surface nanocrystalline layer // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine*
- 10.00–10.15 **Tsybailo I., Svirska L., Solovei P., Krechkovska H., Datsko B., Student O.** Influence of electrolytic hydrogenation on the structural and mechanical state of heat-resistant steel // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine; Lviv Polytechnic National University*
- 10.15–10.30 **Narivs'kyi O., Snizhnoi G., Pulina T., Snizhnoi V., Belikov S.** The influence of the specific magnetic susceptibility of AISI 304 steel on its resistance to pitting in model circulating waters // *Zaporizhzhia Polytechnic National University, Ukraine; LCC “Ukrspetsmash”; Zaporizhzhia National University*
- 10.30–10.45 **Hredil M., Toribio J., Kurnat I., Shtoyko I.** Electrochemical methods for simulating bond strength degradation in reinforced concrete // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine; University of Salamanca, E.P.S., Zamora, Spain*
- 10.45–11.00 **Lampke Th., Rupprecht Ch., Schuberth S., Pokhmurska H.** Corrosion protection by thermal spraying // *University of Technology Chemnitz, Germany; Institute for Machine Tools and Factory Management, Technical University of Berlin; CeWOTec Co., Germany; Lviv Polytechnic National University*
- 11.00–11.30 **COFFEE BREAK // Poster section**

SESSION (Ukrainian)

CHAIR – Prof. Myroslav Khoma

- 11.30–11.45 **Korniy S., Zin I., Khlopyk O., Danyliak M.-O., Datsko B., Halaichak S., Holovchuk M.** Anti-corrosion pigments for paints based on aluminosilicate nanocontainers // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine*

- 11.45–12.00 **Vorobyova V.** A new insight into corrosion inhibition mechanism of steel in neutral solution by ‘green’ plant extract: experimental and theoretical approach // *National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”*
- 12.00–12.15 **Poberezhnyi L., Rutner M., Kessler S.** Corrosion of the responsible elements of wind energy facilities // *Helmut Schmidt University, University of the Federal Armed Forces, Hamburg, Germany; Hamburg University of Technology, Germany*
- 12.15–12.30 **Sakhnenko M., Karakurkchi H., Korogodska A., Indykov S., Horohivska N., Sachanova Yu.** Metal oxide nanocomposites - electrochemical synthesis and properties // *National Technical University “Kharkiv Polytechnic Institute, Ukraine; National Defence University of Ukraine named after Ivan Cherniakhovskiy*
- 12.30–12.45 **Vynar V., Pokhmurskii V., Slepko R., Bukliv R.** Electrochemical approaches for the study of tribocorrosion processes // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine; Lviv Polytechnic National University*
- 12.45–13.45 **LUNCH// Poster section**

SESSION (Ukrainian)

CHAIR – Dr. Sergiy Korniy

- 13.45–14.00 **Chuchman M., Datsko B., Ivashkiv V., Ratska N., Vasylyv Ch., Syrotyuk A.** The influence of CO₂ and H₂S on the corrosion of pipe steels in the oil and gas extraction industry // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine*
- 14.00–14.15 **Kopey B., Krechkovska G., Kopey I. Bakun B.** Regularities of fatigue cracks growth in steel and composite sucker rods // *Ivano-Frankivsk National Technical University of Oil and Gas; Karpenko Physico-Mechanical Institute of the NAS of Ukraine*
- 14.15–14.30 **Kuntyi O., Zozula G., Shepida M.** Brass dezincification as a method of porous electrodes obtaining // *Lviv Polytechnic National University*
- 14.30–14.45 **Halaichak S., Vynar V., Mardarevych R.** Development of nickel-based composite coatings with increased corrosion-mechanical properties // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine*

14.45–15.00 **Kychma A., Predko R.** Monitoring of the corrosion state of supporting units of above-ground sections of gas pipelines // *Lviv Polytechnic National University*

15.00–15.30 **COFFEE BREAK**

SESSION (English and Ukrainian)

CHAIR – Dr. Halyna Krechkovska

15.30–15.45 **Bilyy O., Dominguez Rodriguez G., Rosado Carrasco J.** Determination of criteria for characterising crack-like defects based on the received images and their further processing // *Centre for Corrosion Research of Autonomous University of Campeche, Mexico; Research and Technological Innovation Centre of National Polytechnic Institute, Mexico City, Mexico*

15.45–16.00 **González Sánchez J., Martínez Galván Y., Dzib Perez L., Bilyy O., García Rentería M., López Morelos V.** Effect of temperature on resistance to pitting corrosion in duplex stainless steel 2205 welds // *Centre for Corrosion Research of Autonomous University of Campeche, Mexico; The Metallurgy and Materials Research Institute (IIMM) of the Universidad Michoacana de San Nicolás de Hidalgo*

16.00–16.15 **Andreykiv O., Dolinska I., Zviahin N., Nastasyak S.** The influence of the maneuvering load of the rectification column on residual lifetime // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine; Ivan Franko National University*

16.15–16.30 **Dzhala R., Verbenets' B., Dzhala V., Kostiv V., Kychma A., Lozovan V., Melnyk M., Savula R., Shevchuk T.** Increasing the efficiency of main pipelines diagnostic examinations using non-contact current measurements // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine; Ukrainian Transmission System Operator; National University "Lviv Polytechnic"; Research and Production Enterprise "Integrator"*

16.30–16.45 **Nyrkova L., Lisovyi P., Goncharenko L., Osadchuk S., Klymenko A.** Comparative analysis of the susceptibility of steels pipeline assortment to stress-corrosion cracking under cathodic protection // *Paton Electric Welding Institute of the National Academy of Sciences of Ukraine*

16.45–17.00 **Shendrik T., Dunayevska N., Fateyev A.** Inducted under-deposit corrosion of metal surfaces during combustion of coal with high salt content // *Thermal Energy Technologies Institute of the National Academy of Sciences of Ukraine; Thermal Energy Technologies Institute of the NAS of Ukraine*

November 17, 2022
SESSION (Ukrainian)

CHAIR – Prof. Mykola Sakhnenko

- 10.00–10.15 **Hembara O., Chepil O., Soviak I.** Influence of a corrosive environment and hydrogenation on metal creep // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine*
- 10.15–10.30 **Veseliivska H., Pohrelyuk I., Student M., Gvosdetskii V., Zadorozhna Kh., Dzioba Y.** Influence of the electrolyte composition for solid anodizing of aluminum on the corrosion resistance of synthesized anodic coatings // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine*
- 10.30–10.45 **Kolesnikov V.** Study of corrosion and physical-mechanical properties of degraded steels of power equipment exposed to hydrogen-containing media // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine; Luhansk Taras Shevchenko National University*
- 10.45–11.00 **Vasyliiev G., Herasymenko Yu.** The use of corrometers for controllable reagent water treatment in heating networks // *National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”*
- 11.00–11.15 **Dergach T., Suchomlin G., Deyneko L., Zhou-Hua J., Tian J.** Influence of surfactant elements on grain boundary structure and resistance against intergranular corrosion of austenite Cr-Ni and Cr-Ni-Mo steels // *Prydniprovsk State Academy of Civil Engineering and Architecture; Ukrainian State University of Science and Technology; Northeastern University of China*
- 11.15–11.30 **Kharchenko Yu., Nyrkova L., Osadchuk S., Goncharenko L., Klymenko K.** Study of electrochemical properties of long-term operated gas pipeline pipes made of controllable rolling steel // *E. Paton Electric-Welding Institute of the National Academy of Sciences of Ukraine*
- 11.30–11.45 **Klymenko A., Kovalenko S., Polishko G., Tunik A., Byk M., Buket O., Shapiro A.** Corrosion resistance of stainless steel AISI 310S in lead melt at the temperature 450 °C // *E.O. Paton Electric Welding Institute of NAS of Ukraine; National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”; GenCell Ltd, Israel*

11.45–12.00	<u>Nenastina T., Sakhnenko M., Yar-Mukhamedova G., Karakurkchi H., Narivskyi O.</u> Corrosion properties of electrolytic cobalt metaloxide composites // <i>Kharkiv National Highway University; National Technical University "Kharkiv Polytechnic Institute"; Al-Farabi Kazakh University, Almaty, Kazakhstan; Military National Defense University of Ukraine named after Ivan Cherniakhovskyi; LLC "Ukrspemash</i>
12.00–12.30	GENERAL DISCUSSION
12.30–13.00	CLOSING OF CONFERENCE
	COFFEE BREAK
13.00–13.30	Meeting of interdepartmental scientific and technical council on corrosion problems and anti-corrosion protection of metals

POSTER SECTION

- 1-01 Halaichak S., Datsko B., Dyachuk A. **Investigation of sorption capacity of synthetic zeolite in relation to phosphates of divalent metals** // *Karpenko Physico-Mechanical Institute of NAS of Ukraine*
- 1-02 Slobodyan Z., Mahlatiuk L., Kupovych R., Rizun Yu. **Polyvinylpyrrolidone protection properties for carbon steel in NACE medium and model reservoir water** // *Karpenko Physico-Mechanical Institute of NAS of Ukraine*
- 1-03 Slobodyan Z., Mahlatiuk L., Kupovych R., Ilnytsky Z. **Influence of carboxymethylcellulose on corrosion-electrochemical characteristics of 20 steel in NACE solutions and model reservoir water**// *Karpenko Physico-Mechanical Institute of NAS of Ukraine; Research and Production Company "HALYCHYNA"*
- 1-04 Protseiko V., Butyrina T., Vakulenko V., Romanenko S., Danilov F. **Corrosion behavior of Ni-TiO₂ composite coatings electrodeposited in electrolytes based on a deep eutectic solvent** // *Ukrainian State University of Chemical Technology*
- 1-05 Kovbasiuk T., Duriagina Z., Kulyk V., Kostko O. **Applications of ceramic-based film heaters with heat-resistant insulating coatings** // *Lviv Polytechnic National University; John Paul II Catholic University of Lublin, Poland; LLC «PKVP «KREDUV»*
- 1-06 Kanibolotsky D., Naumenko M., Shcheretskyi O., Verkhovliuk A. **Corrosion in aluminium-based sacrificial anode – steel system** // *Physico-Technological Institute of Metals and Alloys of NAS of Ukraine*
- 1-07 Korolov V., Korolov P. **Parametric design of steel structure corrosion protectability based on the limit states** // *State Higher School "Priazovsky State Technical University"; LTD "Kartis Building"*
- 1-08 Veselivska H., Student M., Posuvailo V., Zadorozhna Kh., Chugai O. **Electrochemical behavior of the MA5 magnesium alloy with aluminium coatings sprayed by different methods after their plasma electrolytic treatment** // *Karpenko Physico-Mechanical Institute of NAS of Ukraine; National Aerospace University "Kharkiv Aviation Institute"*
- 1-09 Fedirko V., Pohrelyuk I., Melnyk Kh., Kukhar I. **Influence of structural state of ferrite-martensitic steel T91 on its corrosion resistance in liquid lead** // *Karpenko Physico-Mechanical Institute of NAS of Ukraine*

- 1-10 Khoma M., Vasylyv Ch., Chuchman M., Ivashkiv V., Holovchuk M., Datsko B., Gural T., Ratska N. **The influence of hydrogen sulfide concentration on the corrosion and hydrogenation of steel 07Cr18Ni6** // *Karpenko Physico-Mechanical Institute of NAS of Ukraine*
- 1-11 Chernov I., Zuyok V., Grytsyna V., Tretyakov M., Kushtym Ya. **Compatibility of dysprosium titanate powder and pellets with 42XHM alloy in water vapor environment at temperatures in range (600...1200) °C** // *"Nuclear Fuel Cycle" Science and Technology Establishment (NFC STE) National Science Center "Kharkov Institute of Physics and Technology (NSC KIPT)*
- 1-12 Ratska N., Ivashkiv V., Chuchman M., Rudkovskii Ye. **Hydrogen permeability of structural steel in corrosive environments with H₂S and CO₂** // *Karpenko Physico-Mechanical Institute of NAS of Ukraine*
- 1-13 Derecha D., Skirta Yu., Gerasimchuk I., Hruzevych A., Samchenko D., Kochetov G. **Technique for determining corrosion-active areas of ferromagnetic materials under effect of magnetic inhomogenous** // *Institute of Magnetism of NAS of Ukraine; Kyiv National University of Construction and Architecture; Trypilska TPP; Phisico-technological Institute of Metals and Alloys*
- 1-14 Yapontseva Yu., Maltseva T., Kublanovsky V., Vyshnevskiy O. **Corrosion behavior of electrolytic CoRe alloy at long-term exposure in an alkaline media** // *V. I. Vernadsky Institute of General and Inorganic Chemistry of NAS of Ukraine; M.P. Semenenko Institute of Geochemistry, Mineralogy and Ore Formation of the NAS of Ukraine*
- 1-15 Tkachuk O., Pohrelyuk I., Proskurnyak R., Kazek-Kesik A. **Formation of PEO coating on Ti-6Al-4V alloy with hardened diffusion layer** // *Karpenko Physico-Mechanical Institute of NAS of Ukraine; Silesian University of Technology*
- 1-16 Snizhnoi G., Snizhnoi V. **Magnetometric assessment of the influence of chemical elements in the process of corrosion of austenitic Fe-Cr-Ni alloys** // *Zaporozhzhia Polytechnic National University; Zaporizhzhia National University*
- 1-17 Karakurkchi H., Sakhnenko M., Zybanova S., Yermolenko I., Indykov S. **Corrosion resistance of the surface of titanium alloys modified by plasma-electrolytic oxidation** // *National Defence University of Ukraine named after Ivan Cherniakhovskiy; National Technical University «Kharkiv Polytechnic Institute»*

- 1-18 Domantsevych N., Aksimentyeva O., Horbenko Yu. **Investigation of corrosion resistance of metal surfaces protected by polymer films** // *Lviv University of Trade and Economics; Ivan Franko Lviv National University*
- 1-19 Rizun Yu., Ivashkiv V., Chuchman M. **Corrosion resistance of 17Г1СУ steel in a NACE environment saturated with carbon dioxide and hydrogen sulfide** // *Karpenko Physico-Mechanical Institute of NAS of Ukraine*
- 1-20 Danyiak M.-O., Rizun Yu. **Corrosion inhibition of the steel by environmental friendly salt of carboxylic acid** // *Karpenko Physico-Mechanical Institute of NAS of Ukraine*
- 1-21 Dzib Perez L., Ake Turiza I.G., Rodríguez Pérez M., Gonzalez Sanchez J., Bilyy O. **Electrochemical characterization of films of semiconductor oxides** // *Centre for Corrosion Research of Autonomous University of Campeche, Campeche, Mexico*
- 1-22 Pustovyi V., Oliynyk O., Nesterov O., Semenov P., Hredil M. **Influence of corrosive environment on fatigue crack growth in long-term operated steel of a portal crane** // *Odessa National Maritime University; Karpenko Physico-Mechanical Institute of NAS of Ukraine*
- 1-23 Matviichuk O., Vynar V., Hnatenko I., Botvinko V. **Corrosion resistance of hard alloys VN20 and VNK15 in environments of different aggressiveness** // *Bakul Institute for Superhard Materials of the NAS of Ukraine; Karpenko Physico-Mechanical Institute of the NAS of Ukraine*
- 1-24 Vorobyova V., Chyhyrynets O. **Multifunctional inhibitory compositions based on "green" organic compounds and organosilane** // *National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"*
- 1-25 Osadchuk S., Nyrkova L., Kovalenko S. **Assessment of soil corrosiveness from the accident site of the main pipeline** // *E. O. Paton Electric-Welding Institute of NAS of Ukraine*
- 1-26 Poberezhna L., Shkitsa L., Hrytsanchuk A., Popovych P. **Optimization of the choice of drill pipe material during the of deep wells construction in protected areas** // *Ivano-Frankivst National Technical University of Oil and Gas; West Ukrainian National University*
- 1-27 Muravsky L., Zin I., Bilyi L., Gaskevych G., Suriadova O. **Corrosion monitoring of paint coating evolution using correlation speckle interferometry** // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine*

- 1–28 Lopachak M., Semeniuk M., Boichyshyn L., Reshetnyak O. **An electrochemical impedance study of amorphous metal alloys based on cobalt in 3% NaCl** // *Ivan Franko National University*
- 1–29 Diduk I., Chuvashov Yu., Yashchenko O., Shapovalenko S., Guo Pengxiang, Korniy S. **Possibilities of using basalt scales for composite materials and anti-corrosion protection** // *SE STC “Basalt-fiber materials” Frantsevich Institute for Problems of Materials Science of NAS of Ukraine; Guangzhou Tianheng Innovation Technology Co.,Ltd; Karpenko Physico-Mechanical Institute of the NAS of Ukraine*
- 1–30 Khlopyk O., Zin I., Bilyy L., Duriagina Z., Datsko B. **Anti-corrosion properties of composite inhibiting pigment based on natural calcium silicate and zinc monophosphate** // *Karpenko Physico-Mechanical Institute of the NAS of Ukraine; Lviv Polytechnic National University*
- 1–31 Hertsyk O., Kovbuz M., Korniy S., Pandiak N., Nestoruk T. **Effect of the nature of an aggressive medium on the electrochemical characteristics of amorphous alloy** // *Ivan Franko National University of Lviv ; Karpenko Physico-Mechanical Institute of the NAS of Ukraine; Ukrainian National Forestry University*
- 1–32 **Nyrkova L., Goncharenko L., Osadchuk S., Labur T.** Influence of the time factor on corrosion-mechanical properties of Al-Mg-Si-Cu alloy welded joint // *Paton Electric Welding Institute of the NAS of Ukraine*