ELYOR BERDIMURODOV

Address: Tashkent, Olmazaro district,
University street, Republic of Uzbekistan.
Date of birth: June 17, 1990
Phone number: +998 97 330 70 60
E-mail address: elyor170690@gmail.com
Scopus Author ID: 57218857113 (H index=13)
Google Scholar: H index=16 and iH index=21
Research Gate: H index=17
Web of Science: ABH-2985-2020, H index= 12

WORK EXPERIENCE

From 2018 to 2021.	Faculty of Natural Science, Department of Chemistry, Karshi State University, Karshi city, Kashkadardo region, Republic of Uzbekistan. ***Associated Professor***
From 2022 to present	National University of Uzbekistan, Tashkent, Uzbekistan ***Associated Professor***

EDUCATION

2008-2012	National University of Uzbekistan, Tashkent, Uzbekistan *Bachelor's Degree on Chemistry*
2012-2014	National University of Uzbekistan, Tashkent, Uzbekistan *Master's Degree on Chemistry (Physical chemistry)*
2015-2018	(2015-2016) Tianjin University, Tianjin, China, (2016-2018) National University of Uzbekistan, Tashkent, Uzbekistan. Cooperation program. *Ph.D. on Chemistry (Physical chemistry)*
2019	Changchun Institute Of Applied Chemistry, Chinese Academy Of Science (Changchun, Jilin, China) *Senior Researcher*
2022	Postdoc, National University of Uzbekistan, Physical chemistry.

RESEARCH AREA

Physical chemistry, corrosion science, material science, inorganic chemistry, organic synthesis, quantum chemical calculation, MD simulation, electrochemistry.

RESEARCH GRANTS

1. RESEARCH GRANTS FROM NATIONAL RESEARCH FOUND, OT-F3- 151 «Polymers as bearers of biologically active compounds and inhibitors» (2007-2011).
2. RESEARCH GRANTS FROM NATIONAL

RESEARCH FOUND, EF-7-1 «New generation of inhibitors of metals corrosion on the base of local raw materials» (2014-2015).

3. RESEARCH GRANTS FROM NATIONAL RESEARCH FOUND, A-12- 46 «Increasing of anticorrosion affectivity of polyelectrolytes and their using» (2015-2017).
4. RESEARCH GRANTS FROM ECONOMICAL FOUND, Economical agreement 21/2010/02-2303 «Anticorrosion cover "Antikor-2" and technology of it's plotting on metal surfaces» (2010-2011).
5. RESEARCH GRANTS FROM KARSHI STATE UNIVERSITY RESEARCH FOUND EF-7-1 «The new generation corrosion inhibitors based on local producties», (2015-2017 y.).

Berdimurodov Elyor is an Associate professor at the National University of Uzbekistan. He has studied in the Ph.D. program at Tianjin University and the National University of Uzbekistan. He was a researcher at Tianjin University, Karshi State University, and Changchun Applied Chemistry Institute (Chinese Academy of Science). He was a participant in several international and domestic study and research programs (Chinese Government Scholarships, Chinese Great belt program, National Fundamental, and practical grants). He has published over 30 articles in Scopus and Web of science journals. H index is 13 in Scopus, 8 in Web of Science, and 16 (i-10 index of 21) in Google Scholar. He contributed over 12 book chapters He was also a participant in over 15 international conferences from China, Russian, India, and other developed countries. His research areas are corrosion science, electrochemistry, quantum chemistry, material science, green chemistry, biology, medicine, pharmacy, and nanochemistry.

List of favorable published works

[1] O. Dagdag, R. Haldhar, S.-C. Kim, L. Guo, M. El Gouri, E. Berdimurodov, O. Hamed, S. Jodeh, E.D. Akpan, E.E. Ebenso, Recent progress in epoxy resins as corrosion inhibitors: design and performance, J. Adhes. Sci. Technol. (2022) 1–22.

[2] E. Berdimurodov, A. Kholikov, K. Akbarov, L. Guo, S. Kaya, D. Kumar Verma, M. Rbaa, O. Dagdag, Novel glycoluril pharmaceutically active compound as a green corrosion inhibitor for the oil and gas industry, J. Electroanal. Chem. 907 (2022) 116055. https://doi.org/10.1016/J.JELECHEM.2022.116055.

[3] E. Berdimurodov, I. Eliboyev, K. Berdimuradov, A. Kholikov, K. Akbarov, O. Dagdag, M. Rbaa, B. El Ibrahimi, D.K. Verma, R. Haldhar, Green β-cyclodextrin-based corrosion inhibitors: Recent developments, innovations and future opportunities, Carbohydr. Polym. (2022) 119719.

[4] M. Rbaa, S. Haida, B. Tuzun, A. El Hassane, A. Kribii, Y. Lakhrissi, T. Ben Hadda, A. Zarrouk, B. Lakhrissi, E. Berdimurodov, Synthesis, characterization and bioactivity of novel 8-hydroxyquinoline derivatives: Experimental, molecular docking, DFT and POM analyses, J. Mol. Struct. 1258 (2022) 132688.

[5] M. Rbaa, M. Galai, O. Dagdag, L. Guo, B. Tüzün, E. Berdimurodov, A. Zarrouk, B. Lakhrissi, Development process for eco-friendly corrosion inhibitors, in: Eco-Friendly Corros. Inhib., Elsevier, 2022: pp. 27–42.

[6] D.K. Verma, Y. Dewangan, A.K. Singh, R. Mishra, M.A.B.H. Susan, R. Salim, M. Taleb, F. El Hajjaji, E. Berdimurodov, Ionic liquids as green and smart lubricant application: an overview, Ionics (Kiel). (2022) 1–10.

[7] E. Berdimurodov, C. Verma, K. Berdimuradov, M.A. Quraishi, A. Kholikov, K. Akbarov, N. Umirov, B. Borikhonov, 8–Hydroxyquinoline is key to the development of corrosion inhibitors: An advanced review, Inorg. Chem. Commun. (2022) 109839.

[8] M. Rbaa, A. Oubihi, H. Hajji, B. Tüzün, A. Hichar, E.H. Anouar, E. Berdimurodov, M.A. Ajana, A. Zarrouk, B. Lakhrissi, Synthesis, bioinformatics and biological evaluation of novel pyridine based on 8-hydroxyquinoline derivatives as antibacterial agents: DFT, molecular docking and ADME/T studies, J. Mol. Struct. 1244 (2021) 130934. https://doi.org/https://doi.org/10.1016/j.molstruc.2021.130934.

[9] E. Berdimurodov, D.K. Verma, A. Kholikov, K. Akbarov, L. Guo, The recent development of carbon dots as powerful green corrosion inhibitors: A prospective review, J. Mol. Liq. (2021) 118124. https://doi.org/https://doi.org/10.1016/j.molliq.2021.118124.

[10] A. Bahgat Radwan, C.A. Mannah, M.H. Sliem, N.H.S. Al-Qahtani, P.C. Okonkwo, E. Berdimurodov, A.M. Mohamed, A.M. Abdullah, Electrospun highly corrosion-resistant polystyrene–nickel oxide superhydrophobic nanocomposite coating, J. Appl. Electrochem. 51 (2021) 1605–1618. https://doi.org/10.1007/s10800-021-01603-8.

[11] D.K. Verma, M. Kazi, M.S. Alqahtani, R. Syed, E. Berdimurodov, S. Kaya, R. Salim, A. Asatkar, R. Haldhar, N–hydroxybenzothioamide derivatives as green and efficient corrosion inhibitors for mild steel: Experimental, DFT and MC simulation approach, J. Mol. Struct. 1241 (2021) 130648. https://doi.org/10.1016/j.molstruc.2021.130648.

[12] E. Berdimurodov, A. Kholikov, K. Akbarov, L. Guo, Experimental and theoretical assessment of new and eco–friendly thioglycoluril derivative as an effective corrosion inhibitor of St2 steel in the aggressive hydrochloric acid with sulfate ions, J. Mol. Liq. 335 (2021) 116168. https://doi.org/https://doi.org/10.1016/j.molliq.2021.116168.

[13] E. Berdimurodov, A. Kholikov, K. Akbarov, L. Guo, S. Kaya, K.P. Katin, D.K. Verma, M. Rbaa, O. Dagdag, R. Haldhar, Novel gossypol–indole modification as a green corrosion inhibitor for low–carbon steel in aggressive alkaline–saline solution, Colloids Surfaces A Physicochem. Eng. Asp. 637 (2022) 128207. https://doi.org/10.1016/J.COLSURFA.2021.128207.

[14] A.R. Shahmoradi, M. Ranjbarghanei, A.A. Javidparvar, L. Guo, E. Berdimurodov, B. Ramezanzadeh, Theoretical and surface/electrochemical investigations of walnut fruit green husk extract as effective inhibitor for mild-steel corrosion in 1M HCl electrolyte, J. Mol. Liq. 338 (2021) 116550. https://doi.org/https://doi.org/10.1016/j.molliq.2021.116550.

[15] E. Berdimurodov, L. Guo, A. Kholikov, K. Akbarov, M. Zhu, MOFs-Based Corrosion Inhibitors, in: Supramol. Chem. Corros. Biofouling Prot., CRC Press, 2021: pp. 287–305.

[16] E. Berdimurodov, A. Kholikov, K. Akbarov, L. Guo, A.M. Abdullah, M. Elik, A gossypol derivative as an efficient corrosion inhibitor for St2 steel in 1 M HCl + 1 M KCl: An experimental and theoretical investigation, J. Mol. Liq. 328 (2021) 115475. https://doi.org/https://doi.org/10.1016/j.molliq.2021.115475.

[17] O. Dagdag, R. Hsissou, Z. Safi, R. Haldhar, E. Berdimurodov, M. El Bouchti, N. Wazzan, O. Hamed, S. Jodeh, M. El Gouri, Rheological and simulation for macromolecular matrix epoxy bi-functional aromatic amines, Polym. Bull. (2021). https://doi.org/10.1007/s00289-021-03862-z.

[18] E. Berdimurodov, A. Kholikov, K. Akbarov, L. Guo, S. Kaya, K.P. Katin, D. Kumar Verma, M. Rbaa, O. Dagdag, R. Haldhar, Novel bromide–cucurbit[7]uril supramolecular ionic liquid as a green corrosion inhibitor for the oil and gas industry, J. Electroanal. Chem. 901 (2021) 115794. https://doi.org/https://doi.org/10.1016/j.jelechem.2021.115794.

[19] E. Berdimurodov, Adsorption Equilibrium, Kinetics, Thermodynamics and Dynamic Separation of Magnesium and Calcium Ions from Industrial Wastewater by New Strong Acid Cation Resin of SPVC, Pakistan J. Anal. Environ. Chem. 22 (2021) 127–138.

[20] R. Haldhar, S.-C. Kim, E. Berdimurodov, D.K. Verma, C.M. Hussain, Corrosion Inhibitors: Industrial Applications and Commercialization, in: Sustain. Corros. Inhib. II Synth. Des. Pract. Appl., American Chemical Society, 2021: pp. 10–219. https://doi.org/doi:10.1021/bk-2021-1404.ch010.

[21] O. Dagdag, A. Berisha, V. Mehmeti, R. Haldhar, E. Berdimurodov, O. Hamed, S. Jodeh, H. Lgaz, E.-S.M. Sherif, E.E. Ebenso, Epoxy coating as effective anti-corrosive polymeric material for aluminum alloys: Formulation, electrochemical and computational approaches, J. Mol. Liq. (2021) 117886. https://doi.org/https://doi.org/10.1016/j.molliq.2021.117886.

[22] E. Berdimurodov, A. Kholikov, K. Akbarov, L. Guo, Inhibition properties of 4,5-dihydroxy-4,5-di-p-tolylimidazolidine-2-thione for use on carbon steel in an aggressive alkaline medium with chloride ions: Thermodynamic, electrochemical, surface and theoretical analyses, J. Mol. Liq. 327 (2021) 114813. https://doi.org/https://doi.org/10.1016/j.molliq.2020.114813.

[23] E. Berdimurodov, A. Kholikov, K. Akbarov, I.B. Obot, L. Guo, Thioglycoluril derivative as a new and effective corrosion inhibitor for low carbon steel in a 1 M HCl medium: Experimental and theoretical investigation, J. Mol. Struct. 1234 (2021) 130165. https://doi.org/https://doi.org/10.1016/j.molstruc.2021.130165.

[24] E. Berdimurodov, A. Kholikov, K. Akbarov, L. Guo, S. Kaya, K.P. Katin, D.K. Verma, M. Rbaa, O. Dagdag, Novel cucurbit[6]uril-based [3]rotaxane supramolecular ionic liquid as a green and excellent corrosion inhibitor for the chemical industry, Colloids Surfaces A Physicochem. Eng. Asp. 633 (2022) 127837. https://doi.org/https://doi.org/10.1016/j.colsurfa.2021.127837.

[25] E. Berdimurodov, A. Kholikov, K. Akbarov, G. Xu, A.M. Abdullah, M. Hosseini, New anti-corrosion inhibitor (3ar,6ar)-3a,6a-di-p-tolyltetrahydroimidazo[4,5-d]imidazole-2,5(1 h,3h)-dithione for carbon steel in 1 M HCl medium: gravimetric, electrochemical, surface and quantum chemical analyses, Arab. J. Chem. 13 (2020) 7504–7523. https://doi.org/https://doi.org/10.1016/j.arabjc.2020.08.025.

[26] A. Yarkulov, B. Umarov, F. Rakhmatkarieva, N. Kattaev, K. Akbarov, E. Berdimurodov, Diacetate

cellulose-silicon bionanocomposite adsorbent for recovery of heavy metal ions and benzene vapours: An experimental and theoretical investigation, Biointerface Res. Appl. Chem. 12 (2022) 2862–2880. https://doi.org/10.33263/BRIAC123.28622880.

[27] Y. Dewangan, D.K. Verma, E. Berdimurodov, R. Haldhar, O. Dagdag, M. Tripathi, V.K. Mishra, P.A. Kumar, N-hydroxypyrazine-2-carboxamide as a new and green corrosion inhibitor for mild steel in acidic medium: experimental, surface morphological and theoretical approach, J. Adhes. Sci. Technol. (2022) 1–21. https://doi.org/10.1080/01694243.2022.2068884.

[28] O. Dagdag, R. Haldhar, S.-C. Kim, Z.S. Safi, N. Wazzan, A.M. Mkadmh, A. Berisha, E. Berdimurodov, S. Jodeh, E.E. Nwanna, Synthesis, physicochemical properties, theoretical and electrochemical studies of Tetraglycidyl methylenedianiline, J. Mol. Struct. (2022) 133508.

[29] E. Berdimurodov, A. Kholikov, K. Akbarov, L. Guo, N. Umirov, D.K. Verma, M. Rbaa, O. Dagdag, R. Haldhar, S. Kaya, Chapter19 - Ionic liquids as green and sustainable corrosion inhibitors I, in: L. Guo, C. Verma, D.B.T.-E.-F.C.I. Zhang (Eds.), Elsevier, 2022: pp. 331–390. https://doi.org/https://doi.org/10.1016/B978-0-323-91176-4.00020-9.

[30] M. Zhu, L. Guo, Z. He, R. Marzouki, R. Zhang, E. Berdimurodov, Insights into the newly synthesized N-doped carbon dots for Q235 steel corrosion retardation in acidizing media: A detailed multidimensional study, J. Colloid Interface Sci. 608 (2022) 2039–2049. https://doi.org/https://doi.org/10.1016/j.jcis.2021.10.160.

[31] E. Berdimurodov, A. Kholikov, K. Akbarov, L. Guo, S. Kaya, D.K. Verma, M. Rbaa, O. Dagdag, New and Green Corrosion Inhibitor Based on New Imidazole Derivate for Carbon Steel in 1 M Hcl Medium: Experimental and Theoretical Analyses, Int. J. Eng. Res. Africa. 58 (2022) 11–44. https://www.scientific.net/JERA.58.11.

[32] И. Элибоев, Э. Бердимуродов, Б. Турсунов, Физико-химическое исследование механизма ингибирования коррозии стали с производными 4, 5-дигидрокси-4, 5-ди-п-толилимидазолидин-2-тионами, Universum Химия и Биология. (2021) 77–81.

[33] L. KAMOLOV, S. TOJIYEVA, S. XASANOV, E. BERDIMURODOV, O. AXMEDOV, STACHYIBOTRUS TOXIC MICROSCOPIC FUNGUS LOW MOLECULAR METOBOLITES, PLANT CELL Biotechnol. Mol. Biol. 22 (2021) 50–61. https://www.ikppress.org/index.php/PCBMB/article/view/6301.

[34] Э. Бердимуродов, И. Нахатов, О. Михлиев, Н. Турсунова, ФИЗИКО-ХИМИЧЕСКОЕ ИССЛЕДОВАНИЕ МЕХАНИЗМА ИНГИБИРОВАНИЯ КОРРОЗИИ СТАЛИ С ПРОИЗВОДНЫМИ ИМИДАЗОЛАМИ, Universum Химия и Биология. (2021).

[35] S.M. Bakhtiyor Burikhonov, Tursinali Kholikov, Elyor Berdimurodov, Habibulla Tajimuhamedov, Synthesis of New Quaternary Ammonium Salts Based on Monochloroacetic Acid Esters, Int. J. Mech. Prod. Eng. Res. Dev. 10 (2020) 6017–6034. https://doi.org/10.24247/ijmperdjun2020571.

[36] E.N. Khurramov, A.K. Abdushukurov, D.M. Buriyeva, E.T. Berdimurodov, I. Nakhatov, Synthesis of new amides based on the n-hydroxyacetylation of ptoluidine, Int. J. Mech. Prod. Eng. Res. Dev. 10 (2020) 6001–6016.

[37] B. Elyor, R. Akbarali, EFFECT OF ANTICORROSION INHIBITOR OF CUCURBIT [N] URILS'CONCENTRATION ON ANTICORROSION INHIBITION MECHANISM, Актуальные Вопросы Современной Науки и Образования. (2020) 22–24.

[38] А.У. Чориев, Э.Т. Бердимуродов, Т.И.У. Тошпулатов, С.Б. Садикова, Синтез 1, 4-фенилен

дикарбоксиметиленгликолята, Universum Химия и Биология. (2020) 54–58.

[39] K. Akbarov, E. Berdimurodov, A. Kholikov, N.E.W.C.I. OF, 3A, 6A-BISTOLYLTHIOGLYCOLURIL (BTGU) FOR MILD STEEL IN STRONG ACID MEDIUM, ЎзМУ Хабарлари, Natl. Univ. Uzb. 1 (2019) 80.

[40] E. Berdimurodov, K. Akbarov, A. Kholikov, Electrochemical Frequency Modulation and Reactivation Investigation of Thioglycolurils in Strong Acid Medium, Adv. Mater. Res. 1154 (2019) 122–128. https://doi.org/10.4028/www.scientific.net/AMR.1154.122.

[41] E. Berdimurodov, A. Kholikov, K. Akbarov, D. Nuriddinova, Polarization Resistance Parameters of Anti-Corrosion Inhibitor of Cucurbit[N]Urils and Thioglycolurils in Aggressive Mediums, Adv. Eng. Forum. 26 (2018) 74–86. https://doi.org/10.4028/www.scientific.net/AEF.26.74.

[42] Х.А.Ж. Бердимуродов Элёр Тухлиевич, Акбаров Хамдам Икромович, Физико-химическое исследование механизма ингибирования коррозии стали тиогликольурилов, Universum Химия и Биология. (2018).

[43] Э.Т. Бердимуродов, Х.И. Акбаров, А.Ж. Холиков, Исследование нового антикоррозионного ингибитора-3а, 6А-бистолилтиогликольурил новым электрохимическим методом “Rp/Ec trend,” Universum: Технические Науки. (2018).

[44] E.T. Berdimurodov, H.I. Akbarov, A.J. Kholikov, U.A. Khurbanov, Reactivation studies of anticorrosion inhibitor of 4, 5-dihydroxy-4, 5-bistolylimidazolidine-2-thione in 5% hcl medium, in: Современные Технологии Актуальные Вопросы, Достижения и Инновации, 2017: pp. 14–16.

[45] E.T. Berdimurodov, H.I. Akbarov, A.J. Kholikov, N. Jurakulova, Adsorption mechanism of the cucurbit [n] urils on the mild steel surface in 10% hcl solution, in: WORLD Sci. Probl. Innov., 2017: pp. 81–83.

[46] E. Berdimurodov, A. Kholikov, K. Akbarov, The 4, 5-Dihydroxy-4, 5-Bistolyl-Imidazolidine-2-Thione (DBIT) As A New Corrosion Inhibitor On Mild Steel In 10% Acidic Medium: By Using The Electrochemical And Scanning Electron Microscope (SEM), Ilmiy Axborotnoma. (2017) 80–84.

[47] E. Berdimurodov, A. Kholikov, K. Akbarov, I. Nakhatov, N.K. Jurakulova, N. Umirov, Adsorption Isotherm and SEM Investigating of Cucurbit[n]Urils Based Corrosion Inhibitors with Gossypol for Mild Steel in Alkaline Media Containing Chloride Ions, Adv. Eng. Forum. 23 (2017) 13–20. https://doi.org/10.4028/www.scientific.net/AEF.23.13.

[48] E.T. Berdimurodov, H.I. Akbarov, A.J. Kholikov, Electrochemical frequency modulation study 3a, 6a-bistolylthioglycoluril, in: Фундаментальные и Прикладные Научные Исследования Актуальные Вопросы, Достижения и Инновации, 2017: pp. 54–56.

[49] E. Berdimurodov, J. Wang, A. Kholikov, K. Akbarov, B. Burikhonov, N. Umirov, Investigation of a New Corrosion Inhibitor Cucurbiturils for Mild Steel in 10% Acidic Medium, Adv. Eng. Forum. 18 (2016) 21–38. https://doi.org/10.4028/www.scientific.net/AEF.18.21.

[50] B.E. Holikov, A J, H.I. Akbarov, Fiziko-himicheskie aspekti ingibirovaniya korrozii metallov polielektrolitami v prisutstvii razlichnih aminov, Dokladi Akademii nauk Respubliki Uzbekistan, (2015) 37–40.

[51] E. Berdimurodov, A. Kholikov, Electrochemical investigation of new corrosion inhibitor of 3a, 6abistolylthioglycoluril (btgu) for mild steel in 1 m HC, Proj. New Corros. Methods Ideas. (n.d.).