Curriculum vitae

PERSONAL INFORMATION

Alexandr Dicusar

str. Matei Basarab 10/3, ap. 48, MD 2048 Chisinau (Moldova)

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aidikusar@gmail.com

Sex Male | Date of birth 28/08/1942 | Nationality Moldovan

PERSONAL STATEMENT

Corresponding Member of Academy of Sciences of Moldova, prof. of Electrochemistry

WORK EXPERIENCE

2013–Present — Head of Laboratory

Laboratory of Electrophysical and Electrochemical Materials Treatment “B. Lazarenko”, Institute of Applied Physics, The Academy of Sciences of Moldova
str. Academiei 5, MD 2028 Chisinau (Moldova)
http://www.phys.asm.md

1995–2013 — Head of Department

Department of Electrical Methods of Materials Machining, Institute of Applied Physics, Academy of Sciences of Moldova
str. Academiei 5, MD 2028 Chisinau (Moldova)
www.phys.asm.md

1979–1995 — Head of Laboratory

Laboratory of Electrochemical Machining, Institute of Applied Physcis, The Academy of Sciences of Moldova

1973–1979 — Senior research scientist

Institute of Applied Physics, The Academy of Sciences of Moldova, Chisinau (Moldova)

1970–1973 — Junior research scientist

Institute of Applied Physics, The Academy of Sciences of Moldova, Chisinau (Moldova)

EDUCATION AND TRAINING

1959–1964 — Licentiat in chemistry

Kishinev State University, Chisinau (USSR)

1967–1971 — Candidate of Sciences (Chemistry)

Kishinev Polytechnical Institute, Chisinau (USSR)

1983–1988 — Doctor in Sciences (Electrochemistry)

Dnepropetrovsk Chemical Technological Institute, Dnepropetrovsk (USSR)

1988–1990 **Professor in Electrochemistry**

Institute of Applied Physics, The Academy of Sciences of Moldova, Chisinau (USSR)

PERSONAL SKILLS

Mother tongue(s): Russian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B1	C2	B1	B1	B2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Communication skills: good team leader, communicable, sociable

Organisational / managerial skills: good team-leading and organizational skills acquired over a long period of being a head of different laboratories and departments.

Job-related skills: good motivation and guidance skills; broad experience as a scientific supervisor; developed research skills

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Basic user	Basic user	Basic user	Basic user	Basic user

Digital competences - Self-assessment grid

Windows 7, MS Office

ADDITIONAL INFORMATION

Research interests: Electroanalytical chemistry, mass transfer in electrochemical systems, high-rate anodic dissolution of metals and semiconductors, macrokinetics of electrode processes, electrodeposition of thin solid films of semiconductors, photoelectrochemistry, electrochemical micromachining, nanoelectrochemistry, science of science

Conferences

II Конференция „Фундаментальные и прикладные вопросы электрохимического и химико-каталитического осаждения и защиты металлов и сплавов" памяти чл-корр Ю.М.Полукарова, М, РФ, 2020

9 th International Conference on Materials Science and Condensed Matter Physics, Chisinau, Moldova, 2018

IX Всероссийская (с международным участием) конференция „Современные методы в теоретической и экспериментальной электрохимии", Плес, Россия, 2017

8th International Conference on Material Science and Condensed Matter Physics, Chisinau, Moldova, 2016

BALTTRIB', VIII International Scientific Conference, Kaunas, Lithuania, 2015

VII Конференция “Современные методы в теоретической и экспериментальной электрохимии” Плес, Россия,2015.

7th International Conference on Materials Science and Condensed Matter Physics, Chisinau, Moldova, 2014

2nd International Conference on Nanotechnologies and Biomedical Engineering, Chisinau, Moldova 2013

BALTTRIB', VII International Scientific Conference, Kaunas, Lithuania, 2013

V Конференция “Современные методы в теоретической и экспериментальной электрохимии”, Плес, Россия, 2013

III Международная конференция “Современные методы в теоретической и экспериментальной электрохимии, Плес, Россия, 2011.

Conference of the International Society of Electrochemistry, Duesseldorf, Germany, 2002

Publications

Books

- **Дикусар А.И**., Энгельгардт Г.Р., Молин А.Н. Термокинетические явления при высокоскоростных электродных процессах, Кишинев, Штиинца, 1989, 142 с.
- **Дикусар А.И**., Энгельгардт Г.Р., Петренко В.И., Петров Ю.Н. Электродные процессы и процессы переноса при электрохимической размерной обработке металлов, Кишинев, Штиинца, 1983, 208 с.

Reviews

- **Dikusar A.I.** Obtaining nanowires under conditions of electrodischarge treatment, In: *Nanowires: Implementations and Applications,* Ed. H.Abbas, London, In Tech Open, 2011, 357-374.
- Langa S., Tighineanu I.M., **Dikusar A.I.** Electrochemical Nanostructuring. In: *Nanoscience and Nanotechnologies,* Ed. Kharkin V., Bai Ch., Osama O., Awadelkerim, Kapitsa S., EOLSS, Eolss Publishers, Oxford, UK, 2011 (http://wwweolss. net)
- Belkin P.N., Ganchar V.I., Davydov A.D., **Dikusar A.I.,** Pasinkovskii E.A. Anodic heating in aqueous solutions and its use treating surfaces, *Surface Eng. Appl. Electrochem.,* 1997, v.33 (2), 1-15.

Original articles in applied electrochemistry and electrochemical technology (selected)

- Мырзак В., Готеляк А.В., **Дикусар А.И.** О размерных эффектах свойств поверхностей, полученных при электроосаждении сплавов металлов группы железа с вольфрамом, *Электронная обработка материалов,* 2020, т.56 (6), 1-11.
- Belevskii S.S., Danilchuk V.V., Gotelyak A.V., Lelis M., Yushcenko S.P., **Dikusar A.I.** Electrodeposition of Fe-W alloys from citrate bath: Impact of anodic materials, *Surface Eng. Appl. Electrochem.*2020, v.56(1), 1-12.
- Danil’chuk V.V., Silkin S.A., Gotrlyak A.V., Buravets V.A., Mitina T.F. , **Dikusar A.I**. The mechanical properties and rate of electrodeposition of Co-W alloys from a boron-gluconate bath: Impact of anodic processes, *Russ. J. Electrochem.*, 2018, v.54 (11), 930-936.
- Silkin S.A., Gotelyak A.V., Tsyntsaru N.I., **Dikusar A.I.** Size effect of microhardness of nanocrystalline Co-W coatings produced from citrate and gluconate solutions, *Surface Eng. Appl. Electrochem.*, 2015, v.51 (3), 228-234.
- Cuharuc A.S., Kulyuk L.L., Lascova R.I., **Dikusar A.I.,** Electrochemical characterization of PbS quantum dots caped with oleic acid and PbS thin films – a comparative study, *Surface Eng. Appl. Electrochem.,* 2012, v.48(3), 193-211.
- Yurchenko V.I., Yurchenko E.V., Fomichev V.M., Baranov S.A., **Dikusar A.I.** Obtaining of nanowires in conditions of electrodischsrge treatment with an Al-Sn alloy, *Surface Eng. Appl. Electrochem.,* 2009, v.45 (4), 259-264.
- Tsyntsaru N., Bobanova Zh., Ye X., Cesiulis H., **Dikusar A.,** Prosychevas I. Iron-Tungsten alloys electrodeposited under direct current from citrate-ammonia plating bath, *Surface Coating Technology,* 2009, v.203 (20-21), 3136-3141.
- Molin A.N. **Dikusar A.I.** Electrochemical deposition of PbSe thin films from aqueous solutions, *Thin Solid Films,* 1995, v.265 (1-2), 3-9.

- Engelgardt G.R., **Dikusar A.I.** Thermokinetic instability of electrode processes. Part I. Theoretical Analysis, *J.Electroanal.Chem.,*1989, v.136 (6), 1-11.
- Бардин М.Б., **Дикусар А.И**., Кишиневский М.Х. Исследование массопереноса при турбулентном режиме течения к стационарному дисковому электроду в сосуде с механическим перемешиванием, *Электрохимия,* 1970 т.6 (2), 212-215.

Original articles in science of science and sciencemetry

(selected)

- **Dicusar A**., Cugba R., Interdependenta dintre stiinta si dezvoltarea economica-sociala: UE, CSI, Republica Moldova, *Akademos,* 2015, № 1, 8-12.
- **Дикусар А.И**., Кужба Р. Сравнительный анализ взаимосвязи между наукой и социально-экономическим развитием общества в странах ЕС и СНГ, *Наука та наукознавство,* 2015, №2, 51-57.
- **Дикусар А.И.** Развитие электрохимии и электрохимических технологий в Молдове, *Электронная обработка материалов,* 2012, т.48(6), с.1-12.
- **Дикусар А.И**. Взаимное влияние социально-экономического и научного развития общества, *Науковедение,* 1999, №2, с.51-74.

Total number of articles and H-factor

Google scholar- 248 H-factor - 19

Scopus – 128 H- factor - 11

WoS - 45 H-factor - 9

Citation (cit/year) (2016-2020)

Google scholar – 109

Scopus – 37

WoS - 9

Honours and awards

- Three Academy Award (Belarus, Ukraine, and Moldova) for outstanding collaborative projects, 2008.
- Meritul Civic Award for outstanding civil achievements, 1996

Editorial activity

Assistant editor in the journal Surface Engineering and Applied Electrochemistry (Электронная обработка материалов), USA , Moldova, USSR (1980 to present).

Research Projects

ISF Mechanism of metal dissolution in the conditions of thermokinetic instability, 1994 - Head of the project

FP7, TEMADEP, 247659, 2010-2013, Head of the project

FP7, Oil&Sugar 295202, 2012-2016, Head of the project

H2020 Smartelectrodes 2018 – 2021 executant of the project

Project C-02-699/IFA (Optimizarea parametrilor electrolitului pentru prelucrarea electrochimică dimensională cu impulsuri a paletelor motoarelor şi instalaţiilor cu turbine pe gaze şi determinarea nivelului lor admisibil în procesul de exploatare), 2013-2014.

National project, *11.817.05.05A (*Metode electrofizicochimice de obţinere şi prelucrare a materialelor şi acoperirelor noi cu caracteristici funcţionale avansate), 2011 – 2014, Head of the project

Moldo-Ukrainian project 10.820.05.14UF (Efectele vitezei de coroziune ale nanostructurilor şi nanocompozitelor), 2010-2011

National project, CSSDT 15.817.02.05A, (Metode fizico-chimice și aspectele inginerești ale obținerii materialelor și suprafețelor noi pentru tehnologiile de multiscară), 2015 - 2018. Head of the project.

National project, 20.80009.5007.18 Obținerea de noi materiale micro- și nano-structurale prin metode fizicochimice și elaborarea tehnologiilor pe baza acestora 2020 - 2023 Head of the project

National project, 19.80015.5007.231.T Elaborarea generatirului universal cu impulsuri pentru strunguri de prelucrari prin electroziune (Inovare si transfer tehnologic), 2019-2020, Head of the project.

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