

PERSONAL INFORMATION

Diana Mihaela Mardare



📍 “Alexandru Ioan Cuza” University of Iasi, Faculty of Physics

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Sex F | Date of birth 25/07/1962 | Nationality Romanian

WORK EXPERIENCE

10.2008 – at the moment

Professor

Alexandru Ioan Cuza University of Iasi, Faculty of Physics
Research and teaching activities

02.2004-09.2008

Assoc. professor

Alexandru Ioan Cuza University of Iasi, Faculty of Physics
Research and teaching activities

10.1998-01.2004

Lecturer

Alexandru Ioan Cuza University of Iasi, Faculty of Physics
Research and teaching activities

02.1991-09.1998

Assistant professor

Alexandru Ioan Cuza University of Iasi, Faculty of Physics
Research and teaching activities

09.1988-01.1991

Researcher in Computational Physics

Alexandru Ioan Cuza University of Iasi, Faculty of Physics
Research activities

09.1985-08.1988

Teacher

High (secondary) school no.1 Vaslui
Teaching activities

EDUCATION AND TRAINING

02.2010-present **Recognition as PhD supervisor**
Alexandru Ioan Cuza University of Iasi, Faculty of Physics

12.1999 **PhD in Physics**

Alexandru Ioan Cuza University of Iasi, Faculty of Physics
Solid State Physics

07.1985 **B.A.in Physics**
Alexandru Ioan Cuza University of Iasi, Faculty of Physics
General Physics, pedagogical skills

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
French	B1	B1	B1	B1	B1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user

Communication skills Good communication skills gained through my experience as a professor and as grants manager

Organisational / managerial skills Managerial skills acquired as **Head of doctoral school**, Faculty of Physics, Alexandru Ioan Cuza University, IASI, ROMANIA, since 2012 till present

- Expert in grants' assesment
- Editor for the Biophysics section: Analele Stiintifice ale Universitatii "Alexandru Ioan Cuza", (Medical Physics and Environmental Physics)
- Member in the Organization Committee of 8 Conferences
- "Peer review" activities (Surface Science, Applied Surface Science, Journal of Hazardous Materials, Journal Of Physical Chemistry, Thin Solid Films, Catalysis Communications, Physica Status Solidi (a), Physica B, Journal of Alloys and Compounds, Journal of Physics and Chemistry of Solids, Surface and Coatings Technology, Applied Physics B, ACS Applied Materials & Interfaces, Colloids and Surfaces A etc.);

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving

Independent user	Proficient user	Independent user	Independent user	Independent user
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ADDITIONAL INFORMATION

H index **27 (WOS)**

Publications	Research domain: Semiconductors in thin films
Conferences	- 100 papers in the domain of semiconducting thin films (75 in ISI quoted journals).
Citations	- over 170 oral and poster presentations in international and national conferences
Grants	- over 1800 independent ISI citations
Memberships	- Participant at 37 national grants and 5 international grants (7 grants as director)
	-Member in the Council of Doctoral School of Alexandru Ioan Cuza University, IASI, ROMANIA/ 2012-2020
	-Member of the European Physical Society and of the Romanian Physical Society
	-Member in the Physics Committee of the National Council for Confirmation of the Titles, Diplomas and University Certificates (CNATDCU): 2011-2024
	-Member of the Register of Experts of CNATDCU: since 2024
Courses	- Environmental Physics
	-Ecological Factors and Their Interaction with the Living Systems (MASTER)
	- Polycrystalline and Amorphous Thin Films (MASTER)
	- Electronic Transport Phenomena (MASTER)
	- Semiconducting Thin Films (MASTER)

ANNEXES

List of publications in ISI quoted journals:

- [1] N-DOPED ZrO₂ THIN FILMS FOR PHOTOCATALYTIC DECOMPOSITION OF SOME HARMFUL DYES FOR THE ENVIRONMENT, Mița C., Frenti M., Cornei N., Bulai G., Dobromir M., Mardare D., Ceramics International 51 (2025) 37292
- [2] ELECTRICAL CONDUCTION MECHANISM OF MG-DOPED ZrO₂ THIN FILMS, Diana Mardare; Mariana Frenti; Carmen Mita; Nicoleta Cornei; Georgiana Bulai; Marius Dobromir; Alexandr Doroshkevich; Abdullah Yildiz, Materials, 17 (15) (2024) 3652
- [3] HIGH STABILITY AND PHOTOCATALYTIC ACTIVITY OF N-DOPED ZrO₂ THIN FILMS, Carmen Mita, Mariana Frenti, Nicoleta Cornei, Georgiana Bulai, Marius Dobromir, Alexandr Doroshkevich, Zhanna V. Mezentsseva, Diana Mardare, Journal of Alloys and Compounds 1002 (2024) 175134
- [4] PHOTOCATALYTIC ACTIVITY OF N-DOPED ZrO₂ THIN FILMS DETERMINED BY DIRECT AND INDIRECT IRRADIATION, Carmen Mita, Nicoleta Cornei, Mariana Frenti, Georgiana Bulai, Marius Dobromir, Vasile Tiron, Alexandr Doroshkevich, Diana Mardare, Materials, 16 (2023) 5901
- [5] ZrO₂ FOR PHOTOCATALYTIC APPLICATIONS, M. Frenti, C. Mița, N. Cornei, V. Tiron, G. Bulai, M. Dobromir, A. Doroshkevich, D. Mardare, U.P.B. Sci. Bull., Series A, 85(2) (2023) 165-176.
- [6] THE ENHANCEMENT OF THE PHOTOCATALYTIC PROPERTIES OF SmFe_{0.7}Co_{0.3}O₃ THIN FILMS BY SYNERGISTIC EFFECT OF Sr DOPING AND H₂O₂ AS CO-CATALYST, C. Mita, N. Cornei, G. Bulai, E. Gyorgy, M. Dobromir, M. Girtan, A. Doroshkevich, D. Mardare, Ceramics International, 49(9) (2023) 14225–14237
- [7] THE RECTIFYING CONTACT OF HYDRATED DIFFERENT SIZE YSZ NANOPARTICLES FOR ADVANCED ELECTRONICS, Alexander S. Doroshkevich, Anna S. Zakharova, Boris L. Oksengendler, Andriy I. Lyubchik, Sergiy I. Lyubchik, Svitlana B. Lyubchik, Alisa A. Tatarinova, Andriy K. Kirillov, Tatyana A. Vasilenko, Oksana O. Gorban, Viktor I. Bodnarchuk, Nadejda N. Nikiforova, Elena A. Zakharova, Maria Balasoiu, Diana M. Mardare, Carmen Mita, Anca Stanculescu, Matlab N. Mirzayev,

- Asif A. Nabiyevev, Evgeni P. Popov 2, Le Hong Khiem, Alexander A. Donkov, Vesna Teofilović, Bozena Jasinska, Dan Chicea, Tatyana Ye. Konstantinova, Nanomaterials, 12 (2022) 4493.
- [8] EFFECTS OF YSZ CERAMICS DOPING WITH SILICA AND ALUMINA ON ITS STRUCTURE AND PROPERTIES, D.R. Belichko, T.E. Konstantinova, G.K. Volkova, M.N. Mirzayev, A.V. Maletsky, V.V. Burkhovetskiy, A.S. Doroshkevich C. Mita, D.M. Mardare, B. Janiska, A.A. Nabiyevev, A.I. Lyubchik , A.A. Tatarinova, E. Popov, Materials Chemistry and Physics 287 (2022) 126237
- [9] ELECTRIC ENERGY STORAGE EFFECT IN HYDRATED ZRO₂ – NANOSTRUCTURED SYSTEM, Alexander S. Doroshkevich *, Andriy I. Lyubchik, Boris L. Oksengendler, Tatyana Yu. Zelenyak, Nurbol O. Appazov, Andriy K. Kirillov, Tatyana A. Vasilenko, Alisa A. Tatarinova, Oksana O. Gorban, Viktor I. Bodnarchuk, Nadejda N. Nikiforova, Maria Balasoiu, Diana M. Mardare, Carmen Mita, Dorin Luca, Matlab N. Mirzayev, Asif A. Nabiyevev, Evgeni P. Popov, Anca Stanculescu, Tatyana E. Konstantinova, Yulia V. Aleksiyenak, Nanomaterials 12 (2022) 1783
- [10] REVERSIBLE MARTENSITIC PHASE TRANSITION IN YTTRIUM-STABILIZED ZRO₂ NANOPOWDERS BY ADSORPTION OF WATER, Elmar B. Asgerov, Anatoly I. Beskrovnyy , Nelya V. Doroshkevich, Carmen Mita, Diana M. Mardare, Dan Chicea, Mihaela D. Lazar, Alisa A. Tatarinova, Sergiy I. Lyubchik , Svitlana B. Lyubchik , Andriy I. Lyubchik and Alexander S. Doroshkevich, Nanomaterials 12 (2022) 435.
- [11] STRUCTURE FORMATION AND PROPERTIES OF CORUNDUM CERAMICS BASED ON METASTABLE ALUMINIUM OXIDE DOPED WITH STABILIZED ZIRCONIUM DIOXIDE, Maletsky A.V., Belichko D.R., Konstantinova T.E., Volkova G.K., Doroshkevich A.S., Lyubchik A.I., Burkhovetskiy V.V., Aleksandrov V.A., Mardare D., Mita C., Chicea D, L.H.Khiem, Ceramics International, 47 (2021) 19489-19495
- [12] INFLUENCE OF HAFNIUM OXIDE ON THE STRUCTURE AND PROPERTIES OF POWDERS AND CERAMICS OF THE YSZ - HfO₂ COMPOSITION, Danil Belichko, Tetuana Konstantinova, Alexandr Maletskyi, Galina Volkova, Alexandr Doroshkevich, Marharyta Lakusta, Mirosław Kulik , Alice Tatarinova, Diana Mardare, Carmen Mita, Nicoleta Cornei, Ceramics International, 47 (2021) 3142–3148
- [13] IRON DOPED TiO₂ FILMS AND THEIR PHOTOACTIVITY IN NITROBENZENE REMOVAL FROM WATER, Maria Crișan, Diana Mardare, Adelina Ianculescu, Nicolae Drăgan, Ines Nițoi, Dorel Crișan, Mariana Voicescu, Ligia Todan, Petruța Oancea, Cătălin Adomniței, Marius Dobromir, Margarita Gabrovska, Bogdan Vasile, Applied Surface Science, 455 (2018) 201–215
- [14] ON THE HYDROPHILICITY OF NI-DOPED TiO₂ THIN FILMS. A STUDY BY X-RAY ABSORPTION SPECTROSCOPY, Dan Macovei, Vasile Tiron, Catalin Adomnitei, Dumitru Luca, Marius Dobromir, Stefan Antohe, Diana Mardare, Thin Solid Films 657 (2018) 42–49
- [15] THE EFFECT OF CO₂ GAS ADSORPTION ON THE ELECTRICAL PROPERTIES OF FE DOPED TiO₂ FILMS, Diana Mardare, Catalin Adomnitei, Daniel Florea, Dumitru Luca, Abdullah Yildiz Physica B 524 (2017) 17–21
- [16] PLATINUM ROLE IN HYDROPHILICITY ENHANCEMENT OF Cr-DOPED TiO₂ THIN FILMS, D. Mardare, C. Mita, N. Cornei, S. Tascu, D. Luca, M. Dobromir and C. Adomnitei, Philosophical Magazine 96 (2016) 3000–3015
- [17] LOW TEMPERATURE TiO₂ BASED GAS SENSORS FOR CO₂, Diana Mardare, Nicoleta Cornei, Carmen Mita, Daniel Florea, Alexandru Stancu, Vasile Tiron, Alina Manole, Catalin Adomnitei, Ceramics International 42 (2016) 7353-7359.
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- [19] THE INFLUENCE OF NI DOPING ON THE SURFACE WETTABILITY OF TiO₂ THIN FILMS C. Adomnitei, N. Cornei, D. Luca, I. Sandu, V. Vasilache, M. Dobromir, D. Mardare, Journal of Optoelectronics and Advanced Materials, 17(5-6) (2015) 889-893.
- [20] Nb DOPED TiO₂ THIN FILMS AS PHOTOCATALYTIC MATERIALS Catalin Adomnitei, Sorin Tascu, Dumitru Luca, Marius Dobromir, Mihaela Girtan and Diana Mardare, Bulletin of Materials Science,

- 38(5) (2015) 1259-1262 .
- [21] SYNTHESIS AND HYDROPHILIC PROPERTIES OF MO DOPED TiO_2 THIN FILMS
Diana Mardare, Nicoleta Cornei, Dumitru Luca, Marius Dobromir, S A. Irimiciuc, Luciana Pungă, Aurel Pui, Cătălin Adomnitei, Journal of Applied Physics, 115, 213501-1 - 2 13501-8 (2014)
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 - [23] ON THE PROPERTIES OF ALUMINIUM DOPED ZINC OXIDE THIN FILMS DEPOSITED ON PLASTIC SUBSTRATES FROM CERAMIC TARGETS, M.Girtan, A. Vlad, R. Mallet, M. A.Bodea, J.D. Pedarnig, A. Stanculescu, D. Mardare, D., L.Leontie, S. Antohe, Applied Surface Science, 274 (2013) 306 – 313.
 - [24] SURFACE WETTABILITY OF TITANIA THIN FILMS WITH INCREASING Nb CONTENT, Diana Mardare, Abdullah Yildiz, Mihaela Girtan, Alina Manole, Marius Dobromir, Mihaela Irimia, Catalin Adomnitei, Nicoleta Cornei, Dumitru Luca, J. Appl. Phys. 112 (2012) 073502
 - [25] THE MEYER-NELDEL RULE IN AMORPHOUS TiO_2 FILMS WITH DIFFERENT Fe CONTENT, Diana Mardare, Abdullah Yildiz² Radu Apetrei, Petronela Rambu, Daniel Florea, Nicoleta Georgiana Gheorghe, Dan Macovei, Cristian Mihail Teodorescu and Dumitru Luca, Journal of Materials Research, 27(17) (2012) 2271-2277.
 - [26] X-RAY ABSORPTION FINE STRUCTURE INVESTIGATIONS ON HEAT-TREATED Cr-DOPED TITANIA THIN FILMS, Diana Mardare, Valentin Nica, Valentin Pohoata, Dan Macovei, Nicoleta Gheorghe, Dumitru Luca and Cristian-Mihail Teodorescu, Thin Solid Films, 520(4) 1348-1352 (2011)
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 - [28] ELECTRICAL CONDUCTION MECHANISM AND GAS SENSING PROPERTIES OF Pd-DOPED TiO_2 FILMS, Diana Mardare, Nicoleta Iftimie, Maria Crișan, Mălina Răileanu, A. Yildiz, T. Coman, K. Pomoni, A. Vomvas, Journal of Non-Crystalline Solids 357, 1774–1779 (2011)
 - [29] EFFECT OF FORMALDEHYDE GAS ADSORPTION ON THE ELECTRICAL CONDUCTIVITY OF Pd-DOPED TiO_2 THIN FILMS, A. Yildiz, D. Crisan, N. Dragan, N. Iftimie, D. Florea, D. Mardare, J Mater Sci: Mater Electron, 22, 1420–1425 (2011)
 - [30] STRUCTURAL STUDY OF SOL–GEL Au/ TiO_2 FILMS FROM NANOPOWDERS, Dorel Crisan, Nicolae Dragan, Malina Raileanu, Maria Crisan, Adelina Ianculescu, Dumitru Luca, Andrei Nastuta, Diana Mardare, Applied Surface Science 257, 4227–4231 (2011)
 - [31] PHOTOINDUCED WETTABILITY OF TITANIUM OXIDE THIN FILMS, Diana Mardare, Alina Manole, A. Yildiz, and D. Luca, Chem.Eng.Comm.,198, 530–540 (2011)
 - [32] POLARON TRANSPORT IN TiO_2 THIN FILMS, Abdullah Yildiz, Felicia Iacomi, Diana Mardare, Journal Of Applied Physics, 108(8), 083701- 083708 (2010)
 - [33] THE SUBSTRATE TEMPERATURE DEPENDENT ELECTRICAL PROPERTIES OF TITANIUM DIOXIDE THIN FILMS, A. Yildiz, S.B.Lisesivdin, M. Kasap, Diana Mardare, Journal of Materials Science: Materials in Electronics, 21 692-697 (2010).
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- [39] GAS SENSING MATERIALS BASED ON TiO₂ THIN FILMS, Nicoleta Iftimie, D. Luca, Felicia Iacomi, Mihaela Girtan and Diana Mardare, Journal of Vacuum Science and Technology B, 27(1) 538-541 (2009)
- [40] PHOTO-DEGRADATION ACTIVITY OF SPUTTER-DEPOSITED NITROGEN-DOPED TITANIA THIN FILMS, R. Apetrei, C. Catrinescu, D. Mardare, C. M. Teodorescu, D. Luca Thin Solid film, 518 (2009) 1040–1043
- [41] FABRICATION AND CHARACTERIZATION OF NANO-STRUCTURED FERROMAGNETIC Ti_{1-x}Fe_xO₂ THIN FILMS, R.Apetrei, C.Negrila, D.Macovei, V.Dascalescu, C.-M.Teodorescu, D.Mardare, D.Luca, NSTI Nanotech 2009 (Technical Proceedings of the 2009 Nanotechnology Conference and Expo, Nanotech Houston,Texas,SUA) 1, (2009) 375-378
- [42] TiO₂ THIN FILMS AS SENSING GAS MATERIALS, D. Mardare, N. Iftimie, D. Luca, Journal of Non-Crystalline Solids 354 4396–4400 (2008)
- [43] ON THE SENSING GAS PROPERTIES OF TITANIUM DIOXIDE FILMS, N. Iftimie, M. Crisan, A. Braileanu, D. Crisan, A. Nastuta, G. B. Rusu, P.D. Popa, D. Mardare, J. Optoelectron. Adv. M. 10(9) 2363-2367 (2008)
- [44] CRYSTALLIZATION STUDY OF SOL– GEL UN-DOPED AND PD-DOPED TiO₂ MATERIALS, Dorel Crisan, , Nicolae Dragan, Maria Crisan, Malina Raileanu, Ana Braileanu, Mihai Anastasescu, Adelina Ianculescu, Diana Mardare, Dumitru Luca, Virgil Marinescu, Antoniu Moldovan, Journal of Physics and Chemistry of Solids 69 2548– 2554 (2008)
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- [46] ELECTRICAL PROPERTIES OF TiO₂ THIN FILMS, A. Yildiz, S. B. Lisesivdin, M. Kasap, D. Mardare, Journal of Non-Crystalline Solids 354 4944–4947 (2008)
- [47] SUBSTRATE AND Fe-DOPING EFFECTS ON THE HYDROPHILIC PROPERTIES OF TiO₂ THIN FILMS, Diana Mardare, Felicia Iacomi, D. Luca, Thin Solid Films, 515, 6474–6478 (2007)
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- [58] CHROMIUM-DOPED TITANIUM OXIDE THIN FILMS, Diana Mardare, G. I. Rusu, Felicia Iacomi, M. Girtan, I. Vida-Simiti, Materials Science and Engineering, B, 118(1-3) 187-191 (2005)
- [59] THE SEEBECK COEFFICIENT OF TiO₂ THIN FILMS, Diana Mardare, J. Optoelectron. Adv. M., 7(2), 721-725 (2005).
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- [75] ON THE ELECTRICAL PROPERTIES OF SOME NEW DISUBSTITUTED YLIDES IN THIN FILMS, I. Mangalagiu, C.Baban, Diana Mardare, G. I. Rusu, M. Rusu, Applied Surface Science 108, 205-210 (1997).

Books

1. Transport Phenomena in Solid Bodies, Diana Mardare, Editura "Gh. Asachi", Iași-2002
2. Polycrystalline and Amorphous Thin Films. Titanium Oxide, Diana Mardare, Editura "Politehnicum", Iași-2005.
3. Introduction to Environmental Physics and Ecology, Diana Mardare, Editura "Politehnicum", Iași-2005
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Selection of Grants

Proiect DUBNA, cod temă 04-4-1143-2021/2025, poziția nr.58 din Ordinul IUCN nr. 365 din 11.05.2021 - Research of metastable crystal phases in nanoscale oxide systems based on ZrO ₂ for applications in adsorption power engineering and electronics using nuclear physics methods	DIRECTOR	2020-2021
Proiect DUBNA, cod temă 04-4-1122-2015/2020, poziția nr.54 din Ordinul IUCN nr.269/20.05.2020 - The study of water adsorption at nanostructured materials surfaces, by using nuclear-physical methods	DIRECTOR	2019-2020
Bilateral cooperation Romania -Turkey, Gazi University, Ankara, prof. dr. Mehmet Kasap Studies on the obtaining and characterization of nanostructured TiO ₂ , thin films, having applications in environmental physics	DIRECTOR	2008-2009
GRANT A, 27/2007 RESEARCH ON THE PROPERTIES OF MICRO AND NANO-STRUCTURED TITANIUM OXIDE THIN FILMS WITH APPLICATIONS IN ECOLOGY	DIRECTOR	2006-2008
Grant Romanian Academy, 37/2007 Titanium oxide thin films characterization for applications in optoelectronics and gas sensing	DIRECTOR	2006-2008
Proiecte complexe de cercetare exploratorie PCCE-ID_76 ȘTIINȚA SUPRAFETELOR ȘI INTERFETELOR: FIZICĂ, CHIMIE, BIOLOGIE, APLICĂȚI ȘTIINȚA SUPRAFETELOR ȘI INTERFETELOR: FIZICĂ, CHIMIE, BIOLOGIE, APLICĂȚI	MEMBER	2010-2013
Grant CERNESIM 257/28.09.2010 (Capacități), CENTRUL INTEGRAT DE STUDII ÎN ȘTIINȚA MEDIULUI PENTRU REGIUNEA DE DEZVOLTARE NORD-EST	MEMBER	2010-2014
Grant Parteneriate, nr. 12-128/2008, Procese și dispozitive pe baza de straturi subțiri oxidice și polimerice pentru electronică și optoelectronică transparentă	MEMBER	2008-2010