

PERSONAL INFORMATION

Mariusz Barczak



PERSONAL PROFILE

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For almost 20 years I have been an academic teacher and researcher at the Faculty of Chemistry, Maria Curie-Skłodowska University in Lublin (Poland). My research interests include *inter alia* modern materials with defined properties, including biomaterials, hybrid materials and nanomaterials, as well as nanotechnology, thin films, sol-gel methods as well as applications of various types of materials in everyday life, industry and environmental protection.

For many years I have also been an independent evaluator of projects submitted to various funding institutions, including the European Union and national research agencies in various countries. I evaluate submitted applications in terms of scientific, innovative and financial aspects.

I am a member of the Association of Top 500 Innovators – the largest NGO platform in Poland dealing with cooperation between the R&D sector and innovative companies. I had the pleasure to be a member of the management board of this organization and now I am on the audit committee. I also carry out my innovation-focused activities by participating in interesting projects of various start-ups, helping them with R&D aspects or consulting innovative strategies.

For many years I have been conducting classes with students, including entrepreneurship, statistics, functional nanomaterials or quantum chemistry, as well as I was the Erasmus coordinator at my faculty responsible for student international cooperation and exchange.

ACTUAL POSITION

Associate Professor at Maria Curie-Skłodowska University (UMCS) in Lublin (Poland)

WORK EXPERIENCE

October 2012 – Present

Independent evaluator

Assessment of applications/proposals submitted to various international and national agencies:

- Research Executive Agency (REA) > 100 proposals

- National Centre for Research and Devt (NCBR) > 40 proposals

- Irish Research Council (IRC) > 10 proposals

- Polish Agency of Enterprise Development (PARP) > 40 proposals

- Research Council of Lithuania (LMT)

- National Agency for Academic Exchange (NAWA)

- National Research Foundation of Ukraine (NRFU)

- m-ERA.NET

- Fulbright Commission

- Malta Xjenza


Evaluation various types of applications for the above-mentioned agencies in terms of research, innovation, but also financial and market-related aspects.

Evaluation over 100 manuscripts submitted to various journals (Elsevier, Springer, Wiley, RSC, ACS, MDPI and others) as well as MSc and PhD dissertations.

Business or sector: European and national institutions

February 2004 – Present

Assistant (till 2020) and associate (from 2020) professor

 Maria Curie-Skłodowska University in Lublin (www.umcs.pl)

- Conducting scientific research in the field of widely understood materials chemistry, materials engineering, nanotechnology and environmental protection.
- Conducting classes with undergraduate and graduate students, preparing teaching materials, supervising undergraduate, graduate and PhD students during their research work.
- Organizational activities related to the functioning of the university: participation in university bodies, organization of conferences, cooperation with the industry.

Business or sector **Academia**

May 2017 – Present

Member of the board of The Association of Top 500 Innovators

In the years 2017-2018 member of the Management Committee and from 2019 member of the Audit Committee.

The activities of the Association include promoting innovation, academic entrepreneurship, as well as commercialization of research results. The Association actively cooperates with government institutions and NGOs in developing the best environment for the growth of innovation ecosystem. The Association has over 420 members, both scientists as well as technology transfer and commercialization specialists from all over Poland.

Business or sector: **Non-governmental organization**

EDUCATION

November 2003

M.Sc. - Basic and Applied Chemistry - Faculty of Chemistry, Maria Curie-Skłodowska University (UMCS) Lublin, Poland.

September 2007

Ph.D. (cum laude) - Chemical Sciences - Faculty of Chemistry, UMCS in Lublin, Poland.

January 2020

Habilitation - Chemical Sciences - Faculty of Chemistry, UMCS in Lublin, Poland.

October 2011-June 2012

 Postgraduate studies "*Manager of research projects*", Higher School of Economy & Innovation, Lublin.

October 2009-June 2010

 Postgraduate studies "*Management of R&D projects*", Higher School of Economy & Innovation, Lublin, Poland.

VISITING POSITIONS

March 2019-February 2020

Laureate of the Bekker fellowship by Polish National Agency for Academic Exchange (NAWA), University of Granada, Spain.

January-August 2017

Fulbright Fellowship (Fulbright Senior Award), The City University of New York, USA.

July-September 2015

Fellowship by the Foundation for Polish Science, Biomedical Diagnostics Institute, Dublin, Ireland.

May-June 2013

NASA Ames Research Center, Mountain View, USA.

April-June 2013

Stanford Center for Professional Development, Stanford University, USA.

2005

Institute of Surface Chemistry of Ukrainian National Academy of Sciences, Kiev, Ukraine.

FUNDED PROPOSALS

Funded level of over PLN 8,500,000 (approx. EUR 2,000,000), including:

- Funded from Polish funds: Ministry of Science and Higher Education (MNiSW), National Science Center (NCN), Foundation for Polish Science (FNP), Foundation for the Development of the Education System (FRSE), Maria Curie-Skłodowska University (UMCS), National Agency for Academic Exchange (NAWA), National Centre for Research and Development (NCBR).

- Funded from non-Polish funds: ASTRIUM SAS company, Fulbright Commission, The Kosciuszko Foundation.

SCIENTIFIC OUTPUT

Research topics

Nanotechnology, Material Chemistry, Porous materials, Surface modification, Sol-gel method, Sensing and sensors, Water pollution and remediation, Valorisation of materials, Hybrid materials, Composites, Thin layers, Thin films, Coatings, Textiles, Biomaterials, Hydrogels, Ferrogels

Publications

Author / co-author of ~100 publications, over ~70 of which are indexed in Scopus, with a total number of citations over 2000.

Conferences

Participation in ~100 international conferences. Five invited lectures. One award for the best oral contribution and three awards for the best poster contributions. Conferences attended on the regular basis: COPS, FOA, ISSHAC, SOL-GEL, IAP.

INTERNATIONAL COLLABORATION

USA

Department of Chemistry, The City College of New York (USA) – group of Prof. Teresa Bandoz.

SPAIN

Facultad de Ciencias, Universidad de Granada (Spain) – group of Prof. Fernando Gonzalez-Caballero and Prof. Modesto T. Lopez-Lopez.

IRELAND

National Centre for Sensor Research, Dublin City University (Ireland) – group of Prof. Colette McDonagh.

FRANCE

Université de Reims Champagne-Ardenne (France) – group of Prof. Xavier Coqueret.

2014-2015

Laureate of Mentoring programme of the Foundation for Polish Science University of Granada, Spain.

2010

Certificated advisor for renewable energy sources, Managerial Initiatives Foundation, Lublin Poland.

2008

Participation in ISGS Summer School: Sol-gel in small dimensions: nanoparticles and thin films, Sardinia, Italy.

2008

Participation in European Course on Carbon Materials DECHEMA e.V, Frankfurt, Germany.

2007

Participation in the course Fundamentals of Sol-Gel Technology International Sol-Gel Society (ISGS), Montpellier, France.

2001-2002

5-month course "A Sustainable Baltic Region" by Uppsala University, Sweden & Maria Curie-Sklodowska University, Poland.

TEACHING & MENTORING ACTIVITIES

- Regular courses with students: Entrepreneurship (lecture), General Chemistry (lecture), Functional nanomaterials (lecture), Statistics (lecture and seminar), Adsorption on solid surfaces (lecture), Theory of chemical bond (seminar), Quantum chemistry (seminar), Theoretical chemistry (seminar and lab), Analytical chemistry (seminar).
- Supervisor of 25 bachelor theses, 9 master theses and 2 PhD theses. Mentoring over 30 other students preparing theses in the Dept. of Theoretical Chemistry, UMCS.
- Three series of lectures delivered to the students of Universidad de Granada (Spain) devoted to surface phenomena and adsorption in the frame of Erasmus Teaching Staff Mobility (2013, 2014, 2016).
- Faculty coordinator of Erasmus programme (2008-2016). Giving assistance to incoming and outgoing Erasmus students. Supervision of research projects conducted by incoming Erasmus students (up-to-day, 8 research projects).
- Mentor in three editions of the programme "TopMinds" - the one of the most prestigious mentoring programmes in Poland organized by the Polish-American Fulbright Commission and the Association of Top 500 Innovators (2018, 2019, 2021).

OTHER LEADERSHIP ROLES AND ACCOMPLISHMENTS

- Elected member of Forensic and Toxicological Analysis Team of the Polish Academy of Sciences for the 2020-2023 term.
- Elected Member of the Board of The Association of Top 500 Innovators (2017-18). Actually member of the Audit Committee (2019-present).
- Member of the Faculty Committee for the Quality of Education, on the Recruitment Commission, on the organization team of the Open Days of UMCS. All the functions listed above were served for the Faculty of Chemistry, UMCS in Lublin (Poland).
- Member of the Polish Chemical Society, including following functions: Vice-president of Student Section (2001-2003), Member of the Audit Committee of Lublin branch (2009-2012), Vice-president of Lublin branch (2013-2016), Member of the board of Lublin branch (from 2016).
- Member of: (i) The Association of TOP 500 Innovators, (ii) European Chemistry Thematic Network, (iii) International Adsorption Society.
- Chair of the Scientific Committee of the *International Symposium Effects of Surface Heterogeneity in Adsorption, Catalysis and related Phenomena* (ISSHAC)– triannual conference organized by Polish Chemical Society, Haber Institute for Catalysis and Surface Chemistry of Polish Academy of Sciences and Maria Curie-Sklodowska University.

AWARDS AND RECOGNITIONS

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| 2020 | Team III° Award for scientific achievements, Rector of Maria Curie-Sklodowska University. Award for the high quality publication, Rector of Maria Curie-Sklodowska University. |
| 2019 | Team III° Award for scientific achievements, Rector of Maria Curie-Sklodowska University. |
| 2019-2020 | Nominated by the Fulbright Commission to be Fulbright Ambassador in Poland. |
| 2018 | Team I° (highest) Award for scientific achievements, Rector of Maria Curie-Sklodowska University. |
| 2017 | Fulbright Senior Award (project title: Adsorptive, photocatalytic and supercapacitive behaviour of functionalized carbon fibers, City University of New York. |
| 2016 | Team II° Award for scientific achievements, Rector of Maria Curie-Sklodowska University. |
| 2013-2016 | Award for distinguished young scientist , Minister of Science and Higher Education of Poland. |
| 2013 | - Fellowship founded by the Polish Ministry of Science and Higher Education: Top 500 Innovators: Science- Management-Commercialization, Stanford University. |
| | - Team I° (highest) Award for scientific achievements, Rector of Maria Curie-Sklodowska University. |
| 2012 | Individual I° (highest) Award for scientific achievements, Rector of Maria Curie-Sklodowska University. |
| 2011 | Individual II° Awards for scientific achievements, Rector of Maria Curie-Sklodowska University. |
| 2010 | Individual II° Awards for scientific achievements, Rector of Maria Curie-Sklodowska University. |
| 2007 | Distinction of the PhD thesis by Scientific Council of the Faculty of Chemistry of Maria Curie-Sklodowska University. |
| 2002-2003 | 9-month Erasmus fellowship. Realization of the experimental part of M.Sc. thesis, Faculty of Sciences, University of Granada, Spain (2002-03). |