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Employment and positions:

Institute of Metallurgy and Materials Science, Polish Academy of Sciences: assistant professor (since 2014); Accredited Testing Laboratories at the Institute of Metallurgy and Materials Science of the Polish Academy of Sciences: member of Laboratory of Scanning Electron Microscopy (since 2014).

Scientific Career:

M.Sc.: Jagiellonian University, 2009

Ph.D.: Institute of Metallurgy and Materials Science, Polish Academy of Sciences/Jagiellonian University, 2014

Latest publications

1.

A. Bigos, M. Wolowicz, M. Janusz-Skuza, Z. Starowicz, M. J. Szczerba, R. Bogucki, E. Beltowska-Lehman, Citrate-based baths for electrodeposition of nanocrystalline nickel coatings with enhanced hardness, *Journal of Alloys and Compounds*, 850 (2021) 156857

2.

M. Szmul, K. Stan-Glowinska, M. Janusz-Skuza, **A. Bigos**, A. Chudzio, Z. Szulc, J. Wojewoda-Budka, The Interface Zone of Explosively Welded Titanium/Steel after Short-Term Heat Treatment, *Metallurgical and Materials Transactions A*, 52 (2021) 588-1595

3.

A. Bigos, M. Janusz-Skuza, M. J. Szczerba, M. Kot, S. Zimowski, A. Dębski, E. Beltowska-Lehman, The effect of heat treatment on the microstructural changes in electrodeposited Ni-Mo coatings, *Journal of Materials Processing Tech.* 276 (2020) 116397

4.

E. Beltowska-Lehman, **A. Bigos**, M.J. Szczerba, M. Janusz-Skuza, L. Maj, A. Debski, G. Wiazania, M. Kot Heat treatment of ultrasonic electrodeposited Ni-W/ZrO₂ nanocomposites, *Surface and Coatings Technology* (2020)

5.

W. Maziarz, P. Bobrowski, A. Wójcik, **A. Bigos**, Ł. Szymański, P. Kurtyka, N. Rylko, E. Olejnik, Microstructure and Mechanical Properties of In Situ Cast Aluminum Based Composites Reinforced with TiC Nano-Particles, *Materials Science Forum*, 985 (2020) 211-217

6.

A. Dobosz, K. Berent, **A. Bigos**, T. Gancarz, Interfacial phenomena between liquid alloy and Ni substrate covered by Ni-W layer, *Materials Letters*, 277 (2020) 128299

7.

A. Wojcik, E. Olejnik, **A. Bigos**, R. Chulist, P. Bobrowski, P. Kurtyka, A. Tarasek, N. Rylko, L. Szymanski, W. Maziarz, Microstructural characterization and mechanical properties of in situ cast nanocomposites Al/TiC type, Journal of Materials Research and Technology, 9(6) (2020) 12707-12715

Research Projects (from 2017)

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M-ERA.NET 2 "New generation copper based coatings of improved antimicrobial resistance to pathogens" (from 2021), contractor

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LIDER/54/0229/L-11/19/NCBR/2020 „Development of a bio-compatible material with high mechanical properties and optimal degradation time for use in modern bioabsorbable cardiac stents" (from 2021), contractor

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LIDER/49/0200/L-11/19/NCBR/2020 „Optimization of the composite materials production process with high performance properties in the aspect of physicochemical phenomena in the liquid metal - ceramics system" (from 2021), contractor

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TECHMATSTRATEG II nr 409122 FANPV „Development of technology for manufacturing of functional materials for application in non-silicon photovoltaic cells " (2019-2021), contractor

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NCN 2016/21/B/ST8/01181 „In-situ cast composites strengthened with ceramic nanoparticles" (2018-2019), contractor

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NCN 2017/01/X/ST8/01357 „New citrate baths for deposition of nanocrystalline nickel coatings with enhanced hardness" (2017-2018), supervisor

Fellowships and trainings:

Corrosion Research Laboratory, Institute of Materials Engineering, Faculty of Science and Technology, University of Silesia, Chorzow, Poland - 2018 (1 month)

ERASMUS+ Staff mobility for training- CIDETEC, San Sebastian, Spain - 2016 (1 month)

KMM-VIN Research Fellowship - CIDETEC, San Sebastian, Spain - 2015 (2 months)

SIMS - Science Infrastructure Management Support - Warsaw, Dresden, Leipzig, New York - 2014 (6 weeks)

ERASMUS Staff Training Mobility - University of Bucharest, Faculty of Applied Chemistry and Materials Science, Department of Applied Physical Chemistry and Electrochemistry, Bucharest, Romania - 2013 (1 month)

The bilateral exchange in the frame of project No. P27: The use of advanced electron microscopy techniques in materials studies, Research Institute for Technical Physics and Materials Science; Hungarian Academy of Sciences, Budapest, Hungary -2010 (1 week)

ERASMUS Staff Training Mobility - Vilnius University, Department of Physical Chemistry, Vilnius, Lithuania - 2010 (1 month)

Awards

18.06.2015 - The professor Tadeusz Żak award for the best national scientific work in the field of galvanic coatings and related topics, awarded by the Polish Electroplating Society (PTG) together with the Institute of Precision Mechanics (IMP) in Warsaw

27.09.2014 - Distinction of the doctoral dissertation by the Scientific Council of the Institute of Metallurgy and Materials Science of the Polish Academy of Sciences