Wrocław University of Science and Technology
Doctoral School

ACADEMIC TEACHER PROFESSIONAL EXPERIENCE

DOCTORAL SCHOOL OF WROCŁAW UNIVERSITY OF SCIENCE AND TECHNOLOGY

1. Basic information

Name, surname:	Bartłomiej Kryszak
Grade / Title:	PhD
Scientific discipline	**inżynieria chemiczna / chemical engineering**
Faculty:	W3 Wydział Chemiczny / Faculty of Chemistry
Email address:	Bartlomiej.kryszak@pwr.edu.pl
Link to home page and/or research profiles (Google Scholar, ResearchGate, etc.)	https://www.researchgate.net/profile/Bartlomiej-Kryszak https://scholar.google.com/citations?user=A0FZslUAAAAJ&hl=pl&oi=ao https://itp.pwr.edu.pl/pracownicy/dr-inz-bartlomiej-kryszak

2. Publication record

Up to 10 most important papers published over the period of previous 10 years.

No.	Description (authors, publication title, journal / conference, DOI)	Publication year
1.	B. Kryszak, M. Biernat, P. Tymowicz-Grzyb, A. Junka, M. Brożyna, M. Worek, P. Dzienny, A. Antończak, K. Szustakiewicz, *The effect of extrusion and injection molding on physical, chemical, and biological properties of PLLA/HAp whiskers composites*, Polymer, 10.1016/j.polymer.2023.126428.	2023
2.	B. Kryszak, K. Szustakiewicz, P. Dzienny, A. Junka, J. Paleczny, P. Szymczyk-Ziółkowska, V. Hoppe, Antończak, *Functionalization of the PLLA surface with a femtosecond laser: Tailored substrate properties for cellular response*, Polymer Testing, 10.1016/j.polymertesting.2022.107815.	2022
3.	B. Kryszak, M. Gazińska, P. Gruber, M. Wieczorek, A. Krokos, P. Dzienny, P. Szymczyk-Ziółkowska, M. Olejarczyk, A. Antończak, *Mechanical properties and degradation of laser sintered structures of PLA microspheres obtained by dual beam laser sintering method*, The International Journal of Advanced Manufacturing Technology, 10.1007/s00170-022-09253-6.	2022
4.	A. Antończak, M. Wieczorek, P. Dzienny, B. Kryszak, A. Krokos, P. Gruber, M. Olejarczyk, M. Gazińska, *First, do not degrade–Dual Beam Laser Sintering of polymers*, Additive Manufacturing, 10.1016/j.addma.2022.102715.	2022
5.	B. Kryszak, K. Szustakiewicz, P. Dzienny, A. Junka, J. Paleczny, P. Szymczyk-Ziółkowska, V. Hoppe, M. Grzymajło, A. Antończak, *'Cookies on a tray': Superselective hierarchical microstructured poly(l-lactide) surface as a decoy for cells'*, Biomaterials Advances, 10.1016/j.msec.2022.112648.	2022
6.	P. Gruber, G. Ziółkowski, M. Gazińska, B. Kryszak, A. Krokos, M. Olejarczyk, P. Szymczyk-Ziółkowska, P. Dzienny, A. Antończak, *High porosity composite structures produced from poly(lactic acid)/hydroxyapatite microspheres using novel Dual Beam Laser Sintering method: Analysis of structural, mechanical and thermal properties*, Journal of Manufacturing Processes, 10.1016/j.jmapro.2022.11.010.	2022

7.	K. Szustakiewicz, B. Kryszak, M. Gazińska, J. Chęcmanowski, B. Stępak, M. Grzymajło, A. Antończak, *The effect of selective mineralization of PLLA in simulated body fluid induced by ArF excimer laser irradiation: Tailored composites with potential in bone tissue engineering*, Composites Science and Technology, 10.1016/j.compscitech.2020.108279.	2020
8.	B. Kryszak, K. Szustakiewicz, B. Stępak, M. Gazińska, A. Antończak, *Structural, thermal and mechanical changes in poly (l-lactide)/hydroxyapatite composite extruded foils modified by CO2 laser irradiation*, European Polymer Journal, 10.1016/j.eurpolymj.2019.02.030.	2019
9.	A. Smieszek, K. Marycz, K. Szustakiewicz, B. Kryszak, S. Targonska, K. Zawisza, A. Watras, R. Wiglusz, *New approach to modification of poly (l-lactic acid) with nano-hydroxyapatite improving functionality of human adipose-derived stromal cells (hASCs) through increased viability and enhanced mitochondrial activity*, Materials Science and Engineering:C, 10.1016/j.msec.2018.12.099.	2019
10.	K. Szustakiewicz, M. Gazińska, B. Kryszak, M. Grzymajło, J. Pigłowski, R. Wiglusz, M. Okamoto, *The influence of hydroxyapatite content on properties of poly (L-lactide)/hydroxyapatite porous scaffolds obtained using thermal induced phase separation technique*, European Polymer Journal, 10.1016/j.eurpolymj.2019.01.073.	2019

3. Projects and grants

List of the most important 5 projects/grants with basic description including: title, source(s) of funding, name of the call, role in the project (e.g., principal investigator).

1.	Role in the project (e.g., principal investigator, work package leader, etc.)	Project manager
	Project title	Development of a method of laser surface modification of composites based on biodegradable polymers, showing potential in biomedical applications
	Sources of funding	National Science Center Center Poland
	Name of the call	Miniatura 6
	Implementation period	01.10.2022 – 31.12.2023
2.	Role in the project (e.g., principal investigator, work package leader, etc.)	Investigator (The young doctor)
	Project title	Multifunctional biologically active composites for applications in bone regenerative medicine
	Sources of funding	Foundation of Polish Science
	Name of the call	TEAM-NET
	Implementation period	01.12.2021 – 30.06.2023
3.	Role in the project (e.g., principal investigator, work package leader, etc.)	Investigator (PhD student, scholarship holder)
	Project title	Laser modification of bioresorbable polymeric materials in thermal additive forming processes
	Sources of funding	National Science Center Center Poland
	Name of the call	Opus 14
	Implementation period	11.2018 – 11.2022

4.	Role in the project (e.g., principal investigator, work package leader, etc.)	
	Project title	
	Sources of funding	
	Name of the call	
	Implementation period	
5.	Role in the project (e.g., principal investigator, work package leader, etc.)	
	Project title	
	Sources of funding	
	Name of the call	
	Implementation period	

4. International experience

Brief description of international cooperation and experience (e.g., research stays, cooperation with foreign entities, coordination or participation in international projects or programmes, keynote speeches and presentations delivered at renowned international conferences, visiting professor stays, invited lectures).

No.	Description	Year(s)
1.	Cooperation with Institute of Macromolecular Chemistry in Prague (prof. Miroslav Slouf team) – investigation of the microstructure and micromechanical properties of polymer composites.	2023 - 2024
2.		
3.		

5. Experience in teaching doctoral students

Brief description of experience in teaching doctoral students (e.g., courses in doctoral schools and PhD studies, summer/winter schools for doctoral students, tutorials, trainings, etc.).

No.	Description	Year(s)
1.	Modern macromolecular engineering materials - participation in conducting the lecture	2024
2.		
3.		

6. List of supervised doctoral students

List of all supervised doctoral students that defended the PhD including: name of the student, dissertation title, year of awarding PhD.

No.	Name, surname	Dissertation title	Year of awarding PhD
1.	-		
2.			
3.			

7. Prizes and awards

The most important national and international prizes and awards related to research, development and teaching activities.

No.	Description	Year
1.	Platinum medal for patent application in the International Competition of Inventions and Innovations PRIX EIFFEL 2023 (group award).	2023
2.	Wrocław University of Science and Technology Rector's Award for outstanding scientific achievements.	2022
3.	Two-time winner of the Secundus university competition for outstanding young scientists.	2022, 2023

8. Other significant achievements

Information on other significant achievements related to research, development and teaching activities.

Member of the organizing committee of the 23rd, 24th, 25th and 26th scientific conference Modyfikacja Polimerów'.