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:	Piotr Cyganowski
Grade / Title:	PhD Eng., DSc
Scientific discipline	**inżynieria chemiczna / chemical engineering**
Faculty:	W3 Wydział Chemiczny / Faculty of Chemistry
Email address:	piotr.cyganowski@pwr.edu.pl
Link to home page and/or research profiles (Google Scholar, ResearchGate, etc.)	https://www.scopus.com/authid/detail.uri?authorId=55763183300

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.	Piotr Cyganowski*, Anna P. Dzimitrowicz, Heterogenous nanocomposite catalysts with rhenium nanostructures for the catalytic reduction of 4-nitrophenol, Scientific Reports. 2022, 12, art. 6228, https://doi.org/10.1038/s41598-022-10237-5	2022
2.	Piotr Cyganowski*, Fully recyclable gold-based nanocomposite catalysts with enhanced reusability for catalytic hydrogenation of p-nitrophenol, Colloids and Surfaces. A: Physicochemical and Engineering Aspects. 2021, 612, art. 125995, https://doi.org/10.1016/j.colsurfa.2020.125995	2021
3.	Piotr Cyganowski*, Dominik P. Terefinko, Piotr Jamróz, Paweł Pohl, Anna P. Dzimitrowicz, Non-thermal atmospheric pressure plasma as a powerful tool for the synthesis of rhenium-based nanostructures for the catalytic hydrogenation of 4-nitrophenol, RSC Advances. 2021, 11(61), 38596-38604 https://doi.org/10.1039/d1ra07416d	2021
4.	Piotr Cyganowski*, Anna Leśniewicz, Anna P. Dzimitrowicz, Joanna Wolska, Paweł Pohl, Dorota Jermakowicz-Bartkowiak, Molecular reactors for synthesis of polymeric nanocomposites with noble metal nanoparticles for catalytic decomposition of 4-nitrophenol. Journal of Colloid and Interface Science. 2019, 541, 226-233 http://dx.doi.org/10.1016/j.jcis.2019.01.097	2019
5.	Piotr Cyganowski*, Agata Cierlik, Anna Leśniewicz, Paweł Pohl, Dorota Jermakowicz-Bartkowiak: Separation of Re(VII) from Mo(VI) by anion exchange resins synthesized using microwave heat, Hydrometallurgy. 2019, 185, 12-22, http://dx.doi.org/10.1016/j.hydromet.2019.01.013	2019
6.	Piotr Cyganowski, Anna P. Dzimitrowicz*, Piotr Jamróz, Dorota Jermakowicz-Bartkowiak, Paweł Pohl: Polymerization-driven immobilization of dc-APGD synthesized gold nanoparticles into a quaternary ammonium-based hydrogel resulting in a polymeric nanocomposite with heat-transfer applications, Polymers. 2018, 10(4), art. 377	2018

	https://doi.org/10.3390/polym10040377	
7.	Dominik P. Terefinko, Magda Caban, Agata Motyka-Pomagruk, Weronika Babinska, Paweł Pohl, Piotr Jamróz, Piotr Cyganowski, Wojciech Śledź, Ewa Łojkowska, Piotr Stepnowski, Anna P. Dzimitrowicz*, Removal of clinically significant antibiotics from aqueous solutions by applying unique high-throughput continuous-flow plasma pencil and plasma brush systems, Chemical Engineering Journal. 2023, 452, art. 139415 https://doi.org/10.1016/j.cej.2022.139415	2023
8.	Ezgi Çermikli, Fatma Şen, Esra Altiok, Joanna Wolska, Piotr Cyganowski, Nalan Kabay, Marek Bryjak*, Muserref Arda, Mithat Yuksel, Performances of novel chelating ion exchange resins for boron and arsenic removal from saline geothermal water using adsorption-membrane filtration hybrid process, Desalination. 2020, 491, art. 114504, https://doi.org/10.1016/j.desal.2020.114504	2020
9.	Izabela Polowczyk, Piotr Cyganowski, Bruno F. Urbano, Bernabé L. Rivas*, Marek Bryjak, Nalan Kabay, Amberlite IRA-400 and IRA-743 chelating resins for the sorption and recovery of molybdenum(VI) and vanadium(V): equilibrium and kinetic studies, Hydrometallurgy. 2017, 169, 496-507 http://dx.doi.org/10.1016/j.hydromet.2017.02.017	2017
10.	Piotr Cyganowski*, Kamil Garbera, Anna Leśniewicz, Joanna Wolska, Paweł Pohl, Dorota Jermakowicz-Bartkowiak, The recovery of gold from the aqua regia leachate of electronic parts using a core-shell type anion exchange resin, Journal of Saudi Chemical Society. 2017, 21(6) http://doi.org/10.1016/j.jscs.2017.03.007	2017

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.)	Principal investigator
	Project title	Catalytic-separation hydrogenation processes of nitroaromatic compounds using multifunctional polymer nanocomposites with rhenium nanoparticles (in Polish: Katalityczno-separacyjne procesy uwodornienia związków nitroaromatycznych z wykorzystaniem wielofunkcyjnych nanokompozytów polimerowych z nanocząstkami renu)
	Sources of funding	National Science Center (Narodowe Centrum Nauki)
	Name of the call	SONATA 16
	Implementation period	Jul 2021-Jul 2024 (36 months)
2.	Role in the project (e.g., principal investigator, work package leader, etc.)	Principal Investigator
	Project title	Polymer anion exchangers for the controlled synthesis of precious metal nano- and micro-particles (in Polish: Anionity polimerowe do kontrolowanej syntezy nano- i mikro-cząstek metali szlachetnych)
	Sources of funding	National Science Center (Narodowe Centrum Nauki)
	Name of the call	MINIATURA 1

	Implementation period	Jan 2018-Jan 2019 (12 months)
3.	Role in the project (e.g., principal investigator, work package leader, etc.)	Co-investigator
	Project title	Geothermal water management: energy recovery and water production
	Sources of funding	National Centre for Research and Development; Scientific and Technological Research Council of Türkiye
	Name of the call	POLTUR 2
	Implementation period	Dec 2018-Dec 2021 (36 months)
4.	Role in the project (e.g., principal investigator, work package leader, etc.)	Co-investigator
	Project title	CHILTURPOL 2 Innovative Materials for Water Treatment
	Sources of funding	European Union 7th Framework Programme
	Name of the call	***FP7-PEOPLE-2010-IRSES***
	Implementation period	May 2010-May 2014 (48 months)
5.	Role in the project (e.g., principal investigator, work package leader, etc.)	Co-investigator
	Project title	The use of cold atmospheric plasmas generated in contact with the flowing solution for the direct degradation of antibiotics and the reduction of multidrug resistance in the natural environment (in Polish: Zastosowanie zimnych plazm atmosferycznych generowanych w kontakcie z przepływającym roztworem do bezpośredniej degradacji antybiotyków oraz obniżenia oporności wielolekowej w środowisku naturalnym)
	Sources of funding	National Science Center (Narodowe Centrum Nauki)
	Name of the call	SONATA 15
	Implementation period	Jul 2020-Jul 2023 (36 months)

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.	**Research stay:** University of Concepcion, Concepcion, Chile Conducting scientific activity related to the synthesis and use of anion exchange resins for the separation of Mo(VI) and V(V) (project FP7-PEOPLE-2010-IRSES: CHILTURPOL 2).	Feb-May 2014
2.	**Study stay:** *Aalto University, Helsinki, Finlandia* *Scientific activity related to the development of an implementation research and teaching program under the patronage of the European Institute of Technology (project Pre-AMSOLI- 18487 -2019)*	*2019.10.23 - 2019.10.26*
3.	**Keynote Speaker:** Piotr Cyganowski: The powerful response for the major environmental threats. The catalytic hydrogenation of aromatic nitro	2023

	compounds over rhenium-based nanocatalysts. 4th Summit on Catalysis and Chemical Engineering 2023, Apr 13-14 2023, Rome, Italy	

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.	Lecture: *Materiały Funkcjonalne*. Co-conducted with prof. Dorota Jermakowicz-Bartkowiak.	2021
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.	Mateusz Bykowski		Planned 2026
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.	Scholarship of the Minister of Education and Science for outstanding young scientists	2021
2.	Dionizy Smoleński award for the outstanding scientific achievements	2022
3.	Award of the Rector of WUST for outstanding scientific achievements	2020

8. Other significant achievements

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

1. Implementation of technology for water purification of the retention reservoir on Mała Panew
   October 2019 to September 2022

Work aimed at optimizing the process parameters of the retention reservoir water treatment reducing the volume of effluents from the columns, which translated into increased economic and operational efficiency of the resulting installation

2. WIGO Gąsiorowski-Water Technologies
   October 2020

Setting parameters of integrated devices intended for use in, among others, in domestic water purification and softening stations. These devices, based on the technology of ion exchange resins, are currently available in the company's offer.

3. Elsur Sp.z o.o.
   October 2015, October 2016 (two reports)
   Preparation of two industrial studies aimed at assessing the condition of the polymer resin deposit used in technological processes at the *Legnica Copper Smelter*.