



ACADEMIC TEACHER PROFESSIONAL EXPERIENCE

DOCTORAL SCHOOL OF WROCLAW UNIVERSITY OF SCIENCE AND TECHNOLOGY

1. Basic information

| | |
|---|---|
| Name, surname: | Rafał Kowalczyk |
| Grade / Title: | dr hab. inż. |
| Scientific discipline | nauki chemiczne / chemical sciences |
| Faculty: | W3 Wydział Chemiczny / Faculty of Chemistry |
| Email address: | rafal.kowalczyk@pwr.edu.pl |
| Link to home page and/or research profiles (Google Scholar, ResearchGate, etc.) | https://www.researchgate.net/profile/Rafal-Kowalczyk-5 |

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. | Mała, Ż. A. , Janicki, M. J., Góra, R. W. , Konieczny, K. A. , Kowalczyk, R., Mechanochemical Assisted Chemoselective and Stereoselective Hydrogen-Bonding Catalyzed Addition of Dithiomalonates to Enones, <i>Advanced Synthesis and Catalysis</i> , doi.org/10.1002/adsc.202300636 | 2023 |
| 2. | Kowalczyk, R.; Boratyński, P., Stereoselective thia-Michael 1,4-Addition to Acyclic 2,4-Dienones and 2-En-4- ynones, <i>Advanced Synthesis and Catalysis</i> , 10.1002/adsc.201501138 | 2016 |
| 3. | Ignatiuk, Ż.A., Janicki, M.J., Góra, R.W., Konieczny, K., Kowalczyk, R., Applications of Thermal Activation, Ball-milling and Aqueous Medium in Stereoselective Michael Addition of Nitromethane to Enynones Catalyzed by Chiral Squaramides, <i>Advanced Synthesis and Catalysis</i> , 10.1002/adsc.201801498 | 2019 |
| 4. | Dajek, M., Kowalczyk, R., Boratyński, P.J., Trans -1,2-Diaminocyclohexane-based sulfonamides as effective hydrogen-bonding organocatalysts for asymmetric Michael-hemiacetalization reaction, <i>Catalysis Science and Technology</i> , 10.1039/c8cy01199k | 2018 |
| 5. | Dajek, M., Pruszczyńska, A., Konieczny, K.A., Kowalczyk, R., Cinchona Squaramide-Catalyzed Intermolecular Desymmetrization of 1,3-Diketones Leading to Chiral 1,4-Dihydropyridines, <i>Advanced Synthesis and Catalysis</i> , 10.1002/adsc.202000455 | 2020 |
| 6. | Mała, Ż.A., Janicki, M.J., Niedźwiecka, N.H., Góra, R. W.; Konieczny, K.A., Kowalczyk, R., Stereoselectivity Enhancement During the Generation of Three Contiguous Stereocenters in Tetrahydrothiophenes, 10.1002/cctc.202001583 | 2021 |
| 7. | Bizet, Vincent; Kowalczyk, Rafał; Bolm, Carsten, Fluorinated sulfoximines: Syntheses, properties and applications, 10.1039/c3cs60427f | 2014 |
| 8. | | |
| 9. | | |
| 10. | | |



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 | Opracowanie struktury katalizatorów oligopolikarbaminianowych do syntezy pochodnych tadalafilu |
| | Sources of funding | MEN |
| | Name of the call | Doktorat wdrożeniowy 6 |
| | Implementation period | 2022-2026 |
| 2. | Role in the project (e.g., principal investigator, work package leader, etc.) | principal investigator |
| | Project title | Non-classical asymmetric catalysis effected by hydrogen-bond donors |
| | Sources of funding | NCN |
| | Name of the call | SONATA BIS |
| | Implementation period | 2017-2022 |
| 3. | Role in the project (e.g., principal investigator, work package leader, etc.) | principal investigator |
| | Project title | Regioselective 1,4 and 1,6-addition of sulfur, oxygen and nitrogen nucleophiles to electron-deficient conjugated dienes |
| | Sources of funding | NCN |
| | Name of the call | SONATA |
| | Implementation period | 2012-2015 |
| 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. | Belgium, Ghent, Ghent University, prof. Christian V. Stevens, short-stage scientific intership | 2013 |
| 2. | Germany, Aachen, RWTH Aachen University, Institute of Organic Chemistry, prof. Carsten Bolm, post-doctoral fellowship | 2009-2010 |
| 3. | Germany, Regensburg, Institut of Organic Chemistry, University of Regensburg & Wissenschaftszentrum Straubing, prof. Olga Garcia Mancheno, short-stage scientific visit | 2016 |

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. | Advanced organic chemistry, courses in doctoral schools and PhD studies | 2020 |
| 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. | Żaneta Mała | Nowe metody aktywacji w katalizie z udziałem wiązań wodorowych | 2023 |
| 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. | | |
| 2. | | |
| 3. | | |

8. Other significant achievements

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

1. Authorship of the chapters to Maiti (Ed.): Handbook of CH-Functionalization (Wiley, Online ISBN: 9783527834242) DOI: 10.1002/9783527834242; chapters: "C-H functionalization of tetrahydroquinolines and isoquinolines(<https://doi.org/10.1002/9783527834242.chf0109>)" and "C-H activation of indoles (<https://doi.org/10.1002/9783527834242.chf0108>)
2. Authorship of the chapter "Mechanochemistry and High-Pressure Techniques in Asymmetric Organocatalysis" doi: 10.1002/9783527832217.ch12 in Asymmetric Organocatalysis: New Strategies, Catalysts, and Opportunities, Wiley, 2022



3. The Author's work: Tetrahedron 2014, 70, 5834 has been cited in March's Advanced Organic Chemistry - Reactions, Mechanisms, and Structure (8th Edition) as reference 1387 (page 978 of the electronic version of book)