

Personal Information

Name: Michał Piotr Ociepa

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Nationality: Polish

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Education

01/11/2015 – 31/03/2020 PhD in Organic and Synthetic Chemistry,
Institute of Organic Chemistry Polish Academy of Sciences, Warsaw, Poland

Research Advisor: prof. Dorota Gryko

Dissertation topic: *Pyridine derivatives as activating groups in photocatalytic radical reactions*

19/02/2015 – 22/06/2016 M. Sc. with Honors in Chemical Technology,
Faculty of Chemistry, Warsaw University of Technology, Warsaw, Poland

Research Advisors: prof. Dorota Gryko, prof. Michał Fedoryński

Dissertation topic: *Cobalamin-catalyzed electrochemical C-H alkylation of olefins*

01/10/2011 – 09/02/2015 B. Sc. with Honors in Chemical Technology,
Faculty of Chemistry, Warsaw University of Technology, Warsaw, Poland

Research Advisors: prof. Dorota Gryko, Dr. Dominika Kubica

Dissertation topic: *Novel approach to synthesis of aquacobalamin*

Professional and Academic Experience

Assistant Professor, Institute of Organic Chemistry PAS, 01/10/2023 – present

Postdoctoral Associate, The Scripps Research Institute, 21/04/2021 – 30/07/2023, prof. Phil Baran laboratory

Assistant, Institute of Organic Chemistry PAS, 01/04/2020 – 20/04/2021, prof. Dorota Gryko laboratory

PhD candidate, Institute of Organic Chemistry PAS, 01/09/2015 – 31/03/2020, prof. Dorota Gryko laboratory

Intern, Institute of Organic Chemistry PAS, 01/01/2014 – 31/08/2015, prof. Dorota Gryko laboratory

Reviewer, Polish National Committee of Chemistry Olympiad, 01/12/2013 – 31/03/2021

Intern, Warsaw University of Technology, 01/01/2012 – 30/11/2013, prof. Adam Gryff-Keller laboratory

International Internships

- 01/04/2019 – 31/07/2019** The Scripps Research Institute, San Diego, USA
Research Advisor: prof. Phil S. Baran
Project topic: Development of scalable and process-friendly synthesis of Calcipotriol (in collaboration with LEO Pharma)
- 03/11/2017 – 24/11/2017** Department of Applied Chemistry, Kyushu University, Fukuoka, Japan
Research Advisor: prof. Yoshio Hisaeda
Project topic: Mechanistic investigation of cobalamin-catalyzed acylation of activated olefins

Prizes and Awards

- ❖ “Świętosławski Award” for the most outstanding Polish chemist under age 30, Polish Chemical Society, **2022**
- ❖ “Start Award” for top 100 young polish researchers (under age 30), Foundation for Polish Science, Poland, **2020**
- ❖ Most Outstanding Graduate Student Award, Institute of Organic Chemistry PAS, Poland, **2018**
- ❖ Minister of Science and Higher Education Scholarship for Outstanding Young Researchers, Poland, **2016**
- ❖ Finalist of the “Chemistry Gold Medal” Competition for Outstanding B. Sc. Thesis in Chemical Sciences, Poland, **2015**
- ❖ Bronze medal at the 43rd International Chemistry Olympiad, Turkey, Ankara, **2011**
- ❖ Laureate of the 56th and the 57th National Chemistry Olympiad, Poland, **2010 and 2011**

Research Funding

- ❖ “Sonata” Research Grant, National Science Centre Poland, **02/10/2023 – 01/10/2026**
- ❖ “Bekker” Fellowship, Polish National Agency for Academic Exchange, Poland, **26/04/2021 – 26/03/2023**
Results of the project were published as 4 scientific papers in international journals (Nat. Chem. JACS, PNAS and Org. Lett.)
- ❖ “Etiuda” Fellowship, National Science Centre, Poland, **01/09/2018 – 31/08/2019**
Results of the project were published as 2 scientific papers in international journals (J. Am. Chem. Soc., and Eur. J. Org. Chem.)
- ❖ “Diamond Grant”, Ministry of Science and Higher Education, Poland, **01/09/2015 – 31/08/2018**
Results of the project were published as 3 scientific papers in international journals (Chem. Eur. J., Adv. Synth. Catal., and Eur. J. Org. Chem.)

Publications

- 1) Aryl versus Alkyl Redox-Active Diazoacetates – Light Induced C-H Insertion or 1,2-Rearrangement
J. V. Santiago, K. Orłowska, **M. Ociepa**, D. Gryko
Org. Lett. **2023**, *25*, 6267-6271.
- 2) Stereocontrolled Radical Thiophosphorylation
M. Nassir,† **M. Ociepa**,† H.-J. Zhang,† L. N. Grant, B. J. Simmons, M. S. Oderinde, Y. Kawamata, A. N. Cauley, M. A. Schmidt, M. D. Eastgate, P. S. Baran [†M.N, M.O and H.-J.Z equal contribution]
J. Am. Chem. Soc. **2023**, *145*, 15088-15093.
- 3) Convergent Total Synthesis of (+)-Calcipotriol: A Scalable, Modular Approach to Vitamin D Analogs
J. Gu, K. X. Rodriguez, Y. Kanda, S. Yang, **M. Ociepa**, H. Wilke, A. V. Abrishami, L. Jørgensen, T. Skak-Nielsen, J. S. Chen, P. S. Baran
PNAS **2022**, *119*, e2200814119.
- 4) Bioinspired Cobalt-Catalysis Enables Generation of Nucleophilic Radicals from Oxetanes
A. Potrzęsaj,† **M. Ociepa**,† W. Chaładaj, D. Gryko [†A.P and M.O equal contribution]
Org. Lett. **2022**, *24*, 2469-2473.
- 5) Reversal of Regioselectivity in Reactions of Donor-Acceptor Cyclopropanes with Electrophilic Olefins
J. Trukowska, J. Durka, **M. Ociepa**, D. Gryko
Chem. Commun. **2022**, *58*, 509-512.
- 6) Mild and Chemoselective Phosphorylation of Alcohols Using a Ψ -Reagent
M. Ociepa, K. W. Knouse, D. He, J. C. Vantourout, D. T. Flood, N. M. Padial, J. S. Chen, B. B. Sanchez, E. J. Sturgell, B. Zheng, S. Qiu, M. A. Schmidt, M. D. Eastgate, P. S. Baran
Org. Lett. **2021**, *23*, 9337-9342.
- 7) Polarity-Reversal Strategy for the Functionalization of Electrophilic Strained Molecules via Light-Driven Cobalt Catalysis
M. Ociepa,† A. J. Wierzba,† J. Turkowska, D. Gryko [†M.O and A.J.W equal contribution]
J. Am. Chem. Soc. **2020**, *142*, 5355-5361.
- 8) Vitamin B₁₂ Enables Consecutive Generation of Acyl and Alkyl Radicals from One Reagent
A. Potrzęsaj, **M. Ociepa**, O. Baka, G. Spólnik, D. Gryko
Eur. J. Org. Chem. **2020**, *10*, 1567-1571.
- 9) Cobalamin-Catalysed Chemical Reactions: Probing the Role of the Nucleotide Loop
M. Karczewski, **M. Ociepa**, D. Gryko
Eur. J. Org. Chem. **2019**, *2*, 469-477.

- 10) Redox-Activated Amines in C(sp³)-C(sp) and C(sp³)-C(sp²) Bond Formation Enabled by Metal-Free Photoredox Catalysis
M. Ociepa, J. Turkowska, D. Gryko
ACS Catal. **2018**, *8*, 11362-11367.
- 11) Light-Driven Vitamin B₁₂-Catalysed Generation of Acyl Radicals from 2-S-Pyridyl Thioesters
M. Ociepa, O. Baka, J. Narodowicz, D. Gryko
Adv. Synth. Cat. **2017**, *359*, 3560-3565.
- 12) Vitamin B₁₂ Catalysis: Probing the Structure/Efficacy Relationship
M. Karczewski, M. Ociepa, K. Pluta, K. ó Proinsias, D. Gryko
Chem. Eur. J. **2017**, *23*, 7024-7030.
- 13) Vitamin B₁₂ Phosphate Conjugation and Its Effect on Binding to the Human B₁₂-Binding Proteins
Intrinsic Factor and Haptocorrin
K. ó Proinsias, M. Ociepa, K. Pluta, M. Chromiński, E. Nexø, D. Gryko
Chem. Eur. J. **2016**, *22*, 8282-8289.
- 14) Scalar Relaxation of the Second Kind. A Potential Source of Information on the Dynamics of Molecular Movements. 4. Molecules with Collinear C-H and C-Br Bonds
P. Bernatowicz, D. Kubica, M. Ociepa, A. Wodyński, A. Gryff-Keller
J. Phys. Chem. A **2014**, *118*, 4063-4070.