

Structural Dynamics Research Group

Katarzyna N. Jarzemska and Radosław Kamiński



Research topics

Photocrystallography – ultrafast time-resolved and steady-state experiments

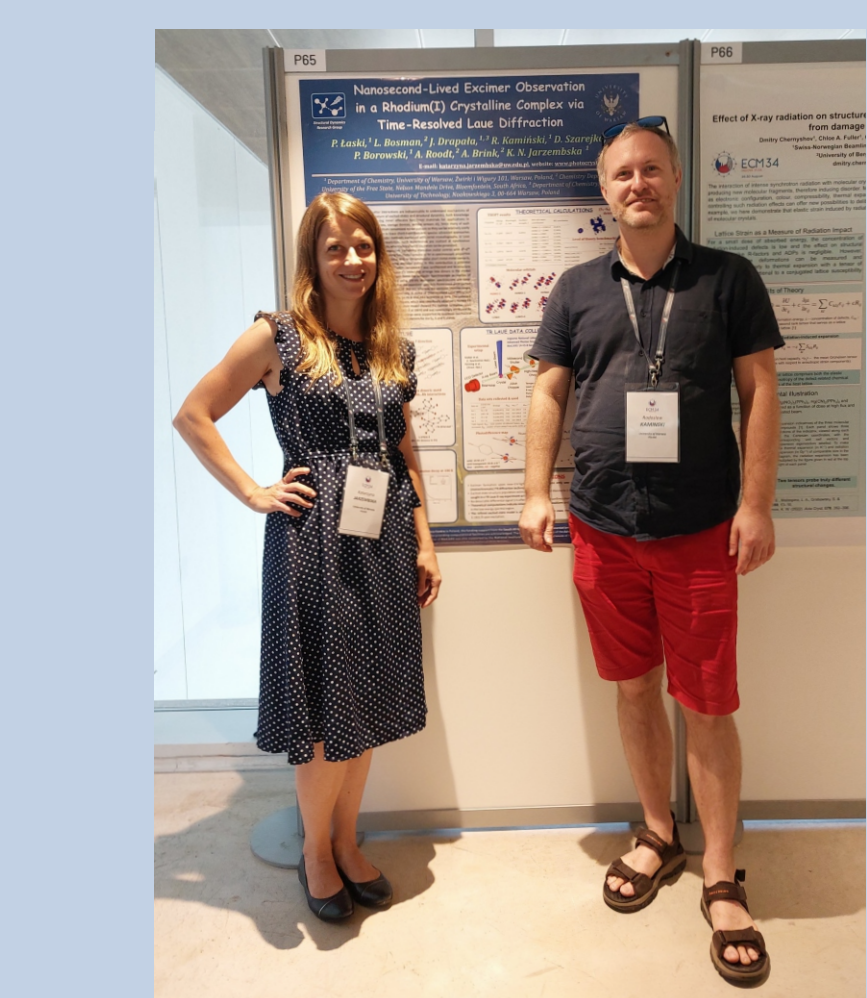
Transition-metal complexes and photoactive functional materials

High-pressure X-ray diffraction and spectroscopy

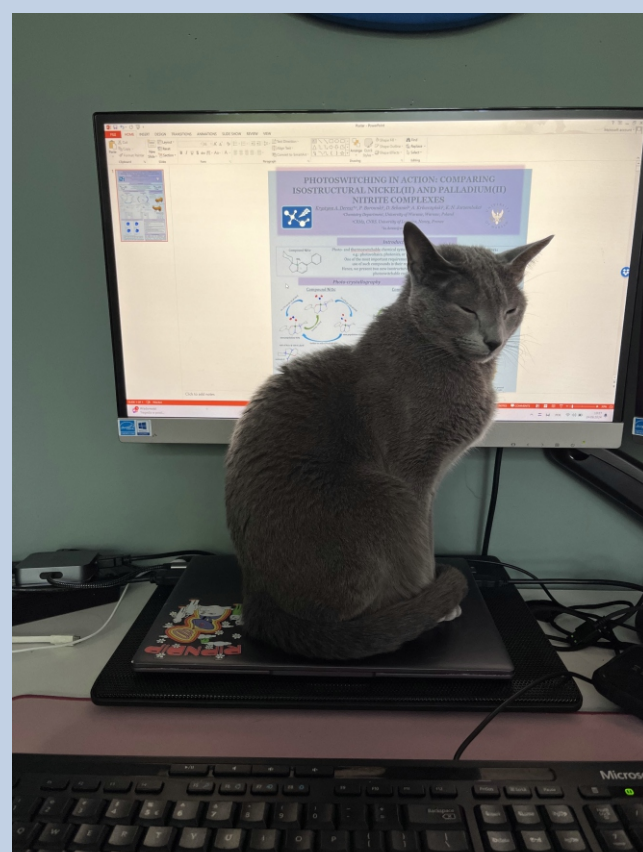
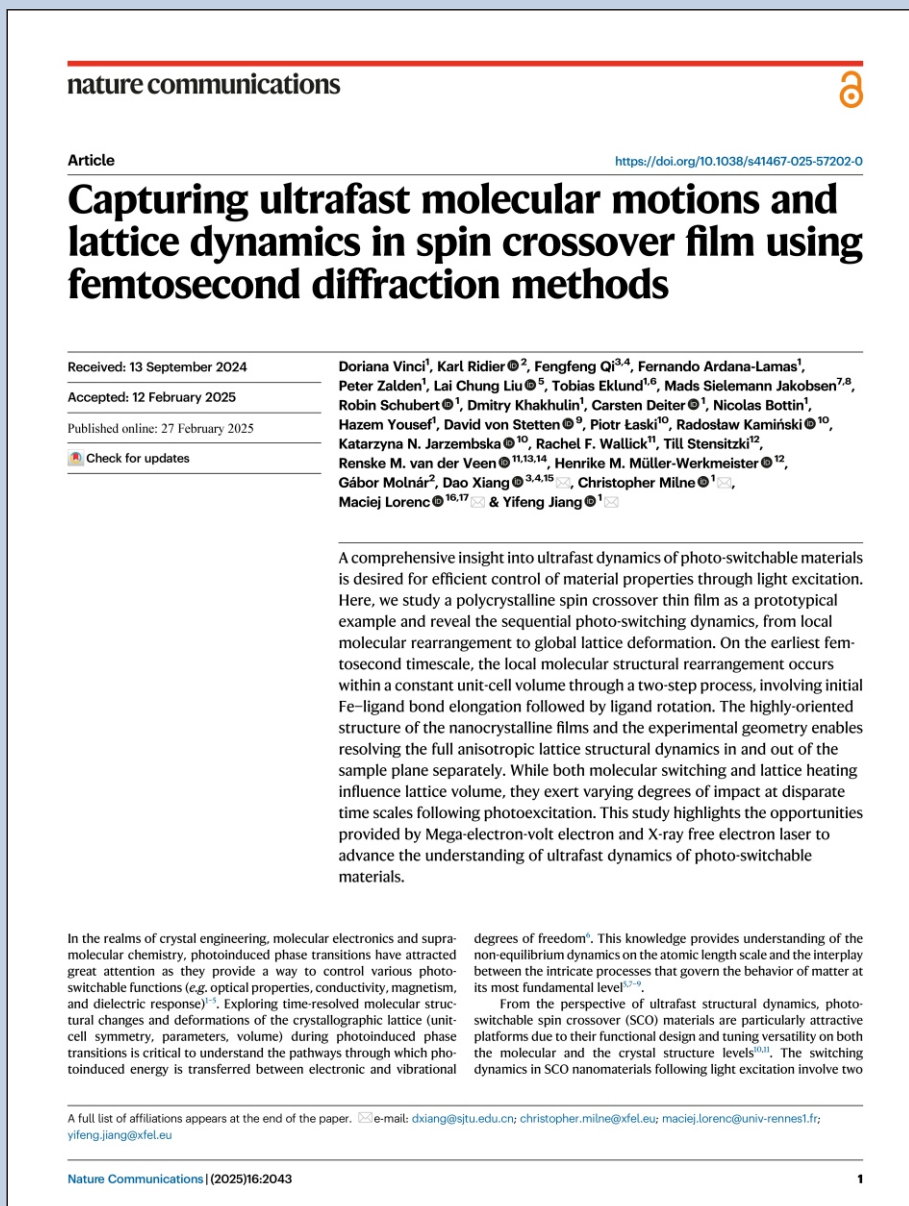
Crystallographic software development

Instrumentation design and construction

Krystyna (Krysia) Deresz (PhD stud.), Kinga Potempa (PhD stud.), **Radosław (Radek) Kamiński** (co-PI), **Katarzyna (Kasia) Jarzemska** (PI, the boss), Bartosz (Bartek) Szymański (PhD stud.), Kacper Paszczyk (MSc stud.), Piotr (Piotrek) Łaski (PhD stud.), Vitali Stsiapura (post-doc); missing here: Vishnu Vijayakumar Syamala (post-doc), Dariusz (Darek) Szarejko (developer), Jakub (Kuba) Drapała (PhD stud.), Patryk Borowski (PhD stud.), Marek Tolsdorf (BSc stud.)



Morning at the ECM34 conference in Padova, Italy (Kasia, Radek)



Krysia's invaluable help in writing her PhD thesis, indeed!



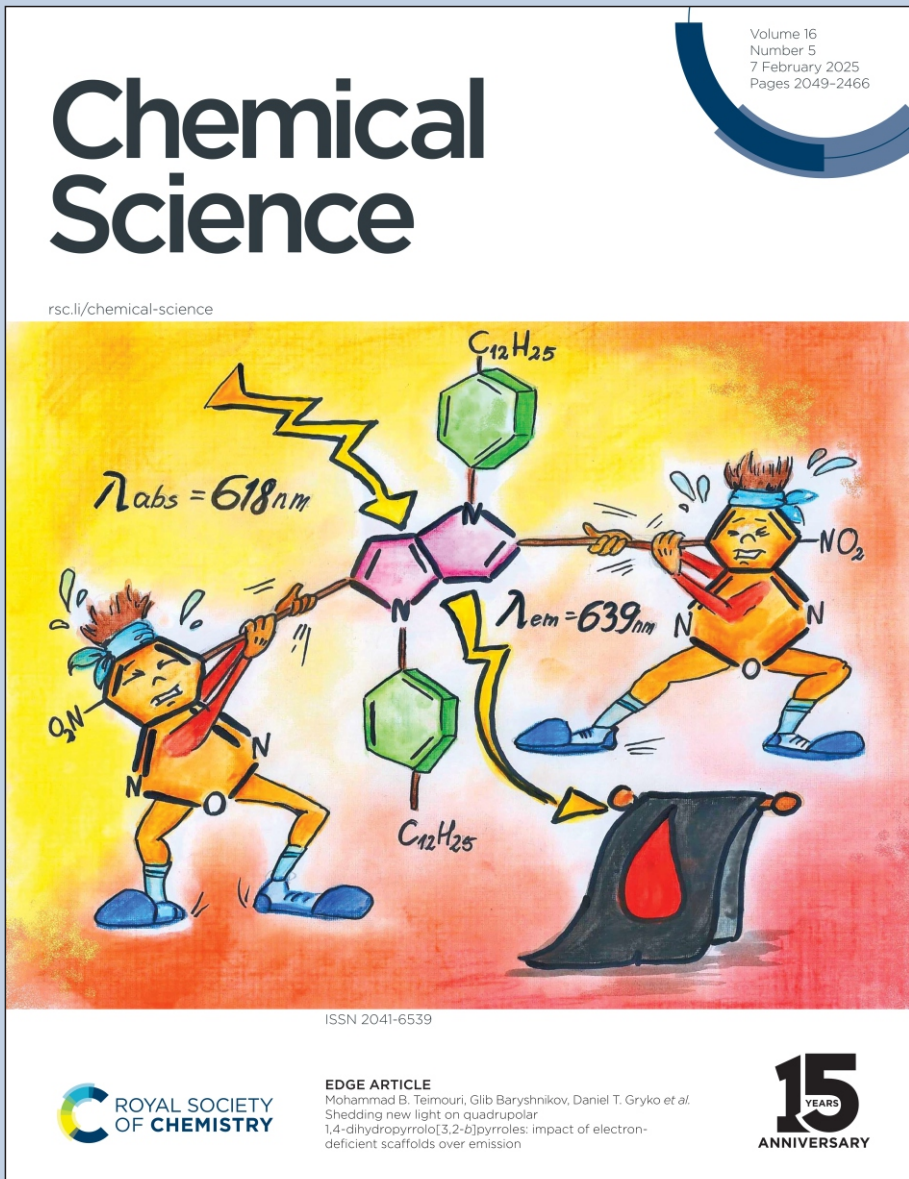
Noon in Venice, perfect weather! (Radek, Stasio, Kasia, Maksio)



Group meeting with a special guest, **Dominik Schaniel** from Nancy, France (Piotrek, Radek, Bartek, Kinga, Dominik, Patryk, Vishnu, Vitali; Kasia is taking a photo)



Bartek tries to escape from the dept. after MSc thesis defence (but the PhD school did catch him)



This is pure science!
Crystals in the diamond-anvil cell ready for high-pressure synchrotron experiments in Elettra, Trieste, Italy



Kinga, Damian Paliwoda & Vishnu working very hard...



... meanwhile Radek at Elettra... (no further comments needed)

find 5 differences



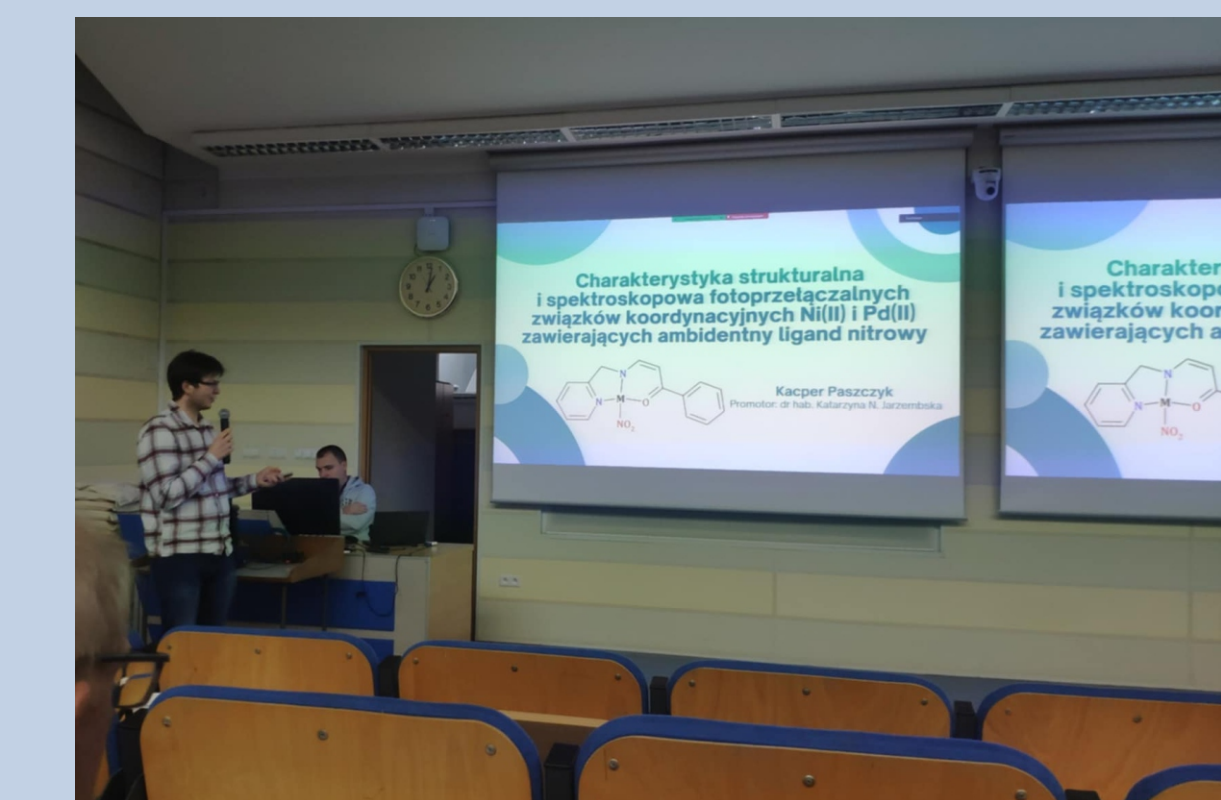
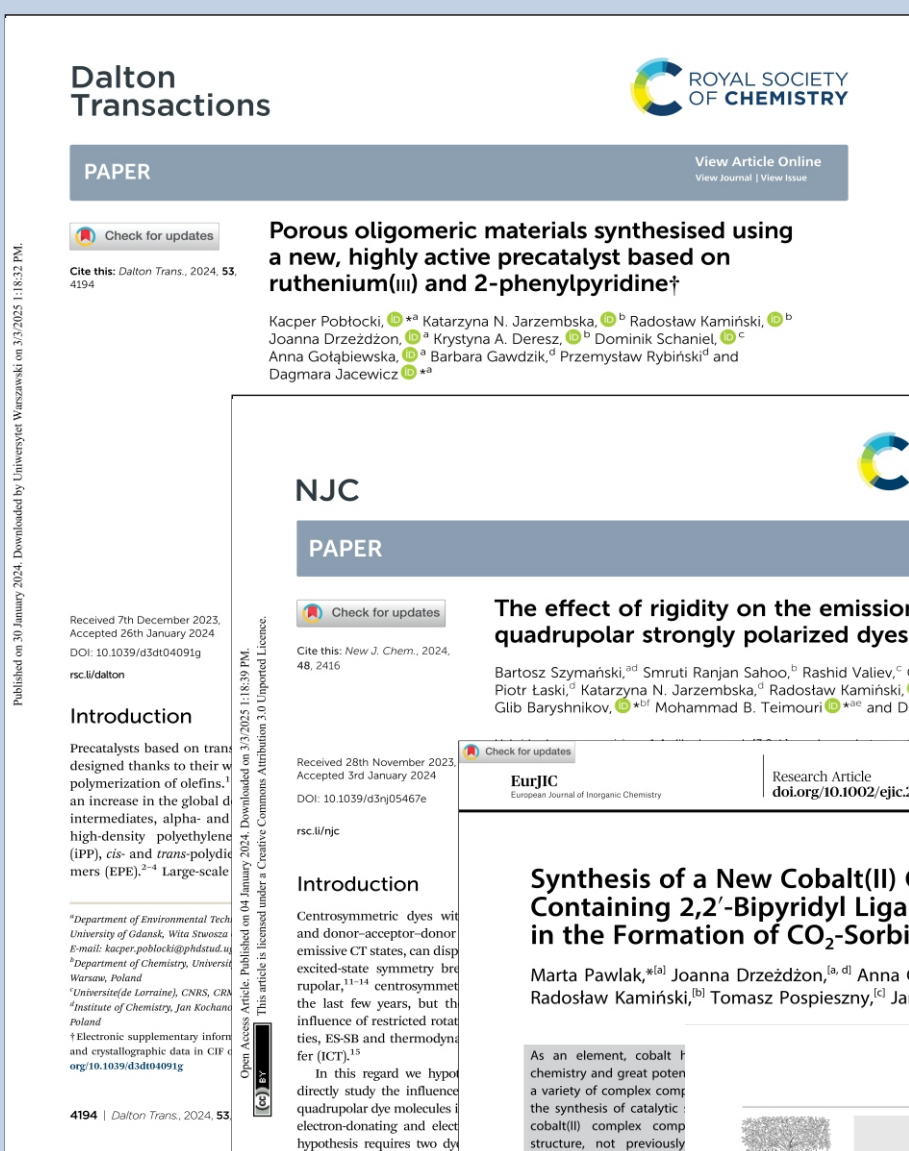
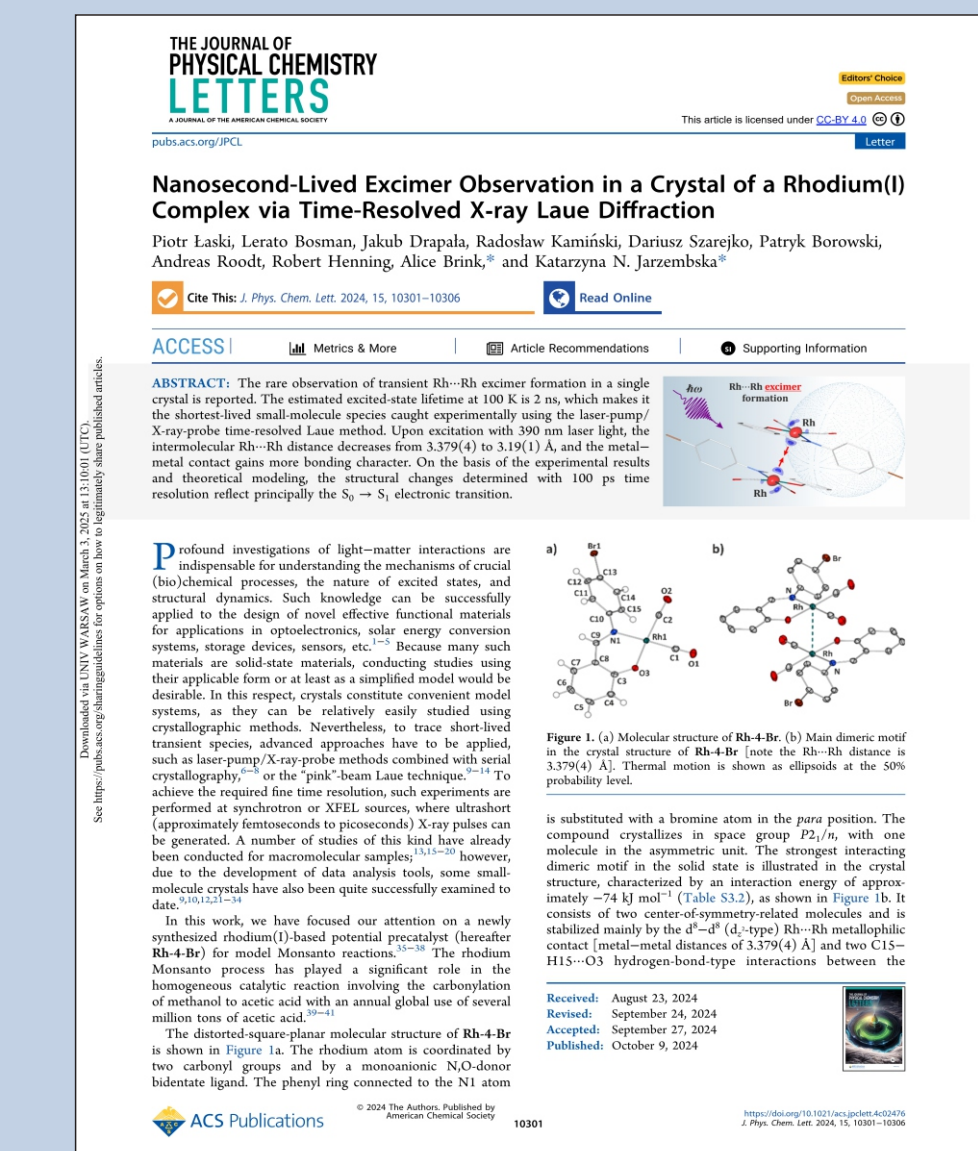
Maura Malińska, Wojtek Sławiński, Ania Krawczuk, Radek, (???), Anders Madsen & Ania Hosier while **brainstorming / brainwashing** discussion about the crystallography in Europe (mostly...)

Selected distinctions:

- ✓ K.N. Jarzemska, Elected ECA executive committee member, 2024
- ✓ B. Szymański, *Piotr Wrona* award for the best MSc student, 2025
- ✓ K. Paszczyk, finalist of the Gold Chemistry Medal competition, 2024
- ✓ K. Potempa, K.N. Jarzemska, IDUB funding for conferences, 2024
- ✓ K. Potempa, IDUB stipend for PhD students, 2024
- ✓ P. Łaski, Extra stipend for PhD students, 2024

Some other smaller projects:

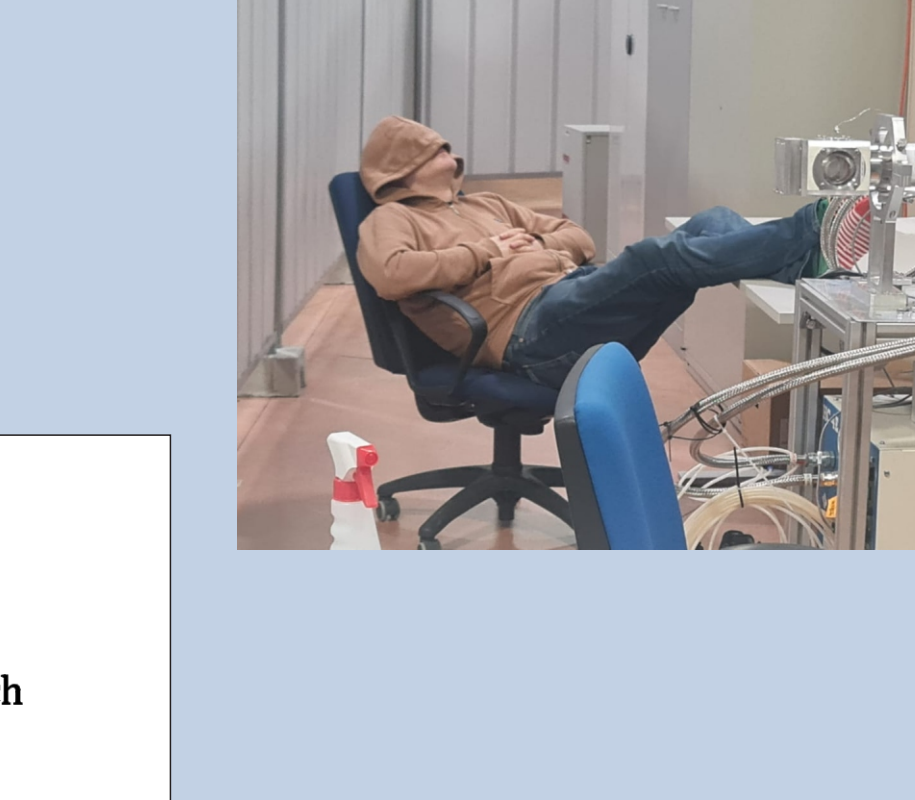
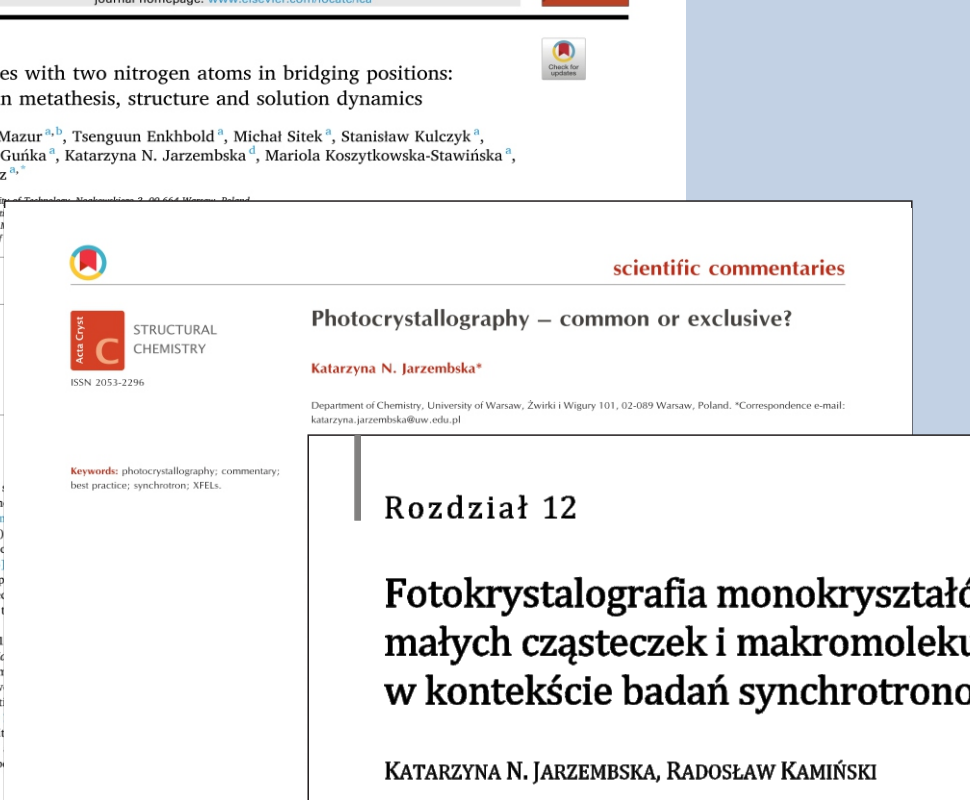
- ✓ Y. Jiang (K.N. Jarzemska, R. Kamiński, P. Łaski & D. Szarejko involved), R&D proposal (in progress), 2022-2025, European XFEL (Germany)
- ✓ K.N. Jarzemska, XPRESS beamline proposal accepted, 2024, Elettra Synchrotron Facility (Italy)



Kacper presenting his (doubly displayed) BSc thesis during the Gold Chemistry Medal finals



Piotrek in the jungle and Darek in the middle of nowhere



XFEL workshop in Warsaw, challenge 1: find Kasia, challenge 2: find Radek

Research grants:

- ✓ K.N. Jarzemska, SONATA BIS, *"M:M-PROP: metallophilic interactions - allies or enemies?"* 2021 (ongoing), National Science Centre (Poland), 2,889,000 PLN
- ✓ K. Deresz (stipendee) & K.N. Jarzemska (PI), PRELUDIUM BIS, *"MX02-ISOMER: in search of colour-changing photoswitchable materials based on 4th-row transition-metal complexes with simple ambidentate ligands"*, 2020 (finished), National Science Centre (Poland), 532,800 PLN
- ✓ R. Kamiński, OPUS, *"THIO-SWITCH: towards novel photo-active switchable materials - exploration of dithienylethene-based transition-metal complexes via advanced in situ photocrystallographic and spectroscopic approaches"*, 2020 (finished), National Science Centre (Poland), 1,999,880 PLN
- ✓ R. Sobierajski (PI, PAS), W. Gawęda (co-PI, AMU), K.N. Jarzemska (co-PI, UW) & D. Milewska (co-PI, NCNR), Supporting the participation of Polish research teams in international research infrastructure projects, *"Support for Polish EuXFEL users - Supervision, Part II (2022-26)"*, 2022 (ongoing), Ministry of Science and Higher Education (Poland), 10,539,719.81 PLN (1,622,650.00 PLN for UW)
- ✓ B. Szymański (PI) & R. Kamiński (advisor), Pearls of Science II, *"Tracking the proton transfer process using ultrafast photocrystallography"*, 2024 (ongoing), Ministry of Science and Higher Education (Poland), 238,018 PLN