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### Education path

- 2016 - ...** Undergraduate studies, University of Warsaw, Department of Chemistry - Chemistry – Individual Course of Studies
- 2013 – 2016** IX Klementyna Hoffmanowa’s High School in Warsaw  
mathematics, biology and chemistry profile

### Scientific experience

- 2018 - ...** Centre of New Technologies University of Warsaw, Interdisciplinary Laboratory of Biological Systems Modelling, host: Joanna I. Sułkowska, PhD DSc. Exploring the folding process and the energy landscape of the deepest-knotted protein with Molecular Dynamics using the C $\alpha$  model.
- 2015 – 2018** Institute of Organic Chemistry Polish Academy of Sciences, internship, host: prof. Janusz Jurczak. Synthesis and study of properties fluorescent anion receptors based on diamidonaphthalenedipyrrole platform targeted for carboxylates.
- 2015 – 2016** Institute of Microbiology, Department of Biology, University of Warsaw, performance of experiments for the XLIV and XLV Biology Olympiad.
- 2015 – 2016** Department of Chemistry, University of Warsaw, scientific workshop as a member of the Polish Children’s Fund.

### Conferences

- **4th Polish-Korean Conference on Protein Folding (9-13.09.2018)**

International conference with broad topic span concerning experimental and theoretical aspects of protein folding.

Poster entitled: “**How to entangle a protein?**”

- **ChemSession 2018 (8.06.2018)**

The conference gathers chemistry students from Warsaw who present their scientific results to the Warsaw chemical community.

Poster entitled: “**Is the ribosome crucial for protein’s knotting?**”

- **Young Chem 2017 (11-15.10.2017)**

International conference for young researchers held in Lublin, Poland.  
Poster entitled: „*Molecular and chiral recognition of anions using diamidonaphthalenedipyrrole-derived fluorescent sensors*” - Piejko M., Stepniak P., Jurczak J.

- **London International Youth Science Forum 2016 (27.07-10.08.2016)**

Representing Poland. The forum gathers over 500 international young scientists.

Poster entitled: „*Synergistic effects of osmotic and thermal stress responses in Pseudomonas fluorescens and Escherichia coli*” - Piejko M.

## Research interests

- Folding proteins with nontrivial topology
- Supramolecular chemistry and systems chemistry
- Self-assembly and far-from-equilibrium processes

## Publications

- „*Protein knotting by active threading of nascent polypeptide chain exiting from the ribosome exit channel*” M. Piejko., P. Dabrowski-Tumanski, A. Stasiak, JI. Sulkowska – under review
- „*Fluorescent sensor for benzoates*” M. Piejko, P. Stepniak, B. Lainer, J. Jurczak - in preparation

## Achievements and awards

- Finalist of XLIV Biology Olympiad
- Special award for XLIV Biology Olympiad research paper „*The influence of thermal shock on the osmotic stress response in Pseudomonas fluorescens*”
- Special award for XLV Biology Olympiad research paper „*The influence of osmotic shock on the thermal stress response in Escherichia coli*”
- Scholarship of Rector of University of Warsaw for Best Students (2016/17, 2017/18)

## Hobbies and interests

- Gliding and aviation – SPL gliding license
- Playing piano
- Reptile and amphibians breeding
- Japanese language and culture
- Cooking