# Curriculum Vitae

## Personal Details

**Name:** János Máté Orosz
**Date of birth:** 05/12/1998
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## Current Position

**2023 - present** PhD student, Budapest University of Technology and Economics (BME), Faculty of Chemical Technology and Biotechnology, Department of Organic Chemistry and Technology

## Previous Positions

**2025** Visiting PhD student, University of Galway, Ireland
**2019 - 2023** Student researcher, Budapest University of Technology and Economics (BME), Faculty of Chemical Technology and Biotechnology, Department of Organic Chemistry and Technology, Innovative Pharmaceutical and Chirotechnological Research Group
**2022** Summer internship at X-Chem Inc.
**2020** Summer internship at Gedeon Richter Pharmaceuticals Plc.

## Education

**2021 - 2023** MSc in Engineer in Pharmaceutical Industry
Qualification: excellent with highest honours
Faculty of Chemical Technology and Biotechnology
Budapest University of Technology and Economics

**2017 - 2021** BSc in Chemical Engineering, Specialization of Industrial Pharmaceutics
Qualification: excellent with highest honours
Faculty of Chemical Technology and Biotechnology
Budapest University of Technology and Economics

**2013 - 2017** Gyula Andrássy Secondary Grammar School, mathematics
Békéscsaba

## Research Experience

- Computer-aided design (CAD) of virtual flow chemical reactor modules.
- 3D printing of leak-proof, heat and pressure resistant flow chemical reactor modules (from polypropylene, carbon-fibre infused polyamide 6 and resin materials), and utilizing them in organic flow synthesis, as a cost-efficient and customizable alternative to commercially available flow reactors.
- Continuous flow synthesis of active pharmaceutical ingredients (APIs) and intermediates with integrating in-line work-up.
- Semi-continuous flow synthesis of homoaromatic and heteroaromatic capsaicin derivatives for potential agricultural application.

## Fellowships and Grants

- Research collaboration and scholarship with Servier Laboratories, 2023 -- present.
- 2nd prize at National Students' Scientific Conference, Szeged, 2023.
- MSc Thesis award, Budapest University of Technology and Economics, 2023.
- 2nd prize at Students' Scientific Conference, Budapest, 2022.
- Researcher Student MSc Scholarship by Gedeon Richter, 2022.
- 1st Award at VII. Grofcsik András Competition, Budapest University of Technology and Economics, 2020.

## Most Important Publications Over the Last Five Years

1. Orosz, J. M.; Ujj, D.; Kasal, P.; Benkovics, G.; Bálint, E. Continuous flow synthesis of 6-monoamino-6-monodeoxy-β-cyclodextrin. *Beilstein J. Org. Chem.* 2023, 19, 294--302. DOI: https://doi.org/10.3762/bjoc.19.25. IF: 2.1, Q2, IC: 1 (70%).
2. Rávai, B.; Orosz, M. J.; Péterfi, O.; Galata, D. L.; Bálint, E. Flow chemical laboratory practice for undergraduate students: synthesis of paracetamol. *J. Flow Chem.* 2024, 14, 409--415. DOI: https://doi.org/10.1007/s41981-023-00303-y. IF: 2.0, Q2, IC: 2 (25%).
3. Orosz, M. J.; Rávai, B.; Mátravölgyi, B.; Bálint, E. Flow synthesis of capsaicin and capsaicinoid analogues. *ACS Sustain. Chem. Eng.* 2024, 12, 7913--7923. DOI: https://doi.org/10.1021/acssuschemeng.4c01839. IF: 7.3, D1, IC: 6 (90%).

4. Rávai, B.; Ujj, D. V.; Orosz, M. J.; Revenco, E.; Béni, Sz.; Tajti, Á.; Bálint, E. Pilot-scale continuous flow synthesis of capsaicinoids and their formulation with cyclodextrins. *ACS Omega* 2026, 11, 4570--4580. DOI: https://doi.org/10.1021/acsomega.5c10910. IF: 4.3, Q1, IC: 0 (10%).
5. Orosz, J. M.; Brégent, T.; Kotschy, A.; Bálint, E. Design and evaluation of chemically resistant 3D printed flow reactors for organic synthesis. (submitted).