

# Dr. Henrik Sørensen

## Postdoctoral Researcher — Organic & Supramolecular Chemistry | Humboldt Fellowship Applicant

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Copenhagen, Denmark

### PROFESSIONAL SUMMARY

Synthetic chemist and postdoctoral researcher at the Technical University of Denmark (DTU) with expertise in supramolecular host-guest systems and stimuli-responsive materials. 12 peer-reviewed publications (h-index: 8, ~310 citations). Applying for the Alexander von Humboldt Research Fellowship to conduct 18 months of collaborative research at the Max Planck Institute for Polymer Research. PhD awarded with distinction from ETH Zürich.

### WORK EXPERIENCE

#### Postdoctoral Researcher — Functional Materials Group

Jan 2024 -  
Present

#### Technical University of Denmark (DTU Chemistry)

Kongens Lyngby,  
Denmark

Designing photoresponsive azobenzene-based cages for selective ion transport across lipid bilayers

Secured Danish Independent Research Fund (DFF) Postdoc Grant — DKK 1.8M (2024–2026)

Supervising 2 PhD students and 1 M.Sc. student in synthetic methodology and characterization

#### Visiting Researcher

Apr 2023 - Jul 2023

#### Max Planck Institute for Polymer Research

Mainz,  
Germany

Collaborated with Prof. Klaus Müllen's group on  $\pi$ -conjugated macrocycle synthesis

Contributed experimental data to a joint publication (Nature Chemistry, 2024)

Profile

### SKILLS

Organic & Supramolecular Synthesis  
(multi-step, air-sensitive)

Covalent Organic Framework (COF) &  
MOF Design

NMR Spectroscopy (1H, 13C, 2D —  
600 MHz)

X-ray Crystallography (SCXRD, PXRD)

Mass Spectrometry (ESI-MS, MALDI)

DFT Calculations (Gaussian, ORCA)

Python & Origin (data analysis &  
plotting)

### LANGUAGES

Danish - Native

English - Fluent (C2)

German - Professional (C1)

### CERTIFICATES

Sørensen H. et al. — 'Azobenzene-COFs as photocontrolled drug carriers.' J. Am. Chem. Soc. 2023, 145, 18.

JACS — 47 citations

Sørensen H., Dietz M. — 'Tunable pore geometry in imine-linked frameworks.' Angew. Chem. 2022, 61.

Angewandte Chemie — 62  
citations

## Graduate Teaching Assistant

Sep 2020 - Jun 2023

**ETH Zürich — Department of Chemistry**

Zürich,  
Switzerland

Taught practical organic synthesis labs for 2nd and 3rd-year undergraduate students (30 students/semester)

Developed a safety refresher module adopted as mandatory pre-lab training across the department

## EDUCATION

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**Ph.D. Organic Chemistry in Thesis:** Sep  
**'Stimuli-Responsive Covalent Organic** 2019  
**Frameworks for Controlled Drug Release'** - Nov  
2023  
**— Advisor: Prof. Markus Dietz**

**ETH Zürich — Department of Chemistry and Applied Biosciences** Copenhagen,  
Denmark

Grade: Awarded with Distinction (Summa Cum Laude equivalent) |  
ETH Medal for Outstanding Doctoral Thesis

Developed 3 novel COF architectures with tunable porosity —  
reported in JACS and Angewandte Chemie

Swiss National Science Foundation (SNSF) PhD Fellowship recipient  
— CHF 86,000

**M.Sc. Chemistry (Organic) in** Sep  
**Specialization: Supramolecular** 2017 -  
**Chemistry & Catalysis** Jun 2019

**University of Copenhagen —** Copenhagen,  
**Department of Chemistry** Denmark

Grade: GPA: 12 / 12 (Danish grading scale) — Top of cohort

Awarded Oticon Foundation Scholarship for academic excellence

**B.Sc. Chemistry in** Sep 2014 - Jun 2017  
**University of Copenhagen** Copenhagen, Denmark

Grade: GPA: 11.2 / 12