Rasmus Christensen

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EDUCATION

2022–2025 **Ph.D. in Material Chemistry**, Aalborg University, Denmark
Supervisor: Prof. Morten M. Smedskjær.
Degree obtained: 28th of October, 2025
Thesis title: Understanding Dynamics in Disordered Battery Materials
with external stay: Lawrence Berkeley National Laboratory, Berkeley, USA, with Prof. Kristin A. Persson (4 months)

2018–2020 **M.Sc. in Chemistry**, Aalborg University, Denmark,
with external stay: University of California, Los Angeles, USA with Prof. Mathieu Bauchy (3 months)

2015–2018 **B.Sc. in Chemistry**, Aalborg University, Denmark

RESEARCH POSITIONS

2025–Present **JSPS Postdoctoral Fellow**
Department of Applied Physics, Tohoku University, Japan
Project: Computational Design of Ultra-Low Loss Glass Fibers for Quantum Communication.

2025–2025 **Research Assistant**
2020–2022 Department of Chemistry and Bioscience, Aalborg University, Denmark

SCIENTIFIC FOCUS AREAS

Core Expertise: Computational discovery of disordered materials using machine learning and atomistic modeling.

Keywords: Disordered materials; structure-property relationships; molecular dynamics; interatomic potentials, machine learning

FUNDING AND GRANTS

2025–2026 **JSPS Postdoctoral Fellowship**, (Personal)
Japanese Society for the Promotion of Science, (~ €30.000)

2025–2026 **Computational grant for "*Extreme Scale Access*" on LUMI** (Co-PI)
European High Performance Computing Joint Undertaking (EuroHPC JU)
(18 million CPU core hours, ~ €130.000 equiv.)

2022–2025 **PhD fellowship from Danish Data Science Academy** (Personal)
(€253.000)

2023–2025 **Computational grant for "*National e-resources*" on LUMI** (Co-PI)
Danish e-infrastructure Consortium (DeiC)
(2 million CPU core hours, ~ €13.000 equiv.)

2022–2023 **Computational grant for "*Regular Access"* on HPC VEGA** (Co-PI)
European High Performance Computing Joint Undertaking (EuroHPC JU)
(10 million CPU core hours, ~ €60.000 equiv.)

2019 **Travel Grants:** Various sources for external stay at University of California, Los Angeles (~ €2.500)

SCIENTIFIC PRODUCTION

Total citations: 182 | h-index: 8 | 13 peer-reviewed publications (5 first author)

First-Author Publication

Includes 5 articles in journals such as Advanced Energy Materials, *Journal of Materials Chemistry A*, *MRS Bulletin*, *The Journal of Physical Chemistry Letters, The Journal of Chemical Physics.*

Co-authored Publications

Includes 8 articles in journals such as *ACS Energy Letters*, *npj Computational Materials*, and *ACS Applied Materials & Interfaces*.

Patent applications

Co-inventor, 'Process to produce a glass-based article and glass-based articles' (P066817WO, EP2022/086278) (2022)

AWARDS & SERVICE

Awards

"Graduate Student Poster Award, Second Place" at Glass & Optical Materials Division Annual Meeting, Las Vegas, USA. (2024)

Conference Contributions

5 contributed talks and **6 posters** at international conferences including: the International Conference on the Physics of Non-Crystalline Solids, Glass & Optical Materials Division Annual Meeting, MRS Fall Meeting, and International Congress on Glass Annual Meeting.

Reviewer

Reviewer for: Journal of Non-Crystalline Solids and npj Computational Materials.

MENTORSHIP

2021-2025 Served as the co-supervisor for 2 M.Sc. students' and 3 B.Sc. student groups' (14 Students) final thesis projects at Aalborg University

TECHNICAL EXPERTISE

Atomistic Simulations: Molecular Dynamics (MD), Density Functional Theory (DFT), Machine Learning Interatomic Potentials (MLIP) in simulation codes: LAMMPS, VASP, ASE, CP2K

Data Science & AI: Proficient in Python, PyTorch, Topological Data Analysis (TDA)

HPC Experience: State-of-the-art national and international GPU- and CPU-based HPC clusters, including projects on EuroHPC and NERSC systems.