

Maria Fredriksson
Building Materials
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1. EDUCATION (degree, year awarded, institution, primary focus/major)

- 2013 PhD in Building Materials, Division of Building Materials, Department of Building and Environmental Technology, Lund University, Lund, Sweden.
- 2008 MSc in Civil Engineering, Faculty of Engineering, Lund University, Lund, Sweden.

2. EMPLOYMENT EXPERIENCE

- 2017- Senior Lecturer, Division of Building Materials, Lund University.
- 2014- 2017 Associate Senior Lecturer, Division of Building Materials, Lund University.
- 2015- 2016 Postdoc, Department of Geosciences and Natural Resource Management, University of Copenhagen, Denmark.
- 2008- 2014 PhD student, Division of Building Materials, Lund University.
- 2008 Project assistant, Division of Building Materials, Lund University.

3. STUDENTS MENTORED (past four years)

Assistant supervisor to three PhD-students and supervisor of one master thesis student and two bachelor thesis students.

4. PRIMARY RESEARCH AREA WITH UP TO FOUR CURRENT RESEARCH PROJECTS

My research concerns the interaction between water and wood with focus on durability related aspects. I also work with method development within this field.

Current research projects:

- 2022-2025 *Fungal degradation of wood under precisely controlled internal and external moisture conditions*, The Swedish Research Council FORMAS, Early-career researchers.
- 2019-2021 *Fundamental understanding of the moisture uptake in modified wood for sustainable, durable wood structures*, The Swedish Research Council FORMAS, Future Research Leaders.

- 2019-2022 *MODUWOOD – Modified Durable Wood Products*, Interreg Öresund-Kattegatt-Skagerak.
- 2019-2021 *Where is the water in acetylated wood? Studies of amount, location and state of water in acetylated wood for development of more durable wood products*, SNS Nordic Forest Research.

5. PROFESSIONAL ACTIVITIES AND ACHIEVEMENTS (Memberships, Editorial boards, professional society leadership roles, awards, honors)

- 2020 Excellent Teaching Practitioner (ETP), Member of the Pedagogical Academy at Faculty of Engineering, Lund University.
- 2020- Deputy member of the board of National Coordinators of the WSE network (Northern European Network of Wood Science and Engineering).
- 2020 Guest Editor for a special issue in the journal *Forests*.
- 2020- Member of the International Research Group of Wood Protection (IRG-WP).
- 2019 The Pedagogical Prize from the Study Council of Architecture, Lund University.
- 2019 Organiser of the 15th Annual Meeting of the Northern European Network of Wood Science and Engineering (WSE2019).

6. PUBLICATIONS (3-5 most important contributions (publications, seminars, graduates, etc.))

- Thybring, E. E. and Fredriksson, M. (2021), *Moisture and wood* in Springer Handbook of Wood Science and Technology, Springer, in press.
- Digaitis R, Thybring EE, Thygesen LG, Fredriksson M (2021) Targeted acetylation of wood: a tool for tuning wood-water interactions. *Cellulose* 28(12), 8009-8025.
- Thybring, E. E., Digaitis, R., Nord-Larsen, T., Beck, G. and Fredriksson, M. (2020). How much water can wood cell walls hold? A triangulation approach to determine the maximum cell wall moisture content. *PLoS ONE* 15(8): e0238319.
- Fredriksson, M. and Thybring, E. E. (2019). On sorption hysteresis in wood: Separating hysteresis in cell wall water and capillary water in the full moisture range. *PLoS ONE* 14(11): e0225111.
- Fredriksson, M and Thybring, E E (2018). Scanning or desorption isotherms? Characterising sorption hysteresis of wood. *Cellulose* 25(8): 4477-4485.