

CV

Orcid: 0000-0002-0357-1103

CV for: Selma Brynolf, 1984

Degrees:

2014. Ph.D. in Shipping and Marine Technology with specialization in Maritime Environment, Chalmers University of Technology

Area: Maritime Environment, Shipping and Marine Technology

Thesis title: Environmental assessment of present and future marine fuels.

Positions:

2017-present. Profile leader for Sustainable Vehicle Technologies, Area of Advance Energy and Area of Advance Transport, Chalmers University of Technology

2018-present. Researcher, Department of Mechanics and Maritime Sciences (M2), Chalmers University of Technology

2014-2018. Postdoctoral researcher, Department of Space Earth and Environment (SEE), Chalmers University of Technology

2009-2014. Ph.D. student in Maritime Environment, Chalmers University of Technology

Research Area:

Energy and environmental systems analysis with focus on the transport sector and especially shipping. The focus is on future marine fuels, global energy systems modelling, sustainability assessment of fuels, environmental impact from a life cycle perspective, assessment of electrofuels (fuels produced from carbon dioxide and water with the help of electricity) and solutions for zero emission shipping including battery-electric and hybrid propulsion and fuel cells.

Parental leave:

Parental leave with two children born 2014 and 2016. Partial parental leave during 2014-2017 in total 20 months.

Publications (name referred database):

Google Scholar data (since 2014): Citations = 740, h-index = 13

1 book, 7 book chapters, 8 peer review journal articles.

Research Grants, 2012 – present (ongoing or finished in 2012 or later):

- 47479-1 - Vägen mot 50% minskning av växthusgasutsläpp från sjöfart till 2050, 2 439 000 SEK (Chalmers part 1025 000SEK)
- 768945 - HyMethShip, 2018, 8,438,110.00 EUR (Chalmers part 3 320 000 EUR) H2020, MG-2.1-2017 - Innovations for energy efficiency and emission control in waterborne transport (main applicant from Chalmers Karin Andersson)
- P42403-1, Prospects for renewable marine fuels, 2016-09-19 -2018-04-30, 1385000 SEK, f3, the Swedish Energy Agency (main applicant Julia Hansson, IVL).
- V141, Marint läromedel baserat på intellektuella tillgångar inom Sjöfart och marin teknik (Verification project for writing a book about the maritime environment), Innovationskontor väst, Chalmers, 2012, 86000SEK (main applicant Magda Wilevska Bien)
- A-H Lindfors research fund, 2012, 1250 SEK.

- Rolf Sörmans research fund, 2012, 9245 SEK.

Selected output:

- Brynolf, S., Taljegard, M., Grahn, M., Hansson, J. Electrofuels for the transport sector: A review of production costs (2018) *Renewable and Sustainable Energy Reviews*, 81, pp. (A comprehensive review of cost and performance of fuels produced from electricity and carbon dioxide)
- Brynolf, S., Fridell, E., Andersson, K. Environmental assessment of marine fuels: Liquefied natural gas, liquefied biogas, methanol and bio-methanol (2014) *Journal of Cleaner Production*, 74, pp. 86-95. (Some of the first environmental assessments of different marine fuels using life cycle assessment)
- Bengtsson, S., Fridell, E., Andersson, K. Environmental assessment of two pathways towards the use of biofuels in shipping (2012) *Energy Policy*, 44, pp. 451-463. (Some of the first environmental assessments of different marine fuels using life cycle assessment)
- Taljegard, M., Brynolf, S., Grahn, M., Andersson, K., Johnson, H. Cost-effective choices of marine fuels in a carbon-constrained world: Results from a global energy model (2014) *Environmental Science and Technology*, 48 (21), pp. 12986-12993. (Shipping and interaction with the global energy system)
- Andersson, K., Brynolf, S., Lindgren, J.F., Wilewska-Bien, M. Shipping and the Environment: Improving Environmental Performance in Marine Transportation (2016) *Shipping and the Environment: Improving Environmental Performance in Marine Transportation*, pp. 1-426. (Editor and author to several chapters in a unique book about the interaction between shipping and the natural environment and how shipping can strive to become more sustainable)