Prof. Dr. Björn Rost

*1971

CV

Scientific degree:

Dr. rer. nat. in Biology, University of Bremen, Germany	2003
Diploma in Biology, University of Hamburg, Germany	1999

Current position:

Head of Section Marine Biogeosciences, AWI	since 2021
Professor for Phytoplankton Ecophysiology, University of Bremen	since 2019

Previous positions:

Speaker of Topic 1 within PACESII	2016–2020
Deputy Head of section Marine Biogeosciences, AWI	2015–2020
ERC-Group Leader (PhytoChange), AWI	2008–2013
Postdoctoral researcher, Marine Biogeosciences, AWI	2003–2007

Academic honours & services:

IPCC Report (AR6, WGII) Lead Author of the Chapter 3: Ocean and coastal ecosystems and their services & Cross Chapter 6: Polar regions (since 2019); Expert Group on Arctic Ocean Acidification within the Arctic Monitoring and Assessment Program (since 2014)

Research Topics

Phytoplankton in polar ecosystems; ocean acidification and warming; heat waves, photosynthesis and carbon concentrating mechanisms; calcification; nitrogen fixation; biogeochemical cycles; stable isotope fractionation

Teaching

Marine Biogeochemistry: Multidisciplinary Oceanography for MSc students; winter semester; 2ECTS; University of Bremen.	since 2011
Marine Phytoplankton under Global Change; Advanced Studies in Marine Biology for MSc students; winter semester; 6ECTS; University of Bremen.	since 2010

Supervision

PhD students (#12): Naomi Gentes (since 2023, University of Bremen – UB); Linda Rehder (since 2021); Miriam Seifert (2022, UB); Klara Wolf (2019, UB), Tim Eberlein (2017, UB); Mirja Hoins (2016, University Utrecht, NL); Dorothee Kottmeier (2015, UB); Meri Eichner (2014, UB); Clara Hoppe (2014, UB); Sebastian Rokitta (2012, UB); Sven Kranz (2010, UB); Scarlett Trimborn (2008, UB).

MSc/Diploma students (#15): Naomi Urbschat (2022, UB); Linda Rehder (2021, UB), Emily White (2018, University Amsterdam, NL); Benjamin Post (2018, UB); Christian Großmann (2016, University of Bayreuth), Klara Wolf (2015, UB); Laura Wischnewski (2015, Bonn-Rhein-Sieg University); Karen Brandenburg (2014, Uni Utrecht, NL); Tim Eberlein (2011, Ruhr University of Bochum); Dorothee Kottmeier (2011, University of Tübingen); Clara Hoppe (2010, UB); Meri Eichner (2010, UB); Sebastian Rokitta (2008, UB); Sven Kranz (2006, University of Kaiserslautern); Scarlett Trimborn (2004, Uni HH).

Publications / Citations

Peer-reviewed publications (total):	>100
H-Index (Google Scholar):	52
Total citation (Google Scholar):	>10.000

Google Scholar: https://scholar.google.de/citations?user=IXfnN3QAAAAJ
Web of Science: https://publons.com/researcher/B-4447-2015
ORCID: https://orcid.org/0000-0001-5452-5505

2023

Seifert, M., Nissen, C., Rost, B., Vogt, M., Völker, C., Hauck, J. (2023). Interaction matters: Bottom- up driver interdependencies alter the projected response of phytoplankton communities to climate change. Global Change Biology, 29, 4234-4258. https://doi.org/10.1111/gcb.16799

Rehder, L., Rost, B., Rokitta, S.D. (2023) Abrupt and acclimation responses to changing temperature elicit divergent physiological effects in the diatom *Phaeodactylum tricornutum*. New Phytologist 239: 1005–1013; https://nph.onlinelibrary.wiley.com/doi/10.1111/nph.18982

Rokitta, S.D., Grossmann, C.H., Werner, E., Moye, J., Castellani, G., Nöthig, E.-M., Rost, B. (2023) Future warming stimulates growth and photosynthesis in an Arctic microalga more strongly than changes in light intensity or pCO_2, Limnology & Oceanography, 9999: 1–11. doi: 10.1002/lno.12460

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Cooley, S., Schoeman, D., Bopp, L., Boyd, B., Donner, S., Ito, S.-I., Kiessling, W., Martinetto, P., Ojea, E., Racault, M.-F., Rost, B., Stern-Mauritzen, M., Ghebrehiwet, D.Y. (2022) Oceans and Coastal Ecosystems and their Services, Climate Change 2022: Impacts, Adaptation, and Vulnerability. WGII to the 6th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 379–550, doi:10.1017/9781009325844.005.

Constable, A.J., Harper, S., Dawson, J., Holsman, K., Mustonen, T., Piepenburg, D., Rost, B. (2022) Polar Regions, Climate Change 2022: Impacts, Adaptation, and Vulnerability. WG II to the 6th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 2319–2368, doi:10.1017/9781009325844.023.

Parmesan, C., et al. (2022) Terrestrial and Freshwater Ecosystems and Their Services. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. WG II to the 6th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 197–377, doi:10.1017/9781009325844.004.

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Rokitta, S.D., Kranz, S.A., Rost, B. (2022) Inorganic carbon acquisition of aquatic primary producers, In: Blue planet, red and green photosynthesis. Eds S. Marberly & B. Gontero, London, ISTE-Wiley, p. 81-114

Wolf, K.K.E., Rokitta, S.D., Hoppe, C.J.M., Rost, B. (2022) Pelagic and ice-associated microalgae under elevated light and pCO_2: Contrasting physiological strategies in two Arctic diatoms, Limnology & Oceanography, 9999, 2022, 1–16. doi: 10.1002/lno.12174

Seifert, M., Nissen, C., Rost, B., Hauck, J. (2022) Cascading effects augment the direct impacts of CO2 on phytoplankton growth in a biogeochemical model. Elementa: Science of the Anthropocene. 10: 1. https://doi.org/10.1525/elementa.2021.00104

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Wolf, K.K.E., Hoppe, C.J.M., Leese, F., Weiss, M., Rost, B., Neuhaus, S., Kühne, N., John, U. (2021) Revealing environmentally driven population dynamics of an Arctic diatom using a novel Microsatellite PoolSeq Barcoding approach, Environmental Microbiology, 23(7), 3809–3824; doi:10.1111/1462-2920.15424

2020

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2017

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2015

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Kottmeier, D.M., Rokitta, S.D., Tortell, P.D., Rost, B. (2014). Strong shift from HCO_3^- to CO_2 uptake in *Emiliania huxleyi* with acidification: new approach unravels acclimation versus short-term pH effects, Photosynthesis Research, 121:265–275.

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