

# Dr. Patrick Blaser

born 10.03.1987; German; married; 2 children

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Web site: <https://patrick-blaser.github.io/>

## Marie Skłodowska-Curie Postdoctoral Fellow

at

### University of Lausanne (Switzerland)

Faculty of Geosciences and Environment

Institute of Earth Sciences

Section for *Paleoenvironment, Evolution of Life and Ocean Dynamics*

Laboratory for *Biogeochemical Oceanography Across Time (BOAT)*



and

### GEOMAR Helmholtz Centre for Ocean Research Kiel (Germany)

Research Division 1: *Ocean Circulation and Climate Dynamics*

Research Unit *Paleo-Oceanography*



## CV summary

Positions	Expertise	Research	Teaching experience	Funding proposals
MSCA Fellow (UNIL & GEOMAR)	(Paleo) Climate	25 articles published (22 peer reviewed)	1 full course	5 successful as PI (~ 880 000€)  4 unsuccessful agencies: (DFG, SNSF, ERC)
Postdoc Earth Sciences (UNIL)	(Isotope) Geochemistry	> 1200 citations	3 individual lectures	
Postdoc Earth Sciences	Oceanography	10 invited talks	18 students supervised	
PhD Physics MSc Physics BSc Physics	Trace Metals (MC) ICP-MS Data Analysis	h-index: 14  17 articles reviewed founding member of PAGES PO2 WG	2 practical courses	

## Work and Research Philosophy

As a scientist at a public university, I contribute to societal advancement through fundamental research in climate and environmental science and teaching to students and the public. I commit to fostering a comprehensive education including laboratory and numerical methods, philosophical and societal considerations, and a robust technical foundation.

My interdisciplinary approach, rooted in a physics education with a keen interest in chemistry, spans climatology, oceanography, and (isotope) geochemistry. Collaborating with experts across disciplines is thus integral to my methodology. In the laboratory, I ensure robust and efficient analyses by leveraging a deep understanding of the applied methods. This allows me to generate larger, more meaningful geochemical data sets, providing enhanced spatial and temporal coverage. I often employ statistical analyses and simple box

models to illuminate obscured processes in uncertain data, reinforcing the significance and confidence in interpretations while mitigating risks for biases.

## Employment History

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<b>since</b> <b>03.2023</b>	<b>Marie Skłodowska-Curie Postdoctoral Fellow</b> University of Lausanne (Switzerland), Institute of Earth Sciences <i>Laboratory for Biogeochemical Oceanography Across Time</i> (with Samuel Jaccard, and Martin Frank at GEOMAR, Kiel, Germany)	(80% work time since 09.2023)
<b>03.2021 –</b> <b>02.2023</b>	<b>Post-Doctoral Research Assistant</b> , University of Lausanne (Switzerland) Institute of Earth Sciences <i>Laboratory for Biogeochemical Oceanography Across Time</i> (with Samuel Jaccard)  (4 months unemployed transition phase to organise move with family to Switzerland)	
<b>07.2017 –</b> <b>10.2020</b>	<b>Post-Doctoral Research Assistant</b> , Heidelberg University (Germany) Institute of Earth Sciences, <i>Past Ocean Dynamics</i> (with Jörg Lippold)	
<b>08.2013 –</b> <b>06.2017</b>	<b>Doctoral Research Assistant</b> , Heidelberg University (Germany) Institute of Environmental Physics, <i>Physics of Environmental Archives</i> (with Norbert Frank)	
<b>09.2010 –</b> <b>10.2012</b>	<b>Student Laboratory Assistant</b> Heidelberg University (Germany), Institute of Environmental Physics (with Jörg Lippold)	
<b>10.2006 –</b> <b>06.2007</b>	<b>Civil Service</b> , Psychiatric Centre North Baden (Germany) Green space maintenance as occupational therapy for addiction patients	

## Education

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**PhD. in Physics** at Heidelberg University, Institute of Environmental Physics (**2013 – 2017**)

Thesis title: *The application of radiogenic neodymium isotopes as a palaeo water mass tracer in the subpolar North Atlantic*

Thesis committee: Prof. Norbert Frank (supervisor), Prof. Aeschbach, Prof. Bartelmann, Prof. Klingeler

**MSc. in Physics** at Heidelberg University (**2011 – 2013**)

Thesis title: *Investigations on the Extraction of Authigenic Neodymium from Marine Sediments*

Supervisor: Prof. Augusto Mangini and Dr. Jörg Lippold

**BSc. in Physics** at Heidelberg University (**2007 – 2011**)

(including one Erasmus exchange semester at the University of Manchester, UK, in 2009)

Thesis title: *Reconstructing the Atlantic circulation during the last interglacial*

Supervisor: Prof. Augusto Mangini and Dr. Jörg Lippold

## Skills

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<b>Languages:</b>	German (native speaker); English (excellent command); French (good command); Spanish (basic command)
<b>Programming:</b>	R (good proficiency); Visual Basic (intermediate); Python (basics)
<b>Laboratory methods:</b>	sequential sediment leaching and total digestion; liquid column chromatography; clean laboratory set up, use, and management; ICP-MS use and management; identifying and picking particles from sediment; ship-based CTD and sediment multi-corer operations and sampling
<b>Measurement techniques:</b>	MC-ICP-MS (expert); ICP-QMS (expert); HR-ICP-MS (experienced); ICP-OES (basic knowledge); TIMS (basic knowledge); XRF (basic knowledge); XRD (basic knowledge); Rock-Eval pyrolysis (basic knowledge)
<b>Data science:</b>	data base management; statistical data analysis; visualisation of complex data; numerical model development and application; geospatial data analysis and visualisation
<b>Safety:</b>	training in fire protection; handling of dangerous chemicals including hydrofluoric acid; field safety and inclusivity

## Field Expeditions

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- 2023 RV Polarstern Expedition 140 “EASI-2”**  
*“East Antarctic Ice Sheet Instabilities 2: Southern Ocean Deep Water Circulation and the Interaction with the East Antarctic Ice Sheet”*  
PI: Marcus Gutjahr  
(Onshore participant for sediment pore water oxygen utilisation; Southern Ocean)
- 2021 GEOTRACES process study cruise GApr16 “MetalGate”**  
*“Trace metals and the Arctic-Atlantic gateway in a changing world, local processes and global connections”*  
PI: Rob Middag  
(Onshore participant for seawater Nd isotope analysis; Subpolar North Atlantic and Nordic Seas around Iceland)
- 2018 RV Meteor Research cruise M151 “ATHENA”**  
*“Atlantic Thermocline Ocean and Ecosystems Dynamic during Natural Climate Change”*  
PI: Norbert Frank  
(Onboard CTD and multi-corer operations, sediment pore water extractions; Eastern North Atlantic and Azores Plateau)
- 2017 RV Meteor Research cruise M141-2 “UFO”**  
*“U-Isotope Fingerprinting of Mediterranean Outflow Water”*  
PI: Norbert Frank  
(Onboard CTD operations; Eastern North Atlantic and Mediterranean Sea)

## Work in External Laboratories

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- 2023** Repeated research visits at Max-Planck Institute for Chemistry (Mainz, Germany) for biomarker extraction and analyses and scientific exchange
- 2019 – 2020** Repeated research visits at University of Cologne (Germany) for ICP-QMS measurements and scientific exchange
- 2013 – 2020** Research visits at MARUM (Bremen, Germany), University of Bordeaux (France), Ifremer (Brest, France), and LSCE (Gif-sur-Yvette, France) for sampling and scientific exchange
- 2013 – 2016** Repeated research visits at GEOMAR (Kiel, Germany) for MC-ICP-MS measurements and scientific exchange
- 2011** Internship at Southampton Oceanographic Centre (UK) in Prof. Gavin Foster's research group, working on boron isotope analyses from planktonic foraminifera

## Invited Talks

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- 2024** National Oceanography Center, Southampton (UK), Paleo & Geochemistry seminar series
- 2023** Institute of Environmental Sciences at Heidelberg University, Institute's seminar series
- 2022** PAGES' *Ocean Circulation and Carbon Cycling* virtual seminar series  
Woods Hole Oceanographic Institution (USA), Climate and Paleo seminar series  
University of Bonn (Germany), Environmental Geology group  
Max Planck Institute for Chemistry (Mainz, Germany), Climate Geochemistry Seminar
- 2021** Department of Geography of University College London (UK)
- 2020** School of Earth Sciences at University of Bristol (UK)  
Solicited presentation at EGU General Assembly (Sharing Geoscience Online) session "*Tracers in the Paleo Sea*"
- 2018** Lamont-Doherty Earth Observatory (USA)

## Workshops and Conferences

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- 2024** **Co-organiser** of 3-day PAGES PO2 working group workshop in Bristol, UK:  
"*Ice sheets, ocean oxygenation and the carbon cycle: Constraining changes in seawater oxygenation during the late Quaternary*"
- 2023** **Co-organiser** of 1-day workshop at the Goldschmidt Conference on Geochemistry:  
"*What can marine authigenic Nd isotopes be reliably used for?*"
- 2021** **Co-convenor** of Goldschmidt Conference on Geochemistry session  
"*Drivers of the climate system over the Cenozoic Era*"
- 2019** **Lead convenor** of EGU General Assembly session  
"*The role of ocean circulation in glacial-interglacial climates*"
- 2018** Participation and presentation at PAGES' OC3 / IPODS workshop (Cambridge, UK)
- 2017** Nature Geoscience Poster Award at Pages Young Scientists Meeting (Zaragoza, Spain)

**2013** Participation at ECORD Summer School “*Deep-Sea Sediments – From Stratigraphy to Age Models*” at MARUM (Bremen, Germany)

Regular active participation at international conferences such as *AGU Fall Meeting*, *EGU’s General Assembly*, *Goldschmidt Conference on Geochemistry*, *International Conference on Paleocceanography* and others (1 – 2 per year).

## Public Outreach

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**2020** Presentation and discussion about climate change for high-school students at “*Akademie für Kommunikation*” secondary school, Karlsruhe, Germany

## Career Development Trainings

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- Introduction to teaching at university level
- Leadership in academia and beyond
- Negotiation: mindset and tools
- Online representation skills
- Project management for researchers
- Presentation skills

## Community Activities

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- **Founding member and communication officer** of the ongoing PAGES (Past Global Changes) working group *Past Ocean Oxygenation (PO2)*
- **Founding member** of the working group *Proxies of Ocean Circulation and Water Properties: Evaluation, Reconstruction and Simulation (POWERS)*
- **Post-Doc representative** at the Institute of Earth Sciences at the University of Lausanne since 2023

## Reviewing Activity

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### Journals

- |                                        |                                             |
|----------------------------------------|---------------------------------------------|
| • Chemical Geology                     | • Marine Geology                            |
| • Climate of the Past                  | • Minerals                                  |
| • Earth and Planetary Science Letters  | • Nature                                    |
| • Frontiers in Geochemistry            | • Nature Geoscience                         |
| • Geochemistry, Geophysics, Geosystems | • Quaternary Science Reviews                |
| • Geochimica et Cosmochimica Acta      | • Rapid Communications in Mass Spectrometry |

### Organisations (research proposals)

- UK Research and Innovation (UKRI)

## Acquired Funding

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- 2022**    **European Commission Marie Skłodowska-Curie Global Fellowship** for 3 year project on the use of trace metal geochemistry in marine sediments for the reconstruction of bottom water oxygen concentrations (~ 320 000 €)
- 2022**    **SNSF Swiss Postdoctoral Fellowship** for 2 year project on the use of trace metal geochemistry in marine sediments for the reconstruction of bottom water oxygen concentrations (~ 226 000 CHF, declined by me due to parallel project)
- 2021**    **SNSF Flexibility Grant** (~ 35 000 €)
- 2015**    **DFG research grant** for 3 year PhD project on ocean circulation reconstruction of the past 1 Million years with Nd isotopes, proposed together with Jörg Lippold and Norbert Frank (~ 150 000 € )
- 2013**    **DFG research grant** for own 3 year PhD project on Last Glacial Maximum ocean circulation reconstruction with Nd isotopes, proposed together with Jörg Lippold (~ 150 000 € )

## Failed Funding Proposals

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- 2025**    **European Commission Starting Grant**
- 2022**    **SNSF Ambizione Postdoctoral Fellowship**
- 2021**    **European Commission Marie Skłodowska-Curie Global Fellowship**

## Teaching Activities

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### Bachelor's level

- 2012**    *Practical training course in physics for earth scientists*  
(execution, description, and evaluation of physical laboratory experiments)  
at Heidelberg University (D), in German

### Master's level

- 2014 -**    *Practical field experiments in physical limnology*  
**2016**    (CTD measurements on an artificial lake and radon decay counting in the laboratory)  
at Heidelberg University (D), in German
- since**    *Orbital- and millennial-scale CO<sub>2</sub> variability during the Pleistocene*  
**2023**    3h lecture in the series *Climate and paleoclimate: from deep time to the Anthropocene*  
at University of Lausanne (CH), in English
- since**    *Ocean Circulation and Marine Biogeochemistry*  
**2023**    4h lecture in the series *Geochemical cycles and rates of geological processes*  
at University of Lausanne (CH), in English
- since**    *Introduction to mass spectrometry*  
**2024**    3h lecture in the series *Methods in Isotope Analysis*  
at University of Lausanne (CH), in English

### PhD level

- 2023**    *Introduction to Paleoclimate*  
5 day x 3h lecture course in the frame work of the 51st Heidelberg Physics Graduate Days of the  
Heidelberg Graduate School of Fundamental Physics, Heidelberg University (D), in English

## Supervision

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### Bachelor's level

- Curchod M. (2022) *Évolution de la productivité primaire en lien avec le fer dans l'océan Indien subantarctique depuis le dernier maximum glaciaire*. **Bachelor's thesis.**
- Pfannschmidt J. (2020) *Can concentration changes of Atlantic deep water Nd be estimated from Holocene end member variations?* **Bachelor's thesis.**
- Goetze G. L. (2019) *Neodymium isotopic signature: Paleo scavenging versus water mass mixing*. **Bachelor's thesis.**
- Tagliavini M. (2018) *Extraction of Rare Earth Elements from seawater employing sep-pak C18 cartridges*. **Bachelor's thesis.**
- Dietrich R. (2014) *Konzentrationsbestimmungen Seltener Eden am ICP-QMS*. **Bachelor's thesis.**
- Förstel J. (2014) *Messung von Lithium-Magnesium-Verhältnissen an einem iCAP Q<sup>TM</sup> Quadrupol-Massenspektrometer mit induktiv gekoppelter Plasmaionenquelle*. **Bachelor's thesis.**
- Eisinger P. (2014) *Analysis and evaluation of a leaching procedure for the extraction of authigenic rare earth elements (REE) from marine sediments of the North Atlantic*. **Bachelor's thesis.**

- de Carvalho Ferreira M. L. (2013) *Water mass reconstruction by Nd isotopic analysis from mid Atlantic ocean sediments*. **Bachelor's thesis**.
- Schwabe E. (2023) *Untersuchungen zum Island Mass Effect bei den Crozet Inseln mittels Opalanalysen*. **Bachelor's thesis (co-supervisor)**.

### Master's level

- Vogt-Vincent N. (2018) *Ice-rafted debris as a source of non-conservative behaviour for the  $\epsilon$ Nd palaeotracer: insights from a simple model*. **Visiting student project** from Oxford University, UK.
- Pöppelmeier F. (2016) *Investigations of Authigenic Neodymium Sediment-Pore Water Interaction and Reconstruction of Deep Water Mass Sourcing in the North-East Atlantic*. **Master's thesis**.
- Link J. M. (2015) *Rekonstruktion der Ozeanzirkulation im Nordatlantik während ausgewählter glazialer Terminationen der letzten 900 ka anhand von Neodymisotopen*. **Master's thesis**.
- Kullik V. (2017) *Rekonstruktion der Zirkulation im NO-Atlantik der letzten 30 ka unter dem Einfluss von Mittelmeerwasser anhand der Neodymisotopie*. **Master's thesis (co-supervisor)**.
- Hauck L. (2017) *Rekonstruktion der Zirkulation im westlichen Nordatlantik über die letzten 30 ka mittels der Neodymisotopie von Blake Bahama Outer Ridge Sedimenten*. **Master's thesis (co-supervisor)**.

### PhD level

- Bollen M. (ongoing) *Constraining past changes in remineralized carbon sequestration in Southern Ocean subsurface ocean water masses across the last glacial cycle*. **PhD thesis (co-supervisor)**.
- Pöppelmeier F. (2019) *The Atlantic water mass structure since the Last Glacial Maximum: New insights from Nd isotopes*. **PhD thesis (co-supervisor)**.
- Süfke F. (2020) *The application of Pa/Th in the Atlantic Ocean for the reconstruction of past circulation strength*. **PhD thesis (co-supervisor)**.
- Link J. M. (2021) *900 ka of Nd-isotope changes in the deep North Atlantic*. **PhD thesis (co-supervisor)**.



## Ongoing Research Projects

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### **Atlantic deep water circulation since the Last Glacial Maximum**

The last glacial maximum about 20 thousand years ago, and the following deglaciation and warm Holocene form the best and most precisely investigated time interval for palaeoclimate research. My primary goal is to further question and improve our understanding of the changes that occurred in this period in the oceans and the whole climate system. I am particularly interested in investigating this problem from different angles with different sedimentary proxies such as stable isotopes in foraminifera shells, the neodymium (Nd) isotope composition of authigenic precipitates, or the ratio of the two uranium-derived isotopes protactinium and thorium. Combining different proxies allows for more comprehensive and accurate conclusions and the evasion of biases that may occur if we only investigate one proxy at a time. Most of our established views of changes in the distribution of water masses in the deep ocean rely on nutrient-based proxies and, for example, Nd isotopes as an inorganic water mass provenance tracer can add a complementing different view to these studies.

### **Biological productivity, ocean circulation, and carbon storage in the Southern Ocean**

The Southern Ocean connects all world oceans and hosts formation of the densest waters that fill the deep ocean basins. Active vertical mixing around its frontal systems leads to high primary productivity. Apart from its ecological importance, this productivity binds the greenhouse gas carbon dioxide from the atmosphere and exports it to the deep ocean via sinking organic particles, where it can be stored for hundreds and thousands of years. Therefore, the circulation and productivity of the Southern Ocean are an integral modulator of global climate. In this project I investigate both these processes with biogenic and non-biogenic proxies across the last glacial cycle.

### **Marine sediments as sinks and sources of dissolved trace metals**

The oceans are full of trace metals that reside in the water column for different durations, depending on their chemical speciation and specific conditions of the seawater. Marine sediments are a major sink for most of them, leading to their long time storage and geological recycling. Thus, the distribution of these trace metals in the seawater-derived phase of sediments can yield information about the conditions of past seawater. For example, the speciation and thus reactivity and residence time of many trace metals depends on the seawater redox conditions, which are tightly linked to oxygen concentrations and can therefore serve as a proxy for past deep ocean oxygenation.

My current EU-funded Marie Skłodowska-Curie project “*OxyQuant*” combines all these topics. It is based on the investigation of trace element behaviour during early diagenesis in order to use these elements as proxies for past ocean oxygenation, and thus past ocean circulation and carbon storage.

## Scientific Articles

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Google Scholar: h-index: 14; i10-index: 15; 1245 citations

(\* indicates that first author was or is a student under my direct supervision)

### Articles in preparation

- **Blaser P.**, Haine T.:  
*Spicy Arctic deep waters during the last glacial cycle?*
- Bruggmann S., **Blaser P.**, Crosta X., Martinez-Garcia A., Jaccard S.L.:  
*Chromium isotopes indicate decreased oxygen availability in sediments of the Southern Ocean during the LGM.*
- \*Bollen M., Gutjahr M., **Blaser P.**, Jaccard S.L.:  
*Post-glacial provenance and transport pathways of glacial sediments in Hughes Trough from Nd and Pb isotopes.*
- Creac'h L., Gutjahr M., Huang H., Lenstra W. K., Ruben M., **Blaser P.**:  
*Marine sedimentary porewaters oxygen and pH measurements using contactless sensors.*
- \*Bollen M., **Blaser P.**, Bruggmann S., Wu S., Jaccard S.:  
*Rapid determination of rare earth elements in geological reference materials using HBF<sub>4</sub> microwave-assisted digestion.*

### Articles submitted or in review

- Jaimes-Gutierrez R., Vimperc L., Wilson D., **Blaser P.**, Pogge von Strandmann P., Adatte T., Sahoo S., Castellot S.:  
*Lithium Isotopes Reveal Enhanced Weathering Fluxes in North America During the Paleocene-Eocene Thermal Maximum.*  
Submitted to *Geology*.
- Lee S., Kim H., Kim Y., Shigeyoshi O., Bollen M., **Blaser P.**, Haghipour N., Yoon T., Joo H., Jaccard S., Eglinton T., Kim M.:  
*Multi-Isotopic approach to trace the provenance and trajectory of sinking particles in the Ulleung Basin, East Sea (Japan Sea).*  
In revision for *Progress in Oceanography*.
- Huang H., Gutjahr M., Hu Y., Pöppelmeier F., Kuhn G., Lippold J., Ronge T. A., Wu S., **Blaser P.**, Jaccard S. L., Luo Y., Yu J.:  
*Expansion of Antarctic Bottom Water released deep ocean CO<sub>2</sub> across the last deglaciation.*  
In review at *Nature Geoscience*

## Published articles

### 2025↓

Du J., Haley B.A., McManus J., **Blaser P.**, Rickli J., Vance D:  
*Abyssal seafloor as a key driver of marine biogeochemical cycles.*  
Accepted in **Nature**.



**Blaser P.**, Waelbroeck C., Thornalley D.J., Lippold J., Pöppelmeier F., Kaboth-Bahr S., Repschläger J., Jaccard S.L.:  
*Prevalent North Atlantic Deep Water during the Last Glacial Maximum and Heinrich Stadial 1.*  
**Nature Geoscience** 18, 410–416.



Pérez-Tribouillier, H., Jaccard, S.L., **Blaser, P.**, Christl, M., Creac'h, L., Hölemann, J., Scheiwiller, M., Vockenhuber, C., Wefing, A.M., Casacuberta, N.:  
*The Role of the St. Anna Trough in Atlantic Water Transport Into the Arctic Ocean: A Novel Radiogenic Isotope Assessment Using Iodine, Uranium, and Neodymium.*  
**Journal of Geophysical Research: Oceans** 130, e2024JC022050.



Sarnthein, M. and **Blaser, P.**:  
*Peak glacial-to-Heinrich-1 changes in Denmark Strait Overflow and seawater stratification in the Nordic Seas, a switchboard of changes in Atlantic Meridional Overturning Circulation and the “Nordic Heat Pump”.*  
**Quaternary Science Reviews** 355, 109181.



Kaboth-Bahr, S., Bahr, A., **Blaser, P.**, Voelker, A.H.L., Lippold, J., Gutjahr, M., Hodell, D.A., Channell, J.E.T., de Vernal, A., Hillaire-Marcel, C.:  
*Reconstruction of deep-water undercurrent variability from the outer Labrador Sea during the past 550,000 years.*  
**Quaternary Science Advances** 100266.

### 2023↓





Frank, N., Hebbeln, D., **Blaser, P.**, Carreiro-Silva, M., Diekamp, V., Eichstädter, R., Freiwald, A., Gaide, S., Günther, B., Hemsing, F., Hoffman, L., Krenkel, T., Lausecker, M., Leymann, T., Link, J., Linnemann, U., Matos, L., Nowald, N., Raddatz, J., Schade, T., Schröder, M., Schröder-Ritzrau, A., Seiter, C., Speicher, R., Stelzner, M., Tamborrino, L., Wefing, A.-M., Wenzel, J., Wienberg, C.:  
*Atlantic Thermocline Ocean and Ecosystems Dynamic during Natural Climate Change - ATHENA, Cruise No. M151, October 06, 2018 - October 31, 2018, Ponta Delgada (Portugal) - Funchal (Portugal)*  
**Cruise report.**

### 2022↓





Pöppelmeier F., Lippold J., **Blaser P.**, Gutjahr M., Frank M., Stocker T.F.:  
*Neodymium isotopes as a paleo-water mass tracer: A model-data reassessment.*  
**Quaternary Science Reviews** 279, 107404.



## 2021↓

-  Pöppelmeier F., Gutjahr M., **Blaser P.**, Schulz H., Sufke F., Lippold J.:  
*Stable Atlantic Deep Water Mass Sourcing on Glacial-Interglacial Timescales.*  
**Geophysical Research Letters** 48, e2021GL092722.
-  Jakob K.A., Pross J., Link J.M., **Blaser P.**, Hauge Braaten A., Friedrich O.:  
*Deep-ocean circulation in the North Atlantic during the Plio-Pleistocene intensification of Northern Hemisphere Glaciation (~2.65–2.4 Ma).*  
**Marine Micropaleontology** 165, 101998.

## 2020↓

-  Pöppelmeier F., Scheen J., **Blaser P.**, Lippold J., Gutjahr M., Stocker T.F.:  
*Influence of Elevated Nd Fluxes on the Northern Nd Isotope End Member of the Atlantic During the Early Holocene.*  
**Paleoceanography and Paleoclimatology** 35, e2020PA003973.
-  \*Pöppelmeier F., **Blaser P.**, Gutjahr M., Jaccard S. L., Frank M., Max L., Lippold J.:  
*Northern-Sourced Water Dominated the Atlantic Ocean during the Last Glacial Maximum.*  
**Geology**, 48 (8), 826–829.
-  **Blaser P.**, Gutjahr M., Pöppelmeier F., Frank M., Kaboth-Bahr S., Lippold J.:  
*Labrador Sea bottom water provenance and REE exchange during the past 35,000 years.*  
**Earth and Planetary Science Letters** 542, 116299.
-  \*Pöppelmeier F., Gutjahr M., **Blaser P.**, Oppo D.W., Jaccard S.L., Regelous M., Huang K.-F., Sufke F., Lippold J.:  
*Water mass gradients of the mid-depth Southwest Atlantic during the past 25,000 years.*  
**Earth and Planetary Science Letters** 531, 115963.
-  Sufke, F. Schulz, H. Scheen, J. Szidat, S., Regelous M., **Blaser P.**, Pöppelmeier F., Goepfert T.J., Stocker, T.F. Lippold J.:  
*Inverse response of  $^{231}\text{Pa}/^{230}\text{Th}$  to variations of the Atlantic meridional overturning circulation in the North Atlantic intermediate water.*  
**Geo-Marine Letters** 40, 75–87.
-  \*Vogt-Vincent N., Lippold J., Kaboth-Bahr S., **Blaser P.**:  
*Ice-rafted debris as a source of non-conservative behaviour for the  $\epsilon\text{Nd}$  palaeotracer: insights from a simple model.*  
**Geo-Marine Letters** 40, 325–340.

## 2019↓

-  Sufke F., Pöppelmeier F., Goepfert T. J., Regelous M., Koutsodendris A., **Blaser P.**, Gutjahr M. and Lippold J.:  
*Constraints on the northwestern Atlantic deep water circulation from  $^{231}\text{Pa}/^{230}\text{Th}$  during the last 30,000 years.*  
**Paleoceanography and Paleoclimatology** 34, 1945–1958.
-  **Blaser P.**, Frank M. and van de Flierdt T.:  
*Revealing past ocean circulation with neodymium isotopes.*  
**Past Global Changes Magazine** 27, 54–55.



\*Pöppelmeier F., **Blaser P.**, Gutjahr M., Süfke F., Thornalley D. J. R., Grützner J., Jakob K. A., Link J. M., Szidat S. and Lippold J.:

*Influence of Ocean Circulation and Benthic Exchange on Deep Northwest Atlantic Nd Isotope Records During the Past 30,000 Years.*

**Geochemistry, Geophysics, Geosystems** 20, 4457–4469.



Lippold J., Pöppelmeier F., Süfke F., Gutjahr M., Goepfert T. J., **Blaser P.**, Friedrich O., Link J. M., Wacker L., Rheinberger S. and Jaccard S. L.:

*Constraining the Variability of the Atlantic Meridional Overturning Circulation During the Holocene.*

**Geophysical Research Letters** 46, 11338–11346.



**Blaser P.**, Pöppelmeier F., Schulz H., Gutjahr M., Frank M., Lippold J., Heinrich H., Link J. M., Hoffmann J., Szidat S. and Frank N.:

*The resilience and sensitivity of Northeast Atlantic deep water  $\epsilon$ Nd to overprinting by detrital fluxes over the past 30,000 years.*

**Geochimica et Cosmochimica Acta** 245, 79–97.

## 2018↓



**Blaser P.** and Jacek R.:

*Undisturbed Measurements of Oxygen in Deep Sea Sediments with Oxygen Sensitive Foil.*

**Application Note**, Heidelberg.



\*Pöppelmeier F., Gutjahr M., **Blaser P.**, Keigwin L. D. and Lippold J.:

*Origin of Abyssal NW Atlantic Water Masses Since the Last Glacial Maximum.*

**Paleoceanography and Paleoclimatology** 33, 530–543.

## 2017↓



Wefing A.-M., Arps J., **Blaser P.**, Wienberg C., Hebbeln D. and Frank N.:

*High precision U-series dating of scleractinian cold-water corals using an automated chromatographic U and Th extraction.*

**Chemical Geology** 475, 140–148.

## 2016↓



Lippold J., Gutjahr M., **Blaser P.**, Christner E., de Carvalho Ferreira M. L., Mulitza S., Christl M., Wombacher F., Böhm E., Antz B., Cartapanis O., Vogel H. and Jaccard S. L.:

*Deep water provenance and dynamics of the (de)glacial Atlantic meridional overturning circulation.*

**Earth and Planetary Science Letters** 445, 68–78.



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