

Curriculum Vitae

Dr. Antje Boetius

President and Chief Executive Officer, Monterey Bay Aquarium Research Institute (MBARI)

Contact

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University Education

1993 - 1996	University of Bremen, Bremen, Germany Doctorate in Biology
1986 - 1992	University of Hamburg, Hamburg, Germany Diplom in Biology
Since May 2025,	President and CEO, MBARI
2017 - 2025	Director of the Alfred Wegener Institute Helmholtz Center for Polar and Marine Research
2019 - 2020	Vice President of Helmholtz Association; Coordinator of Research Field Earth and Environment
2012-2018	Vice Director of the MARUM Cluster of Excellence, University of Bremen
Since May 2010	External Scientific Member of the Max Planck Society
Since March 2009	Professor of Geomicrobiology, University of Bremen
Since May 2025	Adjunct Professor at Stanford University, Oceans Department, Stanford Doerr School of Sustainability
Since December 2008	Leader of the HGF-MPG Joint Research Group on Deep Sea Ecology and Technology, AWI
Since Nov 2003	Leader of the "Microbial habitat" group, MPI Bremen <i>Research on biogeochemistry, transport processes and microbial processes in benthic environments</i>
June 2008 - Dec 2008	Full Professor of Microbiology, Jacobs University Bremen
Sep 2003 - June 2008	Associate Professor of Microbiology, Jacobs University Bremen
Sep 2001 - Sep 2003	Assistant Professor of Microbiology, International University Bremen <i>Teaching in biology (major and non-major) and transdisciplinary university study courses</i>
Feb 2001 - Oct 2003	AWI for Polar and Marine Research, Bremerhaven

	<i>Permanent research faculty, coordination of national and international projects on microbial turnover of methane above marine gas hydrate and at cold seeps</i>
June 1999 – Jan 2001	Max Planck Institute for Marine Microbiology, Bremen <i>Research associate (Postdoc), since 2001 guest researcher</i>
1996 - 1999	Institute for Baltic Sea Research, Warnemünde <i>Research associate (Postdoc)</i>
1993 - 1996	AWI for Polar and Marine Research, Bremerhaven <i>Research associate (PhD)</i>
1990 - 1992	Institute for Hydrobiology and Fishery Res., Hamburg <i>Lab assistant (student contracts)</i>
1989 - 1990	Scripps Inst. of Oceanography, San Diego, CA <i>Lab assistant</i>
<i>International Experience</i>	
2004	Invited Professor of the University Pierre et Marie Curie (Paris 6)
1989 – 1991	Graduate School of Scripps Institution of Oceanography, Academic exchange program with UCSD, La Jolla, California, USA
<i>Honors/Awards/ Stipends</i>	
	<ul style="list-style-type: none"> ■ 2025 Fellow, The Royal Society ■ 2025 Senate Medal of Art and Science, the Free Hanseatic City of Bremen ■ 2024 Order of Saint Charles, Monaco ■ 2024 Global Compact Award TÜV ■ 2024 Culture Award, Eduard-Rhein-Stiftung ■ 2023 Hans-Carl-von-Carlowitz-Sustainability Award ■ 2023 Geochemistry Fellow of the Geochemical Society and European Association of Geochemistry ■ 2023 Ernst-Ludwig Winnacker Award, Bayer Foundation ■ 2023 „University Teacher of the Year“, German Association of University Professors and Lecturers ■ 2023 Fellow of the Konrad Adenauer Foundation (Theme Sustainability) ■ 2022 GOLDENES LOT, Association of German Engineers ■ 2022 Carl-Friedrich-von-Weizsäcker-Prize, Association of Funders and the German National Academy Leopoldina ■ 2022 Arctic Circle Award for the Alfred Wegener Institute and the MOSAiC expedition ■ 2022 Holder of the Johannes Gutenberg Endowed Professorship ■ 2021 Mercator-Professorship of the University Duisburg-Essen ■ 2021 Member of the Royal Swedish Academy of Sciences ■ 2021 Prize of the Klüh Foundation for Research and Innovation ■ 2020 Urania-Medal, Urania Berlin ■ 2019 Corresponding Member of the Braunschweig Scientific Society

- 2019 Erna Hamburger Award, Wish Foundation EPFL Lausanne
- 2019 First Class Order of Merit of the Federal Republic of Germany
- 2019 LeibnizRing Hannover
- 2019 Cody Award in Ocean Sciences, Scripps Institution of Oceanography
- 2018 German Environmental Award
- 2018 DFG Communicator Prize
- 2018 Vernadsky Medal of the European Geosciences Union (EGU)
- 2017 Norwegian Scientific Academy for Polar Research
- 2017 Copernicus Medal
- 2017 Gauss Medal, Braunschweigische Wissenschaftliche Gesellschaft
- 2016 Elected Member of the European Academy of Sciences
- 2016 Endowed Biogeochemistry Lecture of the Geochemical Society
- 2016 Teaching Award of the International Max Planck Research School of Marine Microbiology (MARMIC)
- 2015 Elected Member of the EAM – European Academy of Microbiology
- 2015 Fellow of the American Academy of Microbiology
- 2014 Teaching Award MARMIC
- 2014 Excellence Professorship of the Prof.-Dr.-Werner-Petersen-Foundation
- 2014 David Packard Distinguished Lecturer (MBARI)
- 2014 Gustav-Steinmann-Medal of the Geological Union e.V. Germany
- 2014 Elected Fellow of the American Geophysical Union AGU
- 2014 Elected EMBO member
- 2014 Hector Fellowship
- 2013 Teaching Award MARMIC
- 2013 ECI Ecology Prize
- 2012 Heinrich-Hertz- Guest Professor KIT
- 2011 European Research Council Advanced Investigator Grant “Abyss”
- 2011 Elected Member of the Academy of Sciences and Literature Mainz
- 2010 Member of the German Science Council
- 2010 External Scientific Member of the Max Planck Society
- 2009 Distinguished Professor of the Jacobs University
- 2009 Elected Member of the National Academy Leopoldina (Section Geology)
- 2009 Gottfried-Wilhelm-Leibniz Prize of the DFG
- 2007 Teaching Award MARMIC
- 2006 Teaching Award MARMIC
- 2006 Medaille de la Societe d’Oceanographie de France
- 2005 Teaching Award MARMIC
- 2004 Invited Professor University Pierre et Marie Curie (Paris 6)
- 2000 FEMS Young Scientist Award for the participation in the 7th EMMS
- 1999 FEMS Young Scientist Award for the participation in the conference “Enzymes in the Environment”
- 1999 DFG Stipend for the participation in the 9th Goldschmidt Conference
- 1998 DFG Stipend for the participation in the Gordon Research Conference on Polar Marine Science
- 1997 EU Stipend for the participation in DIALOG II

	<ul style="list-style-type: none"> ■ 1991 IAESTE Stipend of the International Association for the Exchange of Students for Technical Experience (IAESTE) of the German Academic Exchange Service (DAAD) ■ 1986 - 1989 Stipend of the "Studienstiftung des Deutschen Volkes"
<i>Research</i>	<p>Special fields of expertise:</p> <p>Deep Sea Research Polar research Marine Microbiology Ecology Biogeochemistry Marine Biology</p> <p>Specific fields of interest:</p> <p>Ecology of polar oceans Biogeochemistry of the seafloor Methane fluxes Anaerobic microbiology Chemosynthesis and extreme environments Carbon cycle in the ocean Microbial processes of early diagenesis Environmental influences in the deep sea</p> <p>Current funding for research and communication:</p> <p>2026 - 2032 MARUM Excellence Cluster (2nd funding phase) "The Ocean Floor – Earth's Uncharted Interface"</p> <p>2019 – 2025 MARUM Excellence Cluster Ocean Floor</p> <p>2018 – 2027 Hector Fellow Academy (currently 2 PhD Awards)</p> <p>Previous projects:</p> <p>2023 – 2024 Bayer Communication "Coast to Coast" 2014 - 2024 FRAM Frontiers in Arctic Marine Monitoring – HGF Research Infrastructure 2019 – 2023 JPI (Joint Programming Initiative Oceans: Oceans Ecological Aspects of Deep Sea Mining) 2015 - 2019 7th FPR EU Project AtlantOS: Ocean Observation in the Atlantic Ocean 2015 - 2017 JPI (Joint Programming Initiative Oceans: Oceans Ecological Aspects of Deep Sea Mining) 2014 - 2018 7FP EU project FIXO3 Fixed point observatories 2014 - 2017 7FP EU project MIDAS 2013 - 2018 HGF Alliance ROBEX 2012 - 2018 ERC Advanced Grant Abyss 2009 - 2018 DFG Leibniz Program 2009 - 2018 MARUM Exzellenzcluster 2012 - 2016 7FP EU project MicroB3 2011 - 2014 7FP EU project ECO2 2009 - 2012 7 FP EU project EUROFLEETS</p>

- 2009 - 2012 Marie Curie Action "Initial Training Networks" – ITN SenseNet
- 2009 - 2012 7 FP EU project HERMIONE (WP leader)
- 2007 - 2012 Graduate School of the Excellence Initiative "GLOMAR"
- 2009 - 2015 BMBF project BIOACID
- 2009 - 2012 7 FP EU project HYPOX (coordinator)
- 2007 - 2011 6th FP EU NoE ESONET
- 2009 - 2010 DFG MERIAN expedition HOMER 1 + 22006-2010 ESF EUROCORES EuroDiversity "MicroSystems"
- 2007 – 2010 ESF EUROCORES EuroDeep "Chemeco" 2006-2010 CNRS GDRE DIWOOD (Collaboration Univ. Pierre et Marie Curie, CNRS, MPI)
- 2005 – 2009 DFG Research Center RCOM II, Fluid and gas seepage along continental margins: structures, processes and budgets
- 2005 – 2009 EU 6th FP IP HERMES "Hotspot ecosystem research on margins of Europe's seas"
- 2008 DFG METEOR expedition Guineco
- 2007 DFG METEOR expedition MICROHAB (M72/2)
- 2007 DFG METEOR expedition BIONIL (M70/2)
- 2006 DFG METEOR proposal BIONIL (M70/2) 2005-2008 BMBF project MUMM "Microbial turnover of methane above marine gas hydrate"
- 2003 - 2007 ESF project "MEDIFLUX - An integrated study of fluid seepage through the seabed of the Nile deep-sea fan "
- 2003 - 2006 6th FP EU project STREP "EXOCET – Extreme ecosystem studies in the deep Ocean: technological developments "
- 2004 - 2005 DAAD-ICCTI Project-related exchange of persons with Portugal (PPP)
Acções Integradas Luso-Alemãs
- 2002 - 2005 5th FP EU project "METROL – Methane fluxes in ocean margin sediments: microbiological and geochemical control "
- 2002 - 2005 DFG/ODP project „Analysis of the distribution and diversity of methanotrophic microbial consortia at Hydrate Ridge (Cascadia Margin, Offshore Oregon; ODP Leg 204 in 2002)
- 2000 - 2003 BMBF project MUMM "Microbial turnover of methane above marine gas hydrate"
- 1999 - 2000 BMBF project BIGSET II "Biogeochemical transport of matter and energy in the deep-sea"
- 1999 - 2000 DFG project "Pressure sensitivity of microbial processes in deep-sea sediments"

Previous Participation in research programs:

- 2000 NSF Life in Extreme Environments (Collaboration Univ. Georgia)
- 1999 - 2000 BMBF projects TECFLUX I+II "Tectonically induced material fluxes", NE Pacific (GEOMAR, Kiel)
- 1997 - 1998 EU ENRICH program ADEPD "Atlantic data base for exchange processes at the deep-sea floor" (Baltic Sea Research Institute Warnemünde)

	<p>1996 - 1998 BMBF project BIGSET I "Biogeochemical transport of matter and energy in the deep-sea" (Baltic Sea Research Institute Warnemünde)</p> <p>1993 - 1995 Project ARCTIC, Laptev Sea (AWI)</p> <p>1993 BMBF project TIEFMI, Eastern Mediterranean (Institute for Hydrobiology, Hamburg)</p>
<i>National Collaborations</i>	<ul style="list-style-type: none"> ■ GEOMAR, Kiel (P. Linke, M. Haeckel) ■ MARUM (K.-U. Hinrichs, W. Bach) ■ MPI for Marine Microbiology (R Amann, K Knittel) ■ Helmholtz Research Field Earth and Environment
<i>International Collaborations</i>	<ul style="list-style-type: none"> ■ University of Bergen (E. Ramirez) ■ University of Georgia, USA (S. Joye) ■ Japan Agency for Marine-Earth Science and Technology, JAMSTEC (F. Inagaki) ■ Woods Hole Oceanographic Institution, WHOI (C. German) ■ Caltech (V. Orphan)
<i>Current Graduate Students</i>	<p>Katharina Kohlfeld (starting Oct 2024, Hector Fellowship)</p> <p>Stian Thorset (Dr. FB5, MARMIC 2021-2025; Hector Fellowship)</p>
<i>Previous Graduate Students</i>	<p>Hanna Zehnle (Dr. FB5, MARMIC 2019-2023)</p> <p>Magda Cardozo (Dr. FB5, MARMIC 2018-2021; Hector fellowship)</p> <p>David Benito Merino (Dr. FB5, MARMIC 2018-2021)</p> <p>Eduard Fadeev (Dr., FB5, MARMIC 2015-2019)</p> <p>Rafael Perez (Dr., FB5, MARMIC 2015-2018)</p> <p>Ralf Hoffmann (Dr., FB5, POLMAR 2014-2018)</p> <p>Josefine Rapp (Dr., FB2, MARMIC 2014-2018)</p> <p>Katy Hoffmann (Dr., FB2, MARMIC 2013-2017)</p> <p>Tobias Vonnahme (MSc, FB2, MARMIC 2015-2016)</p> <p>Christiane Hassencrück (Dr., FB2 2013-2016)</p> <p>Thorben Wulff (Dr. FB5, University of Bremen 2009 - 2015)</p> <p>Viola Krukenberg (Dr., FB2, MARMIC 2012 - 2015)</p> <p>Gerdhard Jessen (Dr., FB5, MARMIC 2011 - 2015)</p> <p>Renate Degen (PhD, FB2, University of Bremen, POLMAR 2012 - 2014)</p> <p>Mar Fernandez (PhD, FB2, University of Bremen, MARMIC 2011 - 2014)</p> <p>Marianne Jacob (Dr., POLMAR 2009 - 2014)</p> <p>Josefine Rapp (MSc, FB2, MARMIC 2013-2014)</p> <p>Daphne Donis (Dr. FB2, University of Bremen 2010 - 2013)</p> <p>Emil Ruff (Dr. FB2, University of Bremen 2010 - 2013)</p> <p>Boyan Angelov (Master, MARMIC, University of Bremen 2012 - 2013)</p> <p>Judith Ufkess (PhD, GLOMAR, University of Bremen 2008 - 2012)</p> <p>Petra Pop Ristova (Dr., MARMIC 2009 - 2012)</p> <p>Mar Fernandez (Master, MARMIC, University of Bremen 2010 - 2011)</p> <p>Christina Bienhold (Dr., University of Bremen 2007 - 2011)</p> <p>Viola Krukenberg (Master, MARMIC, University of Bremen 2010 - 2011)</p>

	<p>Angelique Gobet (PhD, MARMIC, JUB 2006 - 2010) Sandra Schöttner (MARMIC Master, 2006; PhD, JUB 2007 - 2010) Björn Sonntag (Master, University of Bremen 2010) Emil Ruff (M. S. University of Stuttgart 2009 - 2010) Stefanie Grünke (Dr., University of Bremen 2006 - 2010) Janine Felden (PhD MARMIC, JUB 2005 - 2009) Jan Fischer (Dr., University of Bremen 2005 - 2009) Petra Pop Ristova (Master, MARMIC 2008 - 2009) Marianne Jacob (Master, MARMIC 2008 - 2009) Judith Ufkes (Dipl., University of Bremen 2008) Simone Boer (Dr., University of Bremen 2004 - 2008) Gunter Wegener (Dr., University of Bremen 2004 - 2008) Alexandra Meziti (Master, MARMIC, IUB 2006 - 2007) Enoma Omorogie (PhD, MARMIC, IUB 2004 - 2007) Tina Lösekann (Dipl., Univ. of Bremen 2001, Dr., Univ. of Bremen 2002-2006) Helge Niemann (Dr., University of Bremen 2002-2005) Janine Felden (Master, MARMIC 2004-2005) Rita Dunker (Master, MARMIC 2004-2005) Maya Shovitri (Master, MARMIC 2004-2005) Tina Treude (Dr., University of Bremen 2000-2003) Heiko Löbner (Dipl., University of Bremen 2003)</p>
<i>Teaching</i>	<ul style="list-style-type: none"> ■ Lecture “Molecular Geobiology”, Master of Geoscience, University of Bremen ■ Lecture and courses for Graduates in Microbial Oceanography and Geomicrobiology (IMPRS MARMIC)
<i>Current Professional</i>	<p><i>Past lectures</i></p> <ul style="list-style-type: none"> ■ 2022 Lecture “Johannes Gutenberg Endowed Professorship”, Johannes Gutenberg University Mainz ■ Lecture “Biology for Geoscientists”, Bachelor of Geoscience, University of Bremen ■ Lecture “Astrobiology” Master of Geoscience, University of Bremen ■ Lecture “Geobiology”, Bachelor of Geoscience, University of Bremen ■ 2007 Austral Summer Institute VII, Chile, ENERO 2007 ■ 2004 Participation in lecture series „Evolution de la vie“ and „Microbiologie Generale“, University Paris 6, 2004 ■ 2001-2008 Lectures for Undergraduates in General Biology, Microbiology, Evolutionary Biology, and transdisciplinary „University Study Courses“ (team-taught with instructors from Humanities and Social Sciences) (International University Bremen/Jacobs University Bremen) ■ 1992-1996 Lectures for Graduates in Deep-Sea Ecology (University of Hamburg) and Biogeochemistry (University of Bremen) ■ Undergraduate Courses in Biological Oceanography (University of Rostock) ■ Laboratory Courses for scholars, undergraduates, graduates and technicians in Microbiology, Biogeochemistry, Microbial ecology (University of Rostock and MPI) <ul style="list-style-type: none"> ■ Senate, Max Planck Society ■ Board of Trustees dbu - German Federal Foundation for the Environment

Memberships and Committees

- Board of Governors – University Vienna
- Board of Trustees – Museum of Natural History Berlin
- Coordinator, International Steering Committee "Antarctica InSync" UN Ocean Decade

- Chair, Scientific Advisory Board - Potsdam Institute for Climate Impact Research
- Chair, Scientific Advisory Board – MPI for Geoanthropology Jena
- Science Advisory Board Coastal Center for Oceanographic Research (COPAS)
- International Scientific Advisory Board - Ocean Networks Canada
- Jury member Zurich Insurance Group "Planet Hero" Award
- Academia Net
[\(http://www.academia-net.de/alias/Profil/Prof-Dr-Antje-Boetius/1028143\)](http://www.academia-net.de/alias/Profil/Prof-Dr-Antje-Boetius/1028143)

- Member of the European Geosciences Union
- Member of the American Geophysical Union
- Member of the American Society of Microbiology
- Member of the American Society for Limnology and Oceanography
- Member of the Association for General and Applied Microbiology (VAAM - FEMS)
- Member of the International Society for Microbial Ecology

Expert Activities

- Reviewer for Journals: Science, Nature, Nature Communications, ISME, Nature Geoscience, Science Reports, PLOS Biology, PNAS, MEPS, Limnology and Oceanography, Deep Sea Research I + II, Marine Biology, Marine Geology, Progress in Oceanography, Journal of Sea Research, Organic Geochemistry, AEM, Microbial Ecology, etc.
- Reviewer for funding agencies: DFG, BMBF, ERC, NSF, NOAA, NWO, NERC, ANR, CNRS, SNSF, FWO, Sloan Foundation and many more

Past Professional Services

- Senate of the Leibniz Association
- Board of Trustees – Klaus Tschira Foundation
- Chairperson, Board of Trustees - Wissenschafts-Pressekonferenz e.V.
- Board of Trustees – Einstein Foundation BerlinScientific Advisory Board– Nature-based Climate Protection (Ministry for the Environment)
- Scientific Advisory Board - Hanse-Wissenschaftskolleg Delmenhorst
- Scientific Advisory board - Senckenberg Museum
- Scientific Advisory Board - "Futurium" Science Museum Berlin
- Scientific Advisory Board – Simons Foundation
- Science Advisory Board – Collegium Helveticum Zürich
- Science Advisory Panel NCCR Microbiomes Lausanne
- Member of the Forum #Future-Strategy, BMBF; Mission 5: Space and Oceans
- Member; German National Committee for Polar Research
- Member & Delegate; Representative of the Alfred Wegener Institute in the Main Committee of the German Research Foundation (DFG)
- Science Advisory Board University of Vienna

- Board of Trustees BIOTPIA Natural History Museum Bavaria, Munich
- Board of Governors – Constructor University Bremen
- Advisory Board - Deutsche Kammerphilharmonie
- Board Member UNICEF Germany
- Jury member Frontiers Planet Prize, Frontiers Research Foundation
- Jury Member Helmut Schmidt Future Prize ZEIT Publishing House
- Jury member for the Georg von Holtzbrinck Prize for Science Journalism
- United Nations - Program Global Compact „Oceans“
- International Scientific Advisory Board – Nansen Legacy UiT the Arctic University of Norway
- Science Advisory Board - Museum for Natural History, Berlin
- Board of Governors - Jacobs University Bremen
- Science Panel ; Science Year 2022
- Advisory Board - FS Sonne
- BMBF HighTech Forum 2020-2021
- Board of Trustees, BMBF Germany's Science Year 2024 "Freedom"
- Chair; Advisory Board „Science in Dialogue“
- Goldschmidt Officer, Council of European Association of Geochemistry
- Senate, National Science Foundation Germany (DFG)
- Science Advisory Board, University Copenhagen, Biology
- Science Advisory Board „Deep Life Directorate of the Deep Carbon Observatory“ (Sloan Foundation, Carnegie USA)
- Science Advisory Board CAGE, Excellence Centre for Arctic Gas Hydrate, Environment and Climate (Tromsø, Norway)
- Patterson Award Committee, Geochemical Society
- Science Advisory Board; Robert Bosch Stiftung/Leopoldina Journalist College
- Senior Editor Journal ISME (IF 9.3)
- Editorial Boards in Journals: Applied and Environmental Microbiology, Geobiology, Aquatic Microbial Ecology, Marine Biology Research (new journal, previously SARSIA and OPHELIA), Environmental Microbiology
- Executive Panel OceanSites
- Science Advisory Board Diversitas DE
- Commission of the Senate for Biodiversity Research DFG
- American Society of Microbiology, General Meeting Planning Committee
- ERC Starting Grant Panel LS8
- Wissenschaftsrat 2010-2016; 2014-2016 as Chair of the Scientific Commission
- ASLO Award Committee, Chair of Lindeman Award Committee
- National Committee for Global Change Research
- EGU Biogeosciences Division Vice-Chair
- Advisory Board „C-DEBI“ Center for Dark Biosphere (NSF Science and Technology Center, USC LA, USA)
- Science Advisory Board; French Polar Research Institute IPEV (France)
- Science Advisory Board, Center of Geobiology, Bergen, Norwegen
- Science Committee NIOZ, Niederlande
- Chair, Science Advisory Board, Leibniz-Institute for Baltic Sea Research
- Science Advisory Board GeoBioCenter Munich (LMU)
- Science Advisory Board, Exzellenz cluster „Future Ocean“ Universität Kiel

- Commission of the Senate for Ozeanography, DFG
- Champion of the Monaco Blue Initiative (Prince Albert II of Monaco Foundation)
- Chair, Science Advisory Board, Annette-Barthelt-Prize for Marine Research
- Science Advisory Board „International Census of Marine Microbial Life“ ICOMM
- Science Advisory Board ChEss (Biogeography of Chemosynthetic Ecosystems), Census of Marine Life
- Scientific Council of CNRS Section „Planete et Universe“ (France)
- Science Committee IFREMER (France)
- Science Committee DIVERSITAS International (UNESCO, ESSP)
- Editorial Board of Biogeosciences

Citation Report

[Citation Report 2025](#), Orcid: 0000-0003-2117-4176

[Google Scholar](#): citations 35943, H index 90, i10 index 205

Selected key publications

- Boetius, A., K. Ravenschlag, C. Schubert, D. Rickert, F. Widdel, A. Gieseke, R. Amann, B. B. Jørgensen, U. Witte, O. Pfannkuche, (2000) A marine microbial consortium apparently mediating anaerobic oxidation of methane. **Nature** 407, 623 - 626.
- Michaelis W, Seifert R, Nauhaus K, Treude T, Thiel V, Blumberg M, Knittel K, Gieseke A, Peterknecht K, Pape T, Boetius A, Amann R, Jorgensen BB, Widdel F, Peckmann J, Pimenov NV, Gulin MB (2002) Microbial Reefs in the Black Sea Fueled by Anaerobic Oxidation of Methane, **Science** 297, 1013-1015
- Niemann, H., T. Lösekann, D. de Beer, M. Elvert, T. Nadalig, K. Knittel, R. Amann, E. J. Sauter, M. Schlüter, M. Klages, J. P. Foucher, A. Boetius, (2006) Novel microbial communities of the Haakon Mosby mud volcano and their role as methane sink. **Nature**, (443) 854 – 858.
- Inagaki F, Kuypers MM, Tsunogai U, Ishibashi J, Nakamura K, Treude T, Ohkubo S, Nakaseama M, Gena K, Chiba H, Hirayama H, Nunoura T, Takai K, Jørgensen BB, Horikoshi K, Boetius A (2006) Microbial community in a sediment-hosted CO₂ lake of the southern Okinawa Trough hydrothermal system. **PNAS** 103 (38), 13899-13900
- Jørgensen BB, A Boetius (2007) Feast and famine—microbial life in the deep-sea bed. **Nature Reviews Microbiology**, 5 (10), 770-781.
- Knittel K, Boetius A (2009). The anaerobic oxidation of methane - progress with an unknown process. **Annual Reviews of Microbiology** 63:311–34
- Boetius, A., S. Albrecht, K. Bakker, C. Bienhold, J. Felsen, M. Fernández-Méndez, S. Hendricks, C. Katlein, C. Lalande, T. Krumpen, M. Nicolaus, I. Peeken, B. Rabe, A. Rogacheva, E. Rybakova, R. Somavilla, F. Wenzhöfer and the RV Polarstern ARK27-3-Shipboard Science Party (2013). Massive export of algal biomass from the melting Arctic sea ice. **Science**, 339, 1430
- Boetius, A., F. Wenzhöfer (2013). Seafloor oxygen consumption fuelled by methane from cold seeps. **Nature Geoscience**, doi:10.1038/ngeo1926.
- Ruff, S. E; J Biddle, A Teske, K Knittel, A Boetius, A Ramette, 2015. Global dispersion and local diversification of the methane seep microbiome, **PNAS** 112(13), 4015-4020
- Boetius A, AM Anesio, JW Deming, JA Mikucki, JZ Rapp, 2015. Microbial ecology of the cryosphere: sea ice and glacial habitats. **Nature Reviews Microbiology** 13, 677–690

- Wegener, G, V Krukenberg, D Riedel, HE Tegetmeyer, A Boetius, 2015. Intercellular wiring enables electron transfer between methanotrophic archaea and bacteria. **Nature** 526 (7574), 587-590
- Jessen G. L., Lichtschlag A., Pantoja S., Ramette A., Wenzhöer F., Schubert C. J., Struck U. and Boetius A. (2017) Hypoxia causes preservation of labile organic matter and changes microbial community composition (Black Sea shelf) **Science Advances** DOI: 10.1126/sciadv.1601897
- Molari M., Guilini K., Lott C., Weber M., de Beer D., Meyer S., *Ramette A., Wegener G., Wenzhöfer F., Martin D., Cibic T., De Vittor C., Vanreusel A., Boetius A. (2018) CO₂ leakage alters biogeochemical and ecological functions of submarine sands. **Science Advances**. 4(2), eaao2040. doi:1126/sciadv.aao2040
- T Krumpen, HJ Belter, A Boetius, E Damm, C Haas, S Hendricks, et al. (2019). Arctic warming interrupts the Transpolar Drift and affects long-range transport of sea ice and ice-rafterd matter. **Scientific Reports** 9 (1), 5459
- TR Vonnahme, M Molari, F Janssen, F Wenzhöfer, M Haeckel, J Titschack, A Boetius (2020) Effects of a deep-sea mining experiment on seafloor microbial communities and functions after 26 years. **Science Advances** 6 (18), DOI: 10.1126/sciadv.aa5922
- von Appen W-J, Waite AM, Bergmann M, Bienhold C, Boebel O, Bracher A, Wenzhöfer F, Wietz M, Boetius A. (2021). Sea-ice derived meltwater stratification slows the biological carbon pump: results from continuous observations. **Nature Communications** 12(1)
- Morganti, T. M. , Slaby, B. M. , de Kluijver, A. , Busch, K. , Hentschel, U. , Middelburg, J. , Mollenhauer, G. , Dannheim, J. , Rapp, H. , Purser, A. and Boetius, A. (2022): Giant sponge grounds of Central Arctic seamounts are associated with extinct seep life. **Nature Communications**, 13 (638) . doi: 10.1038/s41467-022-28129-7
- Molari, M., Hassenrueck, C., *Laso-Pérez, R., Wegener, G., Offre, P., Scilipoti S., and Boetius, A. (2023). A hydrogenotrophic *Sulfurimonas* is globally abundant in deep-sea oxygen-saturated hydrothermal plumes. **Nature Microbiology** 8: 651–665. <https://doi.org/10.1038/s41564-023-01342-w>
- Wegener, G., R. Laso-Pérez, V. J. Orphan, and A. Boetius. Anaerobic Degradation of Alkanes by Marine Archaea. **Annu Rev Microbiol** 76 (Sep 8 2022): 553-77. doi: 10.1146/annurev-micro-111021-045911.
- German, C. R., Reeves, E. P., Türke, A., Diehl, A., Albers, E., Bach, W., Purser, A. . Ramalho, S. P. Suman, S. Mertens, C. Walter, M. Ramirez-Llodra, E., Schlindwein, V. Bünz S.& Boetius, A. (2022). Volcanically hosted venting with indications of ultramafic influence at Aurora hydrothermal field on Gakkel Ridge. **Nature Communications**, 13(1), 1-11. doi: 10.1038/s41467-022-34014-0

*Field Work (own participation,
chief scientist)

Ships

Area in situ instruments

*2023 FS POLARSTERN PS138.....Central Arctic.....OFOBS

*2021 Katamaran Ada Rebikoff.....Madeira.....Lula 1000

*2020 Katamaran Ada Rebikoff.....	Azores.....	Lula 1000
*2018 Katamaran Ada Rebikoff.....	Azores.....	Lula 1000
*2016 FS POLARSTERN PS101.....	Central Arctic.....	OFOBS, NUI HROV
*2015 FS SONNE SO242/2.....	South Pacific.....	OFOS, ROV KIEL 6000
*2014 FS POLARSTERN PS86.....	Central Arctic.....	OFOS, NUI HROV
2013 FS POLARSTERN ANT29-8	Southern Ocean	OFOS
*2012 FS POLARSTERN ARK27-3	Central Arctic	under-ice lander systems, OFOS
2011 FS POLARSTERN ARK26-3	Central Arctic	ice-teathered buoys
*2010 FS MERIAN 16/2	Barents Sea	AUV Sentry/ROV Genesis
*2010 FS MERIAN 15/1	Black Sea	JAGO/MOVE
*2009 FS MERIAN 13/3 and 4	Eastern Med.	ROV QUEST/AUV
2009 FS POLARSTERN ARK 24/2	Nordic margin	ROV QUEST/AUV
*2008 FS METEOR 76/3b	Congo, Angola	ROV QUEST
2008 FS SONNE 169	Okinawa Trough	ROV QUEST
2007 RV Pourquoi Pas?	Eastern Med.	ROV VICTOR 6000
*2007 RV METEOR 72/2	Black Sea	ROV QUEST/AUV Asterx
*2006 RV METEOR 70/2	Eastern Med.	ROV QUEST/AUV Asterx
2006 RV Pourquoi pas?	Barents Sea	ROV VICTOR 6000
2006 FS METEOR 68/2	Gulf v Mexico	ROV QUEST
*2005 FS Alkor 267 (EXOCET)	North Sea	ROV Cherokee, MOVE
2005 RV Point Lobos	Catalina Basin	ROV Tiburon
*2004 FS HEINCKE 208 (METROL)	North Sea	
2003 RV ATALANTE (Nautinil)	E Mediterranean	(submarine NAUTILE)
2003 RV POLARSTERN ARK XIX/3b	Barents Sea	(ROV VICTOR 6000, lander)
*2002 RV HEINCKE 180 (METROL)	North Sea	(lander)
*2002 RV HEINCKE 169 (METROL)	North Sea	(ROV AWI)
2001 RV ATALANTE (HMMV)	N-Atlantic	(ROV VICTOR 6000)
2001 RV SEWARD JOHNSON (LexEn) SEALINK)	Gulf of Mexico	(submarine JOHNSON
2000 FS SONNE 148/1 (TECFLUXII)	NE-Pacific	(ROV ROPOS, lander)
2000 FS POSEIDON 260-5 (BIGSET II)	NE-Atlantic	(lander)
2000 FS POSEIDON 260-3 (BIGSET II)	NE-Atlantic	(lander)
1999 FS SONNE 143/2 (TECFLUX I)	NE-Pacific	(lander)
1999 FS METEOR 46/2 (SFB 261)	S-Atlantic	(lander)
1998 FS METEOR 42/2 (BIGSET)	NE-Atlantic	(lander)
1998 FS SONNE 129 (BIGSET)	Arabian Sea	(lander)
1997 FS SONNE 118 (BIGSET)	Arabian Sea	(lander)
1996 FS METEOR 36/6 (BIGSET)	NE-Atlantic	(lander)
1995 FS METEOR 33/1 (pre-study BIGSET)		Indian Ocean (lander)
1995 FS METEOR 31/3 (pre-study BIGSET)		Arabian Sea
1993 FS METEOR 25/1 (TIEFMI)	E Mediterranean	
1993 FS POLARSTERN ARK IX/4	Laptev Sea	
1992 FS METEOR 21/6 (BIO-C-FLUX)	NE-Atlantic	(lander)
1992 FS METEOR 21/1 (BIO-C-FLUX)	NE-Atlantic	(lander)
1992 FS SONNE 77 (DISCOL)	S-Pacific	

1991 FS GAUSS (PRISMA)	North Sea
1991 RV VICKERS/NADIR (HERO)	E Pacific (submarine NAUTILE)
1990 RV NEW HORIZON (QUAGMIRE)	Equatorial Pacific
1989 RV MOANA WAVE (BEPRA I)	Equatorial Pacific
1989 FS METEOR 10/4 (BIO-C-FLUX)	NE-Atlantic (lander)

*Exemplary Invited
Talks or Session
Chair
(2010-2024)*

- 2024 EU Polar Week; Speaker “Introduction to the UN Ocean Decade Initiative Antarctica InSync”
- 2024 Taylor Prize Panel, Univ. Potsdam: Dialogue on Planetary Boundaries with J. Rockstrom
- 2023 Chair; One Planet - Polar Symposium; Paris Forum for Peace; France
- 2023 Arctic Frontiers Conference, Panel "What is Arctic Leadership - and is it changing?"
- 2022 German Shipping Day "Sustainability in Shipping"
- 2022 Leopoldina Journalists' College "Impacts of Climate Change"
- 2022 Lecture Climate and Ocean G7 Meeting of Climate, Energy and Environment Ministers
- 2022 Presentation on climate change Ludwig Erhard Summit
- 2021 Arctic Circle Panel „Linking MOSAIC, IPCC and COP26“
- 2021 ASM/FEMS World Microbe Forum Session and Plenary “Arctic change, carbon flux, and the microbes”
- 2021 ACCESS Südafrika “Into the Ice – the Case of the Arctic Amplification”
- 2020 IASS Ocean Dinner “Wie geht es der Tiefsee und den Polarregionen?”
- 2020 Physikalische Gesellschaft Uni Wien “In Eis und Schnee – Expeditionen in der Arktis”
- 2020 BIG Seminar Lausanne “Arctic change – Tipping points in the Arctic ocean ecosystem”
- 2019 Falling Walls Speaker “Breaking the Wall for Arctic Ice Propelling Climate Research to New Levels”
- 2019 Arctic Circle Iceland Session Arctic Tipping Points
- 2019 EGU presentation for the Vladimir Ivanovich Vernadsky Medal
- 2018: Leopoldina National Academy Annual Meeting Evening lecture "Oceans, Cryosphere and Man: What foreign nature means to us"
- Opening Lecture International Society Microbial Ecology 17 Leipzig
- 2018 IAS Hongkong Distinguished Lecture “The deep ocean space - observations on ecosystem functions and impacts”
- 2018 Jean Henley Memorial Lecture, Berlin
- 2017 Climate Impacts Potsdam Conference opening plenary “Human impacts on polar and deep seas: Knowing the unknown”
- 2017 Humboldt Universität Helmholtz lecture “Polar expeditions”
- 2017 Chair of the Goldschmidt Conference Paris (4000 Attendees)
- 2016 Goldschmidt Conference, Endowed Biogeochemistry lecture 2016
- 2016 ASM plenary session chair “Microbiology of the Anthropocene”
- 2016 EGU plenary talk (Active Planet Invited Lectures) "The active outer shell of Earth: What remains to be explored in carbon and life interactions?"

- 2016 Ocean Sciences plenary talk “At the interface of ocean sciences and society: Ecological aspects of deep-sea mining”
- 2015 Goldschmidt Conference, Invited lectures “Redox Gradients in Deep-Sea Sediments and Associated Microbial Communities” and “Anniversary Theme 06: 25 Years of Geobiology – Zooming in on Planet Earth's Microbes”
- 2015 ASM Outreach Talk “Deep Space, Ocean Life and Us”, Audubon Aquarium; and Session Chair “Oceans alive - Marine microbes in action”
- 2015 Gordon Research Conference “Polar Seas”; Session Chair “Ecosystem Dynamics of Arctic Shelves”
- 2014 ISME plenary session chair “Microbiomes of marine ecosystems: key functions from the cryosphere to the deep biosphere and talk “From surface to bottom: patterns of the marine bacterial microbiome related to environmental change”
- 2014 ASM plenary session chair “Global Change Microbiology: Anthropogenic Pressures and Microbial Responses” and talk “Walking Thin Ice: Microbial Feedback Mechanisms from a Shrinking Cryosphere”
- 2013 FEMS Plenary lecture “The Microbes who came in from the cold”
- 2013 Gordon Research Conference on Geobiology “Anaerobic oxidation of methane”
- 2012 Gordon Research Conference on Marine Microbes Session Chair “Life in Extreme Environments”
- 2012 Jacques Monod Conference “From the shoreline to the abyss - Scales of microbial biodiversity in marine sediments”
- 2012 ASM Session and lecture “Enviable microbial powers”
- 2011 FEMS Geneva 4th congress, session and talk “Environmental prokaryotes shaping global C and N cycles”
- 2011 VAAM opening talk “Microbial consumption of hydrocarbons in the deep sea: From methane seeps to oil spills”
- 2011 ASM 111th Gen. Meeting, Session “Marine Biogeochemistry: Limitations and Optimizations of Microbial Powers”
- 2011 Darwin Day (Darwin Center Netherlands) invited lecture “Biodiversity patterns of microorganisms in the sea: from a teaspoon of mud to the global ocean and back”
- 2010 ISME general meeting, Session “Life in the cold: ecological interactions and biogeochemical roles of polar microbial communities”
- 2010 ASM 110th Gen. Meeting, Session “Microbes in a Changing World”
- 2010 ASM 110th Gen. Meeting, Opening “Technology and Revolutions in Microbiology”

*Public Outreach
(Exemplary
Events
2010-2024)*

- 2024 Terra X “Survival” – 2 parts, Moderator and Author
- 2024 TV Series „Expedition Arctic 2 -Dive to the North Pole” (main PI)
- 2024 Climate talks – German Embassy in Paris
- 2023 Zeit Podcast “alles gesagt”
- 2023 Audio Blog Bremen Zwei "Arctic Expedition"
- 2023 Frankfurter Allgemeine Zeitung "Marine Protection Agreement"
- 2022 Opening of the new touring exhibition "Meer.Natur.Schutz" from the Federal Agency for Nature Conservation
- 2022 ZDF "Our Continents - Australia and Oceania with Professor Antje Boetius".
- 2022 Member of the Science Panel of the Science Year 2022
- 2021 Einstein Lecture Dahlem "Of Man and the Sea"

- 2021 Massilius Lecture University of Heidelberg "On the Future of Ocean and Polar Regions"
- 2021 Volksbühne Berlin "Anthropos Tyrann (Oedipus)", performance as Pythia
- 2021 Panel "Love and Nature" at the Silbersalz Science & Media Festival
- 2020 Participation in the think tank #FactoryWisskomm of the BMBF
- 2020 Talkshow hart aber fair
- 2020 UNCEF annual meeting at Bellevue Palace
- 2020 Scenic readings for the project "Theater of the Anthropocene" (Germany, Chinese-German dialogue)
- 2019 Panel discussion at the Citizens' Festival of the German President Frank-Walter Steinmeier at Bellevue Palace
- 2019 Fall Conference of the German Ethics Council
- 2018 Head of Science Media Festival "Silbersalz" Halle
- 2018 Dalhousie Great Debate: "What is the Next Frontier: Space or the Ocean?"
- 2018 Frankfurt Luminale "Arctic change and us"
- 2018 Opening MS Wissenschaft - Science Year Working Worlds of the Future
- 2017 re:publica congress: communication on "digital ocean"
- 2017 Literature Festival Berlin: Panel discussion and readings with authors
- 2017 DFG excursion "Ocean Experience", lecture and presentation "Sea and Man" with actor D. Bennet
- 2016 Opening of the Science Year "Oceans"
- 2016 Arte TV program "5 Women 5 Oceans - Icy Deep Sea"
- 2015 ARD alpha TV program "Advisor to the Mighty. The National Academy of Sciences Leopoldina" (Interview A. Boetius).
- 2015 TV Alpha Forum "Wissen im Fluss" - Interview on Deep sea research and deep sea threats
- 2015 Time Chances article "Don't dive" (Gender in Academia).
- 2014 RBB Radio Interviews Polarstern - Arctic Week
- 2014 XLAB Göttingen "Planet Deep Sea"
- 2014 Science Notes - Climate Change
- 2013 ZDF TV program Makro - Deep Sea Resources
- 2013 SWR Planet Wissen TV magazines on "Deep Sea", "Ocean Resources"
- 2013 Interviews Brigitte, Girlfriend, Donna
- 2012 NDR TV Talkshow
- 2012 TV Total
- 2012 MS Wissen - "Project Future Earth" Symposium Arctic Change
- 2011 DAS! TV show
- 2011 Book release "The Dark Paradise", various radio interviews
- 2011 Business Vogue Interview
- 2011 Studium Generalis Lecture Universities of Heidelberg, Würzburg, Marburg
- 2010 TV broadcasts Quarks, Tigerentenclub, heute journal, Tagesschau
- 2010 DFG Excursion Lecture "The Abyss - Deep Sea Research today".