

## Curriculum vitae: Bernd Blasius

Prof. Dr. **Bernd Blasius**

\*05.09.1965, male, German

Mathematical Modelling

Institute for Chemistry and Biology of the Marine Environment

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Full Professor (W3, permanent)



### Academic training

1986-1993      Physics, TU Darmstadt, Germany  
Supervisor of diploma thesis: Prof. Dr. Friedrich Beck

### Academic degrees

1997              Dr. rer. nat. in Physics, TU Darmstadt,  
Supervisors: Prof. Dr. Friedrich Beck and Prof. Dr. Ulrich Lüttge

### Academic positions

Since 2007      Permanent Full Professor (W3) for Mathematical Modelling at the ICBM,  
University of Oldenburg, Germany

2004 – 2007      Junior Professor for Theoretical Ecology  
Institute of Physics, University Potsdam, Germany

2001 – 2007      Leader of my own independent Junior Research Group (Volkswagen Stiftung)  
at the Institute of Physics, University Potsdam, Germany

1997 – 2001      Post-Doc at the Department of Life Science (Prof. Dr. Lewi Stone),  
Tel Aviv University, Israel

### Professional experience

Since 2025      Deputy director of the Institute for Chemistry and Biology of the Marine  
Environment (ICBM), University of Oldenburg

Since 2025      Codirector of the Helmholtz Institute for Functional Marine Biodiversity at the  
University of Oldenburg (HIFMB)

Since 2017      Founding member of the HIFMB

2017 - 2019      Deputy director of the ICBM, University of Oldenburg, Germany

2015 – 2017      Director of the ICBM, University of Oldenburg, Germany

2013 – 2015      Deputy director of the ICBM, University of Oldenburg, Germany

## Funding

|                                | <b>Funding</b> | <b>Type of grant</b>  | <b>Period</b>      | <b>Sum €</b>     |
|--------------------------------|----------------|-----------------------|--------------------|------------------|
| UTOPIA                         | DFG            | Research grant        | 2027-2030          | 360 000          |
| DREAM-EP                       | BMBF           | Research grant        | 2026-2030          | 320 000          |
| AGELESS                        | BMBF           | Blue Ocean Cluster    | 2024-2027          | 180 000          |
| INDIFUN-AI                     | BMBF           | Blue Ocean Cluster    | 2024-2027          | 180 000          |
| BASS                           | DFG            | FOR 5267              | 2022-2026          | 100 000          |
| Global Carbon                  | MWK            | Research grant        | 2021-2024          | 200 000          |
| Navigation in Vertebrates      | DFG            | SFB 1372              | 2019-2026          | 750 000          |
| DynaCom                        | DFG            | FOR 2716              | 2019-2025          | 300 000          |
| Roseobacter                    | DFG            | SFB (TRR) 51          | 2018-2021          | 516 000          |
| Poser                          | MWK            | Research grant        | 2016-2020          | 230 000          |
| EcoMol                         | MWK            | Graduate School       | 2016-2019          | 60 000           |
| IBR                            | MWK            | Graduate School       | 2015-2018          | 60 000           |
| DynaTrait                      | DFG            | Priority Programme    | 2015-2018          | 185 000          |
| BEFmate                        | MWK            | Research grant        | 2013-2017          | 190 000          |
| Polar Time                     | Helmholtz      | Virtual Institute     | 2013-2017          | 330 000          |
| Networks on networks           | DFG            | FOR 1748              | 2012-2017          | 490 000          |
| Bioinvasion & epidemic spread  | VW             | Research grant        | 2008-2014          | 650 000          |
| Complex nonlinear processes    | DFG            | SFB 555               | 2006-2009          | 170 000          |
| Bioinvasion into Mediterranean | BMBF           | Research grant        | 2006-2009          | 260 000          |
| Synchronization in ecosystems  | VW             | Junior Research Group | 2001-2007          | 970 000          |
| <b>Total</b>                   |                |                       | <b>2001 – 2030</b> | <b>6 500 000</b> |

## Commissions of Trust

|             |                                                                                                                                                                                                                                    |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2024 – now  | External Advisory Board, Graduate School EcoRisk (University of Osnabrück)                                                                                                                                                         |
| 2021 – now  | Member of the Scientific Advisory Board for the<br>Vienna Doctoral School of Functional and Evolutionary Ecology                                                                                                                   |
| Since 2018  | Recommender of PCI Peer Community in Ecology                                                                                                                                                                                       |
| 2014 - 2016 | Member Steering Committee: DFG Priority Programme 1704 “Dyna Trait”                                                                                                                                                                |
| 2011 - now  | Editor Springer Book Series: Earth Systems Data & Models                                                                                                                                                                           |
| 2010 - 2018 | Member of “Faculty of 1000” Population Ecology                                                                                                                                                                                     |
| 2005 - 2024 | Editorial Board: Ecology Letters                                                                                                                                                                                                   |
| Reviewer    | >30 scientific journals (e.g., Nature, Science, PNAS, Ecology Letters, American Naturalist, Physical Review Letters, a. m. o.)<br>> 10 different funding agencies<br>several comparative assessments of professorship appointments |

## Supervisor/Advisor

|                       |                                                                                                                        |
|-----------------------|------------------------------------------------------------------------------------------------------------------------|
| Supervisor PhD theses | 19 PhD thesis (of these 15 completed, 7 still working in academia)                                                     |
| Advisor Postdocs      | 21 Postdocs (of whom 16 are still working in academia and five gained a permanent lecturer or professorship position). |

## Citations

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134 peer-reviewed publications

total citations: 17388 (Google Scholar), 8666 since 2021<sup>^</sup>

h-index: 49 (Google Scholar), 32 since 2021

## 10 selected peer-reviewed publications

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Dittmar T, Lennartz ST, Buck-Wiese H, Hansell DA, Santinelli C, Vanni C, **Blasius B**, Hehemann JH (2021) Enigmatic persistence of dissolved organic matter in the ocean. *Nature Reviews Earth & Environment* 30, 1-4.

**Blasius B**, Rudolf L, Weithoff G, Gaedke U, Fussmann GF (2020) Long-term cyclic persistence in an experimental predator–prey system. *Nature* 577, 226-30.

Ryabov AB, de Roos AM, Meyer B, Kawaguchi S, **Blasius B** (2017) Competition-induced starvation drives large-scale population cycles in Antarctic krill. *Nature Ecology & Evolution* 1, 0177.

Seebens, H., Blackburn TM, Dyer ED, Genovesi P, Hulme PE, Jeschke JM, Pagad S, Pyšek P, Winter M, Arianoutsou M, Bacher S, **Blasius B**, et al. (2017) No saturation in the accumulation of alien species worldwide. *Nature Communication* 8, 14435.

Massi, .M, Weithoff G, Kuckländer N, Gaedke U & **Blasius B** (2015) Enhanced Moran effect by spatial variation in environmental autocorrelation. *Nature Communications* 6, 5993.

Seebens H, Gastner MT & **Blasius B** (2013) The risk of marine bioinvasion caused by global shipping. *Ecology Letters* 16, 782–790.

Kaluza P, Kölzsch A, Gastner MT, **Blasius B** (2010) The complex network of global cargo ship movements. *Journal of the Royal Society Interface* 7, 1093-103.

Gross, T., D'Lima, C. J. D., & **Blasius, B.** (2006) Epidemic dynamics on an adaptive network. *Physical Review Letters* 96, 208701.

**Blasius B** & Stone L (2000) Ecology: Nonlinearity and the Moran effect. *Nature* 406, 846–847.

**Blasius B**, Huppert A & Stone L (1999) Complex dynamics and phase synchronization in spatially extended ecological systems. *Nature* 399, 354–359.

## Conferences

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| Speaker   | More than 100 invited talks and lectures at international conferences, summer schools and seminars |
| Organizer | Steering committee and board member of many conferences and workshops                              |

## Media Publication Merits

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|                     |                                                                                                                                                                                                               |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| New & Views         | Work has been featured as research highlight or Editors Pick in several journals, such as Nature, Science, PNAS, Physical Review Letters, Phys. Rev. E, Faculty of 1000, Google classic in Nonlinear Science  |
| International Media | Work has been covered in mainstream media, including National Geographic, BBC World, Los Angeles Times, Wall Street Journal, NBN News, New Scientist, Le Monde, Wired, Wiener Zeitung                         |
| German Media        | FAZ (in print), Spiegel online, Zeit online, Süddeutsche Zeitung, Bild der Wissenschaft, Die Welt, Stern<br>ZDF tivi – Kika logo, ARD Wissen vor 8, SRF Tagesschau, TV documentation ZDF Deutschland von oben |

## Most important scientific contributions

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Seminal contributions to the field of population cycles (*Nature* 1999, *PNAS* 2010, *Nature Ecol. Evo.* 2017, *Nature* 2020)

Major contributions to the theory of biological invasions (*Ecol. Lett.* 2013, *Glob. Change. Bio.* 2015, *PNAS* 2016, *Ecol. Lett.* 2017, *Nature Comm.* 2017, *PNAS* 2018)

Pioneering the notion of phase synchronization in ecology (*Nature* 1999)

Originating the field of adaptive networks (*Phys. Rev. Lett.* 2006, *J. R. Soc. Interface* 2007)

Postulation of the intermediate distance hypothesis for biological invasions (*Ecol. Lett.* 2017)

First quantitative description of the global shipping network (*J. R. Soc. Interface* 2010)

Pioneering the statistical physics of board games (*Phys. Rev. Lett.* 2009)

Introduction of structural kinetic modelling to metabolic networks (*PNAS* 2006)

Pioneering the notion of emergent recalcitrance of dissolved organic matter (*Nature Rev Earth Science* 2021)

Discovery of the phenomenon of supersensitivity to model structure (*Biol. Lett.* 2005)

First discovery of chimera states in coupled populations of oscillators (*Phys. Rev. E* 2014)

Discovery of quasiregular ring waves in heterogeneous media (*Nature* 1999, *Phys. Rev. Lett.* 2005, *Phys. Rev. Lett.* 2007)

Discovery of the phenomenon of anomalous phase synchronization (*Phys. Rev. E* 2003)

Discovery of the phenomenon of an enhanced Moran effect (*Nature Comm.* 2015)

Theory of resource competition in inverse gradients (*Ecol. Lett.* 2011)

Discovery of power-law distribution in popularity of chess games (*Phys. Rev. Lett.* 2009) and COVID-19 cases (*Chaos* 2020)

Pioneering a framework to extract functional diversity and species traits from ecological monitoring data (*PNAS* 2022)

Formulation of the Gossip paradox of why bacteria share genes (*Math. Biosc. & Eng.* 2022)

## Fields of Expertise

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Complex systems theory, computational modeling, theoretical ecology

## Publications

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### Peer reviewed publications

- Reddin RC, Kocsis Á, Berends S, **Blasius B**, Dajka JC, Freund J, Hillebrand H, Kaur T, Kiessling W, Kucera M, Meysick L, Siebenhuener B, Smith I, Strack T, Grothmann T, Rillo M, Jonkers L (2026) Climate change will displace habitats prioritised for marine protected areas in the high seas. Research Square.
- Ranjan R, Ryabov A, Halsey K, Hillebrand H, Thomas MK, **Blasius B** (2026) A growth-maintenance tradeoff determines nutrient-limited growth in phytoplankton. arXiv:2107.13792.
- Lücken L, **Blasius B** (2026) A network-based analysis of bacterial growth on substrate mixtures uncovers glucose inhibition in *Phaeobacter inhibens*. Scientific Reports 16:1289.
- Schucht T, **Blasius B** (2025) Shared preferences along stress gradients: how a growth-tolerance trade-off drives unimodal diversity and trait lumping. Theoretical Ecology 18, 13 <https://doi.org/10.1007/s12080-025-00607-w>
- Lücken L, Mitschke N, Dittmar T, **Blasius B** (2025) Network Flow Methods for NMR-Based Compound Identification. Analytical Chemistry 97, 4832-4840. <https://doi.org/10.1021/acs.analchem.4c01652>
- Lennartz ST, Keller DP, Oschlies A, **Blasius B**, Dittmar T (2024) Mechanisms underpinning the net removal rates of dissolved organic carbon in the global ocean. Global Biogeochemical Cycles 38: e2023GB007912. <https://doi.org/10.1029/2023GB007912>
- Ryabov A, Berger U, **Blasius B**, Meyer B (2023) Driving forces of Antarctic krill abundance. Science Advances 9, eadh4584.
- McLaren JD, Schmaljohann H, **Blasius B** (2023) Gauge-and-compass migration: inherited magnetic headings and signposts can adapt to changing geomagnetic landscapes. Movement Ecology 11, 37. [doi.org/10.1186/s40462-023-00406-0](https://doi.org/10.1186/s40462-023-00406-0)
- Ryabov A, **Blasius B**, Hillebrand H, Olenina I, Gross T (2022) Estimation of functional diversity and species traits from ecological monitoring data. Proceedings of the National Academy of Sciences 119, e2118156119. [doi.org/10.1073/pnas.2118156119](https://doi.org/10.1073/pnas.2118156119)
- McLaren JD, Schmaljohann H, **Blasius B** (2022) Predicting performance of naïve migratory animals, from many wrongs to self-correction. Communications Biology 5, 1058. [doi.org/10.1038/s42003-022-03995-5](https://doi.org/10.1038/s42003-022-03995-5)
- Lahiri A, Kamrul Hassan M, **Blasius B**, Kurths J (2022) Dynamic scaling and stochastic fractal in nucleation and growth processes. Chaos: An Interdisciplinary Journal of Nonlinear Science 32, 093124. [doi.org/10.1063/5.0097417](https://doi.org/10.1063/5.0097417)
- Lücken L, Lennartz ST, Froehlich J, **Blasius B** (2022) Emergent Diversity and Persistent Turnover in Evolving Microbial Cross-Feeding Networks. Frontiers in Network Physiology 2: 834057. [doi:10.3389/fnetp.2022.834057](https://doi.org/10.3389/fnetp.2022.834057)
- Jamieson-Lane A, Friedrich A, **Blasius B** (2022) Comparing optimization criteria in antibiotic allocation protocols. Royal Society Open Science 9: 220181. [doi: 10.1098/rsos.220181](https://doi.org/10.1098/rsos.220181)
- Mohammed M, **Blasius B**, Ryabov A (2022) Coexistence patterns and diversity in a trait-based metacommunity on an environmental gradient. Theoretical Ecology 15:51–63. [doi.org/10.1007/s12080-021-00526-6](https://doi.org/10.1007/s12080-021-00526-6)
- Jamieson-Lane A, **Blasius B** (2022) The gossip paradox: Why do bacteria share genes? Mathematical Biosciences and Engineering 19: 5482–5508. [doi: 10.3934/mbe.2022257](https://doi.org/10.3934/mbe.2022257)
- Jamieson-Lane A, **Blasius B** (2021) Comment on “Indirect Fitness Benefits Enable the Spread of Host Genes Promoting Costly Transfer of Beneficial Plasmids”. PLOS Biology 19: e3001449. DOI: [10.1371/journal.pbio.3001449](https://doi.org/10.1371/journal.pbio.3001449)
- Bauer B, Kleyer M, Albach DC, **Blasius B**, Brose U, Ferreira-Arruda T, Feudel U, Gerlach G, Hof C, Kreft H, Kuczynski L. (2021) Functional trait dimensions of trophic metacommunities. Ecography 44: 1486-500.
- Dittmar T, Lennartz S, Buck Wiese H, Hansell D, Santinelli C, Vanni C, **Blasius B**, Hehemann JH (2021) Enigmatic persistence of dissolved organic matter in the oceans. Nature Reviews Earth & Environment 2: 570-583.
- Tschink D, Gerlach G, Winkhofer M, Kohlmeier C, **Blasius B**, Eickelmann L, Schadowell Y, Strahl J (2021) Diminished growth and vitality in juvenile *Hydractinia echinata* under anticipated future temperature and variable nutrient conditions. Scientific Reports 11: 1-4.
- Ryabov A, Kerimoglu O, Litchman E, Olenina I, Roselli L, Basset A, Stanca E, **Blasius B** (2021) Shape matters: the relationship between cell geometry and diversity in phytoplankton. Ecology Letters 24: 847-861.
- Upmann T, Uecker H, Hammann L, **Blasius B** (2021) Optimal stock–enhancement of a spatially distributed renewable resource. Journal of Economic Dynamics and Control 123: 104060.
- Hammann L, Silliman B, **Blasius B** (2021) Optimal planting distance in a simple model of habitat restoration with an Allee Effect. Frontiers in Marine Science 7: 1248.

- Gross T, Allhoff KT, **Blasius B**, Brose U, Drossel B, Fahimipour AK, Guill C, Yeakel JD, Zeng F (2020). Modern models of trophic meta-communities. *Philosophical Transactions of the Royal Society B* 375: 20190455.
- Jamieson-Lane A, **Blasius B** (2020) Calculation of epidemic arrival time distributions using branching processes. *Physical Review E* 102: 042301.
- Mentges A, Deutsch C, Feenders C, Lennartz ST, **Blasius B**, Dittmar T (2020) Microbial Physiology Governs the Oceanic Distribution of Dissolved Organic Carbon in a Scenario of Equal Degradability. *Frontiers in Marine Science* 7: 732.
- Prillwitz KV, **Blasius B** (2020) Mid-domain effect for food chain length in a colonization–extinction model. *Theoretical Ecology* 13: 301-15.
- Tsakalakis I, **Blasius B**, Ryabov A (2020) Resource competition and species coexistence in a two-patch metaecosystem model. *Theoretical Ecology* 13: 209-21.
- Blasius B** (2020) Power-law distribution in the number of confirmed COVID-19 cases. *Chaos* 30: 093123.
- Blasius B**, Rudolf L, Weithoff G, Gaedke U, Fussmann GF (2020) Long-term cyclic persistence in an experimental predator–prey system. *Nature* 577: 226-30.
- Spruch L, Hellwig J, Zotz G, **Blasius B** (2019) Modeling community assembly on growing habitat “islands”: a case study on trees and their vascular epiphyte communities. *Theoretical Ecology* 12: 513-29.
- Mentges A, Feenders C, Deutsch C, **Blasius B**, Dittmar T (2019) Long-term stability of marine dissolved organic carbon emerges from a neutral network of compounds and microbes. *Scientific Reports* 9: 1-3.
- Wünsch D, Trautwein K, Scheve S, Hinrichs C, Feenders C, **Blasius B**, Schomburg D, Rabus R (2019) Amino acid and sugar catabolism in the marine bacterium *Phaeobacter inhibens* DSM 17395 from an energetic viewpoint. *Applied and Environmental Microbiology* 85: e02095-19.
- Seebens H, Briski E, Ghabooli S, Shiganova T, MacIsaac HJ, **Blasius B** (2019) Non-native species spread in a complex network: the interaction of global transport and local population dynamics determines invasion success. *Proceedings of the Royal Society B* 286: 20190036.
- Kleyer M, Trinogga J, Cebrián-Piqueras MA, Trenkamp A, Fløjgaard C, Ejrnæs R, Bouma TJ, Minden V, Maier M, Mantilla-Contreras J, Albach DC, **Blasius B** (2019) Trait correlation network analysis identifies biomass allocation traits and stem specific length as hub traits in herbaceous perennial plants. *Journal of Ecology* 107: 829-42.
- Mittler U, **Blasius B**, Gaedke U, Ryabov AB (2019) Length–volume relationship of lake phytoplankton. *Limnology and Oceanography: Methods* 17: 58-68.
- Trautwein K, Hensler M, Wiegmann K, Skorubskaya E, Wöhlbrand L, Wünsch D, Hinrichs C, Feenders C, Müller C, Schell K, Ruppertsberg H, Vagts J, Koßmehl S, Steinbüchel A, Schmidt-Kopplin P, Wilkes H, Hillebrand H, **Blasius B**, Schomburg D, Rabus R (2018) The marine bacterium *Phaeobacter inhibens* secures external ammonium by rapid buildup of intracellular nitrogen stocks. *FEMS Microbiology Ecology* 94: fyy154.
- Tsakalakis I, Pahlow M, Oschlies A, Blasius B, Ryabov AB (2018) Diel light cycle as a key factor for modelling phytoplankton biogeography and diversity. *Ecological Modelling* 384: 241-8.
- Kölzsch A, Kleyheeg E, Kruckenberg H, Kaatz M, **Blasius B** (2018) A periodic Markov model to formalise animal migration on a network. *Royal Society Open Science* 5: 180438.
- Seebens H, Blackburn TM, Dyer EE, Genovesi P, Hulme PE, Jeschke JM, Pagad S, Pyšek P, van Kleunen M, Winter M, Ansong M, Arianoutsou M, Bacher S, **Blasius B**, et al. (2018) Global rise in emerging alien species results from increased accessibility of new source pools. *PNAS*, 115: E2264-73.
- Hillebrand H, **Blasius B**, Borer ET, Chase JM, Downing JA, Eriksson BK, Filstrup CT, Harpole WS, Hodapp D, Larsen S, Lewandowska AM (2018) Biodiversity change is uncoupled from species richness trends: Consequences for conservation and monitoring. *J Applied Ecology* 55: 169-84.
- Bearup, D, **Blasius B** (2017) Ecotone formation induced by the effects of tidal flooding: A conceptual model of the mud flat-coastal wetland ecosystem. *Ecological Complexity* 32: 217-227.
- Liao J, Bearup D, **Blasius B** (2017) Diverse responses of species to landscape fragmentation in a simple food chain. *Journal of Animal Ecology* 86: 1169-1178.
- Liao J, Bearup D, **Blasius B** (2017) Food web persistence in fragmented landscapes. *Proceedings of the Royal Society B* 284: 20170350.
- Ryabov AB, de Roos AM, Meyer B, Kawaguchi S, **Blasius B** (2017) Competition-induced starvation drives large scale population cycles in Antarctic Krill. *Nature Ecology & Evolution* 1: 0177.
- Mentges A, Feenders C, Seibt M, **Blasius B**, Dittmar T (2017) Functional Molecular Diversity of Marine Dissolved Organic Matter is Reduced During Degradation. *Frontiers in Marine Science* 4: 194.
- Liao J, Bearup D, Wang Y, Nijs I, Bonte D, Li Y, Brose U, Wang S, **Blasius B** (2017) Robustness of metacommunities with omnivory to habitat destruction: Disentangling patch fragmentation from patch loss. *Ecology* 98: 1631-1639.
- Trautwein K, Feenders C, Hulsch R, Ruppertsberg H, Strijkstra A, Kant M, Vagts J, Wünsch D, Michalke M, Maczka M, Schulz S, Hillebrand H, **Blasius B**, Rabus R (2017) Non-Redfield, nutrient synergy, and flexible internal elemental stoichiometry in a marine bacterium. *FEMS Microbiology Ecology* 93: fix059.

- Wickman J, Diehl S, **Blasius B**, Klausmeier CA, Ryabov AB, Brännström Å (2017) Determining selection across heterogeneous landscapes: a perturbation-based method and its application to modeling evolution in space. *The American Naturalist* 189: 381-95.
- Wöhlbrand L, Wemheuer B, Feenders C, Ruppertsberg HS, Hinrichs C, **Blasius B**, Daniel R, Rabus R (2017) Complementary metaproteomic approaches to assess the bacterioplankton response towards a phytoplankton spring bloom in the southern North Sea. *Frontiers in Microbiology*, 8: 442.
- Seebens H, Blackburn TM, Dyer EE, Genovesi P, Hulme PE, Jeschke JM, Pagad S, Pyšek P, Winter M, Arianoutsou M, Bacher S, **Blasius B**, et al. (2017) No saturation in the accumulation of alien species worldwide. *Nature Communications*, 8: 14435.
- Seebens H, Essl F, **Blasius B** (2017) The intermediate distance hypothesis of biological invasions. *Ecology Letters* 20: 158-165.
- Wöhlbrand L, Rabus R, **Blasius B**, Feenders C (2017) Influence of nanoLC column and gradient length as well as MS/MS frequency and sample complexity on shotgun protein identification of marine bacteria. *Journal of Molecular Microbiology and Biotechnology* 27: 199-212.
- Trautwein K, Will SE, Hulsch R, Maschmann U, Wiegmann K, Hensler M, Michael V, Ruppertsberg H, Wunsch D, Feenders C, Kaltenhäuser S, Ulbrich M, Schmidt-Hohagen K, **Blasius B**, Petersen J, Schomburg D, Rabus R (2016) Native plasmids restrict growth of *Phaeobacter inhibens* DSM 17395. Energetic costs of plasmids assessed by quantitative physiological analyses. *Environmental Microbiology* 18: 4817–4829.
- Ritterskamp D, Feenders C, Bearup D, **Blasius B** (2016) Evolutionary food web models: effects of an additional resource. *Theoretical Ecology* 9: 501-512.
- Ritterskamp D, Bearup D, **Blasius B** (2016) Emergence of evolutionary cycles in size-structured food webs. *Journal of Theoretical Biology* 408: 187-197.
- Delfau JB, Ollivier H, Cristóbal C, **Blasius B**, Hernández-García E (2016) Pattern formation with repulsive soft-core interactions: discrete particle dynamics and Dean-Kawasaki equation. *Phys. Rev. E* 94: 042120.
- Ritterskamp D, Bearup D, **Blasius B** (2016) A new dimension: Evolutionary food web dynamics in two dimensional trait space. *Journal of Theoretical Biology* 405: 66-81.
- Strijkstra A, Trautwein K, Roesler A, Feenders C, Danzer D, **Blasius B**, Rabus R (2016) High performance CCD camera system for digitalization of 2D DIGE gels. *Proteomics* 16: 1975–1979.
- Hodapp D, Hillebrand H, **Blasius B**, Ryabov AB (2016) Environmental and trait variability constrain community structure and the biodiversity-productivity relationship. *Ecology* 97: 1463-1474.
- Moorthi SD, Schmitt J, Ryabov A, Tsakalakis I, **Blasius B**, Prella L, Tiedemann M, Hodapp D (2016) Unifying ecological stoichiometry and metabolic theory to predict production and trophic transfer in a marine planktonic food web. *Philosophical Transactions Royal Society B* 71: 20150270.
- Seebens H, Schwartz N, Schupp PJ, **Blasius B** (2016) Predicting the spread of marine species introduced by global shipping. *PNAS* 113: 5646-51.
- Wöhlbrand L, Ruppertsberg HS, Feenders C, **Blasius B**, Braun HP, Rabus R (2016) Analysis of membrane protein complexes of the marine sulfate reducer *Desulfobacula toluolica* Tol2 by 1D Blue Native-PAGE complexome profiling and 2D Blue Native-/SDS-PAGE. *Proteomics* 16: 973-988.
- Ryabov AB, Morozov A, **Blasius B** (2015) Imperfect prey selectivity of predators promotes biodiversity and irregularity in food webs. *Ecology Letters* 18: 1262-1269.
- Seebens H, Essl F, Dawson W, Fuentes N, Moser D, Pergl J, Pyšek P, Kleunen M, Weber E, Winter M, **Blasius B** (2015) Global trade will accelerate plant invasions in emerging economies under climate change. *Global Change Biology* 21: 4128-4140.
- Paulau PV, Feenders C, **Blasius B** (2015) Motif analysis in directed ordered networks and applications to food webs. *Scientific Reports* 5: 11926.
- Massie TM, Weithoff G, Kuckländer N, Gaedke U, **Blasius B** (2015) Enhanced Moran effect by spatial variation in environmental autocorrelation. *Nature Communications* 6: 5993.
- Ryabov AB, **Blasius B** (2014) Depth of the Biomass Maximum Affects the Rules of Resource Competition in a Water Column. *The American Naturalist* 184: E132-E146.
- Schoenmakers S, Hilbe C, **Blasius B**, Traulsen A (2014) Sanctions as honest signals—The evolution of pool punishment by public sanctioning institutions. *Journal of Theoretical Biology* 356: 36-46.
- Blasius B** (2014) Make your trappings count: The mathematics of pest insect monitoring. Comment on "Multiscale approach to pest insect monitoring: Random walks, pattern formation, synchronization, and networks" by Petrovskii et al. *Physics of Life Reviews* 11: 531-532.
- Koßmehl S, Wöhlbrand L, Drüppel K, Feenders C, **Blasius B**, Rabus R (2013) Subcellular protein localization (cell envelope) in *Phaeobacter inhibens* DSM 17395. *Proteomics* 13: 2743-2760.
- Massie TM, Ryabov A, **Blasius B**, Weithoff G, Gaedke U (2013) Complex transient dynamics of stage-structured populations in response to environmental changes. *The American Naturalist* 182: 103-119.
- Seebens H, Gastner MT, **Blasius B** (2013) The risk of marine bioinvasion caused by global shipping. *Ecology Letters* 16: 782-790.

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