

Publication List

Matthias Hofmann

Senior scientist at the
Potsdam Institute for Climate Impact Research

CITATION SUMMARY

Total ISI citations: 692

h-index 12, i.e. 12 papers with 12 or more citations (as of June 2014)

Articles in Peer-Reviewed ISI Journals:

2014

[21] Lewandowska A. M., D. G. Boyce, **M. Hofmann**, B. Matthiessen, U. Sommer, and B. Worm (2014), Effects of sea surface warming on marine plankton. *Ecology Letters*, 17(5), 614-623, doi:10.1111/ele.12265 **Journal Impact Factor: 17.949, Number of ISI Citations: 0**

2013

[20] Olonscheck, D., **M. Hofmann**, B. Worm, and H. J. Schellnhuber (2013), Decomposing the effects of ocean warming on chlorophyll(a) concentrations into physically and biologically driven contributions, *Environmental Research Letters*, 8 014043, doi:10.1088/1748-9326/8/1/014043 **Journal Impact Factor: 3.582, Number of ISI Citations: 3**

2011

[19] **Hofmann, M.**, B. Worm, S. Rahmstorf, and H. J. Schellnhuber (2011), Declining ocean chlorophyll under unabated anthropogenic CO₂ emissions. *Environmental Research Letters*, 6 034035 doi:10.1088/1748-9326/6/3/034035 **Journal Impact Factor: 3.582, Number of ISI Citations: 2**

[18] **Hofmann, M.**, and M. A. Morales Maqueda (2011), The response of Southern Ocean eddies to increased mid-latitude westerlies: A non-eddy resolving model study. *Geophysical Research Letters*, 38, L03605, doi:10.1029/2010GL045972 **Journal Impact Factor: 3.982, Number of ISI Citations: 10**

2010

[17] **Hofmann, M.**, and H. J. Schellnhuber (2010), Ocean Acidification: A Millennial Challenge. *Energy and Environmental Science (RSC)*, 3, 1883-1896, doi:10.1039/C000820F **Journal Impact Factor: 11.653, Number of ISI Citations: 8**

2009

[16] **Hofmann, M.**, and S. Rahmstorf (2009), On the stability of the Atlantic Meridional Overturning Circulation. *Proceedings of the National Academy of Sciences (PNAS)*, 106, 20584-20589, doi:10.1073/pnas.0909146106 **Journal Impact Factor: 9.737, Number of ISI Citations: 30**

[15] Kuhlbrodt, T., S. Rahmstorf, K. Zickfeld, F. Vikerbo, S. Sundby, **M. Hofmann**, P. M. Link, A. Bondeau, W. Cramer, and C. Jaeger (2009), An integrated assessment of changes in the thermohaline circulation. *Climatic Change*, 96, 489-537 **Journal Impact Factor: 3.634, Number of ISI Citations: 32**

[14] **Hofmann, M.**, and H.-J. Schellnhuber (2009), Oceanic acidification affects marine carbon pump and triggers extended marine oxygen holes. *Proceedings of the National Academy of Sciences (PNAS)*, 106, 3017-3022, doi:10.1073/pnas.0813384106 **Journal Impact Factor: 9.737, Number of ISI Citations: 60**

[13] **Hofmann, M.**, and M. A. Morales Maqueda (2009), Geothermal heat flux and its influence on the oceanic abyssal circulation and radiocarbon distribution. *Geophysical Research Letters*. 36, L03603, doi:10.1029/2008GL036078 **Journal Impact Factor: 3.982, Number of ISI Citations: 5**

2008

[12] Brovkin, V., J. Kim, **M. Hofmann**, and R. Schneider (2008), A lowering effect of reconstructed Holocene changes in sea surface temperatures on the atmospheric CO₂ concentration. *Global Biogeochemical Cycles*, 22, GB1016, doi:10.1029/2006GB002885 **Journal Impact Factor: 4.682, Number of ISI Citations: 16**

2007

[11] Kuhlbrodt, T., A. Griesel, M. Montoya, A. Levermann, **M. Hofmann**, and S. Rahmstorf (2007), On the driving processes of the Atlantic meridional overturning circulation, *Review of Geophysics*, 45, RG2001, doi:10.1029/2004RG000166 **Journal Impact Factor: 13.906, Number of ISI Citations: 140**

2006

[10] **Hofmann, M.**, and M. A. Morales Maqueda (2006), Performance of a second-order moments advection scheme in an Ocean General Circulation Model, *Journal of Geophysical Research*, 111, C05006, doi:10.1029/2005JC003279 **Journal Impact Factor: 3.174, Number of ISI Citations: 38**

2005

[9] Montoya M., A. Griesel, A. Levermann, J. Mignot, **M. Hofmann**, A. Ganopolski, S. Rahmstorf (2005), The Earth system model of intermediate complexity CLIMBER-3a. Part I: description and performance for present day conditions. *Climate Dynamics*, 25, 237-263 **Journal Impact Factor: 4.231, Number of ISI Citations: 58**

[8] Levermann A., A. Griesel, **M. Hofmann**, M. Montoya, S. Rahmstorf (2005), Dynamic sea level changes following changes in the thermohaline circulation. *Climate Dynamics*, 24, 347-354 **Journal Impact Factor: 4.231, Number of ISI Citations: 82**

2002

[7] Brovkin, V., **M. Hofmann**, J. Bendtsen, and A. Ganopolski, A. (2002), Ocean biology could control atmospheric $\delta^{13}\text{C}$ during glacial-interglacial cycle. *G³ (Geochemistry, Geophysics, Geosystems)*, 3, doi: 10.1029/2001GC00270 **Journal Impact Factor: 2.939, Number of ISI Citations: 14**

2000

[6] **Hofmann, M.**, Wolf-Gladrow, D.A., Takahashi, T., Southerland, S.C., Six, K., Maier-Reimer, E. (2000), Stable carbon isotope distribution of particulate organic matter in the ocean: A model study. *Marine Chemistry*, 72(2/4), 131-150, doi: 10.1016/S0304-4203(00)00078-5 **Journal Impact Factor: 3.074, Number of ISI Citations: 39**

1999

[5] Broecker, W., J. Lynch-Stieglitz, D. Archer, **M. Hofmann**, E. Maier-Reimer, O. Marchal, T. Stocker, N. Gruber (1999), How Strong is the Harvardton-Bear Constraint? *Global Biogeochemical Cycles*, Vol.13, No. 4, pp. 817–820 **Journal Impact Factor: 4.682, Number of ISI Citations: 40**

[4] **Hofmann, M.**, W. S. Broecker, J. Lynch-Stieglitz (1999), Influence of a $[\text{CO}_2(\text{aq})]$ Dependent Biological C-Isotope Fractionation on Glacial $^{13}\text{C}/^{12}\text{C}$ Ratios in the Ocean. *Global Biogeochemical Cycles*. Vol.13, No.4, pp. 873–883 **Journal Impact Factor: 4.682, Number of ISI Citations: 10**

[3] Kühn, S. F., and **M. Hofmann** (1999), Infection of *Coscinodiscus granii* by the parasitoid nanoflagellate *Pirsonia diadema*: III Effects of turbulence on the incidence of infection. *Journal of Plankton Research* Vol. 21: 2323-2340; doi:10.1093/plankt/21.12.2323 **Journal Impact Factor: 2.012, Number of ISI Citations: 8**

1994

[2] **Hofmann, M.**, A. Zywietz, K. Karch, F. Bechstedt (1994), Lattice dynamics of SiC polytypes within the bond-charge model(1994). *Physical Review B* Vol. 50, 13401-13411 **Journal Impact Factor: 3.691, Number of ISI Citations: 90**

[1] **Hofmann, M.**, D. Strauch, U. Schröder, and E. Rampf (1994), Lattice dynamics and inelastic neutron and synchrotron scattering cross-section in Nd₂CuO₄. *Journal of Physics: Condensed Matter* Vol. 6, 3669-3678 **Journal Impact Factor: 2.355, Number of ISI Citations: 2**

Conferences, Abstracts, and Proceedings:

Hofmann, M., and Morales Maqueda, M.A. (2011) Changing mid-latitude westerlies and their impact to Southern Ocean eddies in a coarse resolution ocean model, Geophysical Research Abstracts 13, European Geosciences Union: EGU2011-12242, **Talk**

Hofmann, M., and Schellnhuber, H.J. (2009) Ocean acidification triggers extended marine oxygen holes. Eighth International Carbon Dioxide Conference, Jena, Germany, 2009, **Poster**

Hofmann, M., and Schellnhuber, H. J. (2009)
Marine oxygen holes as a consequence of oceanic acidification
Geophysical Research Abstracts 11, European Geosciences Union: EGU09-6365, **Talk**

Hofmann, M., and Morales Maqueda, M.A. (2009)
The impact of geothermal heat flux on the oceanic abyssal circulation
Geophysical Research Abstracts 11, European Geosciences Union: EGU06-6323, **Talk**

Hofmann, M., and Schellnhuber, H. J. (2007)
How does oceanic acidification affect the biological carbon pump? A model study
Geophysical Research Abstracts 9, European Geosciences Union: EGU07-A-09660, **Poster**

Hofmann, M., and Morales Maqueda, M.A. (2006)
An improved tracer advection scheme for OGCM's: Consequences for the simulated circulation
Geophysical Research Abstracts 8, European Geosciences Union: EGU06-A-07286, **Poster**

Born, A., **Hofmann, M.**, Levermann, A., Mignot, J. ,and Rahmstorf, S. (2006)
Hydraulic parameterization of Nordic overflows in a coupled climate model with explicit free surface: Freshwater hosing and global warming Geophysical Research Abstracts 8, European Geosciences Union: EGU06-A-00484

Kuhlbrodt, T., Griesel, A. , Montoya, M., Levermann, A. , **Hofmann, M.**, and Rahmstorf, S. (2005)
What drives the meridional overturning circulation? Geophysical Research Abstracts 7, European Geosciences Union: EGU05-A-01120

Bauer, E., Ganopolski, A. and **Hofmann, M.** (2005)
Possible linkage of 8.2 ka event to intermediate stable mode of Atlantic circulation
Geophysical Research Abstracts 7, European Geosciences Union: EGU05-A-05015

Hofmann, M., and Morales Maqueda, M. A. (2005) A more accurate scheme for tracer advection in

OGCM's Geophysical Research Abstracts 7, European Geosciences Union: EGU05-A-06949, **Poster**

Levermann, A., Griesel, A., **Hofmann, M.**, Montoya, M., and Rahmstorf, S. (2004) Sea level changes due to a weakening of the thermohaline circulation Geophysical Research Abstracts 6, European Geosciences Union: EGU04-A-01921

Hofmann, M., and Morales Maqueda, M. A. (2004)

Transport and distribution of passive tracers in Ocean General Circulation Models (solicited)

Geophysical Research Abstracts 6, European Geosciences Union: EGU04-A-06464, **Talk**

Griesel, A., Montoya, M., Morales Maqueda, M.A., Kuhlbrodt, T., and **Hofmann, M.** (2003)

The effects of parameterizing diapycnal mixing based on fixed available energy in an Ocean GCM

Geophysical Research Abstracts 5, European Geosciences Union: EGU03-A-09379

Hofmann, M., Maqueda, M.A.M, Griesel, A., and Montoya, M. (2003) On the interhemispheric transport of Carbon in the ocean: A modelers perspective Geophysical Research Abstracts 5, European Geosciences Union: EGU03-A-12433, **Poster**

Brovkin, V., D. Archer, and **M. Hofmann** (2003) Changes in oceanic biogeochemistry during the LGM simulated by a climate system model of intermediate complexity OCEANS: Ocean Biogeochemistry and Ecosystem Analysis; International Open Science Conference, Paris, France, 2003

Hofmann, M., and M. A. M. Maqueda (2003) Modeling the seasonal pCO₂ cycle in the subarctic Pacific ocean OCEANS: Ocean Biogeochemistry and Ecosystem Analysis; International Open Science Conference, Paris, France, 2003, **Poster**

Hofmann, M., and M. A. M. Maqueda (2001) Modeling the seasonal pCO₂ cycle in the subarctic Pacific Ocean: Evidence of iron fertilization provided by aeolian dust supply from eastern Asia. Sixth International Carbon Dioxide Conference, Sendai, Japan, 2001, **Poster**

Hofmann, M., and M. M. Tilzer (2000) The role of atmospheric iron deposition from mineral particles in determining phytoplankton community growth rates in the sea. Ocean Science Meeting (AGU, ASLO), San Antonio, Texas (USA), 2000, **Talk**

Hofmann, M., and D. Wolf-Gladrow (1999) The Distribution of stable c-isotopes in the ocean. Proceedings of the Second International Symposium, CO₂ in the Oceans, pp. 79-82. Center for Environmental Research, National Institute for Environmental Studies, Tsukuba, Japan, 1999, **Talk**

Hofmann, M. (1998) The Role of Marine Biology in Determining the ¹³C/¹²C Distribution in the Ocean: A 3D Model Study. WOCE Conference, Halifax, Canada, **Poster**

Hofmann M., and D. Wolf-Gladrow (1997) Impact of anthropogenic CO₂ on the d¹³C(DIC) via changes in biological isotope fractionation. Fifth International Carbon Dioxide Conference, Cairns, Australia, 1997, **Talk**

U. Riebesell, S. Burkhardt, **M. Hofmann**, E. Maier-Reimer, M. Pahlow, K. Six, A. Wischmeyer, D. Wolf-Gladrow (1997) Responses of marine phytoplankton to changes in CO₂. Fifth Carbon Dioxide Conference, Cairns, Australia, 1997

Hofmann, M., D. Wolf-Gladrow, U. Riebesell, K. Six, and E. Maier-Reimer (1996) Quantitative Modeling of Carbon Isotope Distribution in the Ocean. Ocean Science Meeting (AGU), San Diego, USA, 1996, **Talk**

Hofmann M., D. Wolf-Gladrow, U. Riebesell, K. Six, E. Maier-Reimer, *Quantitative Modeling of Carbon Isotope Distribution in the Ocean*, Global Analysis, Integration and Modelling (GAIM)-Tagung, Garmisch-Partenkirchen, 1995, **Poster**

Hofmann M., A. Zywitz, F. Bechstedt, *Dynamik und thermodynamische Eigenschaften von kubischem und hexagonalem SiC*. Frühjahrstagung der DPG, Arbeitskreis Festkörperphysik, Münster, 1994, **Poster**

Hofmann M., D. Strauch, U. Schröder, *Lattice Dynamics and Charge Transfer in Superconductors*. 13th General Conference of the EPS, Regensburg, 1993, **Poster**

Hofmann M. und D. Strauch, *Analyse der Synchrotron- und Infrarot-Spektren von Hochtemperatursupraleitern*. Frühjahrstagung der DPG, Arbeitskreis Festkörperphysik, Regensburg, 1992, **Poster**

Hofmann M., *Ermittlung spezifischer Strukturparameter des InP:Cu_B-Zentrums aus optischen Absorptionsquerschnitten*. Frühjahrsschule Optik der Phys. Gesellschaft der DDR, Erfurt, 1989, **Poster**