

(Michael Oppenheimer)

CURRICULUM VITAE

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MICHAEL OPPENHEIMER

Albert G. Milbank Professor of Geosciences and International Affairs
Department of Geosciences
School of Public & International Affairs
High Meadows Environmental Institute
Princeton University

Director, Center for Policy Research on Energy and the Environment of the
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Andlinger Center for Energy and the Environment

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Other Professional Affiliations

Visiting Professor, NYU School of Law
Editor in Chief, *Climatic Change Letters*
Co-editor in Chief, *Climatic Change*
Science Advisor, Environmental Defense Fund
Review Editor, Intergovernmental Panel on Climate Change

Fields of Specialization

Physics and chemistry of the atmosphere; climate change, ozone depletion, acid deposition and air pollution: their effects on natural systems and society, and public policy responses.

Education

S.B. (Chemistry) M.I.T., 1966
Ph.D. (Chemical Physics) University of Chicago, 1970

Positions

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1966-67 Teaching Assistant, University of Chicago
1971-73 Research Fellow, Harvard College Observatory
1971-81 Astrophysicist, Harvard-Smithsonian Center for Astrophysics
1978-79 Visiting Astronomer, University of California, Santa Cruz
1981-96 Senior Scientist, Environmental Defense Fund (EDF)
1995 -2002 Manager, Global / Regional Air Program, EDF
1996 -2002 Chief Scientist, EDF
2002- Professor of Geosciences and International Affairs, Princeton University

Honors, Awards

1969 Danforth Tutor, University of Chicago
1969-70 Union Carbide Fellow, University of Chicago
1978-79 John Simon Guggenheim Memorial Foundation Fellow
1978-79 Morrison Fellow, University of California, Santa Cruz
1989 The Henry Draper Award of the Hudson River Fishermen's Association
1989-2001 Streisand Chair in Environmental Studies, EDF
2000 League of Conservation Voters, Environmental Leadership Award
2001 Environmental Action Coalition Green Star Award
2005-2006 Russell Sage Foundation Visiting Scholar
2007 New Species Award, African Rainforest Conservancy
2007 Participant in the Intergovernmental Panel on Climate Change, which won the Nobel Peace Prize in 2007
2009-10 Russell Sage Foundation Associate Scholar
2010 Heinz Award Winner
2010 First Stephen Schneider Memorial Lecturer, AGU
2010- Fellow, American Association for the Advancement of Science
2014 Linacre Lecturer, Oxford University
2014-15 Pace Academy Visiting Fellow, Pace University
2015 Agassiz Visiting Lecturer, Dept. Earth and Planetary Sciences, Harvard Univ.

Committees, Boards, and Panels

1982-90 Board of Directors, National Clean Air Coalition
1982 E.P.A. Lead Criteria Review Committee
1982-84 Acid Rain Advisory Committee, N.Y. State Department of Environmental Conservation
1982-86 Board of Directors, OSHA-Environmental Network
1983 Ad Hoc Committee to Review the National Acid Precipitation Assessment Program, White House Council on Environmental Quality
1985-90 Hudson River Panel, Hudson River Foundation
1986-88 Board of Directors, Environmental Planning Lobby
1987-88 E.P.A. Visibility Committee
1988-89 Panel on Greenhouse Warming, World Resources Institute

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1988-95 Advisory Board, Pace University Center for Environmental Legal Studies

1989-95 NASA Advisory Committee on the Atmospheric Effects of Stratospheric Aircraft

1989-97 Chairman, Science Advisory Panel, Climate Change Exhibition, American Museum of Natural History

1990-96 Advisory Board, Environmental Media Association

1990 Contributing Author, Intergovernmental Panel on Climate Change, First Assessment Report, WGII Chapter 5

1991-02 Board of Analysts, "Greenwire"

1991-92 National Steering Committee, Florida Global Warming Education Project, American Horizons

1991-94 Environmental Advisory Committee to New York Governor Mario Cuomo

1992-94 Visiting Committee, Cornell Center for the Environment, Cornell University

1994 Interim Advisory Committee, Princeton Environmental Institute, Princeton University

1995-99 National Academy of Sciences/National Research Council, Panel on the Atmospheric Effects of Aviation

1996 Contributing author, Intergovernmental Panel on Climate Change, Second Assessment Report, WGI Technical Summary and Chapter 8

1997-98 Technical Advisory Panel, H. John Heinz III Center

1998 Global Change Steering Committee, H. John Heinz III Center

1998-99 Scientific Advisory Board, The Riverkeeper

1999-02 Advisory Board, Earth and Environmental Studies Program, Montclair State College

2000-02 Executive Campaign Cabinet, Earth System Science Research Center, University of California, Irvine

2000-02 Advisory Council, Center for Environmental Policy, Bard College

2001 Lead author, Intergovernmental Panel on Climate Change, Third Assessment Report, WGI Technical Summary; Drafting Team, WGI Summary for Policy Makers

2001-05 Environment Jury, Heinz Awards, Heinz Foundation

2003-09 Trustee, Tri-State Transportation Coalition

2003-06 Steering Committee, Aldo Leopold Leadership Program

2003- Executive Committee, Cooperative Institute for Climate Science, Princeton University and NOAA Geophysical Fluid Dynamics Laboratory

2003-07 Science and Technology Council, Cummins, Inc.

2004-07 Lead Author, Intergovernmental Panel on Climate Change, Fourth Assessment Report, WGII Chapter 19

2005-06 Panel on Climate Variability and Change, National Research Council, National Academy of Sciences

2005-14 Executive Committee, Environmental Studies Program, Princeton University

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2006-19 Executive Committee, Center for Information Technology Policy
Policy, Princeton University

2006-8 Chair, steering committee for Arctic Expedition for Climate
Action (Lindblad Expeditions, Aspen Institute, National
Geographic Society)

2007-8 Advisory Board, African Rainforest Conservancy

2007-09 Panel on Alternative Liquid Transportation Fuels, National
Academy of Sciences

2007-8 Co-curator, *Climate Change: The threat to life and our energy
future*, American Museum of Natural History

2007-9 Editorial Board, Environmental Research Letters

2008-19 Executive Committee, Program in Sustainable Energy,
Princeton University

2008- Board of Directors, Climate Central

2008 Advisory Board to NJDEP commissioner on establishing an SAB

2009-12 Coordinating Lead Author, Intergovernmental Panel on Climate
Change, Special Report on *Managing the Risks of Extreme
Events and Disasters to Advance Climate Change Adaptation*,
Chapter 1; Drafting Author Summary for Policy Makers

2009-16 National Academies Board on Energy & Environmental
Systems

2010-12 American Geophysical Union (AGU) Outreach Committee

2010-14 Coordinating Lead Author, Intergovernmental Panel on Climate
Change, Fifth Assessment Report, WGII Ch. 19; Drafting Author,
Summary for Policy Makers; Member Core Writing Team, Synthesis
Report

2011-14 Advisory Board, Yale Climate and Energy Institute

2012- Sustainability Steering Committee, Princeton University

2012 AGU Climate Change Position Statement Panel

2012 AGU Journal Feasibility Study Task Force

2013-19 NYC Climate Change Panel, Mayor's Office

2015-19 AGU Climate Communication Prize Committee

2015- Science Advisor, Climate Communication

2015- Editorial Board, Journal of Extreme Events

2016 Co-coordinator, Climate Science Subgroup, Hillary Clinton Campaign

2016 AGU Panel on Statement on Scientists' Rights and Responsibilities

2016-2018 Andlinger Center Executive Committee, Princeton University

2017-20 AAAS Electorate Nominating Committee, Atm. & Hydro. Sci. Section

2017- Board of Directors, Climate Science Legal Defense Fund

2017-19 Coordinating Lead Author, Intergovernmental Panel on Climate
Change, Special Report of Oceans, Cryosphere and Climate Change,
Chapter 4.

2018-21 Review Editor, Sixth Assessment Report, Intergovernmental Panel on
Climate Change

2019- Advisory Board, Metcalf Institute for Marine and Environmental

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2021- Reporting, URI, Advisory Board
Member, Board of Directors, Trust for Governors Island, New York City

Membership in Professional Societies

American Association for the Advancement of Science
American Geophysical Union
American Meteorological Society
American Physical Society
International Glaciological Society

Current and Recent Sources of Research Support

Princeton School of Public and International Affairs (ongoing)
High Meadows Foundation (ongoing)
National Science Foundation Grants: *Risk Assessment and Risk Management: An Integrated Approach for Responding to Multiple Hazards from Tropical Cyclones in a Changing Climate* (2015-2020); *Responses to complex disruptive events: Cognition in a socio-political context* (2021-2023); *Large-scale CoPe: Megalopolitan Coastal Transformation Hub (MACH): Researching complex interactions between climate hazards and communities to inform governance of coastal risk* (2021-2026)

BIBLIOGRAPHY

Articles in Professional Journals

- 1971 Ultraviolet spectra of alkali halides in inert matrices (with R. S. Berry).
J. Chem. Phys., **54**, 5058.
- 1972 Collision matrix elements near a pseudocrossing of potential energy curves.
J. Chem. Phys., **57**, 3899.
- 1972 Non-resonant charge capture: $\text{Na}^+ + \text{Li} = \text{Na} + \text{Li}^+$ (with C. Bottcher).
J. Phys. B., **5**, 492.
- 1972 Eigenvalues of the $2p3p^3P$ and $2p3d^1\text{-}^3D$ bound states of the helium isoelectronic sequence (with H. Doyle and G. W. F. Drake). *Phys. Rev.*, **A5**, 26.

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- 1972 The charge transfer spectrum of $(\text{LiNa})^+$ (with C. Bottcher and A. Dalgarno). *Chem. Phys. Lett.*, **15**, 24.
- 1972 The calculation of photoabsorption processes in helium (with A. Dalgarno and H. T. Doyle). *Phys. Rev. Lett.*, **29**, 1051.
- 1973 Chemiionization in interstellar clouds (with R. S. Berry and A. Dalgarno). *Ap. J. Lett.*, **183**, L21.
- 1973 The formation of formaldehyde in interstellar clouds (with A. Dalgarno and J. Black). *Nature*, **245**, 100.
- 1974 The chemistry of sulphur in interstellar clouds (with A. Dalgarno). *Ap. J.*, **187**, 231.
- 1974 The fractional ionization in dense interstellar clouds (with A. Dalgarno). *Ap. J.*, **192**, 29.
- 1974 Chemical heating in diffuse interstellar clouds (with A. Dalgarno). *Ap. J.*, **192**, 597.
- 1974 Configuration mixing effects on molecular dipole transition moments (with K. Docken). *Chem. Phys. Lett.*, **29**, 349.
- 1974 Hydrogen chloride in dense interstellar clouds (with A. Dalgarno, T. de Jong, and J. H. Black). *Ap. J. Lett.*, **192**, L37.
- 1975 The formation of CO and thermal balance in interstellar clouds (with A. Dalgarno). *Ap. J.*, **200**, 419.
- 1975 Comets and interstellar masers. *Nature*, **254**, 677.
- 1975 Gas phase chemistry in comets. *Ap. J.*, **196**, 251.
- 1975 A bound state expansion method for calculating resonance and non-resonance contributions to continuum processes: Theoretical development and application to the photoionization of helium (with H. Doyle and A. Dalgarno). *Phys. Rev.*, **A11**, 909.
- 1975 The formation of CH^+ in interstellar clouds (with A. Dalgarno and J. H. Black). *Ap. J.*, **199**, 633.
- 1975 Metastable ^2P oxygen ions in the daytime thermosphere (with several authors). *J. Geophys. Res.*, **80**, 1026.
- 1975 A bound state method for phase shifts in elastic scattering of electrons from atoms and ions (with A. Dalgarno and H. Doyle). *Chem. Phys. Lett.*, **32**, 6.

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- 1976 An improved bound state method for calculating resonance eigenvectors and properties (with H. Doyle). *Phys. Rev.*, **A13**, 665.
- 1976 Recombination of NO^+ in the ionosphere (with several authors). *Geophys. Res. Lett.*, **3**, 209.
- 1976 Molecular oxygen abundances in the thermosphere from the chemistry of the O_2^+ ion based on Atmosphere Explorer-C composition measurements (with A. Dalgarno and H. C. Brinton). *J. Geophys. Res.*, **81**, 4678.
- 1976 Ion chemistry of N_2^+ and the solar ultraviolet flux in the thermosphere (with A. Dalgarno and H. C. Brinton). *J. Geophys. Res.*, **81**, 3762.
- 1977 Isentropic instabilities in the interstellar gas. *Ap. J.*, **211**, 400.
- 1977 Association ionization and interstellar TiO and TiO^+ (with A. Dalgarno). *Ap. J.*, **212**, 683.
- 1977 Daytime chemistry of NO^+ from Atmosphere Explorer-C measurements (with A. Dalgarno, F. P. Trebino, L. H. Brace, H. C. Brinton and J. H. Hoffman). *J. Geophys. Res.*, **82**, 191.
- 1977 Indirect determinations of molecular oxygen densities in the daytime thermosphere from Atmosphere Explorer-C composition measurements (with K. Kirby-Docken). *J. Geophys. Res.*, **82**, 3503.
- 1977 Comparison of measured and calculated thermospheric molecular oxygen (with W. E. Potter, D. C. Kayser, H. C. Brinton and L. H. Brace). *J. Geophys. Res.*, **82**, 5243.
- 1977 Ion photochemistry of the thermosphere from Atmosphere Explorer-C measurements (with E. R. Constantinides, K. Kirby-Docken, G. A. Victor, A. Dalgarno and J. H. Hoffman). *J. Geophys. Res.*, **82**, 5485.
- 1978 An analysis of the coma of Comet Bennett 1970 II. *Ap. J.*, **225**, 1083.
- 1978 The EUV flux inferred from AE-C He^+ abundances (with S. Babeu, J. H. Hoffman and E. Breig). *Geophys. Res. Lett.*, **5**, 773.
- 1978 Evidence for shock chemistry in Orion (with C. Lada and T. W. Harquist). *Ap. J. Lett.*, **226**, L153.
- 1979 The effect of cosmic ray screening upon the stability of interstellar clouds (with B. Elmegreen and T. W. Hartquist). *Astron. Astrophys.*, **75**, 137.

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- 1979 Photoionization and photoabsorption cross sections of thermospheric species: He, O, N₂, and O₂ (with K. Kirby, S. Babeu, E. R. Constantinides and G. A. Victor). *Atomic Data and Nuclear Data Tables*, **23**, 63.
- 1980 Molecular diagnostics of interstellar shocks (with T. W. Hartquist and A. Dalgarno). *Ap. J.*, **236**, 182.
- 1980 Sodium D-line emission in Comet West (1975n) and the sodium source in comets. *Ap. J.*, **240**, 923.
- 1980 Chemical reactions and the nature of comets. *Accounts of Chemical Research*, **13**, 378.
- 1980 The effect of solar cycle ultraviolet flux variations on cometary gas (with C. J. Downey). *Ap. J. Lett.*, **241**, L123.
- 1981 EUV flux variations during solar cycle 21 from AE-E He⁺ abundances (with S. Babeu and H. C. Brinton). *J. Geophys. Res.*, **86**, 825.
- 1981 Ultraviolet absorption studies of H₂O and other species in Comet Halley with space telescope (with P. L. Smith and J. H. Black). *Icarus*, **47**, 441.
- 1982 Sulfur emissions. *Science (Letters)*, **217**, 586.
- 1983 The relationship of sulfur emissions to sulfate in precipitation. *Atmos. Environment*, **17**, 451.
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- 1984 The relationship of sulfur emissions to sulfate in precipitation III. Subregional budget analysis. *Atmos. Environment*, **18**, 403.
- 1985 An analysis of the sulfur budget and interstate sulfur transport for Colorado. *Atmos. Environment*, **19**, 1439.
- 1985 Acid deposition (with J. N. Galloway, G. E. Likens and S. A. Norton). *Science (Letters)*, **227**, 1154.
- 1985 Acid deposition, smelter emissions, and the linearity issue in the Western United States (with C. Epstein and R. Yuhnke). *Science*, **229**, 859.
- 1986 Acid deposition in the Western United States (with C. Epstein and R. Yuhnke). *Science (Letters)*, **233**, 10.
- 1986 Empirical relation between sulfur dioxide emissions and acid deposition derived

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- from monthly data (with C. Epstein). *Nature*, **323**, 245.
- 1987 Stratospheric sulphate production and the photochemistry of the Antarctic circumpolar vortex. *Nature*, **328**, 702.
- 1988 Restoration of the Chesapeake Bay: A Multi-State Institutional Challenge (with J. T. B. Tripp). *Maryland Law Review*, **47**, 425.
- 1989 Climate change and environmental pollution: physical and biological interactions. *Climatic Change*, **15**, 255.
- 1989 Developing policies for responding to climate change. *Climatic Change* **15**, 1-4.
- 1991 Atmospheric nitrate deposition and the Chesapeake Bay estuary (with D. C. Fisher). *Ambio*, **20**, 102.
- 1991 Carbon dioxide and temperature (with J. B. Marston, R. M. Fujita and S. R. Gaffin). *Nature* (Scientific Correspondence), **349**, 573.
- 1993 Pondering greenhouse policy. *Science* (Letters), **259**, 1382.
- 1994 Reservoir timescales for anthropogenic CO₂ in the atmosphere (with B. C. O'Neill, S. R. Gaffin, and F. N. Tubiello). *Tellus*, **46B**, 378.
- 1995 Impulse-response functions and anthropogenic CO₂ (with F. N. Tubiello). *J. Geophysical Res. Lett.*, **22**, 413.
- 1995 Comment on “The lifetime of excess atmospheric carbon dioxide” by Berrien Moore III and B. H. Braswell (with S. R. Gaffin and B. C. O'Neill). *Global Biogeochemical Cycles*, **9**, 167.
- 1997 Measuring time in the greenhouse: an editorial essay (with B. C. O'Neill and S. R. Gaffin). *Climatic Change*, **37**, 491.
- 1998 Global warming and the stability of the West Antarctic ice sheet. *Nature*, **393**, 325.
- 1998 Long-term scenarios for aviation: demand and emissions of CO₂ and NO_x (with A. Vedantham). *J. Energy Policy* **26**, 625.
- 2000 Counting the cost of deforestation (with R. Bonnie, S. Schwartzman, and J. Bloomfield). Perspectives: Environmental Policy, *Science* **288**, 1763-1764.
- 2002 Book Review: *The Carbon War: Global Warming and the End of the Oil Era*. *Climatic Change*, **54**, 497-505

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- 2002 Dangerous climate impacts and the Kyoto Protocol (with B.C. O'Neill). *Science* **296**, 1971-2.
- 2003 On past temperatures and anomalous late-20th century warmth (with 12 co-authors). *Eos* **84**, 256-8.
- 2003 Response (to comments on, On past temperatures and anomalous late-20th century warmth, with 12 co-authors). *Eos* **84**, 473-4.
- 2003 Book Review: *Atmospheric Pollution: History, Science, and Regulation*. *Physics Today* **56**, 65-66.
- 2004 The West Antarctic Ice Sheet and Long Term Climate Policy (with R.B. Alley). *Climatic Change*, **64**, 1-10.
- 2004 Climate Change Impacts Sensitive to Path to Stabilization (with B.C. O'Neill). *Proc. Nat. Acad. Sci.* **101**, 16411–16416, doi_10.1073_pnas.0405522101.
- 2004 Book Review: *The Discovery of Global Warming*. *J. Environmental Hist.*, **9**, 327-8.
- 2004 The influence of climate on in-stream removal of nitrogen (with S.D. Donner and C.J. Kucharik). *Geophys. Res. Letters*, **31**, L20509, doi:10.1029/2004GL020477.
- 2005 Ice Sheets, Global Warming, and Article 2 of the UNFCCC (with R.B. Alley). *Climatic Change* **68**, 257-267.
- 2005 Global Assessment of Coral Bleaching and Required Rates of Adaptation under Climate Change (with S.D. Donner, W.J. Skirving, C.M. Little, and O. Hoegh-Guldberg). *Global Change Biology*, **11**, 1–15, doi: 10.1111/j.1365-2486.2005.01073.x
- 2005 Article 2 of the UNFCCC: Historical Origins, Recent Interpretations (with A. Petsonk). *Climatic Change* **73**, 195-226.
- 2005 Attribution of Regional Radiative Forcing Due to Tropospheric Ozone: A Step Toward Climate Credit for Reductions in Emissions of Ozone Precursors (with V. Naik, D. Mauzerall, L. Horowitz, D. Schwarzkopf, V. Ramaswamy). *J. Geophys. Res.*, **110**, D24306, doi:10.1029/2005JD005908
- 2005 Avoiding Dangerous Anthropogenic Interference with the Climate System (with K. Keller, M. Hall, S.-R. Kim, and D. F. Bradford). *Climatic Change* **73**, 227-238
- 2005 Defining Dangerous Anthropogenic Interference: The Role of Science, The Limits of Science. *Risk Analysis* **25**, 1-9

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- 2006 Interim Targets and the Climate Treaty Regime (with Brian C. O’Neill, & Annie Petsonk). *Climate Policy* **5**, 639-645.
- 2006 Global Warming: The Psychology of Long Term Risk (with A. Todorov). *Climatic Change*, **77**, 1–6, DOI: 10.1007/s10584-006-9086-6.
- 2006 Science and Environmental Policy: The Role of Nongovernmental Organizations, *Social Research*, **73**, 881-90.
- 2006 Coral Reefs Reduce Tsunami Impact in Model Simulations (with C. Kunkel and R. Hallberg). *Geophys. Res. Lett.* **33**, L23612, doi:10.1029/2006GL027892.
- 2006 Learning and Climate Change (with many authors), *Climate Policy* **6**, 585–589.
- 2007 Model-based Assessment of the Role of Human-induced Climate Change in the 2005 Caribbean Coral Bleaching Event (with S.D. Donner and T.R. Knutson). *Proc Natl Acad Sci*, doi:10.1073/pnas.0610122104
- 2007 A “Manhattan Project” for Climate Change? (C-J Yang, M Oppenheimer), *Climatic Change* **80**, 199-204, 10.1007/s10584-006-9202-7.
- 2007 On the Sensitivity of Radiative Forcing from Biomass Burning Aerosols and Ozone to Location of Emissions (V.Naik, et al), *Geophys. Res. Letters*, **34**, L03818, doi:10.1029/2006GL028149.
- 2007 Carbon Trading over Taxes (B. Chameides, M Oppenheimer), *Science*, **315**, 1670.
- 2007 The regrets of procrastination in climate policy (K. Keller, et al), *Environmental Research Letters*, **2**, 024004 (4pp) doi:10.1088/1748-9326/2/2/024004.
- 2007 The Limits of Consensus (M Oppenheimer et al), *Science* **317**, 1505-6.
- 2007 The Economics of the Thermohaline Circulation – A Problem with Multiple Thresholds of Unknown Locations (with E. Nævdal). *Resource and Energy Economics* **29**, 262-283.
- 2007 Towards a New Generation of Ice Sheet Models (CM Little et al), *Eos* **88**, 578-9.
- 2008 Learning about ozone depletion (PJ Crutzen and M Oppenheimer), *Climatic Change* **89**, 143-154 DOI 10.1007/s10584-008-9400-6.
- 2008 The potential impacts of sea level rise on the coastal region of New Jersey, USA (MP Cooper, MD Beevers, M Oppenheimer), *Climatic Change* **90**, 475–492, DOI 10.1007/s10584-008-9422-0.

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- 2008 Atmospheric stabilization and the timing of carbon mitigation (BK Mignone et al), *Climatic Change* **88**, 251-265. DOI 10.1007/s10584-007-9391-8.
- 2008 Book Review: An outspoken scientist, *Nature Reports Climate Change*, Published online: 16 January 2008|doi:**10.1038**/climate.2008.3
- 2008 A closer look at the IPCC report-Response (M Oppenheimer, BC O’Neill, M Webster, S Agrawala), *Science* **319**, 410 (*in Letters*)
- 2008 The boundaries of the thinkable: environmentalism in the early twenty-first century (P Tetlock and M Oppenheimer), *Dedaelus* **137**, 59–70.
- 2008 A physical science perspective on disaster: through the prism of global warming (M Oppenheimer), *Social Research* **75**, 659-668.
- 2008 Negative learning (M Oppenheimer, BC O’Neill, M Webster), *Climatic Change* **89**, 155-172 DOI 10.1007/s10584-008-9405-1.
- 2009 Climate change and plant invasions: restoration opportunities ahead? (BA Bradley, M Oppenheimer, DS Wilcove), *Global Change Biology*, **15**, 1511–1521, doi: 10.1111/j.1365-2486.2008.01824.x.
- 2009 Assessing dangerous climate change through an update of the Intergovernmental Panel on Climate Change (IPCC) “reasons for concern” (J Smith et al), *Proc Natl Acad Sci* **106**, 4133-4137 (<http://www.pnas.org/content/106/11/4133.full>).
- 2009 Climate change increases risk of plant invasion in the Eastern United States (B Bradley, D Wilcove, M Oppenheimer), *Biological Invasions*, DOI 10.1007/s10530-009-9597-y.
- 2009 Ice shelf morphology and the efficiency of basal melting (CM Little, A Gnanadesikan, M Oppenheimer), *J. Geophysical Res.* **114**, C12007, doi:10.1029/2008JC005197.
- 2009 Probabilistic assessment of sea level during the Last Interglacial stage (RE Kopp et al), *Nature* **462**, 963-868, doi:10.1038/nature08686.
- 2009 Toward ethical norms and institutions for geo-engineering research (D Morrow, R Kopp, M Oppenheimer), *Environ. Res. Lett.* **4**, p.1-8, doi:10.1088/1748-9326/4/4/045106.
- 2009 A force to fight global warming (WR Turner, M Oppenheimer, DS Wilcove), *Nature* **462**, 278-9.

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- 2009 Fixing a critical climate accounting error (T Searchinger et al), *Science* **326**, 527–528, DOI: 10.1126/science.1178797.
- 2009 *Climatic Change Letters* inaugural editorial (SH Schneider, M Oppenheimer), *Climatic Change* **97**, 1–2, DOI 10.1007/s10584-009-9751-7.
- 2010 Climate change: Helping Nature survive the human response (WR Turner et al), *Conservation Letters* **3**, 304-312 doi: 10.1111/j.1755-263X.2010.00128.x.
- 2010 Nitrogen cycling and feedbacks in a global dynamic land model, (S Gerber et al), *Global Biogeochem. Cycles*, **24**, GB1001, doi:10.1029/2008GB003336.
- 2010 Urbanization, climate change and flood policy in the United States (AA Ntelekos et al), *Climatic Change* **103**, 597-616 [DOI 10.1007/s10584-009-9789-6].
- 2010 Climatic change letters: a modest effort to address a gigantic problem, *Climatic Change* **100**, 7-10, DOI 10.1007/s10584-010-9837-2 (editorial).
- 2010 Carbon Calculations to Consider-Response (Searchinger et al), *Science* **327**, 781 [DOI: 10.1126/science.327.5967.781-a] (in Letters).
- 2010 Bioenergy: Counting on Incentives-Response (Searchinger et al), *Science* **327**, 1200-1201 [DOI: 10.1126/science.327.5970.1200-a] (in Letters).
- 2010 Linkages among climate change, crop yields and Mexico–US cross-border migration (S Feng, A Krueger, M Oppenheimer), *Proc Natl Acad Sci*, **107**, 14257–14262 www.pnas.org/cgi/doi/10.1073/pnas.1002632107.
See also www.pnas.org/cgi/doi/10.1073/pnas.1212226109 for Correction.
- 2011 Characterizing uncertainty in expert panel assessments (J O’Reilly, et al), *WIREs Clim Change* **2**, 728–743 DOI: 10.1002/wcc.135
- 2011 Exploring high-end scenarios for local sea level rise to develop flood protection strategies for a low-lying delta - the Netherlands as an example (CA Katsman, et al), *Climatic Change* **109**, 617-645 DOI: 10.1007/s10584-011-0037-5
- 2011 The Politics and Policy of Carbon Capture and Storage: Framing an Emergent Technology (K Backstrand, J Meadowcroft, M Oppenheimer), *Global Environmental Change*, **21**, 275–281 doi:10.1016/j.gloenvcha.2011.03.008
- 2011 Evaluation, Characterization, and Communication of Uncertainty by the Intergovernmental Panel on Climate Change (G Yohe, M Oppenheimer), *Climatic Change* **108**:629–639 DOI 10.1007/s10584-011-0176-8
- 2012 Predicting how adaptation to climate change could affect ecological

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- conservation: secondary impacts of shifting agricultural suitability (B Bradley et al), *Diversity and Distributions*, **18**, 425-437
<http://onlinelibrary.wiley.com/doi/10.1111/j.1472-4642.2011.00875.x/pdf>
- 2012 The Rapid Disintegration of Predictions: Climate Science, Bureaucratic Institutions, and the West Antarctic ice sheet (J O'Reilly, N Oreskes, M Oppenheimer), *Social Studies of Science* **42**, 709-731 DOI: 10.1177/0306312712448130, at
<http://sss.sagepub.com/content/early/2012/06/26/0306312712448130>
- 2012 On the coupled response to ice shelf basal melting (CM Little, D Goldberg, A Gnanadesikan, M Oppenheimer), *Journal of Glaciology* **58**, 203-215
doi: 10.3189/2012JoG11J037
- 2012 Climate Change Impacts: Accounting for the Human Response (M Oppenheimer), *Climatic Change* **117**, 439-449 (2013); DOI 10.1007/s10584-012-0571-9
- 2012 Physically-based Assessment of Hurricane Surge Threat under Climate Change (N Lin, K Emanuel, M Oppenheimer, E Vanmarcke), *Nature Climate Change* **2**, 462-467
DOI: 10.1038/NCLIMATE1389
- 2012 Simulation of ocean-land ice interactions through a strongly thermally-forced ice shelf, Part 1: Model description and behavior (Goldberg et al), *J. Geophys. Res. E*,
DOI: 10.1029/ 2011JF002246
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DOI: 10.1029/ 2011JF002247
- 2012 Applying statistical models of the climate-migration relationship (S Feng, M Oppenheimer), *PNAS* **109**, E2915 www.pnas.org/cgi/doi/10.1073/pnas.1212226109
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