DAVEN K. HENZE

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Education

University of Washington, Chemistry	B.S. (2001)
University of Washington, Chemical Engineering	B.S. (2001)
California Institute of Technology, Chemical Engineering	M.S. (2004)
California Institute of Technology, Chemical Engineering	Ph.D. (2007)

Appointments

2009-	Assistant Professor of Mechanical Engineering, University of Colorado, Boulder.
2007-2009	Adjunct Assistant Professor of Mechanical Engineering, University of Colorado, Boulder.
2007-2009	Earth Institute Postdoctoral Fellow, Columbia University, NASA GISS.
2007	Postdoctoral Scholar, California Institute of Technology.

Fellowships and Awards

2007	**Columbia University Earth Institute Postdoctoral Fellowship** *to begin fall 2007.*
2007	**William and Sonya Davidow Graduate Fellow** *Awarded to top graduate student in Environmental Science at Caltech.*
2002-2003	**William H. Corcoran Memorial Fellowship for Chemical Engineering** *Provided funding for first year of graduate studies.*

Publications

2008 Pye, H. O. T., J. H. Seinfeld, H. Liao, S. Wu, L. J. Mickely, D. J. Jacob, and **D. K. Henze**, Effect of changes in climate and emissions on future sulfate-nitrate-ammonium aerosol levels in the United States, *J. Geophys. Res.*, *submitted*.

2008 **Henze, D. K.**, J. H. Seinfeld, and D. T. Shindell, Inverse modeling and mapping U.S. air quality influences of inorganic $PM_{2.5}$ precursor emissions with the adjoint of GEOS-Chem, *Atmos. Chem. Phys. Discuss.*, *in press*.

2008 Fu, T.-M., D. J. Jacob, F. Wittrock, J. P. Burrows, M. Vrekoussis, and **D. K. Henze**, Global budgets of atmospheric glyoxal and nethylglyoxal, and implications for formation of secondary organic aerosols, *J. Geophys. Res.*, *in press*.

2008 **Henze, D. K.**, J. H. Seinfeld, N. G. Ng, J. H. Kroll, T.-M. Fu, D. J. Jacob, and C. L. Heald, Global modeling of secondary organic aerosol formation from aromatic hydrocarbons: High- vs low-yield pathways, *Atmos. Chem. Phys.*, 8, 2405-2420.

2008 Kopacz, M., D. Jacob, **D. K. Henze**, C. L. Heald, D. G. Streets, and Q. Zhang, A comparison of analytical and adjoint Bayesian inversion methods for constraining Asian sources of CO using satellite (MOPITT) measurements of CO columns, *J. Geophys. Res.*, doi:1029/2007JD009264, *in press*.

2008 Heald, C. L., **D. K. Henze**, J. H. Seinfeld, L. W. Horowitz, J. Feddema, J-F. Lamarque, A. Guenther, P. G. Hess, F. Vitt, A. H. Goldstein, and I. Fung, Predicted change in secondary organic aerosol concentrations in response to future climate, emissions, and land-use change, *J. Geophys. Res.*, 113, D05211, doi:10.1029/2007JD009092.

2007 Zhang, Y., J.-P. Huang, **D. K. Henze**, and J. H. Seinfeld, The role of isoprene in secondary organic aerosol formation on a regional scale, *J. Geophys. Res.*, 112, D20207, doi:10.1029/2007JD008675.

2007 **Henze, D. K.**, A. Hakami and J. H. Seinfeld, Development of the adjoint of GEOS-Chem, *Atmos. Chem. Phys.*, 7, 2413-2433.

2007 Hakami, A., **D. K. Henze**, J. H. Seinfeld, K. Singh, A. Sandu, S. Kim, D. Byun, and Q. Li, The adjoint of CMAQ, *Environ. Sci. Technol.*, 41(22), 7807-7818, doi:10.1021/es070944p.

2006 Liao, H., **D. K. Henze**, J. H. Seinfeld, W. Shiliang, and L. J. Mickley, Biogenic secondary organic aerosol over the United States: comparison of climatological simulations with observations, *J. Geophy. Res.*, 112, D06201, doi:10.1029/2006JD007813.

2006 **Henze, D. K.**, and J. H. Seinfeld, Global secondary organic aerosol formation from isoprene oxidation, *Geophys. Res. Let.*, 33, L09812, doi:1029/2006GL025976.

2005 Sandu, A., W. Liao, G. R. Carmichael, **D. K. Henze**, and J. H. Seinfeld, Inverse modeling of aerosol dynamics using adjoints: Theoretical and numerical considerations, *Aerosol Sci. Tech.*, 39, 677-694, doi:10.1080/02786820500182289.

2005 Hakami, A., **D. K. Henze**, J. H. Seinfeld, T. Chai, Y. Tang, G. R. Carmichael, and A. Sandu, Adjoint inverse modeling of black carbon during the Asian Pacific Regional Aerosol Characterization Experiment, *J. Geophys. Res.*, 110, D14301, doi:10.1029/2004JD005671.

2004 **Henze, D. K.**, J. H. Seinfeld, W. Liao, A. Sandu, and G. R. Carmichael, Inverse modeling of aerosol dynamics: Condensational growth, *J. Geophys. Res.*, 109, D14201, doi:1029/2004JD004593.

2004 Tantillo, D. J., R. Hoffmann, K. N. Houk, P. M. Warner, E. C. Brown, and **D. K. Henze**, Extended barbaralanes: Sigmatropic shiftamers or alpha-polyacenes? *J. Am. Chem. Soc.*, 126, 13, 4256-4263.

2002 Brown, E. C., **D. K. Henze**, and W. T. Borden, Are 1,5-disubstituted semibullvalenes that have C-2v equilibrium geometries necessarily bishomoaromatic?, *J. Am. Chem. Soc.*, 124, 50, 14977-14982.

Electronic copies of publications available at http://www.puck.che.caltech.edu/∼daven/home/pubs.html

Synergistic Activities

2007 Attended 3-week workshop on Data Assimilation and Remote Sensing at University of Maryland College Park, MD. *http://www.weatherchaos.umd.edu/workshop/index.php*

2005, 2007 Participant at semi-annual GEOS-Chem Users' Meetings, Cambridge, MA. *http://www-as.harvard.edu/chemistry/trop/geos/geos_meeting_2007.html*

2004-2006 Volunteer tutor for K-8 students in math and science at ASOSAL, an El Salvadorian community center in Los Angeles, CA. *http://www.asosal.org*