

## **Dr. Ina Tegen**

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## **Curriculum Vitae**

### **Education**

- 2008            Habilitation, University of Leipzig, Germany
- 1992            PhD in Physics, University of Heidelberg, Germany.
- 1988            Physik Diplom, Institute for Environmental Physics, University of Heidelberg, Germany.

### **Research Positions**

- since 2004     Senior scientist at the Leibniz Institute for Tropospheric Research, Leipzig
- 1999-2004     Senior scientist at the Max-Planck-Institute for Biogeochemistry, Jena
- 1995 - 1999    Associate research scientist, Department of Applied Physics, Columbia University, associated with NASA Goddard Institute for Space Studies, New York, USA
- 1992 - 1995    Postdoctoral researcher, Department of Applied Physics, Columbia University, associated with NASA Goddard Institute for Space Studies, New York, USA
- 1989 - 1992    Research assistant, Heidelberg Science Academy, Heidelberg, Germany
- 1987 - 1989    Research assistant, Institute for Environmental Physics, University of Heidelberg, Germany

## Projects and Research Grants

- 2010-2013 *Up- and downdrafts and Drop and Ice Nucleation Experiment (UDINE): Lidar observations and modeling of tropical and mid-latitude altocumulus* (Co-Principal Investigator, Deutsche Forschungsgemeinschaft)
- 2010-2013 *Aerosol-Ocean Interaction: Ocean Import of Dust and Ocean Export of Organic Matter (Co-Principal Investigator), part of the Joint Research Project Surface Ocean Processes in the Anthropocene (SOPRAN2)*, German Ministry for Education and Research (BMBF)
- 2007-2010 *Saharan dust input into the Tropical Atlantic Ocean: Quantification and Chemical and Physical Characterization (Co-Principal Investigator), part of the Joint Research Project Surface Ocean Processes in the Anthropocene (SOPRAN)*, German Ministry for Education and Research (BMBF)
- 2007-2010 *Modeling and observation of Sahara dust transport, modification and radiative impact (Co-Principal Investigator), part of the Research Group Saharan Mineral dUst experiMent (SAMUM2)*, Deutsche Forschungsgemeinschaft
- 2006-2009 *Dust Modelling and Climate (Co-Principal Investigator), part of the WGL Pakt Network Ocean – Atmosphere – Land Impacts on Tropical Atlantic Ecosystems (TRACES)*, Leibniz Association
- 2004 –2007 *Regional Modeling of the Saharan Dust Cycle (Co-Principal Investigator), part of the Research Group Saharan Mineral dUst experiMent (SAMUM1)*, Deutsche Forschungsgemeinschaft
- 2001-2005 *Interactions and Feedbacks of Biosphere and Climate on Interannual to Centennial Timescales and Future Trends* (Research Scientist, Principal Investigator: I. C. Prentice); German Ministry for Education and Research (BMBF)
- 1998 - 1999 *Global Aerosol Climatology Project: Improvement and Synthesis of Global Aerosol Climatologies Derived from Long-Term Satellite Observations and 3D Transport Models* (Co-Principal Investigator); National Aeronautics and Space Administration , USA
- 1998 - 1999 *Mineral Dust Aerosols and Climate Variability* (Co-Principal Investigator); National Science Foundation , USA
- 1997 - 1999 *Modeling of Distribution and Interannual to Interdecadal Variations of Aerosols* (Principal Investigator); National Aeronautics and Space Administration, USA
- 1995 - 1997 *Modeling of Variability in Climate using High-Resolution Ice Core Records* (Research Scientist, Principal Investigator: D. Rind); National Oceanographic and Atmospheric Administration, USA
- 1995 - 1997 *Feedbacks between Mineral Aerosols and Sahelian Drought* (Co-Principal Investigator); National Science Foundation , USA

## Publications

### Journal Articles:

1. Tegen, I., H. Dörr, Münnich, K. O., 1991. Laboratory experiments to investigate the influence of microbial activity on the migration of cesium in a forest soil. *Water, Air, and Soil Pollution*, 57-58, 441-447.
2. Tegen, I. and I. Y. Fung, 1994. Modeling of mineral dust in the atmosphere: Sources, transport, and optical thickness. *J. Geophys. Res.*, 99, 22,897-22,914.
3. Tegen, I. and I. Y. Fung, 1995. Contribution to the mineral aerosol load from land surface modification. *J. Geophys. Res.*, 100, 18,707-18,726.
4. Tegen, I. and H. Dörr, 1996. Mobilization of cesium in organic rich soils: Correlation with production of dissolved organic carbon. *Water, Air, and Soil Pollution*, 88, 113-144.
5. Tegen, I. and H. Dörr, 1996. <sup>14</sup>C measurements of soil organic matter, soil CO<sub>2</sub>, and dissolved organic carbon (1987-1992). *Radiocarbon, special issue: <sup>14</sup>C Dynamics in Soils*, 38, 247-251.
6. Tegen, I. and A. A. Lacis, 1996. Modeling of particle size distribution and its influence on the radiative properties of mineral dust aerosol. *J. Geophys. Res.*, 101, 19,237-19,244.
7. Tegen, I., A. A. Lacis and I. Y. Fung, 1996. The influence of mineral aerosol from disturbed soils on the global radiation budget. *Nature*, 380, 419-422.
8. Tegen, I., P. Hollrigl, M. Chin, I. Fung, D. Jacob, and J. Penner, 1997. Contribution of different aerosol species to the global aerosol extinction optical thickness: Estimates from model results. *J. Geophys. Res.*, 102, 23,895-23,915.
9. J. E. Hansen, J. E., M. Sato, R. Ruedy, A. Lacis, K. Asamoah, K. Beckford, S. Borenstein, E. Brown, B. Cairns, B. Carlson, B. Curran, S. de Castro, L. Druyan, P. Etwarrow, T. Ferde, M. Fox, D. Gaffen, J. Glascoe, H. Gordon, S. Hollandsworth, X. Jiang, C. Johnson, N. Lawrence, J. Lean, J. Lerner, K. Lo, J. Logan, A. Lueckert, M. P. McCormick, R. McPeters, R. Miller, P. Minnis, I. Ramberran, G. Russell, P. Russell, P. Stone, I. Tegen, S. Thomas, L. Thomason, A. Thompson, J. Wilder, R. Willson, and J. Zawodny, 1997. Forcings and chaos in interannual to decadal climate change. *J. Geophys. Res.*, 102, 25,679-25,720.
10. J. E. Hansen, J. E., M. Sato, A. Lacis, R. Ruedy, I. Tegen, and E. Matthews, 1998. Climate forcings in the industrial era. *Proc. Natl. Acad. Sci. U.S.A.*, 22, 12,753-12,758.
11. Miller, R. and I. Tegen, 1998. Climate response to soil dust aerosol. *J. Climate*, 11, 3247-3267.
12. Tegen, I. and R. Miller, 1998. A GCM study on the interannual variability of soil dust aerosol. *J. Geophys. Res.*, 103, 25,975-25,995.
13. Koch, D., D. Jacob, I. Tegen, D. Rind, and M. Chin, 1999. Tropospheric sulfur simulation and sulfate direct radiative forcing in the GISS GCM. *J. Geophys. Res.*, 104, 23,799-23,822.
14. Lee, D. S., R. D. Kingdon, J. M. Pacyna, L. Bouwman, and I. Tegen, 1999. Modelling base cations in Europe - sources, transport and deposition of calcium. *Atmos. Environ.*, 33, 2241-2256.

15. Miller, R. and I. Tegen, 1999. Radiative forcing of a tropical direct circulation by mineral dust aerosols. *J. Atmos. Sci.*, 56, 2403-2433.
16. Fung, I. Y., S. Meyn, I. Tegen, S. C. Doney, J. John, and J. Bishop, 2000. Iron supply and demand in the upper ocean. *Glob. Biogeochem. Cycl.*, 14, 281-295.
17. Tegen, I. and D. Rind, 2000. The influence of the latitudinal temperature gradient on soil dust concentration and deposition in Greenland. *J. Geophys. Res.*, 105, 7199-7212.
18. Tegen, I., D. Koch, A. Lacis, and M. Sato, 2000. Trends in tropospheric aerosol loads and corresponding impact on direct radiative forcing between 1950 and 1990: A model study. *J. Geophys. Res.*, 105, 26,971-26,990.
19. Cakmur, R., R. Miller, and I. Tegen, 2001. A comparison of seasonal and interannual variability of soil dust aerosols over the Atlantic ocean as inferred by the TOMS and AVHRR AOT retrievals. *J. Geophys. Res.*, 106, 18,287-18,304.
20. Ginoux, P., M. Chin, I. Tegen, J. Prospero, B. Holben, O. Dubovik, and S.-J. Lin, 2001. Global simulation of dust in the troposphere: Model description and assessment. *J. Geophys. Res.*, 106, 20,255-20,273.
21. Perlwitz, J., I. Tegen, and R. Miller, 2001. Interactive soil dust aerosol model in the GISS GCM. Part I: Sensitivity of the soil dust cycle to radiative properties of dust aerosols. *J. Geophys. Res.*, 106, 18,167-18,192.
22. Robertson, A., J. Overpeck, D. Rind, E. Mosley-Thompson, G. Zielinski, J. Lean, D. Koch, J. Penner, I. Tegen, and R. Healy, 2001. Hypothesized climate forcing time series for the last 500 years. *J. Geophys. Res.*, 106, 14,783-14,803.
23. Tegen, I., S.P. Harrison, K.E. Kohfeld, and M. Werner, 2001. Dust deposition and aerosols in the last glacial maximum and their climate effects. *Nova Acta Leopoldina NF 88*, 331, 71-78.
24. Penner, J. E., S. Y. Zhang, M. Chin, C. C. Chuang, J. Feichter, Y. Feng, I. V. Geogdzhayev, P. Ginoux, M. Herzog, A. Higurashi, D. Koch, C. Land, U. Lohmann, M. Mishchenko, T. Nakajima, G. Pitari, B. Soden, I. Tegen, and L. Stowe, 2002. A comparison of model- and satellite-derived aerosol optical depth and reflectivity. *J. Atmos. Sci.*, 59, 441-460.
25. Lequere, C., L. Bopp, and I. Tegen, 2002. Antarctic circumpolar wave impact on marine biology. *Geophys. Res. Lett.*, doi:10.1029/2001GL014585.
26. Claquin, T., C. Roeland, K. E. Kohfeld, S. P. Harrison, I. Tegen, I. C. Prentice, Y. Balkanski, G. Bergametti, M. Hansson, N. Mahowald, H. Rohde, and M. Schulz, 2002. Radiative forcing of climate by ice-age atmospheric dust. *Climate Dynamics*, doi:10.1007/s00382-00002-00269.
27. Hansen, J. E., M. Sato, L. Nazarenko, R. Ruedy, A. Lacis, D. Koch, I. Tegen, T. Hall, D. Shindell, P. Stone, T. Novakov, L. Thomason, R. Wang, Y. Wang, D. J. Jacob, S. Hollandsworth-Frith, L. Bishop, J. Logan, A. Thompson, R. Stolarski, J. Lean, R. Willson, S. Levitus, J. Antonov, N. Rayner, D. Parker, and J. Christy, 2002. Climate forcings in GISS SI2000 simulation. *J. Geophys. Res.* 107, doi:10.1029/2001JD001143.
28. Liepert, B. and I. Tegen, 2002. Multi-decadal solar radiation observations in the United States and direct tropospheric aerosol forcing. *J. Geophys. Res.*, 107, doi:10.1029/2001JD000760.

29. Tegen, I., S. P. Harrison, K. E. Kohfeld, I. C. Prentice, M. C. Coe, and M. Heimann. The impact of vegetation and preferential source areas on global dust aerosol: Results from a model study. *J. Geophys. Res.*, 107, doi:10.1029/2001JD000963.
30. Werner, M., I. Tegen, S. P. Harrison, K. E. Kohfeld, Y. Balkanski, I. C. Prentice, H. Rodhe, and C. Roelandt. Seasonal and interannual variability of the mineral dust cycle under present and glacial climate conditions, 2002. *J. Geophys. Res.*, 107, doi:10.1029/2001JD002365.
31. Engelstaedter, S., K. E. Kohfeld, I. Tegen, I., S. P. Harrison, 2003. The control of dust emissions by vegetation and geomorphic setting: An evaluation using dust storm frequency data. *Geophys. Res. Lett.*, 30, Art. No. 1294.
32. Tegen, I., 2003. Modeling soil dust aerosol in the climate system: An overview. *Quaternary Science Reviews*, 22, 1821-1834
33. Kinne, S., U. Lohmann, J. Feichter, M. Schulz, C. Timmreck, S. Ghan, R. Easter, M. Chin, P. Ginoux, T. Takemura, I. Tegen, D. Koch, M. Herzog, J. Penner, G. Pitari, B. Holben, T. and Eck, A. Smirnov, O. Dubovik, I. Slutsker, D. Tanre, O. Torres, M. Mishchenko, I. Geogdzhayev, D.A. Chu, Y. Kaufman, 2003. Monthly averages of aerosol properties: A global comparison among models, satellite data, and AERONET ground data. *J. Geophys. Res.*, 108, Art. No. 4634., doi: 10.1029/2001JD001253
34. Tegen, I., M. Werner, S. P. Harrison, and K. E. Kohfeld, 2004. Relative importance of climate and land use in determining present and future global soil dust emission. *Geophys. Res. Lett.*, 31, L05105, doi:10.1029/2003GL019216.
35. Miller, R., I. Tegen, and J. Perlwitz, 2004. Surface radiative forcing by soil dust aerosols and the hydrologic cycle. *J. Geophys. Res.*, 109, D04203, doi:10.1029/2003JD004085.
36. Miller, R., J. Perlwitz, and I. Tegen, 2004. Feedback upon dust emission by dust radiative forcing through the planetary boundary layer. *J. Geophys. Res.*, 109, Art. No. D24209
37. Miller, R., J. Perlwitz, and I. Tegen, 2004. Modeling Arabian dust mobilization during the Asian summer monsoon: The effect of prescribed versus calculated SST. *Geophys. Res. Lett.*, 30, Art. No. L22214, doi:10.1029/2004GL020669.
38. Zender, C., R. Miller, and I. Tegen, 2004. Quantifying Mineral Dust Mass Budgets: Systematic Terminology, Constraints, & Current Estimates. *EOS*, 85, 509-512.
39. Tegen, I., M. Werner, S.P. Harrison and K.E. Kohfeld, 2004. Reply to comment by N. M. Mahowald et al. on "Relative importance of climate and land use in determining present and future global soil dust emission" *Geophys. Res. Lett.*, 31, Art. No. L24106.
40. Stier, P., J. Feichter, S. Kinne, S. Kloster, E. Vignati, J. Wilson, L. Ganzeveld, I. Tegen, M. Werner, Y. Balkanski, M. Schulz and O. Boucher, 2005. The Aerosol-Climate Model ECHAM5-HAM. *ACP*, 5, 1125-1156.
41. Prigent, C., I. Tegen, F. Aires, B. Marticorena and M. Zribi, 2004. Estimation of the aerodynamic roughness length in arid and semi-arid regions over the globe with ERS scatterometer. *J. Geophys. Res.*, 110, Art. No. D09205.

42. Jickells T.D., An Z. S. , K. K. Andersen, A.R. Baker, G. Bergametti, N. Brooks, J.J. Cao, P.W. Boyd , R.A. Duce , K.A. Hunter, H. Kawahata, N. Kubilay, J. LaRoche, P.S. Liss, N. Mahowald, J. M. Prospero, A.J. Ridgwell, I. Tegen, R. Torres, 2005. Global Iron Connections Between Desert Dust, Ocean Biogeochemistry and Climate, *Science*, 308, 67-71.
43. Mahowald, N.M., A.R. Baker, G. Bergametti, N. Brooks, R.A. Duce , T.D. Jickells, N. Kubilay, J. M. Prospero, I. Tegen, 2005. Atmospheric global dust cycle and iron inputs into the ocean, *Global Biogeochem. Cycles*, 19, Art. No. GB4025.
44. Cakmur, R.V., R.L. Miller, J. Perlwitz, I.V. Geogdzhayev, P. Ginoux, D. Koch, K.E. Kohfeld, I. Tegen, and C.S. Zender, 2006. Constraining the global dust emission and load by minimizing the difference between the model and observations, *J. Geophys. Res.*, 111, Art. No. D06207
45. Miller, R.L., R.V. Cakmur, J. Perlwitz, I.V. Geogdzhayev, P. Ginoux, D. Koch, K.E. Kohfeld, C. Prigent, R. Ruedy, G.A. Schmidt, and I. Tegen, 2006. Mineral dust aerosols in the NASA Goddard Institute for Space Sciences ModelE atmospheric general circulation model, *J. Geophys. Res.*, 111, Art. No. D06208
46. Washington, R., M.C. Todd, G. Lizcano, I. Tegen, C. Flamant, I. Koren, P. Ginoux, S. Engelstädter, C.S. Bristow, C.S., Zender, A.S. Goudie, and A. Warren, 2006. Links between topography, wind, deflation, lakes and dust: The case of the Bodele Depression, Chad. *Geophys. Res. Lett.*, 33, Art. No. L09401.
47. Engelstädter, S., R. Washington, and I. Tegen, 2006. North African dust emissions and transport. *Earth Science Reviews*, 79, 73-100.
48. Tegen, I., B. Heinold, M.C. Todd, J. Helmert, R. Washington, and O. Dubovik, 2006. Modelling soil dust aerosol in the Bodélé depression during the BoDEx campaign, *Atmos. Chem. Phys.*, 6, 4345-4359.
49. Heinold, B., J. Helmert, O. Hellmuth, R. Wolke, A. Ansmann, B. Marticorena, B., Laurent, and I. Tegen, 2007. Regional Modeling of Saharan Dust Events using LM-MUSCAT: Model Description and Case Studies *J. Geophys. Res.*, 112, D11204, doi:10.1029/2006JD007443.
50. Helmert, J., B. Heinold, I. Tegen, O. Hellmuth, and M. Wendisch, 2007. On the direct and semi-direct effect of Saharan dust over Europe: A case study. *J. Geophys. Res.*, 112, D13208, doi:10.1029/2006JD007444.
51. Schepanski, K., I. Tegen, B. Heinold, B. Laurent, A. Macke, 2007. A new Saharan Dust Source Activation Frequency Map derived from MSG-SEVIRI IR-channels. *Geophys. Res. Lett.*, 34(18), L18803, doi:10.1029/2007GL030168.
52. Birmili, W. , K. Schepanski, A. Ansmann, G. Spindler ,I. Tegen, B. Wehner, A. Nowak, E. Reimer, I. Mattis, K. Müller, E. Brüggemann, T. Gnauk, H. Herrmann, A. Wiedensohler, D. Althausen, A. Schladitz, T. Tuch, and G. Lösschau, 2008. A case of extreme particulate matter concentrations over Central Europe caused by dust emitted over the southern Ukraine, *Atmos. Chem. Phys.*, 8, 997-1016.

53. Laurent, B., B. Heinold, I. Tegen, C. Bouet, and G. Cautenet. Surface wind accuracy for modeling mineral dust emissions: Comparing two regional models in a Bodélé case study, 2008, *Geophys. Res. Lett.*, 35, L09804, doi:10.1029/2008GL033654.
54. Hoose, C., U. Lohmann, R. Erdin, and I. Tegen, 2008. Global influence of dust mineralogical composition on heterogeneous ice nucleation, *Environ. Res. Lett.*, 3, 025003.
55. Cheng, T, Y. Peng, J. Feichter, I. Tegen, 2008. An improvement on the dust emission scheme in the global aerosol-climate model ECHAM5-HAM, *Atmos. Chem. Phys.*, 8, 1105-1117.
56. Heinold, B., I. Tegen, K. Schepanski and O. Hellmuth, 2008. Dust radiative feedback on Saharan boundary layer dynamics and dust mobilization, *Geophys. Res. Lett.*, 35, L09804, doi:10.1029/2008GL033654.
57. Todd, M., D. Bou Karam, C. Cavazos, C. Bouet, B. Heinold, J. Baldasano, G. Cautenet, I. Koren, C. Perez, F. Solmon, I. Tegen, P. Tulet, R. Washington, A. Zakey, 2008. Quantifying uncertainty in estimates of mineral dust flux: An inter-comparison of model performance over the Bodélé Depression, Northern Chad, *J. Geophys. Res.*, 113, D24107, doi:10.1029/2008JD010476.
58. Knippertz, P., A. Ansmann, D. Althausen, D. Müller, M. Tesche, E. Bierwirth, T. Dinter, T. Müller, W. von Hoyningen-Huene, K. Schepanski, M. Wendisch, B. Heinold, K. Kandler, A. Petzold, L. Schütz, and I. Tegen, 2009. Dust mobilization and transport in the Northern Sahara during SAMUM 2006: A meteorological overview, *Tellus B*, 61(1), 12-31.
59. Heinold, B., I. Tegen, M. Esselborn, K. Kandler, P. Knippertz, D. Müller, A. Schladitz, A. M. Tesche, B. Weinzierl, A. Ansmann, D. Althausen, B. Laurent, A. Petzold, and K. Schepanski, 2009. Regional Saharan dust modelling during the SAMUM 2006 campaign, *Tellus B*, 61(1), 307-324.
60. Wagner, BF, D. Bortoli, S. Pereira, M.J. Costa, A.M. Silva, N. Belo, B. Weinzierl, M. Esselborn, A. Petzold, K. Rasp, B. Heinold, I. Tegen, 2009. Long-range transport of desert dust particles from Africa to Portugal during DARPO and SAMUM, *Tellus B*, 61(1), 297-306.
61. Müller, D., B. Heinold, M. Tesche, I. Tegen, D. Althausen, V. Amiridis, A. Amodeo, A. Ansmann, L. Arboledas, D. Balis, A. Comeron, G. D'Amico, E. Gerasopoulos, V. Freudenthaler, E. Giannakaki, B. Heese, M. Iarlori, R. E. Mamouri, L. Mona, A. Papayannis, G. Pappalardo, R.-M. Perrone, G. Pisani, V. Rizi, M. Sicard, N. Spinelli, A. Tafuro, 2009. EARLINET observations of the 14–22-May long-range dust transport event during SAMUM 2006: Validation of results from dust transport modelling, *Tellus B*, 61(1), 325-339.
62. Schepanski, K., I. Tegen and A. Macke, 2009. Saharan dust transport and deposition towards the Tropical Northern Atlantic, *Atmos. Chem. Phys.*, 9, 1173-1189.
63. Reinfried, F., I. Tegen, B. Heinold, O. Hellmuth, K. Schepanski, U. Cubasch, H. Hübener, P. Knippertz, 2009. Density currents in the Atlas region leading to dust mobilization: A model sensitivity study, *J. Geophys. Res.*, 114, Art. No. D08127.

64. Schepanski, K., I. Tegen, M. C. Todd, B. Heinold, G. Bönisch, B. Laurent and A. Macke, 2009. Meteorological processes forcing Saharan dust emission inferred from MSG-SEVIRI observations of sub-daily dust source activation, *J. Geophys. Res.*, 114, Art. No. D10201.
65. Tegen, I. and K. Schepanski, 2009. The global distribution of mineral dust. *IOP Conf. Ser.: Earth Environ. Sci.* 7 012001, doi: 10.1088/1755-1307/7/1/012001.
66. Laurent, B., Marticorena, B., Bergametti, G., Tegen, I., Schepanski, K., and Heinold, B., 2009. Modelling mineral dust emissions. *IOP Conf. Ser.: Earth Environ. Sci.* 7 012006, doi: 10.1088/1755-1307/7/1/012006
67. Washington, R., C. Bouet, G. Cautenet, E. Mackenzie, I. Ashpole, S. Engelstaedter, G. Lizcano, G. Henderson, K. Schepanski, I. Tegen, 2009. Dust as a Tipping Element: The Bodélé Depression, Chad, *Proc. Nat. Acad. Sci.*, doi: 10.1073/pnas.0711850106

Submitted:

- Laurent, B., Tegen, I., Heinold, B., Schepanski, K., and Weinzierl, B. A model study of Saharan dust emissions and distributions during the SAMUM-1 campaign, submitted to *JGR-Atmospheres*
- Tegen, I., Bierwirth, E., Heinold, B., Helmert, J. and Wendisch, M. The effect of measured surface albedo on modeled Saharan dust radiative forcing, submitted to *JGR-Atmospheres*.

**Book Chapters:**

1. Lelieveld, J., P. Crutzen, H. Grassl, J. Heintzenberg, R. Jaenicke, Y. Kaufman, J. T. Kiehl, J. E. Penner, H. Rodhe, I. Schult, and I. Tegen, 1995. Group report: Magnitudes and geographical variations and uncertainties of properties of tropospheric and stratospheric aerosols and their forcing. In: "Aerosol Forcing of Climate" (edited by R. Charlson and J. Heintzenberg), pp 335-348.
2. J. Hansen, M. Sato, R. Ruedy, A. Lacis, K. Asamoah, S. Borenstein, E. Brown, B. Cairns, G. Caliri, M. Campbell, B. Curran S. de Castro, L. Druryan, M. Fox, C. Johnson, J. Lerner, M. P. McCormick, R. Miller, P. Minnis, A. Morrison, L. Pandolfo, I. Ramberran, M. Robinson, P. Russel, K. Shah, P. Stone, I. Tegen, L. Thomason, J. Wilder, H. Wilson, and F. Zaucker, 1996. A Pinatubo climate modeling investigation. In: "Environment Change" (edited by G. Fiocco, D. Fua, and G. Visconti), NATO ASI Series, Springer Verlag.
3. Hansen, J. E., R. Ruedy, A. Lacis, M. Sato, L. Nazarenko, N. Tausnev, I. Tegen, and D. Koch, 2000. Climate modeling in the global warming debate. In: "General Circulation Model Development" (edited by D. Randall), Academic Press, New York, pp. 127-164.

4. Wiedensohler, A., F. Stratmann, and I. Tegen, 2000. Environmental particles. In: "Particle-Lung Interactions" (edited by P. Gehr and J. Heider), Marcel Dekker, Inc., New York, pp. 67-88.
5. S. Kinne, B. N. Holben, T. F. Eck, A. Smirnov, O. Dubovik, I. Slutsker, D. Tanre, D. Zibozdi, U. Lohmann, S. Ghan, R. Easter, M. Chin, P. Ginoux, T. Takemura, I Tegen, D. Koch, R. Kahn, E. Vermote, L. Stowe, O. Torres, M. Mishchenko, I. Geogdzhayev, and A. Hiragushi, 2001. How well do aerosol retrievals from satellites and representation in global circulation models match ground-based AERONET aerosol statistics? In: "Remote Sensing and Climate Modeling: Synergies and Limitations, Advances in Global Change Research Vol. 7" (edited by M. Beniston and M. Verstraete), Kluwer Academic. Dordrecht, Netherlands, pp 103-158.
6. Wolke, R., Heinold, B., Helmert, J., Hinneburg, D., Lieber, M., Renner, E., Schröder, W. and Tegen, I. 2006. Modelling of atmospheric chemistry transport processes. G. Münster, D. Wolf, and M. Kremer (Ed.), In: NIC Symposium 2006, Proceedings. John von Neumann Institute for Computing, Jülich, NIC Series, p. 281-288
7. Tegen, I, 2006.. Effects of Atmospheric Dust. In: "Encyclopedia of Quaternary Science" (edited by S. Elias), Elsevier, pp. 729-738.
8. Tegen, I. and K.E. Kohfeld, 2006. Atmospheric Transport of Silicon, in: "The Silicon Cycle. Human Perturbations and Impacts on Aquatic systems" (edited by V. Ittekkot, D. Unger, C. Humbog, and N. Tac An), SCOPE 66, Island Press, pp 81-91.
9. Kohfeld, K.E. and I. Tegen. Record of Mineral Aerosol and Their Role in the Earth System. In: "Treatise on Geochemistry" (edited by K. Turekian and H.D. Holland), Elsevier, Pergamon, Oxford, 2007, Pages 1-26, doi:10.1016/B9780080437514.
10. Tegen, I., 2009. Aerosol (Mineral), In: Encyclopedia of Paleoclimatology and Ancient Environments (edited by V. Gornitz), Encyclopedia of Earth Sciences Series, XXVIII, pp 1-2
11. Kohfeld, K. E. and I. Tegen, 2009. Dust Transport, Quaternary, In: Encyclopedia of Paleoclimatology and Ancient Environments (edited by V. Gornitz), Encyclopedia of Earth Sciences Series, XXVIII, pp 286-290

#### **Technical and Workshop Reports:**

1. Lee, D. S., R. D. Kingdon, J. M. Pacyna, L. Bouwman, and I. Tegen, 1997. Modelling base cations in Europe - sources, transport and deposition of calcium. Technical Report AEAT-1750/20067001/Issue 1, AEA Technology plc.
2. Tegen, I., Harrison, S.P., Kohfeld, K.E. 2002. Modeling the role of mineral aerosols in global climate cycles. Workshop report. EOS, 83: 395,400.

## **Other contributions**

### Contributing author for Assessment reports:

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