CURRICULUM VITAE OF JOHANNES (JOS) LELIEVELD

1. Affiliation:	Max Planck Institute for Chemistry
Mail address:	P.O. Box 3060, D-55020 Mainz, Germany
Street address:	Hahn-Meitner-Weg 1, D-55128 Mainz
Telephone:	+49 6131 3054000/4040
E-mail:	jos.lelieveld@mpic.de
2. Affiliation:	The Cyprus Institute
Mail address:	P.O. Box 27456, 1645 Nicosia, Cyprus
Street address:	20 Konstantinou Kavafi Street, 2121 Aglantzia
Telephone:	+357 22208789
E-mail:	j.lelieveld@cyi.ac.cy
ResearcherID:	www.researcherid.com/rid/A-1986-2013
ORCID ID:	0000-0001-6307-3846

Education

- B.Sc. in Biology, University of Leiden, the Netherlands, 1980
- Doctoral Degree from Mathematics and Natural Sciences Faculty, University of Leiden, 1984, including one year Mathematics at the Free University of Amsterdam
- Ph.D. in Atmospheric Physics and Chemistry (supervisor Paul J. Crutzen), Physics and Astronomy Faculty, University of Utrecht, 1990

Professional career

- 1984-1987: Research scientist
  Geosens B.V., Atmospheric Research Department, Rotterdam, the Netherlands
- 1987-1993: Research scientist
  Max Planck Institute for Chemistry, Atmospheric Chemistry Department, Mainz
- 1993-1995: Professor in Air Quality, Chair Air Quality Department
  University of Wageningen
- 1996-2000: Professor in Atmospheric Physics and Chemistry
  University of Utrecht
- 2000-present: Director of Atmospheric Chemistry Department
  Max Planck Institute for Chemistry, Mainz
- 2004-2007, 2010-2013, 2020-present: Managing director of the MPI for Chemistry
- 2008-present: Part-time professor at the Cyprus Institute, Nicosia

Extended visits

- August 1991-January 1992:
  International Meteorological Institute, University of Stockholm
- June 1992-September 1992:
  Center for Clouds, Chemistry and Climate, University of California, San Diego

Research interests

- Ozone photochemistry and self-cleaning mechanism of the atmosphere
- Role of reactive gases and aerosols in biogeochemical cycles and climate
- Air quality, climate change and planetary health

Teaching experience

- Introduction air quality (lectures University of Wageningen, 1993-1995)
- Atmospheric chemistry (lectures Universities of Wageningen and Utrecht, 1994-2000)
- Climate processes and global change (lectures University of Wageningen 1994-1995)
- Planetary atmospheres (lectures University of Utrecht 1997-2000)
- Atmospheric chemistry introduction (lectures University of Mainz, 2002-2005)
- Atmospheric chemistry methods (lectures University of Mainz, 2003-2005)
- Organization and contributions to summer schools, lecture series and Capita Selecta
- Supervisor of 67 PhD student dissertations (since 1995)

Awards and honors

- J.W. van Oostrom Meyjes prize, Royal Netherlands Society for Gas Production, 1994
- Editor's citation for excellence in refereeing, Journal of Geophysical Research, 2000
- Professor of the year, University of Utrecht, 2000
- Highly cited, Web of Science, 2001–2014, 2021–2022; Google Scholar, 2021–2022
- Professor in atmospheric physics, Johannes Gutenberg University Mainz, 2002
- Harold Schiff lecturer, York University, Toronto, 2002
- Distinguished lecturer, Weizmann Institute, Israel, 2005
- Academy of Athens, Greece, Citation for achievements in ozone research, 2007
- Hubert Curien lecturer at the Cyprus Institute, 2008
- European Research Council advanced research grant, 2008
- Institute professor at the Cyprus Institute, 2010
- Distinguished scientist, professor in geophysics, King Saud University, Riyadh, 2010
- Yuval Ne'eman distinguished lecturer in geophysics, Tel Aviv University, 2010
- Presidential plaquette for the advancement of science in the Republic of Cyprus, 2013
- German National Academy of Sciences – Leopoldina, 2015
- Doctor Honoris Causa, School of Science and Engineering, University of Crete, 2016
- International Silk Road Academy of Sciences, China, 2016
- Fellow of the Royal Society of Chemistry, UK, 2017
- Fellow of the American Geophysical Union, 2018
- Vilhelm Bjerknes Medal of the European Geosciences Union, 2019
- Cardiovascular research high impact award, European Society of Cardiology, 2021

Service and memberships

- American Geophysical Union (since 1987)

- American Meteorological Society (since 1991)
- Center for Clouds, Chemistry and Climate, Scripps Institution of Oceanography, University of California, San Diego (since 1992)
- Committee on Atmospheric Chemistry and Global Pollution of the International Association of Meteorology and Atmospheric Sciences (1994-2002)
- Editorial Board of Water, Air and Soil Pollution (1995-2005)
- Advisory Board of Tellus B (since 1996)
- Editorial Board of Journal of Atmospheric Chemistry (since 1996)
- Advisory Board Institute for Tropospheric Research (IFT), Leipzig (1996-2003)
- Associate Editor of Journal of Geophysical Research, Atmospheres (1997-2001)
- Director of the international research school COACh (Cooperation on Oceanic, Atmospheric and climate Change studies) (1997-2000)
- Science Panel on Stratospheric Ozone Research of the European Union (1997-2003)
- Professor in Atmospheric Physics, Johannes Gutenberg University, Mainz (since 2002)
- Spokesperson of the International Max Planck Research School for Atmospheric Physics and Chemistry – currently Paul Crutzen Graduate School (since 2002)
- Chairman Science Panel on Atmospheric Research of the EU Commission (2003-2005)
- Program Committee Earth Observations of the DLR Space Agency (2003-2008)
- Scientific Steering Committee of the HALO research aircraft (2003-2017)
- Board of Trustees of MPI for Polymer Research (2004-2007, 2010-2013, 2020-present)
- Deputy Spokesperson of the Excellence Cluster “Geocycles: time and space in the Earth sciences”, Johannes Gutenberg University, Mainz (2005-2008)
- Scientific-Technical Committee of the Executive Board, Karlsruhe Institute of Technology, Chair Advisory Board of the Atmosphere and Climate Program (2006-2019)
- Board COSMOS network (Community Earth System Models) (2007-2012)
- Board of the Netherlands Institute for Space Research, SRON (2008-2012)
- Steering Committee Max Planck Graduate Center Mainz (since 2008)
- Editorial Board of Earth System Dynamics (since 2010)
- Selection and Evaluation Committee, Institute for Basic Science, South Korea (since 2013)
- German National Academy of Sciences – Leopoldina (since 2015)
- European Geosciences Union, life member (since 2015)
- International Silk Road Academy of Sciences and kick-off committee, China (since 2016)
- Royal Society of Chemistry, UK (since 2017)
- Guest editor of the Proceedings of the National Academy of Sciences, USA (since 2018)
- Scientific Council of the National Observatory Athens (since 2019)
- Advisory Board of the Ruisdael Observatory, the Netherlands (since 2019)
- Advisory Board of the Panhellenic infrastructure for atmospheric composition and climate change (since 2019)

Publications

1. Lelieveld, J., F.W. Jansen and J.R.D. Stoute (1986) Radioactivity measurements in the Netherlands by aircraft after the Chernobyl accident. Geosens/ECN, Rotterdam.
2. Beilke, S., R. Berg, A.H. Blommers, W. Grosch, F.W. Jansen and J. Lelieveld (1986) Air sampling flights at low altitudes along the border between the Federal Republic of Germany and its neighbours. Procs. COST 611, Stresa, Italy, pp. 685-703, D. Reidel Publ. Co., Dordrecht.
3. Lelieveld, J., F.W. Jansen and J.F. den Tonkelaar (1987) Assessment of transboundary mass fluxes of air pollutants by aircraft measurements: A preliminary survey with reference to a case study. *Atmos. Environ. 21*, 2133-2143.
4. Lelieveld, J. and G. Helas (1987) Luchtverontreiniging in de troposfeer. Meulenhoff, Amsterdam.
5. de Boer, R.J. and J. Lelieveld (1987) Aircraft measurements in ozone research. In: R. Guicherit, J. van Ham and A.C. Posthumus (eds.) Ozon: fysische en chemische veranderingen in de atmosfeer en de gevolgen, pp. 45-48, Kluwer, Deventer.
6. Lelieveld, J. (1988) The calculation of transboundary and deposition fluxes of SO_2 and sulfate by means of aircraft measurements. *Water, Air, Soil Pollut. 38*, 199-209.
7. Lelieveld, J. and F.W. Jansen (1988) Het schatten van transporten van luchtverontreinigingen met behulp van meetvliegtuigen. *Lucht en Omgeving 5*, 50-54.
8. Beilke, S., W. Fricke, J. Lelieveld and F.W. Jansen (1988) Air sampling flights at low altitudes along the border between the Federal Republic of Germany and its neighbours: An assessment of transboundary mass fluxes of air pollutants. In: S. Beilke, J. Morelli and G. Angeletti (eds.) Field measurements and their interpretation. Air Pollution Research Report 14, pp. 245-254, CEC, Brussels.
9. Lelieveld, J. (1989) Die Bestimmung grenzüberschreitenden Transports von Luftverunreinigungen bei Smogwetterlagen mit Hilfe von Messflugzeugen. In: VDI (ed.) Flugzeugestützte Messungen von Luftverunreinigungen. VDI-RdL Band 9, pp. 45-56, Düsseldorf.
10. Lelieveld, J. (1989) The role of clouds in the photochemistry of the background troposphere. In: A. Ebel, F.M. Neubauer, E. Raschke and P. Speth (eds.) Mitteilungen aus dem Institut für Geophysik und Meteorologie der Universität zu Köln. Heft 61, pp. 117-121, Universität zu Köln.
11. Lelieveld, J., P.J. Crutzen and H. Rodhe (1989) Zonal average cloud characteristics for global atmospheric chemistry modeling. Report CM-76. International Meteorological Institute Stockholm.
12. Lelieveld, J., F.W. Jansen and H. van Dop (1989) Assessment of pollutant fluxes across the frontiers of the Federal Republic of Germany on the basis of aircraft measurements. *Atmos. Environ. 23*, 939-951.
13. Lelieveld, J. (1989) Transboundary air pollution: several years of measurements. In: L.J. Brasser and W.C. Mulder (eds.) Man and his ecosystem, pp. 37-42, Elsevier Science Publishers, Amsterdam.
14. Lelieveld, J. and P.J. Crutzen (1990) Influences of cloud photochemical processes on tropospheric ozone. *Nature 343*, 227-233.
15. Lelieveld, J. (1990) The role of clouds in tropospheric photochemistry. Ph.D. Thesis, University of Utrecht, The Netherlands.

16. Lelieveld, J. and P.J. Crutzen (1991) Climate discussion and fossil fuels. *Eur. Mag. Oil and Gas 4*, 11-15.
17. Lelieveld, J. and P.J. Crutzen (1991) The role of clouds in tropospheric photochemistry. *J. Atmos. Chem. 12*, 229-267.
18. Ramaswamy, V., K. Shine, C. Leovy, W.-C. Wang, H. Rodhe, D. Wuebbles, M. Ding, J. Lelieveld, J.A. Edmonds, M.P. McCormick, P. Frazer, A. Oort, K. Grant, M.D. Schwarzkopf, C. Johnson, A. Sutera, D. Lashof, D.A. Warrilow, J. Leggett and T. Wigley (1991) Radiative forcing of climate. In: D.L. Albritton and R.T. Watson (eds.) Scientific assessment of ozone depletion: 1991, pp. 7.1-7.28. World Meteorological Organization, Global ozone research and monitoring project, Report no. 25, WMO, Geneva.
19. Lelieveld, J. and P.J. Crutzen (1992) Indirect chemical effects of methane on climate warming. *Nature 355*, 339-342.
20. Galloway, J.N., J.E. Penner, C.S. Atherton, J.M. Prospero, H. Rodhe, R.S. Artz, Y.J. Balkanski, H.G. Bingemer, R.A. Brost, S. Bürgermeister, G.R. Carmichael, J.S.Chang, R.J. Charlson, S. Cober, W.G. Ellis, C.J. Fischer, J.M. Hales, D.R. Hastie, T. Iversen, D.J. Jacob, K. John, J.E. Johnson, P.S. Kasibhatla, J. Langner, J. Lelieveld, H. Levy, F. Lipschultz, J.T. Merrill, J.L. Moody, J. Pinto, A.A.P. Pszenny, P.A. Spiro, L. Tarrason, S.M. Turner and D.M. Whelpdale (1992) Sulfur and nitrogen levels in the North Atlantic Ocean's atmosphere: A synthesis of field and modeling results. *Global Biogeochem. Cycles 6*, 77-100.
21. Lelieveld, J. and J. Heintzenberg (1992) Sulfate cooling effect on climate through in-cloud oxidation of SO_2. *Science 258*, 117-120.
22. Isaksen, I.S.A., V. Ramaswamy, H. Rodhe, T.M.L. Wigley, R. Charlson, I. Karol, J. Lelieveld, C.B. Leovy, S.E. Schwartz, K.P. Shine, R.T. Watson, D.J. Wuebles and B.A. Callander (1992) Radiative forcing of climate. In: J.T. Houghton, B.A. Callander and S.K. Varney (eds) Climate Change 1992. The supplementary report to the IPCC scientific assessment, pp. 47-67. Cambridge University Press, New York, USA.
23. Isaksen, I.S.A., J.A. Fuglestvedt Y.-P. Lee, C. Johnson, R. Atkinson, J. Lelieveld, H. Sidebottom, A. Thompson, W. Brune, M. Oppenheimer, J. Kaye, T. Berntsen (1992) Scientific Assessment of Ozone Depletion: 1991. Chapter 5. Tropospheric Processes: Observations and Interpretation. In: D.L. Albritton and R.T. Watson (eds.) World Meteorological Organization Global Ozone Research and Monitoring Project – Report Nr. 25, WMO, Geneva, Switzerland.
24. Sander, R., J. Lelieveld and P.J. Crutzen (1992) Model calculations of the nighttime aqueous phase oxidation of S(IV) in an orographic cloud. In: J. Peeters (ed.) Chemical mechanisms describing tropospheric processes. Air pollution Research Report 45, pp. 285-290, CEC, Brussels.
25. Ramaswamy, V., K. Shine, C. Leovy, W.-C. Wang, H. Rodhe, D. Wuebbles, M. Ding, J. Lelieveld, J.A. Edmonds, M.P. McCormick, P. Fraser, A. Oort, K. Grant, M.D. Schwarzkopf, C. Johnson, A. Sutera, D. Lashof, D.A. Warrilow, J. Legett and T. Wigley (1992) Scientific Assessment of Ozone Depletion: 1991. Chapter 7. Radiative forcing of climate. In: D.L. Albritton and R.T. Watson (eds.) World Meteorological Organization Global Ozone Research and Monitoring Project – Report Nr. 25, WMO, Geneva, Switzerland.

26. Lelieveld, J. (1992) Cloud modelling in the study of global tropospheric photochemistry. Procs. WMO workshop on cloud microphysics and applications to global change. WMP Report No. 19, WMO/TD - No. 537, pp. 19-24, Geneva.
27. Langner, J., T.S. Bates, R.J. Charlson, A.D. Clarke, P.A. Durkee, J. Gras, J. Heintzenberg, D.J. Hofmann, B. Huebert, C. Leck, J. Lelieveld, J.A. Ogren, J. Prospero, P.K. Quinn, H. Rodhe and A.G. Ryaboshapko (1993) The global atmospheric sulfur cycle: An evaluation of model predictions and observations. Report CM-81, International Meteorological Institute Stockholm.
28. Lelieveld, J. and P.J. Crutzen (1993) Methane emissions into the atmosphere: An overview. In: A.R. van Amstel (ed.) Methane and nitrous oxide: methods in national emissions inventories and options for control, pp. 17-25, IPCC/RIVM, Bilthoven.
29. Crutzen, P.J., F.J. Dentener, M. Kanakidou, J. Lelieveld and P.H. Zimmermann (1993) A global three-dimensional study of the fate of HCFCs and HFC-134a in the troposphere. SPA-AFEAS, Washington, DC.
30. Lelieveld, J. (1993) Modelling of heterogeneous chemistry in the global troposphere. In: J.T. Kiehl (ed.) Clouds and climate, pp. 423-446, National Center for Atmospheric Research, Boulder.
31. Lelieveld, J. (1993) Multiphase processes in the atmospheric sulfur cycle. In: R. Wollast, F.T. Mackenzie and L. Chou (eds.) Interactions of C, N, P and S biogeochemical cycles and global change. NATO ASI Series I4, pp. 305-331, Springer-Verlag, Berlin.
32. Lelieveld, J., P.J. Crutzen and C. Brühl (1993) Climate effects of atmospheric methane. *Chemosphere 26*, 739-768.
33. Charlson, R.J. and J. Lelieveld (1993) Multiphase atmospheric chemistry: Implications for climate. In: R.G. Prinn (ed.) Global Atmospheric-Biospheric Chemistry, pp. 57-69, Plenum Press, New York.
34. Crutzen, P.J., J. Lelieveld and C. Brühl (1994) Oxidation processes in the atmosphere and the role of human activities: Observations and model results. *Adv. Environ. Sci. Technol. 28*, 63-93.
35. Lelieveld, J. (1994) Modeling of heterogeneous chemistry in the global troposphere. In: G. Bidoglio and W. Stumm (eds.) Chemistry of aquatic systems: local and global perspectives, pp. 73-95, Kluwer Academic Publ., Dordrecht.
36. Lelieveld, J. and P.J. Crutzen (1994) Role of deep cloud convection in the ozone budget of the troposphere. *Science 264*, 1759-1761.
37. Volz-Thomas A., M.O. Andreae, W.L. Chameides, R.G. Derwent, I.E. Galbally, J. Lelieveld, S.A. Penkett, B.A. Ridley, M.O. Rodgers, M. Trainer, G. Vaughan, X. Zhou (1994) WMO/UNEP Scientific Assessment of Ozone Depletion: Tropospheric Ozone, pp. 5.1-5.29, World Meteorological Organization, Geneva.
38. Lelieveld, J. (1994) Klimaateffecten door gebruik van verschillende fossiele brandstoffen. *Tijdschrift voor Gas, KVGN*, 22-29.
39. Lelieveld, J. und P.J. Crutzen (1994) Emissionen klimawirksamer Spurengasse durch die Nutzung von Öl und Erdgas. *Energiewirtschaftliche Tagesfragen 7*, 435-440.
40. Dentener, F.J., P.J. Crutzen and J. Lelieveld (1994) Chemical reactions in clouds: consequences for the global budget of O_3. In: G. Angeletti and G. Restelli (eds.) Physicochemical behaviour of atmospheric pollutants, pp. 14-17, Reidel Publ. Co., Dordrecht.

41. Lelieveld, J. and L. Bengtsson (1995) Study of the indirect and direct climate influences of anthropogenic trace gas emissions. In: I. Troen (ed.) Global change: Climate change and climate change impacts Symposium in Kopenhagen, pp. 87-99, CEC, Brussels.
42. Hov, Ø., J. Lelieveld, G. Brasseur, J. Fuglestvedt, D. Hauglustaine, J.E. Johnson, I. Karol, A. Ravishankara, F. Stordal (1995) Chemical modeling. In: W.C. Wang and I.S.A. Isaksen (eds.) Atmospheric ozone as a climate gas. NATO ASI Series, pp. 19-38, Springer-Verlag, Berlin.
43. Meijer, E.W., J.P. Beck en J. Lelieveld (1995) Milieueffecten van vliegverkeer in de troposfeer en stratosfeer. *Lucht 12*, 134-138.
44. Sander, R., J. Lelieveld and P.J. Crutzen (1995) Modelling of the nighttime nitrogen and sulfur chemistry in size resolved droplets of an orographical cloud. *J. Atmos. Chem. 20*, 89-116.
45. Lelieveld, J. and R. van Dorland (1995) Model simulations of ozone chemistry changes in the troposphere and consequent radiative forcings of climate during industrialization. In: W.C. Wang and I.S.A. Isaksen (eds.) Atmospheric ozone as a climate gas. NATO ASI Series, pp. 227-258, Springer-Verlag, Berlin.
46. Bregman, A., P.F.J. van Velthoven, F.G. Wienhold, H. Fischer, T. Zenker, A. Waibel, A. Frenzel, F. Arnold, G.W. Harris, M.J.A. Bolder and J. Lelieveld (1995) Aircraft measurements of O_3, HNO_3, and N_2O in the winter Arctic lower stratosphere during STREAM-I. *J. Geophys. Res. 100*, 11245-11260.
47. Lelieveld, J., P.J. Crutzen, H. Graßl, J. Heintzenberg, R. Jaenicke, Y.J. Kaufman, J.T.Kiehl, J.E. Penner, H. Rodhe, I. Schult and I. Tegen (1995) Magnitudes, geographical variations and uncertainties of properties of tropospheric and stratospheric aerosols and their forcing. In: R.J. Charlson and J. Heintzenberg (eds.) Aerosol forcing of climate, pp. 335-348, Wiley-Interscience, Chichester
48. Roelofs, G.-J. and J. Lelieveld (1995) Distribution and budget of O_3 in the troposphere calculated with a chemistry-general circulation model. *J. Geophys. Res. 100*, 20983-20998.
49. Ganzeveld, L.N. and J. Lelieveld (1995) Dry deposition parameterization in a chemistry-general circulation model and its influence on the distribution of chemically reactive trace gases. *J. Geophys. Res. 100*, 20999-21012.
50. Feichter, J., E. Kjellström, H. Rodhe, F. Dentener, J. Lelieveld and G.-J. Roelofs (1996) Simulation of the tropospheric sulfur cycle in a global climate model. *Atmos. Environ. 30*, 1693-1707.
51. Waibel, A.E., M. Welling, H. Fischer, A. Bregman, B. Scheeren, M.J.A. Bolder and J. Lelieveld (1996) Correlations of N_2O, CO, O_3, and NO_y in the winter Arctic lower stratosphere during the STREAM-II campaign, February 1995. In: J.A. Pyle, N.R.P. Harris and G.T. Amanatidis (eds.) *Polar Stratospheric ozone*, Proc. Third Europeansymposium on solar stratospheric ozone, Schliersee, Germany.
52. Lelieveld, J. (1996) Der antropogene Treibhauseffekt - Was ist das eigentlich? *Gas, Wasser, Wärme 96*, 273-278.
53. Holton, J.R. and J. Lelieveld (1996) The dynamics of stratosphere-troposphere mass exchange and the control of tropospheric ozone. In: P.J. Crutzen and V. Ramanathan(eds.) Clouds, Chemistry and Climate, pp. 173-190, NATO ASI Series. Springer Verlag, Berlin.

54. Dentener, F.J., G.R. Carmichael, Y. Zhang, J. Lelieveld and P.J. Crutzen (1996) The role of mineral aerosol as a reactive surface in the global troposphere. *J. Geophys. Res. 101*, 22869-22889.
55. Lelieveld, J. (1997) Hoe veranderlijk is "global change"? *Meteorologica 6*, 4-9.
56. Lelieveld, J., P.J. Crutzen, D.J. Jacob and A.M. Thompson (1997) Modeling of biomassburning influences on tropospheric ozone. In: B.W. van Wilgen, M.O. Andreae, J. Goldammer and J.A. Lindesay (eds.) Fire in southern African savannas: Ecological and atmospheric perspectives, pp. 217-238, Witwatersrand University Press, Johannesburg.
57. Lelieveld, J., F. Arnold, B. Bregman, V. Bürger, P. Crutzen, H. Fischer, P. Siegmund, P. van Velthoven, and A. Waibel (1997) Chemical perturbation of the lowermost stratosphere through exchange with the troposphere. *Geophys. Res. Lett. 24*, 603-606.
58. Bregman, A., F. Arnold, V. Bürger, H. Fischer, A. Krieger, J. Lelieveld, B. Scheeren, P. Siegmund, J. Ström, A. Waibel and W. Wauben (1997) In situ trace gas measurements in the summer lower stratosphere during STREAM: implications for O_3 production. *J. Atmos. Chem. 26,* 275-310.
59. Roelofs, G.-J. and J. Lelieveld (1997) Model study of the influence of cross-tropopause O_3 transports on tropospheric O_3 levels. *Tellus 49B*, 38-55.
60. Roelofs, G.-J., J. Lelieveld, D. Kley and H. Smit (1997) Ozone production and transports in the tropical Atlantic region during the biomass burning season. *J. Geophys. Res. 102*, 10637-10651.
61. Bregman, A., M. van den Broek, K.S. Carslaw, R. Müller, Th. Peter, R. Scheele and J. Lelieveld (1997) Ozone depletion in the late winter lower Arctic stratosphere: observations and model results. *J. Geophys. Res. 102*, 10815-10828.
62. Lelieveld, J., G.-J. Roelofs, L. Ganzeveld, J. Feichter and H. Rodhe (1997) Terrestrial sources and distribution of atmospheric sulphur. *Phil. Trans. R. Soc. Lond. B 352*, 149-158.
63. Crutzen, P., R. Brost, F. Dentener, J. Feichter, R. Hein, M. Kanakidou, J. Lelieveld and P. Zimmermann (1997) Development of a time-dependent global tropospheric air chemistry model "GLOMAC" based on the weather forecast model of the "ECMWF". In: A. Ebel, R. Friedrich and H. Rodhe (eds.) Tropospheric modelling and emission estimation, pp. 380-391, Springer Verlag, Berlin.
64. Fischer, H., A.E. Waibel, M. Welling, F.G. Wienhold, T. Zenker, P.J. Crutzen, F.Arnold, V. Bürger, J. Schneider, A. Bregman, J. Lelieveld and P.C. Siegmund (1997) Observations of high concentrations of total reactive nitrogen (NO_y) and nitric acid (HNO_3) in the lower Arctic stratosphere during the STREAM II campaign in February 1995. *J. Geophys. Res. 102*, 23559-23571.
65. Roelofs, G.-J., J. Lelieveld and R. van Dorland (1997) A three-dimensional chemistry/general circulation model simulation of anthropogenically derived ozone in the troposphere and its radiative climate forcing. *J. Geophys. Res. 102*, 23389-23401.
66. van Dorland, R., F.J. Dentener and J. Lelieveld (1997) Radiative forcing due to tropospheric ozone and sulfate aerosols. *J. Geophys. Res. 102*, 28079-28100.
67. Lelieveld, J., P.J. Crutzen and F.J. Dentener (1998) Changing concentration, lifetime and climate forcing of atmospheric methane. *Tellus 50B*, 128-150.

68. Ganzeveld, L., J. Lelieveld and G.-J. Roelofs (1998) A dry deposition parameterization for sulfur oxides in a chemistry and general circulation model. *J. Geophys. Res. 103*, 5679-5694.
69. Brasseur, G.P., R.A. Cox, D. Hauglustaine, I. Isaksen, J. Lelieveld, D. Lister, R. Sausen, U. Schumann, A. Wahner and P. Wiesen (1998) European scientific assessment of the atmospheric effects of aircraft emissions. *Atmos. Environ. 32*, 2329-2416.
70. Roelofs, G.-J., J. Lelieveld, and L. Ganzeveld (1998) Simulation of global sulfate distribution and the influence on effective cloud droplet radii with a coupled photo-chemistry-sulfur cycle model. *Tellus 50B*, 224-242.
71. Houweling, S., F. Dentener and J. Lelieveld (1998) The impact of non-methane hydro-carbon compounds on tropospheric photochemistry. *J. Geophys. Res. 103*, 10673-10696.
72. Vilà-Guerau de Arellano, J. and J. Lelieveld (1998) Chemistry in the atmospheric boundary layer. In: P.G. Duynkerke and A.A.M. Holtslag (eds.) Clear and cloudy boundary layers, pp. 267-286, Royal Netherlands Academy for Arts and Sciences, Amsterdam.
73. Krol, M., P.J. van Leeuwen and J. Lelieveld (1998) Global OH trend inferred from methylchloroform measurements. *J. Geophys. Res. 103*, 10697-10711.
74. Roelofs, G.J., J. Lelieveld and J. Feichter (1998) Model simulations of the changing distribution of ozone and its radiative forcing of climate: past, present and future. Max-Planck-Institute for Meteorology, Report No. 283, Hamburg.
75. de Reus, M., J. Ström, M. Kulmala, L. Pirjola, J. Lelieveld, C. Schiller and M. Zöger (1998) Airborne aerosol measurements in the tropopause region and the dependence of new particle formation on pre-existing particle number concentration. *J. Geophys. Res. 103*, 31255-31263.
76. Kentarchos, A.S., G.-J. Roelofs and J. Lelieveld (1999) Model study of a stratospheric intrusion event at lower mid-latitudes associated with the development of a cut-off low. *J. Geophys. Res. 104*, 1717-1727.
77. Waibel, A.E., H. Fischer, F.G. Wienhold, P.C. Siegmund, B. Lee, J. Ström, J. Lelieveld and P.J. Crutzen (1999) Highly elevated carbon monoxide concentrations in the upper troposphere and lowermost stratosphere at northern midlatitudes during the STREAM-II summer campaign in 1994. *Chemosphere: Global Change Sci. 1*, 233-248.
78. van Hees, R.M., J. Lelieveld and W.D. Collins (1999) Detecting tropical convection using AVHRR satellite data. *J. Geophys. Res. 104*, 9213-9228.
79. Lelieveld, J., A.M. Thompson, R.D. Diab, Ø. Hov, D. Kley, J.A. Logan, O.J. Nielsen, R. Stockwell and X. Zhou (1999) Scientific assessment of ozone depletion: 1998, Report No. 44. Chapter 8, Tropospheric ozone and related processes, pp. 8.1-8.42, World Meteorological Organization, Geneva.
80. Kreidenweis, S., G. Tyndall, M. Barth, F. Dentener, J. Lelieveld and M. Mozurkewich (1999) Aerosols and clouds. In: G.P. Brasseur, J.J. Orlando and G.S. Tyndall (eds.) Atmospheric chemistry and global change, pp. 117-154, Oxford University Press, New York.

81. Schneider, J., F. Arnold, J. Curtius, B. Sierau, H. Fischer, P. Hoor, F.G. Wienhold, U. Parchatka, Y.C. Zhang, H. Schlager, H. Ziereis, Ch. Feigl, J. Lelieveld, H.A. Scheeren and O. Bujok (1999) The temporal evolution of the ratio HNO_3/NO_y in the Arctic lower stratosphere from January to March 1997. *Geophys. Res. Lett. 26*, 1125-1128.
82. de Reus, M., J. Ström, P. Hoor, J. Lelieveld and C. Schiller (1999) Particle productionin the lowermost stratosphere by convective lifting of the tropopause. *J. Geophys. Res. 104*, 23935-23940.
83. Roeckner, E., L. Bengtsson, J. Feichter, J. Lelieveld and H. Rodhe (1999) Transient climate change simulations with a coupled atmosphere-ocean GCM including the tropospheric sulfur cycle. *J. Climate 12*, 3004-3032.
84. Dedikov, J.V., G.S. Akopova, N.G. Gladkaja, A.S. Piotrovskij, V.A. Markellov, S.S. Salichov, H. Kaesler, A. Ramm, A. Müller von Blumencron and J. Lelieveld (1999) Estimating methane releases from natural gas production and transmission in Russia. *Atmos. Environ. 33*, 3291-3299.
85. Lelieveld, J., A. Bregman, H.A. Scheeren, J. Ström, K.S. Carslaw, H. Fischer, P.C. Siegmund and F. Arnold (1999) Chlorine activation and ozone destruction in the northern lowermost stratosphere. *J. Geophys. Res. 104*, 8201-8213.
86. Marufu, L., J. Ludwig, M.O. Andreae, J. Lelieveld and G. Helas (1999) Spatial and temporal variation in biofuel consumption rates and patterns in Zimbabwe: Implications for atmospheric trace gas emissions. *Biomass and Bioenergy 16*, 311-332.
87. Lelieveld, J. (1999) Processes influencing tropospheric ozone. In: P. Jeannet, N. Bretz Guby and P. Viatte (eds.) Ozone, radiation and aerosols in the atmosphere, pp. 35-38, Swiss Agency for the Environment, Forests and Landscape, Bern.
88. de Laat, A.T.J., M. Zachariasse, G.J. Roelofs, P. van Velthoven, R.R. Dickerson, K.P. Rhoads, S.J. Oltmans and J. Lelieveld (1999) Tropospheric ozone distribution over the Indian Ocean during spring 1995 evaluated with a chemistry-climate model. *J. Geophys. Res. 104*, 13881-13894.
89. Metzger, S., F. Dentener, and J. Lelieveld (1999) Aerosol multiphase equilibrium composition: results of a parameterization applied to a global chemistry/tracer transport model. *J. Aerosol Sci. 30*, S877.
90. Ström, J., H. Fischer, J. Lelieveld and F. Schröder (1999) In-situ measurements of microphysical properties and trace gases in two cumulonimbus anvils over western Europe. *J. Geophys. Res 104*, 12221-12226.
91. Lelieveld, J., V. Ramanathan and P.J. Crutzen (1999) The global effects of Asian haze. *IEEE Spectrum, December 1999*, 50-54.
92. Houweling, S., T. Kaminski, F.J. Dentener, J. Lelieveld and M. Heimann (1999) Inverse modelling of methane sources and sinks using the adjoint of a global transport model. *J. Geophys. Res. 104*, 26137-26160.
93. Fischer, H., F.G. Wienhold, P. Hoor, O. Bujok, C. Schiller, P. Siegmund, M. Ambaum, H.A. Scheeren and J. Lelieveld (2000) Tracer correlations in the northern high latitude lower stratosphere: Influence of cross-tropopause mass exchange. *Geophys. Res. Lett. 27*, 97-100.
94. Formenti, P., M.O. Andreae and J. Lelieveld (2000) Measurements of aerosol optical depths in the North Atlantic free troposphere: results from ACE-2. *Tellus 52B*, 678-693.

95. Houweling, S., F.J. Dentener, J. Lelieveld, B. Walter and E. Dlugokencky (2000) The modeling of tropospheric methane: How well can point measurements be reproduced by a global model? *J. Geophys. Res. 105*, 8981-9002.
96. Marufu, L., F.J. Dentener, J. Lelieveld, M.O. Andreae and G. Helas (2000) Photo-chemistry of the African troposphere: The influence of biomass-burning emissions. *J. Geophys. Res. 105*, 14513-14530.
97. Rasch, P.J., J. Feichter, K. Law, N. Mahowald, J. Penner, C. Benkovitz, C. Genthon, C. Giannakopoulos, P. Kasibhatla, D. Koch, H. Levy, T. Maki, M. Prather, D.L. Roberts, G.-J. Roelofs, D. Stevenson, Z. Stockwell, S. Taguchi, M. Kritz, M. Chipperfield, D. Baldocchi, P. McMurry. L. Barrie, Y. Balkanski, R. Chatfield, E. Kjellstrom, M. Lawrence, H.N. Lee, J. Lelieveld, K.J. Noone, J. Seinfeld, G. Stenchikov, S. Schwartz, C. Walcek and D. Williamson (2000) A comparison of scavenging and deposition processes in global models: results from the WCRP Cambridge Workshop of 1995. *Tellus 52B*, 1025-1056.
98. Lelieveld, J. and F.J. Dentener (2000) What controls tropospheric ozone? *J. Geophys. Res. 105*, 3531-3551.
99. Crutzen, P.J., J. Williams, U. Pöschl, P. Hoor, H. Fischer, C. Warneke, R. Holzinger, Hansel, W. Lindinger, B. Scheeren and J. Lelieveld (2000) High spatial and temporal resolution measurements of primary organics and their oxidation products over the tropical forests of Surinam. *Atmos. Environ. 34*, 1161-1165.
100. Kentarchos, A.S., G.-J. Roelofs and J. Lelieveld (2000) Simulation of extratropical synoptic scale stratosphere-troposphere exchange using a coupled chemistry-GCM:Sensitivity to horizontal resolution. *J. Atmos. Sci. 57*, 2824-2838.
101. van den Berg, A., F.J. Dentener and J. Lelieveld (2000) Modelling the chemistry of the marine boundary layer: Sulfate formation and the role of sea-salt aerosol particles. *J. Geophys. Res. 105*, 11671-11698.
102. van Hees, R.M. and J. Lelieveld (2000) Retrieving cloud top structure from infrared satellite data. *J. Geophys. Res. 105*, 15663-15671.
103. Bregman, A., J. Lelieveld, M. van den Broek, P.C. Siegmund, H. Fischer and O. Bujok (2000) The N_2O and O_3 relationship in the lowermost stratosphere: A diagnostic for mixing processes as represented by a three-dimensional chemistry-transport model. *J. Geophys. Res. 105* 17279-17290.
104. Zachariasse, M., P.F.J. van Velthoven, H.G.J. Smit, J. Lelieveld, T.K. Mandal and H.Kelder (2000) Influence of stratosphere-troposphere exchange on tropospheric ozone over the tropical Indian Ocean during the winter monsoon. *J. Geophys. Res. 105*, 15403-15416.
105. de Laat, A.T.J. and J. Lelieveld (2000) Diurnal ozone cycle in the marine boundary layer. *J. Geophys. Res. 105*, 11547-11559.
106. de Reus, M., Ström, J. Curtius, L. Pirjola, E. Vignati, F. Arnold, H.C. Hansson, M. Kulmala, J. Lelieveld and F. Raes (2000) Aerosol production and growth in the upper free troposphere. *J. Geophys. Res. 105*, 25751-24762.
107. Houweling, S. F. Dentener and J. Lelieveld (2000) Simulation of preindustrial atmospheric methane to constrain the global source strength of natural wetlands. *J. Geophys. Res. 105*, 17243-17255.
108. de Reus, M., F.J. Dentener, A. Thomas, S. Borrmann, J. Ström and J. Lelieveld (2000) Airborne observations of dust aerosol over the North Atlantic Ocean during ACE-2: indications for heterogeneous ozone destruction. *J. Geophys. Res. 105*, 15263-15275.

109. Roelofs, G.J. and J. Lelieveld (2000) Tropospheric ozone simulation with a chemistry-general circulation model: Influence of higher hydrocarbon chemistry. *J. Geophys. Res. 105*, 22697-22712.
110. Williams, J. H. Fischer, G.W. Harris, P.J. Crutzen, P. Hoor, A. Hansel, R. Holzinger,C. Warneke, W. Lindinger, B. Scheeren and J. Lelieveld (2000) The variability-lifetime relationship for organic trace gases: A novel aid to compound identification and estimation of HO concentrations. *J. Geophys. Res. 105*, 20437-20486.
111. Kentarchos, A., G.J. Roelofs, J. Lelieveld and E. Cuevas (2000) On the origin of elevated surface ozone concentrations at Izana Observatory during late March 1996. *Geophys. Res. Lett. 27*, 3699-3702.
112. Roelofs, G.-J. and J. Lelieveld (2000) Model analysis of stratosphere-troposphere exchange of ozone and its role in the tropospheric ozone budget. In: C. Zerefos et al. (eds.) Chemistry and radiation changes in the ozone layer, pp. 25-43, Kluwer Academic Publishers, Netherlands.
113. van den Broek, M.M.P., A. Bregman and J. Lelieveld (2000) Model study of stratospheric chlorine activation and ozone loss during the 1996/97 winter. *J. Geophys. Res. 105*, 28961-28977.
114. Pöschl, U., J. Williams, P. Hoor, H. Fischer, P.J. Crutzen, C. Warneke, R. Holzinger, A. Hansel, A. Jordan, W. Lindinger, B. Scheeren, W. Peters and J. Lelieveld (2001) High acetone concentrations throughout the 0-12 km altitude range over the tropical rainforest in Surinam. *J. Atmos. Chem. 38*, 115-132.
115. Williams, J., U. Pöschl, P.J. Crutzen, A. Hansel, R. Holzinger, C. Warneke, W. Lindinger and J. Lelieveld (2001) An atmospheric chemistry interpretation of mass scans obtained from a proton transfer mass spectrometer frown over the tropical rainforest of Surinam. *J. Atmos. Chem. 38*, 133-166.
116. Warneke, C., R. Holzinger, A. Hansel, A. Jordan, W. Lindinger, U. Pöschl, J. Williams, P. Hoor, H. Fischer, P. Crutzen, H.A. Scheeren and J. Lelieveld (2001) Isoprene and its oxidation products methyl venyl ketone, methacrolein, and isoprene related peroxides measured online over the tropical rain forest of Surinam in March 1998. *J. Atmos. Chem. 38*, 167-185.
117. Formenti, P., M.O. Andreae, T.W. Andreae, C. Ichoku, G. Schebeske, A.J. Kettle, W. Maenhout, J. Cafmeyer, J. Ptasinsky, A. Karnieli and J. Lelieveld (2001) Physical and chemical characteristics of aerosols over the Negev Desert (Israel) during summer 1996. *J. Geophys. Res. 106*, 4871-4890.
118. Williams, J., H. Fischer, P. Hoor, U. Pöschl, P.J. Crutzen, M.O. Andreae and J. Lelieveld (2001) Influence of the tropical rain forest on atmospheric CO and CO_2 as measured by aircraft over Surinam, South America. *Chemosphere - Glob. Change Sci*. *3*, 157-170.
119. Andreae, M.O., P. Artaxo, H. Fischer, S.R. Freitas, J.-M. Grégoire, A. Hansel, P. Hoor, R. Kormann, R. Krejci, L. Lange, J. Lelieveld, W. Lindinger, K. Longo, W. Peters, M. de Reus, B. Scheeren, M. A. de Silva Dias, J. Ström, P.F.J. van Velthoven and J. Williams (2001) Transport of biomass burning smoke to the upper troposphere by deep convection in the equatorial region. *Geophys. Res. Lett. 28*, 951-954.

120. Formenti, P., M.O. Andreae, T.W. Andreae, E. Galani, A. Vasaras, C. Zerefos, V. Amiridis, L. Orlovsky, A. Karnieli, M. Wendisch, H. Wex, B.N. Holben, W. Maenhaut and J. Lelieveld (2001) Aerosol optical properties and large-scale transport of air masses: Observations at a coastal and semiarid site in the eastern Mediterranean during summer 1998. *J. Geophys. Res. 106*, 9807-9826.
121. Lelieveld, J., P.J. Crutzen, M.O. Andreae, C.A.M. Brenninkmeijer, T. Campos, G.R. Cass, R.R. Dickerson, H. Fischer, J.A. de Gouw, A. Hansel, A. Jefferson, D. Kley, A.T.J. de Laat, S. Lal, M.G. Lawrence, J.M. Lobert, O. Mayol-Bracero, A.P. Mitra, T. Novakov, S.J. Oltmans, K.A. Prather, V. Ramanathan, T. Reiner, H. Rodhe, H.A. Scheeren, D. Sikka and J. Williams (2001) The Indian Ocean Experiment: Widespread air pollution from South and South-East Asia. *Science 291*, 1031-1036.
122. van Aardenne, J.A., F.J. Dentener, C.G.M. Klein Goldewijk, J.G.J. Olivier and J.Lelieveld (2001) A 1^{o}x1^{o} resolution dataset of historical anthropogenic trace gas emissions for the period 1890-1990. *Global Biogeochem. Cycles 15*, 909-928.
123. Ramanathan, V., P.J. Crutzen, J. Lelieveld, A.P. Mitra, D. Althausen, J. Anderson, M.O. Andreae, W. Cantrell, C.R. Cass, C.E. Chung, A.D. Clarke, J.A. Coakley, W.D. Collins, W.C. Conant, F. Dulac, J. Heintzenberg, B. Holben, S. Howell, J. Hudson, A. Jayaraman, J.T. Kiehl, T.N. Krishnamurti, D. Lubin, G. McFarquhar, T. Novakov, J.A. Ogren, I.A. Podgorny, K. Prather, K. Priestley, J.M. Prospero, P.K. Quinn, K. Rajeev, P. Rasch, S. Rupert, R. Sadourny, S.K. Sathees, G.E. Shaw, P. Sheridan and F.P.J. Valero (2001) Indian Ocean Experiment: An integrated analysis of the climate forcing and effects of the great Indo-Asian haze. *J. Geophys. Res. 106*, 28371-28398.
124. Formenti, P., M.O. Andreae, L. Lange, G. Roberts, J. Cafmeyer, I. Rajta, W. Maenhaut, B.N. Holben, P. Artaxo and J. Lelieveld (2001) Saharan dust in Brazil and Suriname during the Large-Scale Biosphere-Atmosphere Experiment in Amazonia (LBA) - Cooperative LBA Regional Experiment (CLAIRE) in March 1998. *J. Geophys. Res. 106*, 14919-14934.
125. Lange, L., P. Hoor, G. Helas, H. Fischer, D. Brunner, H.A. Scheeren, J. Williams, S. Wong, K.H. Wohlfrom, F. Arnold, J. Ström, R. Krejci, J. Lelieveld and M.O. Andreae (2001) Detection of lightning-produced NO in the midlatitude upper troposphere during STREAM 98. *J. Geophys. Res. 106*, 27777-27785.
126. Crutzen, J. and J. Lelieveld (2001) Human impacts on atmospheric chemistry. *Ann. Rev. Earth Planet. Sci. 29*, 17-45.
127. Kentarchos, A, G.-J. Roelofs and J. Lelieveld (2001) Altitude distribution of tropospheri ozone over the northern hemisphere during 1996, simulated with a chemistry-general circulation model at two different horizontal resolutions. *J. Geophys. Res. 106*, 17453-17469.
128. de Laat, A.T.J., J. Lelieveld, G.J. Roelofs, R.R. Dickerson and J.M. Lobert (2001) Source analysis of carbon monoxide pollution during INDOEX 1999. *J. Geophys. Res. 106*, 28481-28495.
129. de Laat, A.T.J., J.A. de Gouw, J. Lelieveld and A. Hansel (2001) Model analysis of trace gas measurements and pollution impact during INDOEX. *J. Geophys. Res. 106*, 28469-28480.
130. Peters, W., M. Krol, F. Dentener and J. Lelieveld (2001) Identification of an El Niño-Southern Oscillation signal in a multiyear global simulation of tropospheric ozone. *J. Geophys. Res. 106*, 10389-10402.

131. Bregman, A., M.C. Krol, H. Teyssèdre, W.A. Norton, A. Iwi, M. Chipperfield, G. Pitari, J. Sundet and J. Lelieveld (2001) Chemistry-transport model comparison with ozone observations in the midlatitude lowermost stratosphere. *J. Geophys. Res. 106*, 17479-17496.
132. Curtius, J. B. Sierau, F. Arnold, M. de Reus, J. Ström, B. Scheeren and J. Lelieveld (2001) Measurements of aerosol sulfuric acid (II): Pronounced layering in the free troposphere during ACE 2. *J. Geophys. Res. 106*, 31975-31990.
133. Fischer, H., P. Hoor and J. Lelieveld (2001) Seasonal variation of extratropical cross-tropopause transport inferred from chemical tracer measurements. *SPARC Newsletter 17*, 18-22.
134. de Gouw, J.A., C. Warneke, H.A. Scheeren, C. van der Veen, M. Bolder, M.P. Scheele, J. Williams, S. Wong, L. Lange, H. Fischer and J. Lelieveld (2001) Overview of the trace gas measurements onboard the Citation aircraft during the Intensive Field Phase of INDOEX. *J. Geophys. Res. 106*, 28453-28467.
135. Fischer, H., D. Brunner, G.W. Harris, P. Hoor, J. Lelieveld, D.S. McKenna, J. Rudolph, H.A. Scheeren, P. Siegmund, H. Wernli, J. Williams, S. Wong (2002) Chemical signatures of upper tropospheric airmasses over central Canada during the STREAM 1998 summer campaign. *J. Geophys. Res 107*, doi: 10.1029/2000JD000312.
136. Williams, J., H. Fischer, S. Wong, P.J. Crutzen, M.P. Scheele and J. Lelieveld (2002) Near equatorial CO and O_3 profiles over the Indian Ocean during the winter monsoon: High O_3 levels in the middle troposphere and interhemispheric exchange. *J. Geophys. Res. 107*, doi: 10.1029/2001JD001126.
137. Hoor, P., H. Fischer, L. Lange, J. Lelieveld and D. Brunner (2002) Seasonal variations of a mixing layer in the tropopause region as identified by the CO-O_3 correlation from in-situ measurements. *J. Geophys. Res*. *107*, doi: 10.1029/2000JD000289.
138. Bregman, A., P.H. Wang and J. Lelieveld (2002) Chemical ozone loss in the tropopauseregion on subvisible ice clouds, calculated with a chemistry transport model. *J. Geophys. Res. 107*, doi: 10.1029/2001JD000761.
139. Peters, W., M. Krol, F.J. Dentener, A.M. Thompson and J. Lelieveld (2002) Chemistry-transport modeling of the satellite observed distribution of tropical tropospheric ozone. *Atmos. Chem. Phys. 2*, 103-120.
140. Ganzeveld, L.N., J. Lelieveld, F.J. Dentener, M. Krol and G.-J. Roelofs (2002) Atmosphere-biosphere trace gas exchanges simulated with a single column model. *J. Geophys. Res.*, doi: 10.1029/2001JD000684.
141. Ganzeveld, L.N., J. Lelieveld, F.J. Dentener, M. Krol, A.F. Bouwman and G.-J. Roelofs (2002) Global soil-biogenic NO_x emissions and the role of canopy processes. *J. Geophys. Res.*, doi: 10.1029/2001JD001289.
142. Scheeren, H.A., J. Lelieveld, J.A. de Gouw, C. van der Veen and H. Fischer (2002) Methyl chloride and other chlorocarbons in polluted air during INDOEX. *J. Geophys. Res. 107*, doi: 10.1029/2001JD001121.
143. Lelieveld, J., H. Berresheim, S. Borrmann, P.J. Crutzen, F.J. Dentener, H. Fischer, J. Feichter, P.J. Flatau, J. Heland, R. Holzinger, R. Korrmann, M.G. Lawrence, Z. Levin, K.M. Markowicz, N. Mihalopoulos, A. Minikin, V. Ramanathan, M. de Reus, G.J. Roelofs, H.A. Scheeren, J. Sciare, H. Schlager, M. Schultz, P. Siegmund, B. Steil, E.G. Stephanou, P. Stier, M. Traub, C. Warneke, J. Williams, and H. Ziereis (2002) Global air pollution crossroads over the Mediterranean. *Science 298*, 794-799.

144. Metzger, S., F. Dentener, S. Pandis and J. Lelieveld (2002) Gas/aerosol partitioning: 1. A computationally efficient model. *J. Geophys. Res*. *107*, doi: 10.1029/2001JD001102.
145. Metzger, S., F. Dentener, M. Krol, A. Jeuken and J. Lelieveld (2002) Gas/aerosol partitioning: 2. Global modeling results. *J. Geophys. Res. 107*, doi: 10.1029/2001JD001103.
146. Andreae, M.O., P. Artaxo, C. Brandão, F. E. Carswell, P. Ciccioli, A. L. da Costa, A.D. Culf, J. L. Esteves, J. H. C. Gash, J. Grace, P. Kabat, J. Lelieveld, Y. Malhi, A., O. Manzi, F. X. Meixner, A. D. Nobre, C. Nobre, M. de L. P. Ruivo, M. A. Silva-Dias, P. Stefani, R. Valentini, J. von Jouanne, and M. J. Waterloo (2002) Towards an understanding of the biogeochemical cycling of carbon, water, energy, trace gases and aerosols in Amazonia: The LBA-EUSTACH experiments. *J. Geophys. Res. 107*, 8066, doi: 10.1029/2001JD000524.
147. Beuermann, J., P. Konopka, D. Brunner, O. Bujok, G. Günther, D.S. McKenna, J. Lelieveld, R. Müller and C. Schiller (2002) High-resolution measurements and simulation of stratospheric and tropospheric intrusions in the vicinity of the polar jet stream. *Geophys. Res. Lett 29*, doi: 10.1029/2001GL014162.
148. Oberlander, E.A., C.A.M. Brenninkmeijer, P.J. Crutzen, J. Lelieveld and N.F. Elanski (2002) Why not take the train? Trans-Siberian atmospheric chemistry observations across Central and East Asia. *EOS Transactions 83*, 509-516.
149. Lelieveld, J., W. Peters, F.J. Dentener and M.C. Krol (2002) Stability of tropospheric hydroxyl chemistry. *J. Geophys. Res. 107*, 4715, doi: 10.1029/2002JD002272.
150. Berresheim, H. and J. Lelieveld (2002) Verändert der Mensch das Oxidationsvermögen der Atmosphäre? *GAW Brief des Deutschen Wetterdienstes 13*, November 2002.
151. de Laat, A.T.J. and J. Lelieveld (2002) Interannual variability of the Indian winter monsoon circulation and consequences for pollution levels. *J. Geophys. Res. 107*, 4739, doi: 10.1029/2001JD001483.
152. de Reus, M, P. Formenti, J. Ström, R. Krejci, D. Müller, M.O. Andreae and J. Lelieveld (2003) Airborne observations of dry particle absorption and scattering properties over the northern Indian Ocean. *J. Geophys. Res. 108*, 8002, doi: 10.1029/2002JD002304.
153. Crutzen, P.J. and J. Lelieveld (2003) Comment on the paper by C.G. Roberts et al. "Cloud condensation nuclei in the Amazon Basin: "Marine" conditions over a continent?". *Geophys. Res. Lett. 30*, 1078, doi: 10.1029/2002GL015206.
154. Krol, M.C. and J. Lelieveld (2003) Can the variability in tropospheric OH be deduced from measurements of 1,1,1-trichloroethane (methyl chloroform)? *J. Geophys. Res. 108*, 4125, doi: 10.1029/2002JD002423.
155. Krol, M.C., J. Lelieveld, D.E. Oram, G.A. Sturrock, S.A. Penkett, C.A.M. Brenninkmeijer, V. Gros, J. Williams and H.A. Scheeren (2003) Continuing emissions of methyl chloroform from Europe. *Nature 421*, 131-136.
156. Fischer, H., M. de Reus, M. Traub, J. Williams, J. Lelieveld, J. de Gouw, C. Warneke, H. Schlager, A. Minikin, R. Scheele and P. Siegmund (2003) Deep convective injection of boundary layer air into the lowermost stratosphere at midlatitudes. *Atmos. Chem. Phys. 3, 739-745*.
157. Steil, B., C. Brühl, E. Manzini, P.J. Crutzen, J. Lelieveld, P.J. Rasch, E. Roeckner and K. Krüger (2003) A new interactive chemistry climate model. I: Present day climatology and interannual variability of the middle atmosphere using the model and 9 years of HALOE/UARS data. *J. Geophys. Res. 108*, 4290, doi: 10.1029/2002JD002971.

158. Dentener, F., W. Peters, M. Krol, M. van Weele, P. Bergamaschi and J. Lelieveld (2003) Interannual variability and trend of CH_4 lifetime as a measure for OH changes in the 1979-1993 time period. *J. Geophys. Res. 108*, 4442, doi: 10.29/2002JD002916.
159. Lawrence, M.G., P.J. Rasch, R. von Kuhlmann, J. Williams, H. Fischer, M. de Reus, J. Lelieveld, P.J. Crutzen, M. Schultz, P. Stier, H. Huntrieser, J. Heland, A. Stohl, C. Forster, H. Elbern, H. Jakobs and R.R. Dickerson (2003) Global chemical weather forecasts for field campaign planning: predictions and observations of large-scale features during MINOS, CONTRACE, and INDOEX. *Atmos. Chem. Phys. 3*, 267-289.
160. Xu, X., L.L.P. van Stee, J. Williams, J. Beens, M. Adahchour, R.J.J. Vreuls, U.A.T. Brinkman and J. Lelieveld (2003) Comprehensive two-dimensional gas chromate-graphy (GC×GC) measurements of volatile organic compounds in the atmosphere. *Atmos. Chem. Phys. 3*, 665-682.
161. Scheeren, H.A., J. Lelieveld, J. Williams, H. Fischer and C. Warneke (2003) Measurements of reactive chlorocarbons over the Surinam tropical rain forest: Indications for strong biogenic emissions. *Atmos. Chem. Phys. 3*, 1589-1608.
162. Kormann, R., H. Fischer, M. de Reus, M. Lawrence, C. Brühl, R. von Kuhlmann, R. Holzinger, J. Williams, J. Lelieveld, C. Warneke, J. de Gouw, J. Heland, H. Ziereis and H. Schlager (2003) Formaldehyde over the eastern Mediterranean during MINOS: Comparison of airborne in-situ measurements with 3D model results. *Atmos. Chem. Phys. 3*, 851-861.
163. Roelofs, G.J., H.A. Scheeren, J. Heland and J. Lelieveld (2003) A model study of ozone in the eastern Mediterranean free troposphere during MINOS (August 2001). *Atmos. Chem. Phys. 3*, 1199-1210.
164. Gros, V., J. Williams, J.A. van Aardenne, G. Salisbury, R. Hofmann, M. Lawrence, R. von Kuhlmann, J. Lelieveld, M. Krol, H. Berresheim, J.M. Lobert and E. Atlas (2003) Origin of anthropogenic hydrocarbons and halocarbons measured in the summertime European outflow (on Crete in 2001). *Atmos. Chem. Phys. 3*, 1223-1235.
165. Scheeren, H.A., H. Fischer, J. Lelieveld, P. Hoor, J. Rudolph, F. Arnold, B. Bregman, C. Brühl, A. Engel, C. van der Veen, and D. Brunner (2003) Reactive organic species in the northern extratropical lowermost stratosphere: Seasonal variability and implications for OH. *J. Geophys. Res. 108,* 4805, doi: 10.1029/2003JD003650.
166. Traub, M., H. Fischer, M. de Reus, R. Kormann, J. Heland, H. Ziereis, H. Schlager, R. Holzinger, J. Williams, C. Warneke, J. de Gouw and J. Lelieveld (2003) Chemical characteristics assigned to trajectory clusters during the MINOS campaign. *Atmos. Chem. Phys. 3*, 459-468.
167. Xu, X., J. Williams, C. Plass-Dülmer, H. Berresheim, G. Salisbury, L. Lange and J.Lelieveld (2003) GC×GC measurements of C_7-C_{11} aromatic and n-alkane hydrocarbonson Crete, in air from eastern Europe during the MINOS campaign. *Atmos. Chem. Phys. 3*, 1461-1475.
168. Traub, M. and J. Lelieveld (2003) Cross-tropopause transport over the eastern Mediterranean. *J. Geophys. Res. 108*, 4712, doi: 10.1029/2003JD003754.
169. Scheeren, H.A., J. Lelieveld, G.-J. Roelofs, J. Williams, H. Fischer, M. de Reus, J.A. de Gouw, C. Warneke, R. Holzinger, H. Schlager, T. Klüpfel, M. Bolder, C. van der Veen and M. Lawrence (2003) The impact of monsoon outflow from India and southeast Asia in the upper troposphere over the eastern Mediterranean. *Atmos. Chem. Phys. 3,* 1589-1608.

170. Salisbury, G., J. Williams, R. Holzinger, L. Lange, X. Xu, N. Mihalopoulos, M.Vrekoussis, J. Sciare, H. Berresheim, M.G. Lawrence, R. von Kuhlmann and J. Lelieveld (2003) Ground-based PTR-MS measurements of reactive organic compounds During the MINOS campaign in Crete, July-August 2001. *Atmos. Chem. Phys. 3*, 925-940.
171. Lelieveld, J. (2003) Self-cleaning capacity of the atmosphere and land-biosphere processes. Proceedings of ILEAPS: Integrated Land Ecosystem - Atmosphere Processes Study, pp. P22-P24. *Report series in Aerosol Science 62A*, Aerosolitutkimusseura, Helsinki.
172. Lelieveld, J. and N. Mihalopoulos (2003) The regional integrated "Project Mediterranean". *IGAC Newsletter 28*, 20-23.
173. van Aalst, M.K., M.M.P. van den Broek, A. Bregman, C. Brühl, B. Steil, G.C. Toon, S. Garcelon, G.M. Hansford, R.L. Jones, T.D. Gardiner, G.J. Roelofs, J. Lelieveld and P.J. Crutzen (2004) Trace gas transport in the 1999/2000 Actic winter: comparison of nudged GCM runs with observations. *Atmos. Chem. Phys. 4*, 81-93.
174. Peters, W., M.C. Krol, J.P.F. Fortuin, H.M. Kelder, A.M. Thompson, C.R. Becker, J. Lelieveld and P.J. Crutzen (2004) Tropospheric ozone over a tropical Atlantic station in the northern hemisphere: Paramaribo, Surinam (6°N, 55°W). *Tellus 56B*, 21-34.
175. Vrekoussis, M., M. Kanakidou, N. Mihalopoulos, P.J. Crutzen, J. Lelieveld, D. Perner,H. Berresheim, E. Baboukas (2004) Role of NO_3 radicals in oxidation processes in the eastern Mediterranean troposphere during the MINOS campaign. *Atmos. Chem. Phys. 4*, 169-182.
176. Gurjar, B.R., J.A. van Aardenne, J. Lelieveld and M. Mohan (2004) Emission estimates and trends (1990-2000) for megacity Delhi and implications. *Atmos. Environ. 38*, 5663-5681.
177. Ganzeveld, L.N. and J. Lelieveld (2004) Impact of Amazonian deforestation on atmospheric chemistry. *Geophys. Res. Lett. 31*, L06105, doi: 10.1029/2003GL019205.
178. Lelieveld, J., J. van Aardenne, H. Fischer, M. de Reus, J. Williams and P. Winkler (2004) Increasing ozone over the Atlantic Ocean. *Science 304*, 1483-1487.
179. Lelieveld, J. (2004) Veränderte troposphärische Chemie. *Promet 30 (3)*, 116-121.
180. Lelieveld, J., F.J. Dentener, W. Peters and M.C. Krol (2004) On the role of hydroxylradicals in the self-cleansing capacity of the troposphere. *Atmos. Chem. Phys. 4*, 2337-2344.
181. Lelieveld, J. (2004) Globaler und regionaler Spurenstofftransport in der Atmosphäre: Die INDOEX und MINOS Kampagnen. In: H. Behret, W. Kördel, B. Stock, R. Zellner (eds.) Stoffstransport und Transformation in der Atmosphäre, pp. 9-34, Gesellschaft Deutscher Chemiker – Monographie Band 28, Frankfurt am Main.
182. Winkler, P. and J. Lelieveld (2004) Troposphärisches Ozon in den Tropen, Subtropen und der Südhemisphäre gestiegen. *Ozonbulletin des Deutschen Wetterdienstes 100*, August 2004.
183. Holzinger, R., J. Williams, G. Salisbury, T. Klüpfel, M. de Reus, M. Traub, P.J. Crutzen and J. Lelieveld (2005) Oxygenated compounds in aged biomass burning plumes over the eastern Mediterranean: evidence for strong secondary production of methanol and acetone. *Atmos. Chem. Phys. 5*, 39-46.

184. Jöckel, P., R. Sander, A. Kerkweg, H. Tost and J. Lelieveld (2005) Technical note: The Modular Earth Submodel System (MESSy) – a new approach towards Earth System Modeling. *Atmos. Chem. Phys. 5*, 433-444.
185. Sander, R., A. Kerkweg, P. Jöckel and J. Lelieveld (2005) Technical note: The new comprehensive atmospheric chemistry module MECCA. *Atmos. Chem. Phys. 5*, 445-450.
186. Rhee, T.S., C.A.M. Brenninkmeijer, J. Mühle, P.F.J. van Velthoven, M. Hermann, A. Zahn, D.E. Oram, D.H. Scharffe, C. Koeppel, H. Fischer and J. Lelieveld (2005) A case study of rapid mixing across the extratropical tropopause based on Civil Aircraftfor the Regular Investigation of the Atmosphere Based on an Instrumented Container (CARIBIC) observations. *J. Geophys. Res. 110, D22301*, doi:10.1029/2005JD005890.
187. Gurjar, B.R. and J. Lelieveld (2005) New directions: Megacities and global change. *Atmos. Environ. 39*, 391-393.
188. Kormann, R., R. Königstedt, U. Parchatka, J. Lelieveld and H. Fischer (2005) QUALITAS – A mid-infrared spectrometer for sensitive trace gas measurements based on quantum cascade lasers in CW operation. *Rev. Sci. Instr. 76*, 075103.
189. Hoor, P., H. Fischer and J. Lelieveld (2005) Tropical and extratropical tropospheric air in the lowermost stratosphere over Europe: A CO based budget. *Geophys. Res. Lett. 32*, doi: 10.1029/2004GL022018.
190. de Reus, M., H. Fischer, R. Sander, V. Gross, R. Kormann, G. Salisbury, R. van Dingenen, J. Williams, M. Zöllner and J. Lelieveld (2005) Observations and model calculations of trace gas scavenging in a dense Saharan dust plume during MINATROC. *Atmos. Chem. Phys. 5*, 1787-1803.
191. van Aalst, M.K., J. Lelieveld, B. Steil, C. Brühl, P. Jöckel, M.A. Giorgetta and G.-J. Roelofs (2005) Stratospheric temperatures and tracer transport in a nudged 4-year middle atmosphere GCM simulation. *Atmos. Chem. Phys. Discuss.* 5, 961-1006.
192. Brenninkmeijer, C.A.M., F. Slemr, C. Koeppel, D.S. Scharffe, M. Pupek, J. Lelieveld, P. Crutzen, A. Zahn, D. Sprung, H. Fischer, M. Hermann, M. Reichelt, J. Heintzenberg, H. Schlager, H. Ziereis, U. Schumann, B. Dix, U. Platt, R. Ebinghaus, B. Martinsson, P. Ciais, D. Filippi, M. Leuenberger, D. Oram, S. Penkett, P. van Velthoven and A. Waibel (2005) Analyzing atmospheric trace gases and aerosols using passenger aircraft. *EOS Transactions 86*, 77-83.
193. Lelieveld, J., S. Lechtenböhmer, S.S. Assonov, C.A.M. Brenninkmeijer, C. Dienst, M. Fischedick and T. Hanke (2005) Low methane leakage from gas pipelines. *Nature 434*, 841-842.
194. Lelieveld, J., S. Fuzzi, C. Granier, N. Harris, Ø. Hov, M. de Mazière and U. Schumann (2005) Atmospheric change and earth system science. AIRES III research challenges. EUR 21465, European Commission, B-1049 Brussels.
195. Tost, H., P. Jöckel, A. Kerkweg, R. Sander and J. Lelieveld (2006) Technical note: A new comprehensive SCAVenging submodel for global atmospheric chemistry modeling. *Atmos. Chem. Phys. 6*, 565-574.
196. Metzger, S., N. Mihalopoulos and J. Lelieveld (2006) Importance of mineral cations and organics in gas-aerosol partitioning of reactive nitrogen compounds: case study based on MINOS results. *Atmos. Chem. Phys. 6*, 2549-2567.

197. Jiménez, P., J. Lelieveld and J.M. Baldasano (2006) Multiscale modelling of air pollutants dynamics in the northwestern Mediterranean basin during a typical summertime episode. *J. Geophys. Res. 111*, D18306, doi: 10.1029/2005JD006516.
198. Stickler, A., H. Fischer, J. Williams, M. de Reus, R. Sander, M.G. Lawrence, J.N. Crowley and J. Lelieveld (2006) Influence of summertime deep convection on formaldehyde in the middle and upper troposphere over Europe. *J. Geophys. Res. 111*, D14308, doi:10.1029/2005JD007001.
199. Fischer, H., M. Lawrence, C. Gurk, P. Hoor, J. Lelieveld, M. Hegglin, D. Brunner and C. Schiller (2006) Model simulations and aircraft measurements of vertical, seasonal and latitudinal O_3 and CO distributions over Europe. *Atmos. Chem. Phys. 6*, 339-348.
200. Vrekoussis, M., E. Liakakou, N. Mihalopoulos and M. Kanakidou P. J. Crutzen and J. Lelieveld (2006) Formation of HNO_3 and NO_3^- in the anthropogenically-influenced eastern Mediterranean marine boundary layer. *Geophys. Res. Lett. 33*, L05811, doi: 10.1029/2005GL025069.
201. Lelieveld, J., C.A.M. Brenninkmeijer, P. Jöckel, I.S.A. Isaksen, M.C. Krol, J.E. Mak E. Dlugokencky, S.A. Montzka, P.C. Novelli, W. Peters and P.P. Tans (2006) New Directions: Watching over tropospheric hydroxyl. *Atmos. Environ. 40*, 5741-5743.
202. Jöckel, P., H. Tost, A. Pozzer, Ch. Brühl, J. Buchholz, L. Ganzeveld, P. Hoor, A. Kerkweg, M.G. Lawrence, R. Sander, B. Steil, G. Stiller, M. Tanarhte, D. Taraborelli, J. van Aardenne and J. Lelieveld (2006) The atmospheric chemistry general circulation model ECHAM5/MESSy: Consistent simulation of ozone from the surface to the mesosphere. *Atmos. Chem. Phys. 6*, 5067-5104.
203. Pozzer, A., P. Jöckel, R. Sander, L. Ganzeveld and J. Lelieveld (2006) Technical Note: The MESSy-submodel AIRSEA calculating the air-sea exchange of chemical species. *Atmos. Chem. Phys. 6*, 5435-5444.
204. Lelieveld, J. (2006) A nasty surprise in the greenhouse. *Nature 443*, 405-406.
205. Colomb, A., J. Williams, J. Crowley, V. Gros, R. Hofmann, G. Salisbury, T. Kluepfel, R. Kormann, A. Stickler, C. Forster and J. Lelieveld (2006) Airborne measurements of trace species in the upper troposphere over Europe: the impact of deep convection. *Environ. Chem. 3*, 244-259.
206. Ganzeveld, L.N., J. van Aardenne, T. Butler, M.G. Lawrence, S.M. Metzger, P. Stier, P. Zimmermann and J. Lelieveld (2006) Technical note: Anthropogenic and natural offline emissions and the online emissions and dry deposition (EMDEP) submodel of the Modular Earth Submodel System. *Atmos. Chem. Phys. Discuss.* 6, 5457-5483.
207. Tost, H., P. Jöckel and J. Lelieveld (2006) Influence of different convection parameterizations in a GCM, *Atmos. Chem. Phys. 6*, 5475-5493.
208. Bartenbach, S., J. Williams, C. Plass-Dülmer, H. Berresheim and J. Lelieveld (2007) In-situ measurement of reactive hydrocarbons at Hohenpeissenberg with comprehensive gas chromatography (GC×GC-FID): use in estimating HO and NO_3. *Atmos. Chem. Phys. 7*, 1-14.
209. Vrekoussis, M., N. Mihalopoulos, E. Gerasopoulos, M. Kanakidou, P.J. Crutzen and J. Lelieveld (2007) Two years of NO_3 radical observations in the boundary layer over the Eastern Mediterranean. *Atmos. Chem. Phys. 7*, 315-327.
210. Williams, J., N. Yassaa, S. Bartenbach and J. Lelieveld (2007) Mirror image hydrocarbons from tropical and boreal forests, *Atmos. Chem. Phys. 7*, 973-980.

211. Lelieveld, J., C. Brühl, P. Jöckel, B. Steil, P.J. Crutzen, H. Fischer, M.A. Giorgetta, P.Hoor, M.G. Lawrence, R. Sausen, and H. Tost (2007) Stratospheric dryness: model simulations and satellite observations. *Atmos. Chem. Phys. 7*, 1313-1332.
212. Pozzer, A., P. Jöckel, H. Tost, R. Sander, L. Ganzeveld, A. Kerkweg and J. Lelieveld (2007) Simulating organic species with the global atmospheric chemistry general circulation model ECHAM5/MESSy1: a comparison of model results with observations. *Atmos. Chem. Phys. 7*, 2527-2550.
213. Tost, H., P. Jöckel, A. Kerkweg, A. Pozzer, R. Sander and J. Lelieveld (2007) Global cloud and precipitation chemistry and wet deposition: tropospheric model simulations with ECHAM5/MESSy1. *Atmos. Chem. Phys. 7*, 2733-2757.
214. Metzger, S. and J. Lelieveld (2007) Reformulating atmospheric aerosolthermodynamics and hygroscopic growth into haze and clouds. *Atmos. Chem. Phys. 7,* 3163-3193.
215. Butler, T.M., M.G. Lawrence, B. Gurjar, J. van Aardenne, M. Schultz and J. Lelieveld (2007) The representation of emissions from megacities in global emissions inventories. *Atmos. Environ. 42*, 703-719.
216. Lawrence, M.G., T.M. Butler, J. Steinkamp, B. Gurjar and J. Lelieveld (2007) Regional pollution potentials of megacities and other major population centers. *Atmos. Chem. Phys. 7*, 3969-3987.
217. Kuhn, U., M.O. Andreae, C. Ammann, A.C. Araújo, E. Brancaleoni, P. Ciccioli, T. Dindorf, M. Frattoni, L.V. Gatti, L. Ganzeveld, B. Kruijt, J. Lelieveld, J. Lloyd, F.X. Meixner, A. Nobre, U. Pöschl, C. Spirig, P. Stefani, A. Thielmann, R. Valentini, and J. Kesselmeier (2007) Isoprene and monoterpene fluxes from Central Amazonian rainforest inferred from tower-based and airborne measurements, and implications on the atmospheric chemistry and the local carbon budget. *Atmos. Chem. Phys. 7*, 2855-2879.
218. Kerkweg, A., R. Sander, H. Tost, P. Jöckel and J. Lelieveld (2007) Technical Note: simulation of detailed aerosol chemistry on the global scale using MECCA-AERO. *Atmos. Chem. Phys. 7*, 2973-2985.
219. Stickler, A., H. Fischer, H. Bozem, C. Gurk, C. Schiller, M. Martinez-Harder, D.Kubistin, H. Harder, J. Williams, G. Eerdekens, N. Yassaa, L. Ganzeveld, R. Sander and J. Lelieveld (2007) Chemistry, transport and dry deposition of trace gases in the boundary layer over the tropical Atlantic Ocean and the Guyanas during the GABRIEL field campaign. *Atmos. Chem. Phys. 7*, 3933-3956.
220. Brenninkmeijer, C.A.M., P. Crutzen, F. Boumard, T. Dauer, B. Dix, R. Ebinghaus, D. Filippi, H. Fischer, H. Franke, U. Frieß, J. Heintzenberg, F. Helleis, M. Hermann, H.H. Kock, C. Koeppel, J. Lelieveld, M. Leuenberger, B.G. Martinsson, S. Miemczyk, H.P. Moret, H N. Nguyen, P. Nyfeler, D. Oram, D. O'Sullivan, S. Penkett, U. Platt, M. Pupek, M. Ramonet, B. Randa, M. Reichelt, T.S. Rhee, J. Rohwer, K. Rosenfeld, D. Scharffe, H. Schlager, U. Schumann, F. Slemr, D. Sprung, P. Stock, R. Thaler, F. Valentino, P. van Velthoven, A. Waibel, A. Wandel, K. Waschitschek, A. Wiedensohler, I. Xueref-Remy, A. Zahn, U. Zech and H. Ziereis (2007) Civil aircraft for the regular investigation of the atmosphere based on an instrumented container: the new CARIBIC system. *Atmos. Chem. Phys. 7*, 4953-4976.
221. Tost, H., P. Jöckel and J. Lelieveld (2007) Lightning and convection parameterizations – uncertainties in global modeling. *Atmos. Chem. Phys. 7*, 4553-4568.
222. Gurjar, B.R., T.M. Butler, M.G. Lawrence and J Lelieveld (2007) Evaluation of emissions and air quality in megacities. *Atmos. Environ. 42, 1593-1606*.

223. Cooper, O.R., M. Trainer, A.M. Thompson, S.J. Oltmans, D.W. Tarasick, J.C. Witte, A. Stohl, S. Eckhardt, J. Lelieveld, M.J. Newchurch, B.J. Johnson, R.W. Portmann, L. Kalnajs, M.K. Dubey, T. Leblanc, I.S. McDermid, G. Forbes, D. Wolfe, T. Carey-Smith, G.A. Morris, B. Lefere, B. Rappenglück, E. Joseph, F. Schmidlin, J. Meagher, F.C. Fehsenfeld, T.J. Keating, R.A. Van Curen and K. Minschwaner (2007) Evidence for a recurring eastern North America upper tropospheric ozone maximum during summer. *J. Geophys. Res. 112*, D23304, doi:10.1029/2007JD008710.
224. Sinha, V., J. Williams, J.N. Crowley and J. Lelieveld (2008) The comparative reactivity method – a new tool to measure total reactivity in ambient air. *Atmos. Chem. Phys. 8*, 2213-2227.
225. Gebhardt, S., A. Colomb, R. Hofmann, J. Williams and J. Lelieveld (2008) Halogenated organic species over the tropical rainforest. *Atmos. Chem. Phys. Discuss. 8*, 1159-1190.
226. Lelieveld, J., T. M. Butler, J.N. Crowley, T. J. Dillon, H. Fischer, L. Ganzeveld, H.Harder, M.G. Lawrence, M. Martinez, D. Taraborrelli and J. Williams (2008) Atmospheric oxidation capacity sustained by a forest. *Nature 452*, 737-740.
227. Butler, T.M., D. Taraborrelli, C. Brühl, H. Fischer, H. Harder, M. Martinez, J. Williams, M.G. Lawrence and J. Lelieveld (2008) Improved simulation of isoprene oxidation chemistry with the ECHAM5/MESSy chemistry-climate model: lessons from the GABRIEL airborne field campaign. *Atmos. Chem. Phys. 8*, 4529-4546.
228. Gurk, C., H. Fischer, P. Hoor, M.G. Lawrence, J. Lelieveld and H. Wernli (2008) Airborne in-situ measurements of vertical, seasonal and latitudinal distributions of carbon dioxide over Europe. *Atmos. Chem. Phys. 8*, 6395-6403.
229. Kerkweg, A., P. Jöckel, A. Pozzer, H. Tost, R. Sander, M. Schulz, P. Stier, E. Vignati,J. Wilson and J. Lelieveld (2008) Consistent simulation of bromine chemistry from the marine boundary layer to the stratosphere – Part I: Model description, sea salt aerosols and pH. *Atmos. Chem. Phys. 8*, 5899-5917.
230. Kerkweg, A., P. Jöckel, N. Warwick, S. Gebhardt, C.A.M. Brenninkmeijer and J.Lelieveld (2008) Consistent simulation of bromine chemistry from the marine boundary layer to the stratosphere – Part II: Bromocarbons. *Atmos. Chem. Phys. 8*, 5919-9539.
231. Ganzeveld, L., G. Eerdekens, G. Feig, H. Fischer, H. Harder, R. Königstedt, D. Kubistin, M. Martinez, F. X. Meixner, B. Scheeren, V. Sinha, D. Taraborrelli, J. Williams, J. Vilà-Guerau de Arellano and J. Lelieveld (2008) Surface and boundary layer exchanges of volatile organic compounds, nitrogen oxides and ozone during the GABRIEL Campaign. *Atmos. Chem. Phys. 8*, 6223-6243.
232. Schiller, C.L., H. Bozem, C. Gurk, U. Parchatka, R. Königstedt, G.W. Harris, J. Lelieveld and H. Fischer (2008) Applications of quantum cascade lasers for sensitive trace gas measurements of CO, CH_4, N_2O and HCHO. *Appl. Phys. B 92*, 419-430.
233. Lelieveld, J. (2008) Montreal Protocol ter bescherming van de ozonlaag. In: A.M. de Gier en J.B. Opschoor (red.) Onzekerheden en klimaatverandering, pp. 29-33, Koninklijke Nederlandse Akademie van Wetenschappen, Amsterdam.
234. Lelieveld, J. (2008) A reverse ozone hole on Mars. *Angew. Chem. Int. Ed. 47*, 9804-9807.
235. Lelieveld, J. (2008) Ein umgekehrtes Ozonloch auf dem Mars. *Angew. Chem. 120*, 9950-9953.

236. Eerdekens, G., L. Ganzeveld, J. Vilà-Guerau de Arellano, T. Klüpfel, V. Sinha, N. Yassaa, J. Williams, H. Harder, D. Kubistin, M. Martinez and J. Lelieveld (2009) Flux estimates of isoprene, methanol and acetone from airborne PTR-MS measurements over the tropical rainforest during the GABRIEL 2005 campaign. *Atmos. Chem. Phys. 9*, 4207-4227.
237. Lelieveld, J., P. Hoor, P. Jöckel, A. Pozzer, P. Hadjinicolaou, J.-P. Cammas and S. Beirle (2009) Severe ozone air pollution in the Persian Gulf region. *Atmos. Chem. Phys. 9*, 1393-1406.
238. Taraborrelli, D., M. Lawrence, T. Butler, R. Sander and J. Lelieveld (2009) Mainz Isoprene Mechanism 2 (MIM2): an isoprene oxidation mechanism for regional and global atmospheric modelling. *Atmos. Chem. Phys. 9*, 2751-2777.
239. Hoor, P., J. Borken-Kleefeld, D. Caro, O. Dessens, O. Endresen, M. Gauss, V. Grewe, D. Hauglustaine, I.S.A. Isaksen, P. Jöckel, J. Lelieveld, E. Meijer, D. Olivie, M. Prather, C. Schnadt-Poberaj, J. Staehelin, Q. Tang, J. van Aardenne, P. van Velthoven and R. Sausen (2009) The impact of traffic emissions on atmospheric ozone and OH: results from QUANTIFY. *Atmos. Chem. Phys. 9*, 3113-3136.
240. Lelieveld, J. (2009) Air pollution and climate. In: J.C. Woodward (ed.) The physical geography of the Mediterranean, pp. 599-614, Oxford University Press, Oxford.
241. Lelieveld, J. (2009) Stratosphere-troposphere interactions in a chemistry-climate model. In: C. Zerefos, G. Contopoulos and G. Skalkeas (eds.) Twenty years of ozone decline, pp. 329-349, Springer Verlag, Berlin.
242. Keppler, F., M. Boros, C. Frankenberg, J. Lelieveld, A. McLeod, A.M. Pirttilä, T. Röckmann and J.P. Schnitzler (2009) Methane formation in aerobic environments. *Environ. Chem.* 6, 459-465.
243. Xu, L., J.E. Penner, S. Metzger and J. Lelieveld (2009) A comparison of water uptake by aerosols using two thermodynamic models. *Atmos. Chem. Phys. Discuss. 9*, 9551-9595.
244. Kubistin, D., H. Harder, M. Martinez, M. Rudolf, R. Sander, H. Bozem, G. Eerdekens, H. Fischer, C. Gurk, T. Klüpfel, R. Königstedt, U. Parchatka, C.L. Schiller, A. Stickler, D. Taraborrelli, J. Williams and J. Lelieveld (2010) Hydroxyl radicals in the tropical troposphere over the Suriname rainforest: comparison of measurements with the box model MECCA. *Atmos. Chem. Phys. 10*, 9705-9728.
245. Martinez, M., H. Harder, D. Kubistin, M. Rudolf, H. Bozem, G. Eerdekens, H. Fischer, C. Gurk, T. Klüpfel, R. Königstedt, U. Parchatka, C. L. Schiller, A. Stickler, J. Williams and J. Lelieveld (2010) Hydroxyl radicals in the tropical troposphere over the Suriname rainforest: Airborne measurements. *Atmos. Chem. Phys. 10*, 3759-3773.
246. Holzinger, R., J. Williams, F. Herrmann, J. Lelieveld, N.M. Donahue and T. Röckmann (2010) Aerosol analysis using a Proton-Transfer-Reaction Thermo-Desorption Mass Spectrometer (PTR-TD-MS): A new approach to study processing of organic aerosols. *Atmos. Chem. Phys. 10*, 2257-2267.
247. Crowley, J.N., G. Schuster, N. Pouvesle, B. Bonn, H. Bingemer, U. Parchatka, H. Fischer and J. Lelieveld (2010) Nocturnal nitrogen oxides at a rural mountain-site in Southwestern Germany. *Atmos. Chem. Phys. 10*, 2795-2812.
248. Pozzer, A., J. Pollmann, D. Taraborrelli, P. Jöckel, D. Helmig, P. Tans, J. Hueber and J. Lelieveld (2010) Observed and simulated global distribution and budget of atmospheric C_2–C_5 alkanes. *Atmos. Chem. Phys. 10*, 4403-4422.

249. Uherek, E., T. Halenka, J. Borken-Kleefeld, Y. Balkanski, T. Berntsen, C. Borrego, M. Gauss, P. Hoor, K. Juda-Rezler, J. Lelieveld, D. Melas, K. Rypdal and S. Schmid (2010) Transport impacts on atmosphere and climate: Land transport. *Atmos. Environ. 44*. 4772-4816.
250. Ma, J., Y. Chen, W. Wang, P. Yan, H. Liu, S. Yang, Z. Hu and J. Lelieveld (2010) Strong air pollution causes widespread haze-clouds over China. *J. Geophys. Res. 115*, D18204, doi:10.1029/2009JD013065.
251. Williams, J., T. Custer, H. Riede, R. Sander, P. Jöckel, P. Hoor, A. Pozzer, S. Wong-Zehnpfennig, Z. Hosaynali Beygi, H. Fischer, V. Gros, A. Colomb, B. Bonsang, N. Yassaa, I. Peeken, E. L. Atlas, C. M. Waluda, J.A. van Aardenne and J. Lelieveld (2010) Assessing the effect of marine isoprene and ship emissions on ozone, using modelling and measurements from the South Atlantic Ocean. *Environ. Chem. 7*, 171–182.
252. Schulze, E.D., P. Ciais, S, Luyssaert, M. Schrumpf, A.A. Janssens, B. Thiruchittampalam, J. Theloke, M. Saurat, S. Bringezu, J. Lelieveld, A. Lohila, C. Rebmann, M. Jung, D. Bastviken, G. Abril, G. Grassi, A. Leip., A. Freibauer, W. Kutsch, A. Don, J. Nieschulze, A. Börner, J. Gash and A.J. Dolman (2010) The European carbon balance. Part 4: Integration of carbon and other trace-gas fluxes. *Glob. Change Biol*. *16*, 1451-1469.
253. Pringle, K.J., H. Tost, A. Pozzer, U. Pöschl and J. Lelieveld (2010) Global distribution of the effective hygroscopicity parameter for CCN activation. *Atmos. Chem. Phys. 10*, 5241-5255.
254. Keppler, F., S. Laukenmann, J. Rinne, H. Heuwinkel, M. Greule, M. Whiticar and J. Lelieveld (2010) Measurements of 13C/12C Methane from anaerobic digesters: Comparison of continuous-flow isotope ratio mass spectrometry and optical spectrometry. *Environ. Sci. Technol. 44,* 5067-5073.
255. Lawrence, M.G. and J. Lelieveld (2010) Atmospheric pollutant outflow from southern Asia: A review. *Atmos. Chem. Phys. 10*, 11017-11096.
256. Astitha, M., G. Kallos, C. Spyrou, W. O'Hirok, J. Lelieveld and H.A.C. Denier van der Gon (2010) Modelling the chemically aged and mixed aerosols over the eastern central Atlantic Ocean – potential impacts. *Atmos. Chem. Phys. 10*, 5797-5822.
257. Laukenmann, S., D. Polag, H. Heuwinkel, M. Greule, A. Gronauer, J. Lelieveld and F. Keppler (2010) Identification of methanogenetic pathways in anaerobic digesters using stable carbon isotopes. *Eng. Life Sci. 10*, 509-514.
258. Ganzeveld, L.N., L. Bouwman, B. Eickhout, J. Lelieveld, E. Stehfest and D. van Vuuren (2010) The impact of land use and land cover changes on atmospheric chemistry-climate interactions. *J. Geophys. Res. 115*, D23301, doi:10.1029/2010JD014041.
259. Pringle, K.J., H. Tost, S. Metzger, B. Steil, D. Giannadaki, A. Nenes, C. Fountoukis, P. Stier, E. Vignati and J. Lelieveld (2010) Description and evaluation of GMXe: A new aerosol submodel for global simulations (v1). *Geosci. Model Dev. 3*, 391-412.
260. Gurjar, B.R., A. Jain, A. Sharma, A. Agarwal, P. Gupta, A.S. Nagpure and J. Lelieveld (2010) Human health risks in megacities due to air pollution. *Atmos. Environ. 44*, 4606-4613.
261. Sinha, V., J. Williams, J. Lelieveld, T.M. Ruuskanen, M.K. Kajos, J. Patokoski, H. Hellen, H. Hakola, D. Mogensen, M. Boy, J. Rinne and M. Kulmala (2010) OH reactivity measurements within a boreal forest: Evidence for unknown reactive emissions. *Environ. Sci. Technol. 44*, 6614-6620.
262. Lelieveld, J. (2010) A missing sink for radicals. *Nature 466*, 925-926.

263. Kuhn, U., L. Ganzeveld, A. Thielmann, T. Dindorf, G. Schebeske, M. Welling, J. Sciare, G. Roberts, F. X. Meixner, J. Kesselmeier, J. Lelieveld, O. Kolle, P. Ciccioli, J. Lloyd, J. Trentmann, P. Artaxo and M. O. Andreae (2010) Impact of Manaus City on the Amazon Green Ocean atmosphere: ozone production, precursor sensitivity and aerosol load. *Atmos. Chem. Phys. 10*, 9251-9282.

264. de Meij, A., A. Pozzer and J. Lelieveld (2010) Global and regional trends in aerosol optical depth based on remote sensing data and pollutant emission estimates between 2000 and 2009. *Atmos. Chem. Phys. Discuss 10*, 30731-30776.

265. Hadjinicolaou, P., C. Giannakopoulos, C. Zerefos, M.A. Lange, S. Pashiardis and J. Lelieveld (2011) Mid-21st century climate and weather extremes in Cyprus as projected by six regional climate models. *Reg. Environ. Change 11*, 441-457.

266. Montzka, S., M. Krol, E. Dlugokencky, B. Hall, P. Jöckel and J. Lelieveld (2011) Small inter-annual variability of global atmospheric hydroxyl. *Science 331*, 67-69.

267. de Meij, A. and J. Lelieveld (2011) Evaluating aerosol optical properties observed by ground-based and satellite remote sensing over the Mediterranean and Middle East in 2006. *Atmos. Res. 99*, 415-433.

268. Butler, T.M., M.G. Lawrence, D. Taraborrelli and J. Lelieveld (2011) Tagged ozone production potential (TOPP) of volatile organic compounds. *Atmos. Environ. 45*, 4082-4090.

269. Liu, C., S. Beirle, T. Butler, J. Liu, P. Hoor, P. Jöckel, M. Penning de Vries, A. Pozzer, C. Frankenberg, M.G. Lawrence, J. Lelieveld, U. Platt and T. Wagner (2011) Application of SCIAMACHY and MOPITT CO total column measurements to evaluate model results over biomass burning regions and eastern China. *Atmos. Chem. Phys. 11*, 6083-6114.

270. Hosaynali Beygi, Z., H. Fischer, H.D. Harder, M. Martinez, R. Sander, J. Williams, D.M. Brookes, P.S. Monks and J. Lelieveld (2011) Oxidation photochemistry in the Southern Atlantic boundary layer: Unexpected deviations of photochemical steady state. *Atmos. Chem. Phys. 11,* 8497-8513.

271. Chenoweth, J., P. Hadjinicolaou, A. Bruggeman, J. Lelieveld, Z. Levin, M.A. Lange, E. Xoplaki and M. Hadjikakou (2011) The impact of climate change on the water resources of the eastern Mediterranean and Middle East region: modeled changes and socio-economic implications. *Water Resour. Res. 47*, W06506, doi: 10.1029/2010WR010269.

272. Klippel, T., H. Fischer, H. Bozem, M.G. Lawrence, T. Butler, P. Jöckel, H. Tost, M. Martinez, H. Harder, E. Regelin, R. Sander, C.L. Schiller, A. Stickler and J. Lelieveld (2011) Distribution of hydrogen peroxide, methyl hydroperoxide and formaldehyde over central Europe during the HOOVER project. *Atmos. Chem. Phys. 11*, 4391-4410.

273. Dillon, T.J., L. Vereecken, A. Horowitz, V. Khamaganov, J.N. Crowley and J. Lelieveld (2011) Removal of the potent greenhouse gas NF_3 by reactions with the atmospheric oxidants $O(^1D)$, OH and O_3. *Phys. Chem. Chem. Phys. 13*, doi: 10.1039/c1cp22230a.

274. Williams, J., J. Crowley, H. Fischer, H. Harder, M. Martinez, T. Petäjä, J. Rinne, J. Bäck, M. Boy, M. Dal Maso, J. Hakala, M. Kajos, P. Keronen, P. Rantala, J. Aalto, H. Aaltonen, J. Paatero, T. Vesala, H. Hakola, J. Levula, T. Pohja, F. Herrmann, J. Auld, E. Mesarchaki, W. Song, N. Yassaa, A. Nölscher, A.M. Johnson, T. Custer, V. Sinha, J. Thieser, N. Pouvesle, D. Taraborrelli, M.J. Tang, H. Bozem, Z. Hosaynali-Beygi, R. Axinte, R. Oswald, A. Novelli, D. Kubistin, K. Hens, U. Javed, K. Trawny, C. Breitenberger, P.J. Hidalgo, C. J. Ebben, F. M. Geiger, A.L. Corrigan, L.M. Russell, H. Ouwersloot, J. Vilà-

Guerau de Arellano, L. Ganzeveld, A. Vogel, M. Beck, A. Bayerle, C. J. Kampf, M. Bertelmann, F. Köllner, T. Hoffmann, J. Valverde, D. González, M.-L. Riekkola, M. Kulmala and J. Lelieveld (2011) The summertime Boreal forest field measurement intensive (HUMPPA-COPEC-2010): an overview of meteorological and chemical influences. *Atmos. Chem. Phys. 11,* 10599-10618.

275. Crowley, J.N., J. Thieser, M. Tang, G. Schuster, H. Bozem, Z. Hosaynali Beygi, H. Fischer, J. Diesch, F. Drewnick, S. Borrmann, W. Song, N. Yassaa, J. Williams, D. Pöhler, U. Platt and J. Lelieveld (2011) Variable lifetimes and loss mechanisms for NO_3 and N_2O_5 during the DOMINO campaign: contrasts between marine, urban and continental air. *Atmos. Chem. Phys. 11*, 10853-10870.
276. Ouwersloot, H.G., J. Vilà-Gerau de Arellano, C.C. van Heerwaarden, L.N. Ganzeveld, M.C. Krol and J. Lelieveld (2011) On the segregation of chemical species in a clear boundary layer over heterogeneous land surfaces. *Amos. Chem. Phys. 11*, 10681-10704.
277. Metzger, S., B. Steil, L. Xu, J.E. Penner and J. Lelieveld (2011) Description of EQSAM4: Gas-liquid-solid partitioning model for global simulations. *Geosci. Model Dev. Discuss.* 4, 2791-2847.
278. Song, W., J. Williams, N. Yassaa, M. Martinez, J.A. Adame Carnero, P. Hidalgo Fernandez, H. Bozem and J. Lelieveld (2011) Winter and summer characterization of biogenic enantiomeric monoterpenes and anthropogenic BTEX compounds at a Mediterranean Stone Pine forest site. *J. Atmos. Chem. 68,* 233-250.
279. Metzger, S., B. Steil, L. Xu, J.E. Penner and J. Lelieveld (2012) Aerosol hygroscopic growth parameterization based on a solute specific coefficient. *Atmos. Chem. Phys. 12*, 5429-5446.
280. Lin, G., J.E. Penner, S. Sillman, D. Taraborrelli and J. Lelieveld (2012) Global mechanistic model of SOA formation: effects of different chemical mechanisms. *Atmos. Chem. Phys. 12*, 4743-4774.
281. Lelieveld, J., P. Hadjinicolaou, E. Kostopoulou, J. Chenoweth, M. El Maayar, C. Giannakopoulos, C. Hannides, M.A. Lange, M. Tanarhte, E. Tyrlis and E. Xoplaki (2012) Climate change and impacts in the eastern Mediterranean and the Middle East. *Clim. Change 114,* 667-687.
282. Christoudias, T., A. Pozzer, and J. Lelieveld (2012) Influence of the North Atlantic Oscillation on air pollution transport. *Atmos. Chem. Phys. 12*, 869-877.
283. Dillon, T.J., A. Pozzer, J.N. Crowley and J. Lelieveld (2012) Does acetone react with HO_2 in the upper troposphere? *Atmos. Chem. Phys. 12*, 1339-1351.
284. Taraborrelli, D., M.G. Lawrence, J.N. Crowley, T.J. Dillon, S. Gromov, C.B.M. Groß, L. Vereecken and J. Lelieveld (2012) Hydroxyl radical buffered by isoprene oxidation over tropical forests. *Nature Geosci. 5*, 190-193.
285. Brühl, C., J. Lelieveld, P.J. Crutzen and H. Tost (2012) The role of carbonyl sulphide as a source of stratospheric sulphate aerosol and its impact on climate. *Atmos. Chem. Phys. 12*, 1239-1253.
286. Pozzer, A., A. de Meij, K.J. Pringle, H. Tost, U.M. Doering, J. van Aardenne and J. Lelieveld (2012) Distributions and regional budgets of aerosols and their precursors simulated with the EMAC chemistry-climate model. *Atmos. Chem. Phys. 12*, 961-987.
287. Lelieveld, J., D. Kunkel and M.G. Lawrence (2012) Global risk of radioactive fallout after nuclear reactor accidents. *Atmos. Chem. Phys. 12*, 4245-4258.

288. Elshorbany, Y., J. Kleffmann, A. Hofzumahaus, R. Kurtenbach, P. Wiesen, T. Brauers, B. Bohn, H.-P. Dorn, H. Fuchs, F. Holland, F. Rohrer, R. Tillmann, R. Wegener, A. Wahner, Y. Kanaya, A. Yoshino, S. Nishida, Y. Kajii, M. Martinez, D. Kubistin, H. Harder, J. Lelieveld, T. Elste, C. Plass-Duelmer, G. Stang, H. Berresheim and U. Schurath (2012) HO_x budgets during HOxComp: a case study of HO_x chemistry under NO_x limited conditions. *J. Geophys. Res. 117*, D03307, doi:10.1029/2011JD017008.
289. de Meij, A., A. Pozzer, K.J. Pringle, H. Tost and J. Lelieveld (2012) EMAC model evaluation and analysis of atmospheric aerosol properties and distribution. *Atmos. Res. 114-115*, 38-69.
290. Ma, J.Z., W. Wang, Y. Chen, H.J. Liu, P. Yan, G.A. Ding, M.L. Wang and J. Lelieveld (2012) The IPAC-NC field campaign: a pollution and oxidization pool in the lower atmosphere over Huabei, China. *Atmos. Chem. Phys. 12*, 3883-3908.
291. Tanarhte, M., P. Hadjinicolaou and J. Lelieveld (2012) Intercomparison of temperature and precipitation datasets based on observations in the Mediterranean and the Middle East. *J. Geophys. Res. 117*, D12102, doi: 10.1029/2011JD017293.
292. Smoydzin, L., A. Teller, H. Tost, M. Fnais and J. Lelieveld (2012) Impact of mineral dust on cloud formation in a Saharan outflow region. *Atmos. Chem. Phys. 12*, 11383-11393.
293. de Meij, A., A. Pozzer and J. Lelieveld (2012) Trend analysis in aerosol optical depths and pollutant emission estimates between 2000 and 2009. *Atmos. Environ. 51*, 75-85.
294. Baker, A.K., T.J. Schuck, C.A.M. Brenninkmeijer, A. Rauthe-Schöch, F. Slemr, P.F.J. van Velthoven and J. Lelieveld (2012) Estimating the contribution of monsoon-related biogenic production to methane emissions from South Asia using CARIBIC observations. *Geophys. Res. Lett. 39, L10813*, doi:10.1029/2012GL051756.
295. Sinha, V., J. Williams, J.M. Diesch, F. Drewnick, M. Martinez, H. Harder, E. Regelin, D. Kubistin, H. Bozem, Z. Hosaynali-Beygi, H. Fischer, M.D. Andres-Hernandez, D. Kartal, J. A. Adame and J. Lelieveld (2012) Constraints on instantaneous ozone production rates and regimes during DOMINO derived using in-situ OH reactivity measurements. *Atmos. Chem. Phys. 12*, 7269-7283.
296. van Stratum, B.J.H., J. Vilà-Guerau de Arellano, H.G. Ouwersloot, K. van den Dries, T.W. van Laar, M. Martinez, J. Lelieveld, J.-M. Diesch, F. Drewnick, H. Fischer, Z. Hosaynali Beygi, H. Harder, E. Regelin, V. Sinha, J.A. Adame, M. Sörgel, R. Sander, H. Bozem, W. Song, J. Williams and N. Yassaa (2012) Case study of the diurnal variability of chemically active species with respect to boundary layer dynamics during DOMINO. *Atmos. Chem. Phys. 12*, 5329-5341.
297. Pozzer, A., P. Zimmermann, U.M. Doering, J. van Aardenne, H. Tost, G. Janssens-Maenhout and J. Lelieveld (2012) Effects of business-as-usual anthropogenic emissions on air quality. *Atmos. Chem. Phys. 12*, 6915-6937.
298. Phillips, G.J., M.J. Tang, J. Thieser, B. Brickwedde, G. Schuster, B. Bohn, J. Lelieveld and J.N. Crowley (2012) Significant concentrations of nitryl chloride observed in rural continental Europe associated with the influence of sea salt chloride and anthropogenic emissions. *Geophys. Res. Lett. 39*, L10811, doi:10.1029/2012GL051912.
299. Ouwersloot, H.G., J. Vilà-Guerau de Arellano, A.C. Nölscher, M.C. Krol, L.N. Ganzeveld, C. Breitenberger, I. Mammarella, J. Williams and J. Lelieveld (2012) Characterization of a boreal convective boundary layer and its impact on atmospheric chemistry during HUMPPA-COPEC-2010. *Atmos. Chem. Phys. 12*, 9335-9353.

300. Yassaa, N., W. Song, J. Lelieveld, A. Vanhatalo, J. Bäck and J. Williams (2012) Diel cycles of isoprenoids in the emissions of Norway spruce, four Scots pine chemotypes, and in Boreal forest ambient air during HUMPPA-COPEC-2010. *Atmos. Chem. Phys. 12*, 7215-7229.
301. Vilà-Guerau de Arellano, J., C. van Heerwaarden and J. Lelieveld (2012) Increasing CO_2 suppresses boundary-layer clouds in temperate climates. *Nature Geosci. 5*, 701-704.
302. Elshorbany, Y.F., C. Brühl, B. Steil and J. Lelieveld (2012) Impact of HONO on global atmospheric chemistry calculated with an empirical parameterization in the EMAC model. *Atmos. Chem. Phys. 12*, 9977-10000.
303. Astitha, M., J. Lelieveld, M. Abdel Kader, A. Pozzer and A. de Meij (2012) Parameterization of dust emissions in the global atmospheric chemistry-climate model EMAC: impact of nudging and soil properties. *Atmos. Chem. Phys. 12,* 11057-11083.
304. Nölscher, A.C., J. Williams, V. Sinha, T. Custer, W. Song, A. M. Johnson, R. Axinte, H. Bozem, H. Fischer, N. Pouvesle, G. Phillips, J.N. Crowley, P. Rantala, J. Rinne, M. Kulmala, D. Gonzales, J. Valverde-Canossa, A. Vogel, T. Hoffmann, H.G. Ouwersloot, J. Vilà-Guerau de Arellano and J. Lelieveld (2012) Summertime total OH reactivity measurements from boreal forest during HUMPPA-COPEC 2010, *Atmos. Chem. Phys. 12*, 8257-8270.
305. Jugold, A., F. Althoff, M. Hurkuck, M. Greule, J. Lelieveld and F. Keppler (2012) Non-microbial methane formation in oxic soils. *Biogeosci. 9*, 5291-5301.
306. Schuck, T.J., K. Ishijima, P. Patra, A.K. Baker, T. Machida, H. Matsueda, Y. Sawa, T. Umezawa, C.A.M. Brenninkmeijer and J. Lelieveld (2012) Distribution of methane in the tropical troposphere measured by CARIBIC and CONTRAIL aircraft. *J. Geophys. Res. 117, D19304*, doi: 10.1029/2012JD018199.
307. Smoydzin, L., M. Fnais and J. Lelieveld (2012) Ozone pollution over the Arabian Gulf – Role of meteorological conditions. *Atmos. Chem. Phys. Discuss. 12*, 6331-6361.
308. Phillips, G.J., N. Pouvesle, J. Thieser, G. Schuster, R. Axinte, H. Fischer, J. Williams, J. Lelieveld and J. N. Crowley (2013) Peroxyacetyl nitrate (PAN) and peroxyacetic acid (PAA) measurements by iodide chemical ionisation mass spectrometry: first analysis of results in the boreal forest and implications for the measurement of PAN fluxes. *Atmos. Chem. Phys. 13*, 1129-1139.
309. Tyrlis, E., B. Steil and J. Lelieveld (2013) The summer circulation in the eastern Mediterranean and the Middle East: influence of the South Asian monsoon. *Clim. Dyn. 40*, 1103-1123.
310. Lelieveld, J., M.G. Lawrence and D. Kunkel (2013) Comment on "Global risk of radioactive fallout after major nuclear reactor accidents" by J. Lelieveld et al. (2012). *Atmos. Chem. Phys. 13*, 31-34.
311. Polag, D., L.C. Krapf, H. Heuwinkel, S. Laukenmann, J. Lelieveld and F. Keppler (2013) Stable carbon isotopes of methane for real-time process monitoring in anaerobic digesters. *Eng. Life Sci. 14*, 153-160.
312. Lelieveld, J., C. Barlas, D. Giannadaki and A. Pozzer (2013) Model calculated global, regional and megacity premature mortality due to air pollution by ozone and fine particulate matter. *Atmos. Chem. Phys. 13*, 7023-7037.
313. Vrekoussis, M., A. Richter, A. Hilboll, J.P. Burrows, E. Gerasopoulos, J. Lelieveld, L. Barrie, C. Zerefos and N. Mihalopoulos (2013) Economic crisis detected from space: Air

quality trends over Athens/Greece. *Geophys. Res. Lett. 40,* 458-463, doi: 10.1002/grl.50118.

314. Christoudias, T. and J. Lelieveld (2013) Modelling the global atmospheric transport and deposition of radionuclides from the Fukushima Dai-ichi nuclear accident. *Atmos. Chem. Phys. 13*, 1425-1438.
315. Regelin, E., H. Harder, M. Martinez, D. Kubistin, C. Tatum Ernest, H. Bozem, T. Klippel, Z. Hosaynali-Beygi, H. Fischer, R. Sander, P. Jöckel, R. Königstedt and J. Lelieveld (2013) HOx measurements in the summertime upper troposphere over Europe: A comparison of observations to a box model and a 3-D model. *Atmos. Chem. Phys. 13*, 10703-10720.
316. Nölscher, A.C., E. Bourtsoukidis, B. Bonn, J. Kesselmeier, J. Lelieveld and J. Williams (2013) Seasonal measurements of total OH reactivity fluxes, total ozone loss rates and missing emissions from Norway spruce in 2011. *Biogeosci. 10*, 4241-4257.
317. Tyrlis, E. and J. Lelieveld (2013) Climatology and dynamics of the summer Etesian winds over the Eastern Mediterranean. *J. Atmos. Sci., 70*, 3374-3396.
318. Giannakopoulos C., E. Kostopoulou, P. Hadjinicolaou, M. Hatzaki, A. Karali, J. Lelieveld and M.A. Lange (2013) Impacts of climate change over the Eastern Mediterranean and Middle East region using the Hadley Centre PRECIS RCM. *Advances in Meteorology, Climatology and Atmospheric Physics*, Springer Atmospheric Sciences, Berlin-Heidelberg, pp. 457-463.
319. Kostopoulou E., C. Giannakopoulos, M. Hatzaki, A. Karali, P. Hadjinicolaou, J. Lelieveld and M.A. Lange (2013) Assessment of climate change extremes over the Eastern Mediterranean and Middle East region using the Hadley Centre PRECIS Regional Climate Model. *Advances in Meteorology, Climatology and Atmospheric Physics*, Springer Atmospheric Sciences, Berlin-Heidelberg, pp. 547-554.
320. Tyrlis, E., J. Lelieveld and B. Steil (2013) The summer circulation over the Eastern Mediterranean and the Middle East: Influence of the South Asian monsoon and mid-latitude dynamics. *Advances in Meteorology, Climatology and Atmospheric Physics*, Springer Atmospheric Sciences, Berlin-Heidelberg, pp. 793-802.
321. Zittis, G., P. Hadjinicolaou and J. Lelieveld (2013) Land-atmosphere coupling: The feedback of soil moisture on surface temperature in the Eastern Mediterranean and Middle East. *Advances in Meteorology, Climatology and Atmospheric Physics*, Springer Atmospheric Sciences, Berlin-Heidelberg, pp. 833-839.
322. Waldock, J., N.L. Chandra, J. Lelieveld, Y. Proestos, E. Michael, G. Christophides and P. Parham (2013) The role of environmental variables on *Aedes albopictus* biology and distribution and the epidemiology of chikungunya infection. *Pathog. Glob. Health 107*, 224-241.
323. Ma, J., W. Wang, H. Liu, Y. Chen, X. Xu and J. Lelieveld (2013) Pollution plumes observed by aircraft over the Huabei region in eastern China during the IPAC-NC field campaign. *Chin. Sci. Bull. 58*, doi: 10.1007/s11434-013-5978-9.
324. de Vries, A.J., E. Tyrlis, D. Edry, S.O. Krichak, B. Steil and J. Lelieveld (2013) Extreme precipitation events in the Middle East: Dynamics of the active Red Sea trough. *J. Geophys. Res. 118*, 7087-7108, doi:10.1002/jgrd.50569.
325. Hadjimitsis, D.G., R.-E. Mamouri, A. Nisantzi, N. Kouremerti, A. Retalis, D. Paronis, F. Tymvios, S. Perdikou, S. Achilleos, M.A. Hadjicharalambous, S. Athanasatos, K. Themistocleous, C. Papoutsa, A. Christodoulou, S. Michaelides, J.S. Evans, M.M. Abdel

Kader, G. Zittis, M. Panayiotou, J. Lelieveld and P. Koutrakis (2013) Air Pollution from Space. In: D.G. Hadjimitsis (ed.), Remote sensing of environment: Integrated approaches, pp. 181-211. InTech, Rijeka, Croatia.

326. Yoon, J. A. Pozzer, P. Hoor, D.Y. Chang, S. Beirle, T. Wagner, S. Schloegl, J. Lelieveld and H.M. Worden (2013) Technical note: Temporal change in averaging kernels as a source of uncertainty in trend estimates of carbon monoxide retrieved from MOPITT. *Atmos. Chem. Phys. 13*, 11307-11316.
327. Waldock, J., P.E. Parham, J. Lelieveld and G.K. Christophides (2013) Climate and human health: The impact of climate change on vector-borne diseases, Paphos, Cyprus (17-19 October 2012). *Path. Glob. Health. 107*, 387-392.
328. Lelieveld, J. (2013) Weltweites Risiko durch radioactive Fallouts nach katastrophalen Kernreaktorunfällen. In: C. Klug, J. Lutz, K. Krusewitz (Hrsg.) Perspektiven fortschrittlicher und kritischer Wissenschaft und Kultur, Tagungsband 8, pp. 142-148, Offene Akademie.
329. Brühl, C., J. Lelieveld, M. Höpfner and H. Tost (2013) Stratospheric SO_2 and sulphate aerosol, model simulations and satellite observations. *Atmos. Chem. Phys. Discuss. 13*, 11395-11425.
330. Foley, S,F., D. Gronenborn, M.O. Andreae, J.W. Kadereit, J. Esper, D. Scholz, U. Pöschl, D.E. Jacob, B.R. Schöne, R. Schreg, A. Vött, D. Jordan, J. Lelieveld, C.G. Weller, K.W. Alt, S. Gaudzinski-Windheuser, K.-C. Bruhn, H. Tost, F. Sirocko and P.J. Crutzen (2013) The Palaeoanthropocene – The beginnings of anthropogenic environmental change. *Anthropocene 3*, 83-88.
331. Veres, P.R., P. Faber, F. Drewnick, J. Lelieveld and J. Williams (2013) Anthropogenic sources of VOC in a football stadium: Assessing human emissions in the atmosphere. *Atmos. Environ. 77*, 1052-1059.
332. Zanis, P., P. Hadjinicolaou, A. Pozzer, E. Tyrlis, S. Dafka, N. Mihalopoulos and J. Lelieveld (2014) Summertime free tropospheric ozone pool over the Eastern Mediterranean/Middle East. *Atmos. Chem. Phys. 14*, 115-132.
333. Liu, C., S. Beirle, T. Butler, P. Hoor, C. Frankenberg, P. Jöckel, M. Penning de Vries, U. Platt, A. Pozzer, M.G. Lawrence, J. Lelieveld, H. Tost and T. Wagner (2014) CO profiles from SCIAMACHY observations using cloud slicing and comparison with model simulations. *Atmos. Chem. Phys. 14*, 1717-1732.
334. Lelieveld, J., P. Hadjinicolaou, E. Kostopoulou, C. Giannakopoulos, A. Pozzer, M. Tanarhte and E. Tyrlis (2014) Model projected heat extremes and air pollution in the eastern Mediterranean and Middle East in the 21st century. *Reg. Env. Change 14*, 1937-1949.
335. Zittis, G., P. Hadjinicolaou and J. Lelieveld (2014) Role of soil moisture in the amplification of climate warming in the Eastern Mediterranean and the Middle East. *Clim. Res. 59*, 27-37.
336. Adame, J.A., M. Martinez, M. Sorribas, P.J. Hidalgo, H. Harder, J.-M. Diesch, F. Drewnick, W. Song, J. Williams, V. Sinha, M.A. Hernández-Ceballos, J. Vilà-Guerau de Arellano, R. Sander, Z. Hosaynali-Beygi, H. Fischer, J. Lelieveld and B. De la Morena (2014) Meteorology during the DOMINO campaign and its connection with trace gases and aerosols. *Atmos. Chem. Phys. 14*, 2325-2342.

337. Elshorbany, Y.F., P. Crutzen, B. Steil, A. Pozzer and J. Lelieveld (2014) Global and regional impacts of HONO on the chemical composition of clouds and aerosols. *Atmos. Chem. Phys. 14,* 1167-1184.
338. Giannadaki, D., A. Pozzer and J. Lelieveld (2014) Modeled global effects of airborne desert dust on air quality and premature mortality. *Atmos. Chem. Phys. 14,* 957-968.
339. Kostopoulou, E., C. Giannakopoulos, M. Hatzaki, A. Karali, P. Hadjinicolaou, J. Lelieveld and M.A. Lange (2014) Spatial and temporal patterns of recent and future climate extremes in the Eastern Mediterranean and Middle East region. *Nat. Hazards Earth Syst. Sci. 14*, 1565-1577.
340. Kushta, J., G. Kallos, S. Solomos, M. Astitha, C. Spyrou, C. Mitsakou and J. Lelieveld (2014) Impact of natural aerosols on atmospheric radiation and consequent feedbacks on the meteorological and photochemical state of atmosphere. *J. Geophys. Res. 119*, 1463-1491.
341. Christoudias, T., Y. Proestos and J. Lelieveld (2014) Global risk from the atmospheric dispersion of radionuclides by nuclear power plant accidents in the coming decades. *Atmos. Chem. Phys. 14*, 4607-4616.
342. Mann, G.W., K.S. Carslaw, C.L. Reddington, K.J. Pringle, M. Schulz, A. Asmi, D.V. Spracklen, D.A. Ridley, M.T. Woodhouse, L.A. Lee, K. Zhang, S.J. Ghan, R.C. Easter, X. Liu, P. Stier, Y.H. Lee, P.J. Adams, H. Tost, J. Lelieveld, S.E. Bauer, K. Tsigaridis, T.P.C. Noije, A. Strunk, E. Vignati, N. Bellouin, M. Dalvi, C.E. Johnson, T. Bergman, H. Kokkola, K. von Salzen, F. Yu, G. Luo, A. Petzold, J. Heintzenberg, A. Clarke, J.A. Ogren, J. Gras, U. Baltensperger, U. Kaminski, S.G. Jennings, C.D. O'Dowd, R.M. Harrison, D.C.S. Beddows, M. Kulmala, Y. Viisanen, V. Ulevicius, N. Mihalopoulos, V. Zdimal, M. Fiebig, H.-C. Hansson, E. Swietlicki and J.S. Hentig (2014) Intercomparison and evaluation of aerosol microphysical properties among AeroCom global models of a range of complexity. *Atmos. Chem. Phys. 14*, 4679-4713.
343. Mishra, A.K., K. Klingmüller, E. Fredj, J. Lelieveld, Y. Rudich and I. Koren (2014) Radiative signature of absorbing aerosol over the eastern Mediterranean basin. *Atmos. Chem. Phys. 14*, 7213-7231.
344. Kleanthous, S., M. Vrekoussis, N. Mihalopoulos, P. Kalabokas and J. Lelieveld (2014) On the temporal and spatial variation of ozone in Cyprus. *Sci. Total Environ. 476-477*, 677-687.
345. Nölscher, A.C., T. Butler, J. Auld, P. Veres, A. Muñoz, D. Taraborrelli, L. Vereecken, J. Lelieveld and J. Williams (2014) Using total OH reactivity to assess isoprene photooxidation via measurement and model. *Atmos. Environ. 89*, 453-463.
346. Tyrlis, E., B. Skerlak, M. Sprenger, H. Wernli, G. Zittis and J. Lelieveld (2014) On the linkage between the Asian summer monsoon and tropopause fold activity over the eastern Mediterranean and the Middle East*. J. Geophys. Res. 119,* 3202-3221.
347. Hens, K., A. Novelli, M. Martinez, J. Auld, R. Axinte, B. Bohn, H. Fischer, P. Keronen, D. Kubistin, A.C. Nölscher, R. Oswald, P. Paasonen, T. Petäjä, E. Regelin, R. Sander, V. Sinha, M. Sipilä, D. Taraborrelli, C. Tatum Ernest, J. Williams, J. Lelieveld and H. Harder (2014) Observation and modelling of HOx radicals in a boreal forest. *Atmos. Chem. Phys. 14*, 8723-8747.
348. Klingmüller, K., B. Steil, C. Brühl, H. Tost and J. Lelieveld (2014) Sensitivity of aerosol extinction to new mixing rules in the AEROPT submodel of the ECHAM5/MESSy1.9 atmospheric chemistry (EMAC) model. *Geosci. Model Dev. 7*, 2503-2516.

349. Bozem, H., H. Fischer, C. Gurk, C.L. Schiller, U. Parchatka, R. Koenigstedt, A. Stickler, M. Martinez, H. Harder, D. Kubistin, J. Williams, G. Eerdekens and J. Lelieveld (2014) Influence of cold corona discharge on the ozone budget in the tropical free troposphere: A case study of deep convection during GABRIEL. *Atmos. Chem. Phys. 14*, 8917-8931.
350. Astitha, M., J. Lelieveld, A. De Meij, A. Kerkweg, M. Abdelkader, A.Pozzer and G. Glaser (2014) Impact of different physical parameterizations on the global modeling of desert dust – Importance of the initialization fields. NATO Science for Peace and Security Series C: Environmental Security. Springer, Berlin-Heidelberg, pp. 119-123.
351. Groß, C.B.M., T.J. Dillon, G. Schuster, J. Lelieveld and J.N. Crowley (2014) Direct kinetic study of OH and O_3 formation in the reaction of $CH_3C(O)O_2$ with HO_2. *J. Phys. Chem. A*, 118 (6), 974-985.
352. Novelli, A., K. Hens, C. Tatum Ernest, D. Kubistin, E. Regelin, T. Elste, C. Plaß-Dülmer, M. Martinez, J. Lelieveld and H. Harder (2014) Characterisation of an inlet pre-injector laser induced fluorescence instrument for the measurement of ambient hydroxyl radicals. *Atmos. Meas. Tech. 7*, 3413-3430.
353. Zittis, G., P. Hadjinicolaou and J. Lelieveld (2014) CL-WRF sensitivity to physics parameterizations over the Middle East and North Africa. *Am. J. Clim. Change 3*, 490-511.
354. Neophytou, M.K.-A., E. Tryphonos, P. Fokaides, M. Sandberg, E. Batchvarova, H.J.S. Fernando, J. Lelieveld and G. Zittis (2014) Toward designing strategies for urban heat island mitigation based on multi scale flow considerations. Proceedings of the 34th AIVC-3rd TightVent-2nd Cool Roofs - 1st Venticool International Conference, Athens, 24-26 September, 2013, 10 p.
355. Novelli, A., L. Vereecken, J. Lelieveld and H. Harder (2014) Direct observation of OH formation from stabilised Criegee intermediates. *Phys. Chem. Chem. Phys. 16*, 19941-19951.
356. Tsimpidi, A.P., V.A. Karydis, A. Pozzer, S.N. Pandis and J. Lelieveld (2014) ORACLE: a module for the description of ORganic Aerosol Composition and Evolution in the atmosphere. *Geosci. Model Dev. 7*, 3153-3172.
357. Neophytou, M.K.-A., H.J.S. Fernando, E. Batchvarova, M. Sandberg, J. Lelieveld and E. Tryphonos (2014) A scaling law for the urban heat island phenomenon: Deductions from field measurements and comparisons with existing results from laboratory experiments. Proceedings of the 4th US-European Fluids Engineering Division, Symposium on Urban Fluid Mechanics FEDSM2014, August 3-7, 2014, Chicago, IL, USA, 10 p. 365.
358. Christoudias, T., Y. Proestos and J. Lelieveld (2014) Atmospheric dispersion of radioactivity from nuclear power plant accidents: Global assessment and case study for the Eastern Mediterranean and Middle East. *Energies 7*, 8338-8354.
359. Fischer, H., A. Pozzer, T. Schmitt, P. Jöckel, T. Klippel, D. Taraborrelli and J. Lelieveld (2015) Hydrogen peroxide in the marine boundary layer over the southern Atlantic during the OOMPH cruise in March 2007. *Atmos. Chem. Phys. 15,* 6971-6980.
360. Chang, D.Y., H. Tost, B. Steil and J. Lelieveld (2014) Aerosol-cloud interactions studied with the chemistry-climate model EMAC. *Atmos. Chem. Phys. Discuss. 14*, 21975-22043.

361. Zheng, S., A. Pozzer, C. X. Cao and J. Lelieveld (2015) Long-term (2001–2012) fine particulate matter (PM2.5) and the impact on human health in Beijing, China, *Atmos. Chem. Phys. 15,* 5715-5725.
362. Ouwersloot, H., J. Vilà-Guerau de Arellano , B.J.H. van Stratum , M.C. Krol and J. Lelieveld (2015) Quantifying the transport of sub-cloud layer reactants by shallow cumulus clouds over the Amazon. *J. Geophys. Res. 118*, 13,041-13,059.
363. Tanarhte, M., P. Hadjinicolaou and J. Lelieveld (2015) Heat wave characteristics in the Eastern Mediterranean and Middle East using extreme value theory. *Climate Res. 63*, 99-113.
364. Proestos, Y., G. Christophides, K. Ergüler, M. Tanarhte, J. Waldock and J. Lelieveld (2015) Climate model projections of vector-borne disease transmission by the Asian Tiger Mosquito (*Aedes albopictus*). *Phil. Trans. R. Soc. B, 370*, 20130554.
365. Brühl, C., J. Lelieveld, H. Tost, M. Höpfner and N. Glatthor (2015) Stratospheric sulfur and its implications for radiative forcing simulated by the chemistry climate model EMAC. *J. Geophys. Res. 120*, 2103-2118.
366. Lelieveld, J. und A. Pozzer (2015) Luftverschmutzung und Klimawandel. In: J. Marotzke und M. Stratmann (Hrsg.) Die Zukunft des Klimas, Verlag C.H. Beck, München, pp. 105-122.
367. Ouwersloot, H.G., A. Pozzer, B. Steil, H. Tost and J. Lelieveld (2015) Revision of convective transport in the EMAC atmospheric chemistry-climate model. *Geosci. Model Dev. 8.,* 2435-2445.
368. Lubczyńska, M.J., C.A. Christophi and J. Lelieveld (2015) Heat-related cardiovascular mortality risk in Cyprus: a case-crossover study using a distributed lag non-linear model. *Environ. Health 14, 39,* doi: 10.1186/s12940-015-0025-8.
369. Abdelkader, M., S. Metzger, M. Astitha, Z. Levin and J. Lelieveld (2015) Dust – air pollution dynamics over the Eastern Mediterranean. *Atmos. Chem. Phys. 15*, 9173-9189.
370. Tyrlis, E., F.S. Tymvios, C. Giannakopoulos and J. Lelieveld (2015) The role of blocking in the summer 2014 collapse of Etesians over the eastern Mediterranean. *J. Geophys. Res. 120*, 6777-6792.
371. Lelieveld, J., J.S. Evans, M. Fnais, D. Giannadaki and A. Pozzer (2015) The contribution of outdoor air pollution sources to premature mortality on a global scale. *Nature 525*, 367-371.
372. Lelieveld, J., S. Beirle, C. Hörmann, G. Stenchikov and T. Wagner (2015) Abrupt recent trend changes in atmospheric nitrogen dioxide over the Middle East. *Science Adv. 1*, e1500498.
373. Yoon, J., A. Pozzer, D.Y. Chang, J. Lelieveld, J. Kim, M. Kim, Y.G. Lee, J.-H. Koo, J. Lee (2016) Trend estimates of AERONET-observed and model-simulated AOTs between 1993 and 2013. *Atmos. Environ. 125*, 33-47.
374. Zittis, G., P. Hadjinicolaou, M. Fnais and J. Lelieveld (2016) Projected changes of heat wave characteristics in the eastern Mediterranean and the Middle East. *Reg. Environ. Change 16*, 1863-1876.
375. Constantinidou, K., P. Hadjinicolaou, G. Zittis and J. Lelieveld (2016) Effects of climate change on the yield of wheat in the eastern Mediterranean and Middle East. *Clim. Res. 69*, 129-141.

376. de Vries, A.J., S.B. Feldstein, E. Tyrlis, M. Riemer, M. Baumgart, M. Fnais, M. Sprenger and J. Lelieveld (2016) Dynamics of tropical-extratropical interactions and extreme precipitation events in Saudi Arabia in Autumn, Winter and Spring. *Q. J. R. Meteorol. Soc. 142*, 1862-1880.
377. Rauthe-Schöch, A., A.K. Baker, T.J. Schuck, C.A.M. Brenninkmeijer, A. Zahn, M. Hermann, G. Stratmann, H. Ziereis, P.F.J. van Velthoven and J. Lelieveld (2016) Trapping, chemistry and export of trace gases in the South Asian summer monsoon observed during CARIBIC flights in 2008. *Atmos. Chem. Phys. 16,* 3609-3629.
378. Karydis, V.A., A.P. Tsimpidi, A. Pozzer, M. Astitha and J. Lelieveld (2016) Effects of mineral dust on global atmospheric nitrate concentrations. *Atmos. Chem. Phys. 16*, 1491-1509.
379. Ojha, N., A. Pozzer, A. Rauthe-Schöch, A.K. Baker, J. Yoon, C.A.M. Brenninkmeijer and J. Lelieveld (2016) Ozone and carbon monoxide over India during the summer monsoon: regional emissions and transport. *Atmos. Chem. Phys. 16,* 3013-3032.
380. Klingmüller, K., A. Pozzer, S. Metzger, G. Stenchikov and J. Lelieveld (2016) Aerosol optical depth trend over the Middle East. *Atmos. Chem. Phys. 16*, 5063-5073.
381. Lelieveld, J., Y. Proestos, P. Hadjinicolaou, M. Tanarhte, M.S. Fnais, E. Tyrlis and G. Zittis (2016) Strongly increasing heat extremes in the Middle East and North Africa (MENA) in the 21st century. *Clim. Change 137*, 245-260.
382. Thieser, J., G. Schuster, G.J. Phillips, A. Reiffs, U. Parchatka, D. Pöhler, J. Lelieveld and J.N. Crowley (2016) A two-channel, thermal dissociation cavity-ringdown spectrometer for the detection of ambient NO_2, RO_2NO_2 and $RONO_2$. *Atm. Meas. Techn. 9*, 553-576.
383. Metzger, S., B. Steil, M. Abdelkader, K. Klingmüller, L. Xu, J.E. Penner, C. Fountoukis, A. Nenes and J. Lelieveld (2016) Aerosol water parameterization: A single parameter framework. *Atmos. Chem. Phys. 16,* 7213-7237.
384. Erguler, K., S.E. Smith-Unna, J. Waldock, Y. Proestos, G.K. Christophides, J. Lelieveld and P.E. Parham (2016) Large-scale modelling of the environmentally-driven population dynamics of temperate Aedes albopictus (Skuse). *PLOS One 11(2)*, e0149282.
385. Sobanski, N., M.J. Tang, J. Thieser, G. Schuster, D. Pöhler, H. Fischer, W. Song, C. Sauvage, J. Williams, J. Fachinger, F. Berkes, P. Hoor, U. Platt, J. Lelieveld and J.N. Crowley (2016) Chemical and meteorological influences on the lifetime of NO_3 at a semi-rural mountain site during "PARADE". *Atmos. Chem. Phys. 16,* 4867-4883.
386. Williams, J., S. Keßel, A.C. Nölscher, Y. Yang, Y. Lee, A.M. Yáñez Serrano, S. Wolf, J. Kesselmeier, T. Klüpfel, J. Lelieveld and M. Shao (2016) Opposite OH reactivity and ozone cycles in the Amazon rainforest and megacity Beijing: Subversion of biospheric oxidant control by anthropogenic emissions. *Atmos. Environ*. *125*, 112-118.
387. Tsimpidi, A.P., V.A. Karydis, S.N. Pandis and J. Lelieveld (2016) Global combustion sources of organic aerosols: Model comparison with 84 AMS factor analysis data sets. *Atmos. Chem. Phys. 16*, 8939-8962.
388. Lelieveld, J., S. Gromov, A. Pozzer and D. Taraborrelli (2016) Global tropospheric hydroxyl distribution, budget and reactivity. *Atmos. Chem. Phys. 16*, 12477-12493.
389. Pollmann, J., D. Helmig, D. Liptzin, C.R. Thompson, J. Hueber, P.P. Tans and J. Lelieveld (2016) Variability analyses, site characterization, and regional [OH] estimates using

trace gas measurements from the NOAA global greenhouse gas reference network. Elementa: Sci. Anthrop. 4, 000128.

390. Giannadaki, D., A. Pozzer and J. Lelieveld (2016) Implementing the US air quality standard for PM2.5 worldwide can prevent millions of premature deaths per year. *Environ. Health 15:88*, doi: 10.1186/s12940-016-0170-8.
391. Sobanski, N., J. Schuladen, G. Schuster, J. Lelieveld and J. Crowley (2016) A five-channel cavity ring-down spectrometer for the detection of NO_2, NO_3, N_2O_5, total peroxy nitrates and total alkyl nitrates. *Atmos. Meas. Tech. 9*, 5103-5118.
392. Akritidis, D., A. Pozzer, P. Zanis, E. Tyrlis, B. Škerlak, M. Sprenger and J. Lelieveld (2016) On the role of tropopause folds in summertime tropospheric ozone over the eastern Mediterranean and the Middle East. *Atmos. Chem. Phys. 16,* 14025-14039.
393. Zittis G., P. Hadjinicolaou, A. Bruggeman, C. Camera and J. Lelieveld (2016) High-resolution simulations of recent past extreme precipitation events over Cyprus. In: Perspectives on Atmospheric Sciences. Springer Atmospheric Sciences, ISBN: 978-3-319-35095-0.
394. Georgoulias, A.K., G. Alexandri, K.A. Kourtidis, J. Lelieveld, P. Zanis, U. Pöschl, R. Levy, V. Amiridis, E. Marinou and A. Tsikerdekis (2016) Spatiotemporal variability and contribution of different aerosol types to the aerosol optical depth over the Eastern Mediterranean. *Atmos. Chem. Phys. 16*, 13853-13884.
395. Meusel, H., U. Kuhn, A. Reifs, C. Malik, H. Harder, M. Martinez, J. Schuladen, B. Bohn, U. Parchatka, J. N. Crowley, H. Fischer, T. Hoffmann, R. Janssen, O. Hartogensis, M. Pikridas, M. Vrekoussis, E. Bourtsoukidis, B. Weber, J. Lelieveld, J. Williams, U. Pöschl, Y. Cheng and H. Su (2016) Daytime formation of nitrous acid at a coastal remote site in Cyprus indicating a common ground source of atmospheric HONO and NO. *Atmos. Chem. Phys. 16*, 14475-14493.
396. Vereecken, L., H.K. Chakravarty, B. Bohn and J. Lelieveld (2016) Theoretical study on the formation of H- and O-atoms, HONO, OH, NO, and NO_2 from the lowest-lying singlet and triplet states in ortho-nitrophenol photolysis. *Int. J. Chem. Kinet. 48*, 785-795.
397. Phillips, G., J. Thieser, M. Tang, N. Sobanski, G. Schuster, J. Fachinger, F. Drewnick, S. Borrmann, H. Bingemer, J. Lelieveld and J. Crowley (2016) Estimating N_2O_5 uptake coefficients using ambient measurements of NO_3, N_2O_5, $ClNO_2$ and particle-phase nitrate. *Atmos. Chem. Phys. 16*, 13231-13249.
398. Georgoulias, A.K., G. Alexandri, K.A. Kourtidis, J. Lelieveld, P., Zanis and V. Amiridis (2016) Differences between the MODIS Collection 6 and 5.1 aerosol datasets over the greater Mediterranean region. *Atmos. Environ. 147*, 310-319.
399. Abdelkader, M., S. Metzger, B. Steil, K. Klingmüller, H. Tost, A. Pozzer, G. Stenchikov, L. Barrie and J. Lelieveld (2017) Chemical aging of atmospheric mineral dust during transatlantic transport. *Atmos. Chem. Phys. 17*, 3799-3821.
400. Chang, D.Y., J. Lelieveld, H. Tost, B. Steil, A. Pozzer and J. Yoon (2017) Aerosol physicochemical effects on CCN activation simulated with the chemistry-climate model EMAC. *Atmos. Environ. 162*, 127-140.
401. Girach, I.A., N. Ojha, P.R. Nair, A. Pozzer, Y.K. Tiwari, K.R. Kumar and J. Lelieveld (2017) Variations in O_3, CO and CH_4 over the Bay of Bengal during the summer-monsoon: Ship-borne measurements and model simulations. *Atmos. Chem. Phys. 17*, 257–275.

402. Derstroff, B., I. Hüser, E. Bourtsoukidis, J.N. Crowley, H. Fischer, S. Gromov, H. Harder, R.H.H. Janssen, J. Kesselmeier, J. Lelieveld, C. Mallik, M. Martinez, A. Novelli, U. Parchatka, G.J. Phillips, R. Sander, C. Sauvage, J. Schuladen, C. Stönner, L. Tomsche and J. Williams (2017) Volatile organic compounds (VOCs) in photochemically aged air from the Eastern and Western Mediterranean. *Atmos. Chem. Phys. 17,* 9547-9566.
403. Shiraiwa, M., Y. Li, A.P. Tsimpidi, V.A. Karydis, T. Berkemeier, S.N. Pandis, J. Lelieveld, T. Koop and U. Pöschl (2017) Global atmospheric secondary organic particle phase state distribution, *Nature Comm., 8:15002*, doi:10.1038/ncomms15002.
404. Sobanski, N.,J. Thieser, J. Schuladen, C. Sauvage, W. Song, J. Williams, J. Lelieveld and J. Crowley (2017) Day- and night-time formation of organic nitrates at a forested mountain-site in South West Germany. *Atmos. Chem. Phys. 17*, 4115-4130.
405. Ojha, N., A. Pozzer, D. Akritidis and J. Lelieveld (2017) Secondary ozone peaks in the troposphere over the Himalayas. *Atmos. Chem. Phys. 17*, 6743-6757.
406. Novelli, A., K. Hens, C. Tatum Ernest, M. Martinez, A. Nölscher, V. Sinha, P. Paasonen, T. Petäjä, M. Sipilä, T. Elste, C. Plaß-Dülmer, G. Phillips, D. Kubistin, J. Williams, L. Vereecken, J. Lelieveld and H. Harder (2017) Estimating the atmospheric concentration of Criegee intermediates and their possible interference in a FAGE-LIF instrument. *Atmos. Chem. Phys., 17*, 7807-7826.
407. Erguler, K., N.L. Chandra, Y. Proestos, J. Lelieveld, G.K. Christophides and P.E. Parham (2017) A large-scale stochastic spatiotemporal model for Aedes albopictus-borne chikungunya epidemiology. *PLOS One 12(3)*, e0174293.
408. Karydis, V., A. Tsimpidi, S. Bacer, A. Pozzer, A. Nenes and J. Lelieveld (2017) Global impact of mineral dust on cloud droplet number concentration. *Atmos. Chem. Phys. 17*, 5601-5621.
409. Liebmann, J., N. Sobanski, J. Schuladen, J. Lelieveld, J. Crowley and G. Schuster (2017) Measurement of ambient NO_3 reactivity: Design, characterization and first deployment of a new instrument. *Atmos. Meas. Tech. 10*, 1241-1258.
410. Pozzer, A., A. Tsimpidi, V. Karydis, A. de Meij and J. Lelieveld (2017) Impact of agricultural emissions on fine particulate matter and public health. *Atmos. Chem. Phys. 17*, 12813-12826.
411. Sharma, A., N. Ojha, A. Pozzer, K.A. Mar, G. Beig, J. Lelieveld and S.S. Gunthe (2017) WRF-Chem simulated surface ozone over South Asia during the pre-monsoon: Effects of emission inventories and chemical mechanisms. *Atmos. Chem. Phys.* 17, 14393-14413.
412. Zittis, G., A. Bruggeman, C. Camera, P. Hadjinicolaou and J. Lelieveld (2017) The added value of convection permitting simulations of extreme precipitation events over the eastern Mediterranean. *Atmos. Res. 191,* 20-33.
413. Janssen, R.H.H., A.P. Tsimpidi, V.A. Karydis, A. Pozzer, J. Lelieveld, M. Crippa, A.S.H. Prevot, W. Ait-Helal, A. Borbon, S. Sauvage and N. Locoge (2017) Influence of local production and vertical transport on the organic aerosol budget over Paris. *J. Geophys. Res. Atmos. 122*, doi:10.1002/2016JD026402.
414. Tsimpidi, A., V. Karydis, S. Pandis and J. Lelieveld (2017) Global-scale combustion sources of organic aerosols: Sensitivity to formation and removal mechanisms. *Atmos. Chem. Phys. 17,* 7345-7364.

415. Bozem, H., T.M. Butler, M.G. Lawrence, H. Harder, M. Martinez, D. Kubistin, J. Lelieveld and H. Fischer (2017) Chemical processes related to net ozone tendencies in the free troposphere. *Atmos. Chem. Phys. 17*, 10565-10582.
416. Bozem, H., A. Pozzer, H. Harder, M. Martinez, J. Williams, J. Lelieveld and H. Fischer (2017) The influence of deep convection on HCHO and H_2O_2 in the upper troposphere over Europe. *Atmos. Chem. Phys. 17,* 11835-11848.
417. Keßel, S., D. Cabrera-Perez, A. Horowitz, P.R. Veres, R. Sander, D. Taraborrelli, M. Tucceri, J. Crowley, A. Pozzer, C. Stönner, L. Vereecken, J. Lelieveld and J. Williams (2017) Atmospheric chemistry, sources, and sinks of carbon suboxide, C_3O_2. *Atmos. Chem. Phys. 17*, 8789-8804.
418. Meusel, H., Y. Elshorbany, U. Kuhn, T. Bartels-Rausch, K. Reinmuth-Selzle, C.J. Kampf, G. Li, X. Wang, J. Lelieveld, U. Pöschl, T. Hoffmann, H. Su, M. Ammann and Y. Cheng (2017) Light-induced protein nitration and degradation with HONO emission. *Atmos. Chem. Phys. 17*, 11819-11833.
419. Lelieveld, J. (2017) Clean air in the Anthropocene. *Faraday Discuss. 200*, 693-703.
420. Bourtsoukidis, E., F. Helleis, L. Tomsche, H. Fischer, R. Hofmann, J. Lelieveld and J. Williams (2017) An aircraft gas chromatograph-mass spectrometer System for Organic Fast Identification Analysis (SOFIA): design, performance and a case study of Asian monsoon pollution outflow. *Atmos. Meas. Tech. 10*, 5089-5105.
421. Shiraiwa, M., K. Ueda, A. Pozzer, G. Lammel, C.J. Kampf, A. Fushimi, S. Enami, A.M. Arangio, J. Fröhlich-Nowoisky, Y. Fujitani, A. Furuyama, P.S.J. Lakey, J. Lelieveld, K. Lucas, Y. Morino, U. Pöschl, S. Takahama, A. Takami, H. Tong, B. Weber, A. Yoshino and K. Sato (2017) Aerosol health effects from molecular to global scales. *Environ. Sci. Technol. 51*, 13545-13567.
422. Lelieveld, J. and U. Pöschl (2017) Chemists can help to solve the air pollution health crisis. *Nature 551*, 291-293.
423. Giannadaki, D., E. Giannakis, A. Pozzer and J. Lelieveld (2017) Estimating health and economic benefits of reductions in air pollution from agriculture. *Sci. Total Environ. 622-623*, 1304-1316.
424. Cabrera-Perez, D., D. Taraborrelli, J. Lelieveld, T. Hoffmann and A. Pozzer (2017) Global impact of monocyclic aromatics on tropospheric composition. *Atmos. Chem. Phys. Discuss.*, https://doi.org/10.5194/acp-2017-928.
425. Kushta, J., G.K. Georgiou, Y. Proestos, T. Christoudias and J. Lelieveld (2018) A modelling study of the atmospheric composition over Cyprus. *Atmos. Pollut. Res. 9*, 257-269.
426. Abdelwares, M.S., M. Haggag, A. Wagdy and J. Lelieveld (2018) Customized framework of the WRF model for regional climate simulation over the eastern Nile Basin. *Theor. Appl. Clim. 134*, 1135-1151.
427. Meusel, H., A. Tamm, U. Kuhn, D. Wu, A. L. Leifke, S. Fiedler, N. Ruckteschler, P. Yordanova, N. Lang-Yona, J. Lelieveld, T. Hoffmann, U. Pöschl, H. Su, B. Weber and Y. Cheng (2018) Emission of nitrous acid from soil and biological soil crusts represents a dominant source of HONO in the remote atmosphere in Cyprus. *Atmos. Chem. Phys. 18*, 799-813.
428. Klingmüller, K., S. Metzger, M. Abdelkader, V.A. Karydis, G.L. Stenchikov, A. Pozzer and J. Lelieveld (2018) Revised mineral dust emissions in the atmospheric chemistry-climate model EMAC (based on MESSy 2.52). *Geosci. Model Dev. 11,* 989-1008.

429. Tymvios, F., D. Charalambous, S. Michaelides and J. Lelieveld (2018) Intercomparison of boundary layer parameterizations for summer conditions in the eastern Mediterranean island of Cyprus using the WRF - ARW model. *Atmos. Res. 208*, 45-59.
430. de Vries, A.J., H.G. Ouwersloot, S.B. Feldstein, M. Riemer, A.M. El Kenawy, M.F. McCabe and J. Lelieveld (2018) Identification of tropical-extratropical interactions and extreme precipitation events in the Middle East based on potential vorticity and moisture transport. *J. Geophys. Res. 123*, 861-881.
431. Bourtsoukidis, E., T. Behrendt, A.M. Yañez-Serrano, H. Hellén, E. Diamantopoulos, E. Catão, A. Pozzer, C.A. Quesada, D.L. Martins, M. Sá, A. Araujo, J. Brito, P. Artaxo, J. Kesselmeier, J. Lelieveld and J. Williams (2018) Strong sesquiterpene emissions from Amazonian soils. *Nature Comm. 9,* 2226.
432. Georgiou, G.K., T. Christoudias, Y. Proestos, J. Kushta, P. Hadjinicolaou and J. Lelieveld (2018) Air quality modelling in the summer over the Eastern Mediterranean using WRF/Chem: Chemistry and aerosol mechanisms intercomparison. *Atmos. Chem. Phys. 18*, 1555-1571.
433. Lelieveld, J., E. Bourtsoukidis, C. Brühl, H. Fischer, H. Fuchs, H. Harder, A. Hofzumahaus, F. Holland, A. Pozzer, H. Schlager, J. Williams, A. Zahn and H. Ziereis (2018) The South Asian monsoon – pollution pump and purifier. *Science 361*, 270-273.
434. Liebmann, J., E. Karu, N. Sobanski, J. Schuladen, M. Ehn, S. Schallhart, L. Quéléver, H. Hellen, H. Hakola, T. Hoffmann, J. Williams, H. Fischer, J. Lelieveld and J. Crowley (2018) Direct measurement of NO_3 reactivity in a boreal forest. *Atmos. Chem. Phys. 18*, *18*, 3799-3815.
435. Yan, Y., A. Pozzer, N. Ojha and J. Lelieveld (2018) Analysis of European ozone trends in the period 1995–2014. *Atmos. Chem. Phys. 18*, 5589-5605.
436. Georgoulias, A., A. Tsikerdekis, V. Amiridis, E. Marinou, A. Benedetti, P. Zanis, G. Alexandri, K. Kourtidis and J. Lelieveld (2018) A 3-D evaluation of the MACC reanalysis dust product over Europe, Northern Africa and Middle East using CALIOP/CALIPSO dust satellite observations. *Atmos. Chem. Phys. 18*, 8601-8620.
437. Mallik, C., L. Tomsche, E. Bourtsoukidis, J.N. Crowley, B. Derstroff, H. Fischer, S. Hafermann, I. Hueser, U. Javed, S. Keßel, J. Lelieveld, M. Martinez, H. Meusel, A. Novelli, G.J. Phillips, A. Pozzer, A. Reiffs, R. Sander, C. Sauvage, J. Schuladen, H. Su, J. Williams and H. Harder (2018) Oxidation processes in the Eastern Mediterranean atmosphere: Evidence from the modelling of HOx measurements over Cyprus. *Atmos. Chem. Phys. 18*, 10825-10847.
438. Tsimpidi, A., V. Karydis, A. Pozzer, S. Pandis and J. Lelieveld (2018) ORACLE 2-D (v2.0): an efficient module to compute the volatility and oxygen content of organic aerosol with a global chemistry – climate model. *Geosci. Model Dev. 11*, 3369-3389.
439. Lelieveld, J., A. Haines and A. Pozzer (2018) Age-dependent health risk from ambient air pollution: a modelling and data analysis of childhood mortality in middle-income and low-income countries. *Lancet Planet. Health 2*, e292-300.
440. Li, M., E. Karu, C. Brenninkmeijer, H. Fischer, J. Lelieveld and J. Williams (2018) Tropospheric OH and stratospheric OH and Cl concentrations determined from CH_4, CH_3Cl, and SF_6 measurements. *Nature Clim. Atm. Sci. 1, 29,* doi:10.1038/s41612-018-0041-9.
441. Bacer, S., S.C. Sullivan, V.A. Karydis, D. Barahona, M. Krämer, A. Nenes, H. Tost, A.P. Tsimpidi, J. Lelieveld and A. Pozzer (2018) Implementation of a comprehensive ice

crystal formation parameterization for cirrus and mixed-phase clouds into the EMAC model (based on MESSy 2.53). *Geosci. Model Dev. 11,* 4021-4041.

442. Liebmann, J.M., J.B.A. Muller, D. Kubistin, A. Claude, R. Holla, C. Plass-Dülmer, J. Lelieveld and J.N. Crowley (2018) Direct measurements of NO_3-reactivity in and above the boundary layer of a mountain-top site: Identification of reactive trace gases and comparison with OH-reactivity. *Atmos. Chem. Phys. 18*, 12045-12059.
443. Zittis, G., A. Bruggeman, P. Hadjinicolaou, C. Camera and J. Lelieveld (2018) Effects of meteorology nudging in regional hydro-climatic simulations of the eastern Mediterranean. *Atmosphere 9*, 470, doi:10.3390/atmos9120470.
444. Nikolaou, Z.M., J.Y. Chen, Y. Proestos, J. Lelieveld and R. Sander (2018) Accelerating simulations using Direct Relation Graphs for atmospheric chemistry mechanism reduction. *Geosci. Model Dev. 11*, 3391-3407.
445. Crowley, J., N. Pouvesle, G. Phillips, R. Axinte, H. Fischer, T. Petäjä, A. Nölscher, J. Williams, K. Hens, H. Harder, M. Martinez-Harder, A. Novelli, D. Kubistin, B. Bohn and J. Lelieveld (2018) Insights into HO_X and RO_X chemistry in the boreal forest via measurement of peroxyacetic acid, peroxyacetic nitric anhydride (PAN) and hydrogen peroxide. *Atmos. Chem. Phys. 18*, 13457-13479.
446. Münzel, T., T. Gori, S. Al-Kindi, J. Deanfield, J. Lelieveld, A. Daiber and S. Rajagopalan (2018) Effects of gaseous and solid constituents of air pollution on endothelial function. *Eur. Heart J. 39,* 3543-3550.
447. Kushta, J., A. Pozzer and J. Lelieveld (2018) Uncertainties in estimates of mortality attributable to ambient $PM_{2.5}$ in Europe. *Environ. Res. Lett. 13*, 064029.
448. Ehrhart, S., E.M. Dunne, H.E. Manninen, T. Nieminen, J. Lelieveld and A. Pozzer (2018) Two new submodels for the Modular Earth Sub model System (MESSy): New Aerosol Nucleation (NAN) and small ions (IONS) version 1.0. *Geosci. Model Dev. 11*, 4987-5001.
449. Kushta, J., G.K. Georgiou, Y. Proestos, T. Christoudias, P. Thunis and J. Lelieveld (2018) Evaluation of EU air quality standards through modelling and the FAIRMODE benchmarking methodology. *Air Qual. Atm. Health 12*, 73-86.
450. Buonocore, J.J., A.H. Villavicencio, J.D. Spengler, J.S. Evans, J. Lelieveld, D.A. Koehler, P. Klop and R. Sanchez (2019) Metrics for the sustainable development goals: Renewable energy and transportation. *Palgrave Comm. 5*, 136.
451. Yan, Y., D. Cabrera-Perez, J. Lin, A. Pozzer, L. Hu, D.B. Millet, W.C. Porter and J. Lelieveld (2019) Global tropospheric effects of aromatic chemistry with the SAPRC-11 mechanism implemented in GEOS-Chem version 9-02. *Geosci. Model Dev. 12*, 111-130.
452. Tomsche, L., A. Pozzer, N. Ojha, U. Parchatka, J. Lelieveld and H. Fischer (2019) Upper tropospheric CH_4 and CO affected by the South Asian summer monsoon during the OMO campaign. *Atmos. Chem. Phys. 19,* 1915-1939.
453. Yoon, J., D.Y. Chang, J. Lelieveld, A. Pozzer, J. Kim and S.S. Yum (2019) Empirical evidence of a positive climate forcing of aerosols at elevated albedo. *Atmos. Res. 229*, 269-279.
454. Erguler, K., I. Pontiki , G. Zittis , Y. Proestos, V. Christodoulou , N. Tsirigotakis, M. Antoniou , O.E. Kasap, B. Alten and J. Lelieveld (2019) Using longitudinal surveillance data to analyse the environmental dependence of vector populations: the case of sand flies. *Sci. Rep. 9*, 2469*,* https://doi.org/10.1038/s41598-019-38994-w.

455. Yan, Y., J. Lin, A. Pozzer, S. Kong and J. Lelieveld (2019) Trend reversal from high-to-low and from rural-urban ozone concentrations over Europe. *Atmos. Environ. 213*, 25-36.
456. Klingmüller, K., J. Lelieveld, V. Karydis and G. Stenchikov (2019) Direct radiative effect of dust-pollution interactions. *Atmos. Chem. Phys. 19*, 7397-7408.
457. Lelieveld, J, K. Klingmüller, A. Pozzer, U. Pöschl, M. Fnais, A. Daiber and T. Münzel (2019) Cardiovascular disease burden from ambient air pollution in Europe reassessed using novel hazard ratio functions. *Eur. Heart J. 40*, 1590-1596.
458. Fischer, H., R. Axinte, H. Bozem, J. Crowley, C. Ernest, S. Gilge, S. Hafermann, H. Harder, K. Hens, R. Königstedt, D. Kubistin, C. Mallik, M. Martinez, A. Novelli, U. Parchatka, C. Plass-Dülmer, A. Pozzer, E. Regelin, A. Reiffs, T. Schmidt, J. Schuladen and Jos Lelieveld (2019) Diurnal variability, photochemical production and loss processes of hydrogen peroxide in the boundary layer over Europe. *Atmos. Chem. Phys. 19*, 11953-11968.
459. Lelieveld, J., K. Klingmüller, A. Pozzer, R.T. Burnett, A. Haines and V. Ramanathan (2019) Effects of fossil fuel and total anthropogenic emission removal on public health and climate. *Proc. Natl. Acad. Sci. U.S.A. 116,* 7192-7197.
460. Javed, U., D. Kubistin, M. Martinez, J. Pollmann, M. Rudolf, U. Parchatka, A. Reiffs, J. Thieser, G. Schuster, M. Horbanski, D. Pöhler, J.N. Crowley, H. Fischer, J. Lelieveld and H. Harder (2019) Laser-induced fluorescence-based detection of atmospheric nitrogen dioxide and comparison of different techniques during the PARADE 2011 field campaign. *Atmos. Meas. Tech 12*, 1461-1481.
461. Giannakis, E., J. Kushta, D. Giannadaki, G.K. Georgiou, A. Bruggeman, J. Lelieveld (2019) Exploring the economy-wide effects of agriculture on air quality and health: Evidence from Europe. *Sci. Total Environ. 663*, 889-900.
462. Eger, P.G., F. Helleis, G. Schuster, G.J. Phillips, J. Lelieveld and J.N. Crowley (2019) Chemical ionisation quadrupole mass spectrometer with an electrical discharge ion source for atmospheric trace gas measurement. *Atmos. Meas. Tech. 12*, 1935-1954.
463. Tanarhte, M., S. Bacer, S. Burrows, J.A. Huffman, K.M. Pierce, A. Pozzer, R. Sarda-Estève, N.J. Savage and J. Lelieveld (2019) Global modeling of fungal spores with the EMAC chemistry-climate model: uncertainties in emission parametrizations and observations. *Atmos. Chem. Phys. Discuss*., https://doi.org/10.5194/acp-2019-251.
464. Bourtsoukidis, E., L. Ernle, J. Crowley, J. Lelieveld, J.-D. Paris, A. Pozzer, D. Walter and J. Williams (2019) Non Methane Hydrocarbon (C2-C8) sources and sinks around the Arabian Peninsula. *Atmos. Chem. Phys. 19*, 7209-7232.
465. Zittis, G., P. Hadjinicolaou, M. Klangidou, Y. Proestos and J. Lelieveld (2019) A multi-model, multi-scenario and multi-domain analysis of regional climate projections for the Mediterranean. *Reg. Environ. Change 19*, 2621-2635.
466. Evoy, E., A. Maclean, G. Rovelli, Y. Li, A. Tsimpidi, V. Karydis, S. Kamal, J. Lelieveld, M. Shiraiwa, J.P. Reid and A.K. Bertram (2019) Predictions of diffusion rates of organic molecules in secondary organic aerosols using the Stokes-Einstein and fractional Stokes-Einstein relations. *Atmos. Chem. Phys. 19*, 10073–10085.
467. Münzel, T., J. Lelieveld, S. Rajagopalan and A. Daiber (2019) Contribution of airborne desert dust to air quality and cardiopulmonary disease. *Eur. Heart J.* 40, 2377-2378.
468. Pfannerstill, E.Y, N. Wang, A. Edtbauer, E. Bourtsoukidis, J.N. Crowley, D. Dienhart, P.G. Eger, L. Ernle, H. Fischer, B. Hottmann, J.-D. Paris, C. Stönner, I. Tadic, D. Walter, J. Lelieveld and J. Williams (2019) Shipborne measurements of total OH reactivity

around the Arabian Peninsula and its role in ozone chemistry. *Atmos. Chem. Phys. 19*, 11501-11523.

469. Ma, J., C. Brühl, Q. He, B. Steil, V.A. Karydis, K. Klingmüller, H. Tost, B. Chen, Y. Jin, N. Liu, X. Xu, P. Yan, X. Zhou, K. Abdelrahman, A. Pozzer and J. Lelieveld (2019) Modelling the aerosol chemical composition of the tropopause over the Tibetan Plateau during the Asian summer monsoon. *Atmos. Chem. Phys. 19*, 11587-11612.
470. Liebmann, J., N. Sobanski, J. Schuladen, E. Karu, H. Hellén, H. Hakola, Q. Zha, M. Ehn, M. Riva, J. Williams, H. Fischer, J. Lelieveld and J.N. Crowley (2019) Alkyl nitrates in the boreal forest: Formation via the NO_3, OH and O_3 induced oxidation of BVOCs and ambient lifetimes. *Atmos. Chem. Phys. 19*, 10391-10403.
471. Eger, P.G., N. Friedrich, J. Schuladen, J. Shenolikar, H. Fischer, I. Tadic, H. Harder, M. Martinez, R. Rohloff, S. Tauer, F. Fachinger, F. Drewnick, J. Brooks, E. Darbyshire, J. Sciare, M. Pikridas, J. Lelieveld and J.N. Crowley (2019) Shipborne measurements of $ClNO_2$ in the Mediterranean Sea and around the Arabian Peninsula during summer. *Atmos. Chem. Phys. 19*, 12121-12140.
472. Kippenberger, M., G. Schuster, J. Lelieveld and J. Crowley (2019) Trapping of HCl and oxidized, organic trace-gases in growing ice at temperatures relevant for cirrus clouds. *Atmos. Chem. Phys. 19.*, 11939–11951.
473. Lelieveld, J. and T. Münzel (2019) Air pollution, chronic smoking, and mortality. *Eur. Heart J*. *40*, 3204.
474. Giannakis, E., J. Kushta, G.K. Georgiou, A. Bruggeman and J. Lelieveld (2019) Costs and benefits of agricultural ammonia emission abatement options for compliance with European air quality regulations. *Environ. Sci. Eur. 31*, 93.
475. Daiber, A., J. Lelieveld, S. Steven, M. Oelze, S. Kröller-Schön, M. Sørensen and T. Münzel (2019) The “exposome” concept – how environmental risk factors influence cardiovascular health. *Acta Biochim. Pol. 66*, 269-283.
476. Abdelwares, M., J. Lelieveld, P. Hadjinicolaou, G. Zittis, A. Wagdy and M. Haggag (2019) Evaluation of a regional climate model for the Eastern Nile basin: Terrestrial and atmospheric water balance. *Atmosphere 10*, 736.
477. Eger, P.G., J. Schuladen, N. Sobanski, H. Fischer, E. Karu, J. Williams, M. Riva, Q. Zha, M. Ehn, L.L.J. Quéléver, S. Schallhart, J. Lelieveld and J.N. Crowley (2020) Pyruvic acid in the boreal forest: gas-phase mixing ratios and impact on radical chemistry. *Atmos. Chem. Phys. 20,* 3697-3711.
478. Forrest, M., H. Tost, J. Lelieveld and T. Hickler (2020) Including vegetation dynamics in an atmospheric chemistry-enabled general circulation model: linking LPJ-GUESS (v4.0) with the EMAC modelling system (v2.53). *Geosci. Model Dev. 13*, 1285-1309.
479. Wang, S., H. Su, C. Chen, Q. Zhang, W.Tao, D.Streets, Z. Lu, B. Zheng, G.R. Carmichael, J. Lelieveld, U. Pöschl and Y. Cheng (2020) Natural gas shortages during the “coal-to-gas” transition in China have caused a large redistribution of air pollution in winter 2017. *Proc. Natl. Acad. Sci. U.S.A. 117*, 31018-31025.
480. Zimmermann, P.H., C.A.M. Brenninkmeijer, A. Pozzer, P. Jöckel, F. Winterstein, A. Zahn, S. Houweling and J. Lelieveld (2020) Model simulations of atmospheric methane (1997–2016) and their evaluation using NOAA and AGAGE surface- and IAGOS-CARIBIC aircraft observations. *Atmos. Chem. Phys. 20*, 5787-5809.
481. Chen, Y., Y. Cheng, N. Ma, C. Wei, L. Ran, R. Wolke, J. Größ, Q. Wang, A. Pozzer, H.A.C. Denier van der Gon, G. Spindler, J. Lelieveld, I. Tegen, H. Su and A. Wiedensohler

(2020) Natural emissions moderate the climate forcing of anthropogenic aerosols. *Atmos. Chem. Phys. 20*, 771-786.

482. Bourtsoukidis, E., A. Pozzer, T. Sattler, V. Matthaios, L. Ernle, A. Edtbauer, H. Fischer, T. Könemann, S. Osipov, J.-D. Paris, E.Y. Pfannerstill, C. Pöhlker, C. Stönner, I. Tadic, D. Walter, N. Wang, J. Lelieveld, and J. Williams (2020) The Red Sea deep water is a potent source of atmospheric ethane and propane. *Nat. Comm*. *11*, 447.
483. Georgiou, G.K., T. Christoudias, J. Kushta, Y. Proestos and J. Lelieveld (2020) Air quality modelling over the Eastern Mediterranean: Seasonal sensitivity to anthropogenic emissions. *Atmos. Environ. 222*, 117119.
484. Lelieveld, J., A. Pozzer, U. Pöschl, M. Fnais, A. Haines and T. Münzel (2020) Loss of life expectancy from air pollution compared to other risk factors: a worldwide perspective. *Cardiov. Res. 116*, 1910-1917.
485. Edtbauer, A., C. Stönner, E.Y. Pfannerstill, M. Berasategui, D. Walter, J.N. Crowley, J. Lelieveld and J. Williams (2020) A new marine biogenic emission: methane sulfonamide (MSAM), DMS and $DMSO_2$ measured in air over the Arabian Sea. *Atmos. Chem. Phys. 20*, 6081-6094.
486. Tadic, I., J.N. Crowley, P. Eger, D. Dienhart, H. Harder, B. Hottmann, M. Martinez, U. Parchatka, J.-D. Paris, A. Pozzer, R. Rohloff, J. Schuladen, J. Shenolikar, S. Tauer, J. Lelieveld and H. Fischer (2020) Net ozone production and its relationship to NOx and VOCs in the marine boundary layer around the Arabian Peninsula. *Atmos. Chem. Phys. 20,* 6769-6787.
487. Berasategui, M., D. Amedro, A. Edtbauer, J. Williams, J. Lelieveld and J.N. Crowley (2020) Kinetic and mechanistic study of the reaction between methane sulphonamide ($CH_3S(O)_2NH_2$) and OH. *Atmos. Chem. Phys. 20*, 2695-2707.
488. Constantinidou, K., P. Hadjinicolaou, G. Zittis and J. Lelieveld (2020) Sensitivity of simulated climate over the MENA region related to different land surface schemes in the WRF model. *Theor. Appl. Clim. 141*, 1431-1449.
489. Daiber, A., J. Lelieveld, S. Steven, M. Oelze, S. Kröller-Schön, M. Sørensen, T. Münzel (2020) Traffic-related environmental risk factors and their impact on oxidative stress and cardiovascular health. In: H. Sies (ed.) Oxidative stress: Eustress and distress, pp. 489-510, Academic Press, https://doi.org/10.1016/B978-0-12-818606-0.00025-0.
490. Marno, D., C. Ernest, K. Hens, U. Javed, T. Klimach, M. Martinez, M. Rudolf, J. Lelieveld and H. Harder (2020) Calibration of an airborne HO_X instrument using the All Pressure Altitude based Calibrator for HO_X Experimentation (APACHE). *Atmos. Meas. Tech. 13,* 2711-2731.
491. Chowdhury, S., A. Pozzer, S. Dey, K. Klingmueller and J. Lelieveld (2020) Changing risk factors that contribute to premature mortality from ambient air pollution between 2000 and 2015. *Environ. Res. Lett. 7,* 074010.
492. Abdelwares, M., J. Lelieveld, G. Zittis, M. Haggag and A. Wagdy (2020) A comparison of gridded datasets for precipitation and temperature over the Eastern Nile Basin region. *Euro-Mediterr. J. Environ. Integr*. *5*, 3.
493. Lelieveld, J. (2020) Schlechte Luft durch Verkehr, Industrie und Landwirtschaft. *Klinikarzt 1-2*, 22-25.
494. Amedro, D., M. Berasategui, A.J.C. Bunkan, A. Pozzer, J. Lelieveld and J.N. Crowley (2020) Kinetics of the $OH+NO_2$ reaction: effect of water vapour and new parameterization for global modelling. *Atmos. Chem. Phys. 20*, 3091-3105.

495. Hottmann, B., S. Hafermann, L. Tomsche, D. Marno, M. Martinez, H. Harder, A. Pozzer, M. Neumaier, A. Zahn, B. Bohn, G. Stratmann, H. Ziereis, J. Lelieveld and H. Fischer (2020) Impact of the South Asian monsoon outflow on atmospheric hydroperoxides in the upper troposphere. *Atmos. Chem. Phys. 20*, 12655-12673.
496. Wang, N., A. Edtbauer, C. Stönner, A. Pozzer, E. Bourtsoukidis, L. Ernle, D. Dienhart, B. Hottmann, H. Fischer, J. Schuladen, J.N. Crowley, J.-D. Paris, J. Lelieveld and J. Williams (2020) Measurements of carbonyl compounds around the Arabian Peninsula: overview and model comparison. *Atmos. Chem. Phys. 20*, 10807-10829.
497. Lelieveld, J. (2020) Reducing air pollution: avoidable health burden. In: W.K. Al-Delaimy, V. Ramanathan, M. Sánchez Sorondo (eds.). Health of people, health of planet and our responsibility, pp. 105-117, Springer Open, Switzerland.
498. Liu, N., J. Ma, W. Xu, Y. Wang, A. Pozzer and J. Lelieveld (2020) A modeling study of the regional representativeness of surface ozone variation at the WMO/GAW background stations in China. *Atmos. Environ. 242*, 117672.
499. Gori, T., J. Lelieveld and T. Münzel (2020) Cardiovascular disease and the COVID-19 pandemic. *Basic Res. Cardiol. 115*, 32.
500. Venter, Z.S., K. Aunan, S. Chowdhury and J. Lelieveld (2020) COVID-19 lockdowns cause global air pollution declines. *Proc. Natl. Acad. Sci. U.S.A. 117*, 18984-18990.
501. Dewald, P., J.M. Liebmann, N. Friedrich, J. Shenolikar, J. Schuladen, F. Rohrer, D. Reimer, R. Tillmann, A. Novelli, C. Cho, K. Xu, R. Holzinger, F. Bernard, L. Zhou, W. Mellouki, S.S. Brown, H. Fuchs, J. Lelieveld and J.N. Crowley (2020). Evolution of NO_3 reactivity during the oxidation of isoprene. *Atmos. Chem. Phys. 20*, 10459-10475.
502. Münzel, T., S. Steven, K. Frenis, J. Lelieveld, O. Hahad and A. Daiber (2020) Environmental factors such as noise and air pollution and vascular disease. *Antioxid. Redox Signal. 33*, 581-601.
503. Pozzer, A., F. Dominici, A. Haines, T. Münzel, C. Witt and J. Lelieveld (2020) Regional and global contributions of air pollution to risk of death from COVID-19. *Cardiov. Res. 116*, 2247-2253.
504. Friedrich, N., I. Tadic, J. Schuladen, J. Brooks, E. Darbyshire, F. Drewnick, H. Fischer, J. Lelieveld, J.N. Crowley (2020) Measurement of NOx and NOy with a thermal dissociation cavity ring-down spectrometer (TD-CRDS): instrument characterisation and first deployment. *Atmos. Meas. Tech. 13*, 5739-5761.
505. Hahad, O., J. Lelieveld, F. Birklein, K. Lieb, A. Daiber and T. Münzel (2020) Cerebrovascular and neurological disorders from ambient air pollution – Inflammation and oxidative stress as common features. *Int. J. Molec. Sci. 21*, 4306.
506. Lazoglou, G., G. Zittis, C. Anagnostopoulou, P. Hadjinicolaou and J. Lelieveld (2020) Bias correction of RCM precipitation by TIN-Copula method: A case study for historical and future simulations in Cyprus. *Climate 8*, 85.
507. Klingmüller, K., V.A. Karydis, S. Bacer, G.L. Stenchikov and J. Lelieveld (2020) Weaker cooling by aerosols due to dust-pollution interactions. *Atmos. Chem. Phys. 20*, 15285-15295.
508. Stolzenburg, D. M. Simon, A. Ranjithkumar, A. Kürten, K. Lehtipalo, H. Gordon, S. Ehrhart, H. Finkenzeller, L. Pichelstorfer, T. Nieminen, X.-C. He, S. Brilke, M. Xiao, A. Amorim, R. Baalbaki, A. Baccarini, L. Beck, S. Bräkling, L. Caudillo Murillo, D. Chen, B. Chu, L. Dada, A. Dias, J. Dommen, J. Duplissy, I. El Haddad, L. Fischer, L. Gonzalez Carracedo, M. Heinritzi, C. Kim, T.K. Koenig, W. Kong, H. Lamkaddam, C.P. Lee, M.

Leiminger, Z. Li, V. Makhmutov, H.E. Manninen, G. Marie, R. Marten, T. Müller, W. Nie, E. Partoll, T. Petäjä, J. Pfeifer, M. Philippov, M.P. Rissanen, B. Rörup, S. Schobesberger, S. Schuchmann, J. Shen, M. Sipilä, G. Steiner, Y. Stozhkov, C. Tauber, Y.J. Tham, A. Tomé, M. Vazquez-Pufleau, A.C. Wagner, M. Wang, Y. Wang, S.K. Weber, D. Wimmer, P.J. Wlasits, Y. Wu, Q. Ye, M. Zauner-Wieczorek, U. Baltensperger, K.S. Carslaw, J. Curtius, N.M. Donahue, R.C. Flagan, A. Hansel, M. Kulmala, J. Lelieveld, R. Volkamer, J. Kirkby and P.M. Winkler (2020) Enhanced growth rate of atmospheric particles from sulfuric acid. *Atmos. Chem. Phys. 20*, 7359-7372.

509. Berasategui, M., D. Amedro, L. Vereecken, J. Lelieveld and J.N. Crowley (2020) Reaction between $CH_3C(O)OOH$ (peracetic acid) and OH in the gas-phase: a combined experimental and theoretical study of the kinetics and mechanism. *Atmos. Chem. Phys. 20*, 13541-13555.
510. Münzel, T. und J. Lelieveld (2020) Auswirkungen von Luftverschmutzung auf das Herzkreislaufsystem. *VDI Rheingau Reg. Mag.* 3, 18-21.
511. Ntoumos, A., P. Hadjinicolaou, G. Zittis, J. Lelieveld (2020) Updated assessment of temperature extremes over the MENA region from observational and CMIP5 data. *Atmosphere 11*, 813.
512. Constantinidou, K., P. Hadjinicolaou, G. Zittis and J. Lelieveld (2020) Performance of land surface schemes in the WRF model for climate simulations over the MENA-CORDEX domain. *Earth Syst. Environ. 4*, 647-665.
513. Hess, J.J., N. Ranadive, C. Boyer, L. Aleksandrowicz, S.C. Anenberg, K. Aunan, K. Belesova, M.L. Bell, S. Bickersteth, K. Bowen, M. Burden, D. Campbell-Lendrum, E. Carlton, G. Cissé, F. Cohen, H. Dai, A.D. Dangour, P. Dasgupta, H. Frumkin, P. Gong, R.J. Gould, A. Haines, S. Hales, I. Hamilton, T. Hasegawa, M. Hashizume, Y. Honda, D.E. Horton, A. Karambelas, H. Kim, S.E. Kim, P.L. Kinney, I. Kone, K. Knowlton, J. Lelieveld, V.S. Limaye, Q. Liu, L. Madaniyazi, M.E. Martinez, D.L. Mauzerall, J. Milner, T. Neville, M. Nieuwenhuijsen, S. Pachauri, F. Perera, H. Pineo, J.V. Remais, R.K. Saari, J. Sampedro, P. Scheelbeek, J. Schwartz, D. Shindell, P. Shyamsundar, T.J. Taylor, C. Tonne, D. Van Vuuren, C. Wang, N. Watts, J.J. West, P. Wilkinson, S.A. Wood, J. Woodcock, A. Woodward, Y. Xie, Y. Zhang and K.L. Ebi (2020) Guidelines for modeling and reporting health effects of climate change mitigation actions. *Environ. Health Perspect. 128*, 115001.
514. Lelieveld, J. F. Helleis, S. Borrmann, Y. Cheng, F. Drewnick, G. Haug, T. Klimach, J. Sciare, H. Su and U. Pöschl (2020) Model calculations of aerosol transmission and infection risk of COVID-19 in indoor environments. *Int. J. Environ. Res. Publ. Health 17*, 8114.
515. Münzel, T., M.R. Miller, M. Sørensen, J. Lelieveld, A. Daiber and S. Rajagopalan (2020) Current opinion reduction of environmental pollutants for prevention of cardiovascular disease: it's time to act. *Eur. Heart J. 41*, 3989-3997.
516. He, Q., J. Ma, X. Zheng, Y. Wang, Y. Wang, H. Mu, T. Cheng, R. He, G. Huang, D. Liu and J. Lelieveld (2021) Formation and dissipation dynamics of the Asian tropopause aerosol layer. *Environ. Res. Lett. 16*, 014015.
517. Chang D.Y., J. Lelieveld, B. Steil, J. Yoon, S.S. Yum and A.-H. Kim (2021) Variability of aerosol-cloud interactions induced by different cloud droplet nucleation schemes. *Atmos. Res. 250*, 105367.

518. Bacer, S., S.C. Sullivan, O. Sourdeval, H. Tost, J. Lelieveld and A. Pozzer (2021) Cold cloud microphysical process rates in a global chemistry-climate model. *Atmos. Chem. Phys. 21*, 1485-1505.
519. Taraborrelli, D., D. Cabrera-Perez, S. Bacer, S. Gromov, J. Lelieveld, R. Sander and A. Pozzer (2021) Influence of aromatics on tropospheric gas-phase composition. *Atmos. Chem. Phys. 21*, 2615-2636.
520. Chowdhury, S., A. Haines, K. Klingmüller, A. Pozzer, C. Witt and J. Lelieveld (2021) Global burden of asthma in children and adolescents from major sources of ambient NO_2. *Environ. Res. Lett. 16*, 035020.
521. Kushta, J., N. Paisi, H. Denier van der Gon and J. Lelieveld (2021) Disease burden and excess mortality from coal-fired power plant emissions in Europe. *Environ. Res. Lett*. *16*, 045010.
522. Karu, E., M. Li, L. Ernle, C.A.M. Brenninkmeijer, J. Lelieveld and J. Williams (2021) Atomic emission detector with gas chromatographic separation and cryogenic pre-concentration (CryoTrap-GC-AED) for atmospheric trace gas measurements. *Atmos. Meas. Techn. 14,* 1817-1831.
523. Osipov, S., G. Stenchikov, K. Tsigaridis, A.N. LeGrande, S.E. Bauer, M. Fnais and J. Lelieveld (2021) The Toba supervolcano eruption caused severe tropical stratospheric ozone depletion. *Comm. Earth Environ. 2*, 71.
524. Karydis, V.A., A.P. Tsimpidi, A. Pozzer and J. Lelieveld (2021) How alkaline compounds control atmospheric aerosol acidity. *Atmos. Chem. Phys. 21*, 14983-15001.
525. Eger, P.G., L. Vereecken, R. Sander, J. Schuladen, N. Sobanski, H. Fischer, E. Karu, J. Williams, V. Vakkari, T. Petäjä, J. Lelieveld, A. Pozzer and J.N. Crowley (2021) Impact of pyruvic acid photolysis on acetaldehyde and peroxy radical formation in the boreal forest: theoretical calculations and model results. *Atmos. Chem. Phys. 21*, 14333-14349.
526. Zittis, G., P. Hadjinicolaou, M. Almazroui, E. Bucchignani, F. Driouech, K. El Rhaz, L. Kurnaz, G. Nikulin, A. Ntoumos, T. Ozturk, Y. Proestos, G. Stenchikov, R Zaaboul, J. Lelieveld (2021) Business-as-usual will lead to ultra-extreme heatwaves in the Middle East and North Africa. *Nat. Clim. Atmos. Sci. 4,* 20.
527. Venter, Z.S., K. Aunan, S. Chowdhury and J. Lelieveld (2021) COVID-19 lockdowns cause declines in health burden associated with air pollution exposure. *Environ. Res. 192*, 110403.
528. Chang, D. Y., J, Yoon, J. Lelieveld, S.K. Park, S.S. Yum, J. Kim and S. Jeong (2021) Direct radiative forcing of biomass burning aerosols from the extensive Australian wildfires in 2019–2020. *Environ. Res. Lett 16*, 044041.
529. Shaheen, A., R. Wu, J. Lelieveld, R. Yousefi and M. Aldabash (2021) Winter AOD trend changes over the Eastern Mediterranean and Middle East region. *Int. J. Climatol. 41*, 5516-5535.
530. Yousefi, R., F Wang, Q. Ge, J. Lelieveld and A. Shaheen (2021) Aerosol trends during the dusty season over Iran. *Remote Sens. 13*, 1045.
531. Lelieveld, J., M. Abdelkader, M. Astitha, V.A. Karydis and K. Klingmüller (2021) Modelling air pollution by atmospheric desert dust. In: A.-M.O. Mohamed, E.K. Paleologos and F.M. Howari (eds.) Pollution assessment for sustainable practices in applied science and engineering, pp. 555-581, Butterworth-Heinemann, Cambridge, USA.

532. Klingmüller, K. and J. Lelieveld (2021) Climate-model-informed deep learning of global soil moisture distribution. *Geosci. Model Dev. 14,* 4429-4441.
533. Friedrich, N., P. Eger, J. Shenolikar, N. Sobanski, J. Schuladen, D. Dienhart, B. Hottmann, I. Tadic, H. Fischer, M. Martinez, R. Rohloff, S. Tauer, H. Harder, E.Y. Pfannerstill, N. Wang, J. Williams, J. Brooks, F. Drewnick, H. Su, G. Li, Y. Cheng, J. Lelieveld and J.N. Crowley (2021) Reactive nitrogen around the Arabian Peninsula and in the Mediterranean Sea during the 2017 AQABA ship campaign. *Atmos. Chem. Phys.* 21, 7473-7498.
534. Tadic, I., C. Nussbaumer, B. Bohn, H. Harder, D. Marno, M. Martinez, F. Obersteiner, U. Parchatka, A. Pozzer, R. Rohloff, M. Zöger, J. Lelieveld and H. Fischer (2021) Central role of nitric oxide in ozone production in the upper tropical troposphere over the Atlantic Ocean and West Africa. *Atmos. Chem. Phys. 21*, 8195-8211.
535. Nussbaumer, C., I. Tadic, D. Dienhart, N. Wang, A. Edtbauer, L. Ernle, J. Williams, F. Obersteiner, I. Gutiérrez-Álvarez, H. Harder, J. Lelieveld and H. Fischer (2021) Measurement report: In situ observations of deep convection without lightning during the tropical cyclone Florence 2018. *Atmos. Chem. Phys. 21*, 7933-7945.
536. Kumar, V., J. Remmers, S. Beirle, J. Fallmann, A. Kerkweg, J. Lelieveld, M. Mertens, A. Pozzer, B. Steil, M. Barra, H. Tost and T. Wagner (2021) Evaluation of the coupled high-resolution atmospheric chemistry model system MECO(n) using in situ and MAX-DOAS NO_2 measurements. *Atmos. Meas. Tech. 14*, 5241–5269.
537. Münzel, T., O. Hahad, A. Daiber und J. Lelieveld (2021) Luftverschmutzung und Herz-Kreislauf-Erkrankungen. *Herz 46*, 120-128.
538. Paris, J.-D., A. Riandet, E. Bourtsoukidis, M. Delmotte, A. Berchet, J. Williams, L. Ernle, I. Tadic, H. Harder and J. Lelieveld (2021) Shipborne measurements of methane and carbon dioxide in the Middle East and Mediterranean areas and contribution from oil and gas emissions. *Atmos. Chem. Phys. 21*, 12443-12462.
539. Dörich, R., P. Eger, J. Lelieveld and J.N. Crowley (2021) Iodide-CIMS and m/z 62: the detection of HNO_3 as NO_3^- in the presence of PAN, peracetic acid and O_3. *Atmos. Meas. Techn. 14*, 5319-5332.
540. Zittis, G. A. Bruggeman and J. Lelieveld (2021) Revisiting future extreme precipitation trends in the Mediterranean. *Weath. Clim. Extremes 34*, 100380.
541. Dienhart, D., J.N. Crowley, E. Bourtsoukidis, A. Edtbauer, P.G. Eger, L. Ernle, H. Harder, B. Hottmann, M. Martinez, U. Parchatka, J.-D. Paris, E.Y. Pfannerstill, R. Rohloff, J. Schuladen, C. Stönner, I. Tadic, S. Tauer, N. Wang, J. Williams, J. Lelieveld and H. Fischer (2021) Measurement report: Observation-based formaldehyde production rates and their relation to OH reactivity around the Arabian Peninsula. *Atmos. Chem. Phys. 21*, 17373-17388.
542. Dewald, P., R. Dörich, J. Schuladen, J. Lelieveld and J.N. Crowley (2021) Impact of ozone and inlet design on the quantification ofisoprene-derived organic nitrates by thermal dissociation cavity ring-down spectroscopy (TD-CRDS). *Atmos. Meas. Tech. 14*, 5501-5519.
543. Münzel, T., M. Sørensen, J. Lelieveld, O. Hahad, S. Al-Kindi, M. Nieuwenhuijsen, B. Giles-Corti, A. Daiber and S. Rajagopalan (2021) Heart healthy cities: genetics loads the gun but the environment pulls the trigger. *Eur. Heart J. 25,* 2422-2438.

544. Osman, M., G. Zittis, M, Haggag, A.W. Abdeldayem and J. Lelieveld (2021) Optimizing regional climate model output for hydro-climate applications. *Earth Syst. Environ. 5*, 185-200.

545. Kezoudi, M., C. Keleshis, P. Antoniou, G. Biskos, M. Bronz, C. Constantinides, M. Desservettaz, R.S. Gao, J. Girdwood, J. Harnetiaux, K. Kandler, A. Leonidou, Y. Liu, J. Lelieveld, F. Marenco, N. Mihalopoulos, G. Močnik, K. Neitola, J.-D. Paris, M. Pikridas, R. Sarda-Esteve, C. Stopford, F. Unga, M. Vrekoussis and J. Sciare (2021) The Unmanned Systems Research Laboratory (USRL): A new facility for UAV-based atmospheric observations. *Atmosphere 12*, 1042.

546. Nussbaumer, C.M., U. Parchatka, I. Tadic, B. Bohn, D. Marno, M. Martinez, R. Rohloff, H. Harder, F. Kluge, K. Pfeilsticker, F. Obersteiner, M. Zöger, R. Doerich, J.N. Crowley, J. Lelieveld and H. Fischer (2021) Modification of a conventional photolytic converter for improving aircraft measurements of NO_2 via chemiluminescence. *Atmos. Meas. Techn. 14,* 6759-6776.

547. Ricaud, P., J.-L. Attié, R. Chalinel, F. Pasternak, J. Léonard, I. Pison, E. Pattey, R.L. Thompson, Z. Zelinger, J. Lelieveld, J. Sciare, N. Saitoh, J. Warner, A. Fortems-Cheiney, H. Reynal, J. Vidot, L. Brooker, L. Berdeu, O. Saint-Pé, P.K. Patra, M. Dostál, J. Suchánek, V. Nevrlý and C. Groot Zwaaftink (2021) The Monitoring Nitrous Oxide Sources (MIN_2OS) satellite project. *Rem. Sens. Environ. 266*, 112688.

548. Münzel, T., O.Hahad, A. Pozzer and J. Lelieveld (2021) Air pollution as important cofactor in COVID-19 deaths. *Akt. Kardiol.*, 1-7.

549. Hahad, O., M. Kuntic, K. Frenis, S. Chowdhury, J. Lelieveld, K. Lieb, A. Daiber and T. Münzel (2021) Physical activity in polluted air – Net benefit or harm to cardiovascular health? A comprehensive review. *Antioxidants 10*, 1787.

550. Lelieveld, J., O. Hahad, A. Daiber and T Münzel (2021) Air pollution and cardiovascular diseases. *Akt. Kardiol. 10,* 510-515.

551. Daiber, A., M. Kuntic, J. Lelieveld, O. Hahad and T. Münzel (2021). The exposome characterizes the impact of environmental factors on metabolism and health. *Akt. Kardiol. 10*, 502-508.

552. Maclean, A., Y. Li, G. Crescenzo, N. Smith, V. Karydis, A. Tsimpidi, C. Butenhoff, C. Faiola, J. Lelieveld, S. Nizkorodov, M. Shiraiwa and A. Bertram (2021) Global distribution of the phase state and mixing times within secondary organic aerosol particles in the troposphere based on room-temperature viscosity measurements. *Earth Space Chem. 5*, 3458-3473.

553. Nussbaumer, C.M., J.N. Crowley, J. Schuladen, J. Williams, S. Hafermann, A. Reiffs, R. Axinte, H. Harder, C. Ernest, A. Novelli, K. Sala, M. Martinez, C. Mallik, L. Tomsche, C. Plass-Dülmer, B. Bohn, J. Lelieveld and H. Fischer (2021) Measurtement report: Photochemical production and loss rates of formaldehyde and ozone across Europe. *Atmos. Chem. Phys. 21*, 18413-18432.

554. Chowdhury, S., A. Pozzer, A. Haines, K. Klingmüller, T. Münzel, P. Paasonen, A. Sharma, C. Venkataraman and J. Lelieveld (2022) Global health burden of ambient $PM_{2.5}$ and the role of anthropogenic black carbon and organic aerosols. *Environ. Int.* 159, 107020.

555. Li, M., A. Pozzer, J. Lelieveld and J. Williams (2022) Northern hemispheric atmospheric ethane trends in the upper troposphere and lower stratosphere (2006-2016) with reference to methane and propane. *Earth Syst. Sci. Data 14*, 4351-4364.

556. Wang, M., M. Xiao, B. Bertozzi, G. Marie, B. Rörup, B. Schulze, R. Bardakov, X.-C. He, J. Shen, W. Scholz, R. Marten, L. Dada, R. Baalbaki, B. Lopez, H. Lamkaddam, H.E. Manninen, A. Amorim, F. Ataei, P. Bogert, Z. Brasseur, L. Caudillo, L.-P. De Menezes, J. Duplissy, A. Ekman, H. Finkenzeller, L. Gonzalez Carracedo, M. Granzin, R. Guida, M. Heinritzi, V. Hofbauer, K. Höhler, J.E. Krechmer, A. Kürten, K. Lehtipalo, N.G.A. Mahfouz, V. Makhmutov, D. Massabo, S. Mathot, R.L. Mauldin, B. Mentler, T. Müller, A. Onnela, M. Philippov, A.A. Piedehierro, A. Pozzer, A. Ranjithkumar, M. Schervish, M. Simon, Y. Stozhkov, A. Tome, N.S. Umo, F. Vogel, R. Wagner, D.S. Wang, S.K. Weber, A. Welti, Y. Wu, M. Zauner-Wieczorek, M. Sipila, P.M. Winkler, A. Hansel, U. Baltensperger, M. Kulmala, R.C. Flagan, J. Curtius, R. Volkamer, I. Riipinen, H. Gordon, J. Lelieveld, I. El-Haddad, D.R. Worsnop, T. Christoudias, J. Kirkby, O. Möhler and N.M. Donahue (2022) Role of nitric acid and ammonia in upper tropospheric particle formation. *Nature 605*, 483-489.

557. Lazoglou, G., G. Zittis, P. Hadjinicolaou and J. Lelieveld (2022) TIN-Copula bias-correction method for model-derived maximum temperature in the MENA region. *Int. J. Clim. 42*, 2260-2280.

558. Benner, S., G. Lax, P.J. Crutzen, U. Pöschl, J. Lelieveld and H.G. Brauch (eds.) (2022) Paul J. Crutzen and the Anthropocene: A new epoch in Earth's history. Springer Nature, Switzerland.

559. Georgiades, P., E. Ezhova, M. Räty, D. Orlov, M. Kulmala, J. Lelieveld, S. Malkhazova, K. Erguler and T. Petäjä (2022) The impact of climatic factors on tick-related hospital visits and borreliosis incidence rates in European Russia. *PLoS ONE 17,* e0269846.

560. Hein, A., S. Kehl, L. Häberle, C. Tiemann, R. Peuker, D. Mereutanu, F.M. Stumpfe, F. Faschingbauer, K. Meyer-Schlinkmann, M.C. Koch, F. Kainer, U. Dammer, H. Zoche, C. Kladt, M.G. Schrauder, S. Weingärtler, V. Hanf, A. Hartmann, M. Rübner, H. Schneider, J. Lelieveld, M.W. Beckmann, L.A. Wurmthaler, P.A. Fasching and M.O. Schneider (2022) Prevalence of SARS-CoV-2 in pregnant women assessed by RT-PCR in Franconia, Germany: First results of the SCENARIO study (SARS-CoV-2 prEvalence in pregNAncy and at biRth In FrancOnia). *Geburtsh. Frauenheilk. 82*, 226-234.

561. Ma, J., X. Zhou, X. Xu, S. Gromov and J. Lelieveld (2022) Ozone and aerosols over the Tibetan Plateau. In: R.P. Singh (ed.) Asian atmospheric pollution: Sources, characteristics and impacts, pp. 287-302, Elsevier, Amsterdam, Netherlands.

562. Reifenberg, S.F., A. Martin, M. Kohl, S. Bacer, Z. Hamryszczak, I. Tadic, L. Röder, D.J. Crowley, H. Fischer, K. Kaiser, J. Schneider, R. Dörich, J.N. Crowley, L. Tomsche, A. Marsing, C. Voigt, A. Zahn, C. Pöhlker, B. Holanda, O.O. Krüger, U. Pöschl, M. Pöhlker, P. Jöckel, M. Dorf, U. Schumann, J. Williams, J. Curtius, H. Harder, H. Schlager, J. Lelieveld and A. Pozzer (2022) Numerical simulation of the impact of COVID-19 lockdown on tropospheric composition and aerosol radiative forcing in Europe. *Atmos. Chem. Phys.* 10901-10917.

563. Nussbaumer, C.M., A. Pozzer, I. Tadic, L. Röder, F. Obersteiner, H. Harder, J. Lelieveld and H. Fischer (2022) Tropospheric ozone production and chemical regime analysis during the COVID-19 lockdown over Europe. *Atmos. Chem. Phys. 22*, 6151-6165.

564. Georgiou, G.K., T. Christoudias, Y. Proestos, J. Kushta, M. Pikridas, J. Sciare, C. Savvides and J. Lelieveld (2022) Evaluation of WRF/Chem model (v3.9.1.1) real-time air quality forecasts over the Eastern Mediterranean. *Geosci. Model Dev. 15*, 4129-4146.

565. Erguler, K., D. Petric, M. Petric, M. Kavran, M.C. Demirok, F. Gunay, J. Mendel, P. Georgiades, B. Alten and J. Lelieveld (2022) A dynamically structured matrix population model for insect life histories observed under variable environmental conditions. *Sci. Rep. 12*, 11587.
566. Krüger, O.O., B.A. Holanda, S. Chowdhury, A. Pozzer, D. Walter, C. Pöhlker, M.D. Andrés Hernández, J.P. Burrows, C. Voigt, J. Lelieveld, J. Quaas, U. Pöschl and M.L. Pöhlker (2022) Black carbon aerosol reductions during COVID-19 confinement quantified by aircraft measurements over Europe. *Atmos. Chem. Phys. 22*, 8683-8699.
567. Beall, C.M., T,C.J. Hill, P.J. DeMott, T. Könneman, M. Pikridas, F. Drewnick, H. Harder, C. Pöhlker, J. Lelieveld, B. Weber, M. Iakovides, R. Prokeš, J. Sciare, M.O. Andreae, M. Dale Stokes and K.A. Prather (2022) Ice-nucleating particles near two major dust source regions. *Atmos. Chem. Phys. 22*, 12607-12627.
568. Wietzoreck, M., M. Kyprianou, B.A. Musa Bandowe, S. Celik, J.N. Crowley, F. Drewnick, P. Eger, N. Friedrich, M. Iakovides, P. Kukučka, J. Kuta, B. Nežiková, P. Pokorná, P. Přibylová, R. Prokeš5,, R. Rohloff, I. Tadic, S. Tauer, J. Wilson, H. Harder, J. Lelieveld, U. Pöschl, E.G. Stephanou and G. Lammel (2022) Polycyclic aromatic hydrocarbons (PAHs) and their alkylated-, nitrated- and oxygenated derivatives in the atmosphere over the Mediterranean and Middle East seas. *Atmos. Chem. Phys. 22*, 8739-8766.
569. Hamryszczak, Z.T., A. Pozzer, F. Obersteiner, B. Bohn, B. Steil, J. Lelieveld and H. Fischer (2022) Distribution of hydrogen peroxide over Europe during the BLUESKY aircraft campaign. *Atmos. Chem. Phys.* 22, 9483-9497.
570. Sun, W., M. Berasategui, A. Pozzer, J. Lelieveld and J. Crowley (2022) Kinetics of OH + SO_2 + M: Temperature-dependent rate coefficients in the fall-off regime and the influence of water vapour. *Atmos. Chem. Phys.* 22, 4969-4984.
571. Dewald, P., C.M. Nussbaumer, J. Schuladen, A. Ringsdorf, A. Edtbauer, H. Fischer, J. Williams, J. Lelieveld and J.N. Crowley (2022) Fate of the nitrate radical at the summit of a semi-rural mountain site in Germany assessed with direct reactivity measurements. *Atmos. Chem. Phys. 22*, 7051-7069.
572. Voigt, C., J. Lelieveld, H. Schlager, J. Schneider, J. Curtius, R. Meerkötter, D. Sauer, L. Bugliaro, B. Bohn, J.N. Crowley, T. Erbertseder, S. Groß, V. Hahn, Q. Li, M. Mertens, M.L. Pöhlker, A. Pozzer, U. Schumann, L. Tomsche, J. Williams, A. Zahn, M. Andreae S. Borrmann, T. Bräuer, R. Dörich, A. Dörnbrack, A. Edtbauer, L. Ernle, H. Fischer, A. Giez, M. Granzin, V. Grewe, H. Harder, M. Heinritzi, B.A. Holanda, P. Jöckel, K. Kaiser, O.O. Krüger, J. Lucke, A. Marsing, A. Martin, S. Matthes, C. Pöhlker, U. Pöschl, S. Reifenberg, A. Ringsdorf, M. Scheibe, I. Tadic, M. Zauner-Wieczorek, R. Henke and M. Rapp (2022) Cleaner skies during the COVID-19 lockdown. *Bull. Am. Meteorol. Soc. 103,* E1796-E1827.
573. Sun, W., J. Lelieveld and J.N. Crowley (2022) Rate coefficients for OH + NO (+N_2) in the fall-off regime and the impact of water vapor. *J. Phys. Chem. A*, 3863-3872.
574. Zittis, G., M. Almazroui, P. Alpert, P. Ciais, W. Cramer, Y. Dahdal, M. Fnais, D. Francis, P. Hadjinicolaou, F. Howari, A. Jrrar, D.G. Kaskaoutis, M. Kulmala, G. Lazoglou, N. Mihalopoulos, X. Lin, Y. Rudich, J. Sciare, G. Stenchikov, E. Xoplaki and J. Lelieveld

(2022) Climate change and weather extremes in the Eastern Mediterranean and Middle East. *Rev. Geophys. 60*, e2021RG000762.

575. Tomsche, L., A. Marsing, T. Jurkat-Witschas, J. Lucke, S. Kaufmann, K. Kaiser, J. Schneider, M. Scheibe, H. Schlager, L. Röder, H. Fischer, F. Obersteiner, A. Zahn, J. Lelieveld and C. Voigt (2022) Enhanced sulfur in the upper troposphere and lower stratosphere in spring 2020. *Atmos. Chem. Phys. 2*, 15135-15151.
576. Münzel, T., O. Hahad, M. Sørensen, J. Lelieveld, G.D. Duerr, M. Nieuwenhuijsen and A. Daiber (2022) Environmental risk factors and cardiovascular diseases: a comprehensive expert review. *Cardiov. Res. 118*, 2880-2902.
577. Duce, R.A., R.R. Dickerson, I.E. Galbally, J.N. Galloway, R. Jaenicke, W.C. Keene, J. Lelieveld, H. Levy II, J.M. Prospero, L. Schütz, F. Slemr, P. Winkler (2022) Christian Junge – A Pioneer in Global Atmospheric Chemistry. *J. Atmos. Chem. 79*, 219-256.
578. Osipov, S., S. Chowdhury, J.N. Crowley, I. Tadic, F. Drewnick, S. Borrmann, P. Eger, F. Fachinger, H. Fischer, E. Predybaylo, M. Fnais, H. Harder, M. Pikridas, P. Vouterakos, A. Pozzer, J. Sciare, A. Ukhov, G.L. Stenchikov, J. Williams and J. Lelieveld (2022) Severe atmospheric pollution in the Middle East is attributable to anthropogenic sources. *Comm. Earth. Environ. 3,* 203.
579. Lazoglou, G., G. Zittis, P. Hadjinicolaou and J. Lelieveld (2022) Emerging extreme heat conditions as part of the new climate normal. *Theor. Appl. Clim*. (submitted).
580. Georgiades, P., Y. Proestos, J. Lelieveld and Kamil Erguler (2022) Machine learning approach for projecting *Aedes albopictus* habitat suitability in the 21st century. *PLoS One* (submitted).
581. Economou, T., G. Lazoglou, A. Tzyrkalli, K. Constandinidou and J. Lelieveld (2023) A data integration framework for spatial interpolation of temperature observations using climate model data. *PeerJ 11*, e14519.
582. Abdelkader, M. G. Stenchikov, A. Pozzer, H. Tost and J. Lelieveld (2023) The effect of ash, water vapor, and heterogeneous chemistry on the evolution of a Pinatubo-size volcanic cloud. *Atmos. Chem. Phys. 23*, 471-500.
583. Vella, R., M. Forrest, J. Lelieveld and H. Tost (2023) Isoprene and monoterpene simulations using the chemistry-climate model EMAC (v2.55) with interactive vegetation from LPJ-GUESS (v4.0). *Geosci. Model Devel. 16*, 885-906.
584. Schallock, J., C. Brühl, C. Bingen, M. Höpfner, L. Rieger and J. Lelieveld (2023) Reconstructing volcanic radiative forcing since 1990, using a comprehensive emission inventory and spatially resolved sulfur injections from satellite data in a chemistry-climate model. *Atmos. Chem. Phys. 23*, 1169–1207.
585. Ntoumos, A., P. Hadjinicolaou, G. Zittis and J. Lelieveld (2022) Future warming and maximal temperatures over the Middle-East – North Africa (MENA) region. *Earth Syst. Environ.* (submitted).
586. Li, M., E. Karu, P. Ciais, J. Lelieveld and J. Williams (2022) The empirically determined atmospheric residence time of carbon dioxide (CO_2). *Nat. Clim. Atmos. Sci.* (submitted).
587. Dienhart, D., B. Brendel, J.N. Crowley, P.G. Eger, H. Harder, M. Martinez, A Pozzer, R. Rohloff, J. Schuladen, S. Tauer, J. Lelieveld and H. Fischer (2023) Formaldehyde and

hydroperoxide distribution around the Arabian Peninsula - evaluation of EMAC model results with ship-based measurements. *Atmos. Chem. Phys. 23*, 119-142.

588. Nabavi, S., T. Christoudias, Y. Proestos, C. Fountoukis, H. Al-Sulaiti and J. Lelieveld (2023) Spatio-temporal variation of radionuclide dispersion from nuclear power plant accidents using FLEXPART ensemble modeling. *Atmos. Chem. Phys. Discuss.*, https://doi.org/10.5194/acp-2022-383.
589. Klingmüller, K. and J. Lelieveld (2022) Data-driven aeolian dust emission scheme for climate modelling, evaluated with EMAC 2.54. *Geosci. Model Dev. Discuss*. https://doi.org/10.5194/gmd-2022-232.
590. Xue, M., J. Ma, X. Zhou, Y. Liu, X. Zhen, X. Yan, N. Liu, B. Steil, A. Pozzer and J. Lelieveld (2022) Effects of topography, dynamical and photochemical processes on the column ozone low over the Tibetan Plateau. *Atmos. Chem. Phys. Discuss.* (submitted).
591. Hamryszczak, Z., D. Dienhart, B. Brendel, R. Rohloff, D. Marno, M. Martinez, H. Harder, A. Pozzer, B. Bohn, M. Zöger, J. Lelieveld and H. Fischer (2022) Hydrogen peroxide in the upper tropical troposphere over the Atlantic Ocean and western Africa during the CAFE-Africa aircraft campaign. *Atmos. Chem. Phys. Discuss*., https://doi.org/10.5194/acp-2022-693.
592. Shapiro, A.V., C. Brühl, K. Klingmüller, B. Steil, A.I. Shapiro, V. Witzke, N. Kostogryz, L. Gizon, S.K. Solanki and J. Lelieveld (2023) Planets hosted by metal-rich stars are less suitable for the evolution of life. *Nat. Comm.* (accepted).
593. Cho, Y., S. Jeong, D.Y. Chang, C.-E- Park, J. Joo, J. Lelieveld and A. Pozzer (2023) Potential impact of air quality change on the visual navigation of honey bees. *Comm. Earth Environ.* (submitted).
594. Ni, R., Y. Cheng, H. Su, T. Münzel, J. Lelieveld and U. Pöschl (2023) Large unaccounted disease burden by non-fatal health outcomes from particulate air pollution. *Sci. Adv.* (submitted).
595. Kaskaoutis, D., M. Pikridas, K. Barmpounis, G. Kassell, D. Logan, M. Rigler, M. Ivančič. K. Mohammadpour, N. Mihalopoulos, J. Lelieveld and J. Sciare (2023) Aerosol characteristics and types in the marine environments surrounding the East Mediterranean – Middle East (EMME) region during the AQABA campaign. *Atmos. Environ. 298*, 119633.
596. Ringsdorf, A., A. Edtbauer, J. Vilà-Guerau de Arellano, E.Y. Pfannerstill, S. Gromov, V. Kumar, A. Pozzer, A. Tsokankunku, M. Soergel, M.O. Sá, A. Araújo, F. Ditas, C. Poehlker, J. Lelieveld and J. Williams (2023) Inferring the diurnal variability of OH radical concentrations over the Amazon from BVOC measurements. *Comm. Earth Environ.* (submitted).
597. Holanda, B.A., M.A. Franco, D. Walter, P. Artaxo, S. Carbone, Y. Cheng, S. Chowdhury, F. Ditas, M. Gysel-Beer, T. Klimach, L.A. Kremper, O.O. Krüger, J.V. Lavric, J. Lelieveld, C. Ma, L.A.T. Machado, R.L. Modini, F.G. Morais, A. Pozzer, J. Saturno, H. Su, M. Wendisch, S. Wolff, M.L. Pöhlker, M.O. Andreae, U. Pöschl and C. Pöhlker (2023) African smoke affects the climate in the Amazon. *Comm. Earth Environ.* (submitted).

598. Gurriaran, L., K. Tanaka, S.I. Bayram, Y. Proestos, J. Lelieveld and P. Ciais (2023) Warming-induced increase in power demand and CO_2 emissions in Qatar and the Middle East. *J. Clean. Prod. 382*, 135359.
599. Bourtsoukidis, E., A. Pozzer, P. Ciais, N. Daskalakis, G. Lazoglou, J. Lelieveld, D. Makowski, V.N. Matthaios, J. Peñuelas, J. Sciare, M. Vrekoussis, A.M. Yañez-Serrano and J. Williams (2023) High temperature sensitivity of monoterpene emissions from global vegetation. *Clim. Atmos. Sci.* (submitted).
600. Keller, K., S.H. Rasteguye Haghi, StudMed; O. Hahad, I. Schmidtmann, S. Chowdhury, J. Lelieveld, T. Münzel and L. Hobohm (2023) Air pollution impacts on in-hospital case-fatality rate of ischemic stroke patients. *Throm. Res.* (submitted).
601. Pozzer, A., S. Anenberg, S. Dey, A. Haines, J. Lelieveld and S. Chowdhury (2023) Mortality attributable to ambient air pollution: a review of global estimates. *GeoHealth* 7, e2022GH000711.
602. Hajat, S., Y. Proestos, J.-L. Araya-Lopez, T. Economou and J. Lelieveld (2023) Current and future trends in heat-related mortality in the MENA region: health impact assessment using bias-adjusted statistically downscaled CMIP6 (SSP-based) data and Bayesian inference. *Lancet Planet. Health* (accepted).
603. Ma, S., H. Su, U. Pöschl, J. Lelieveld, M.O. Andreae and Y. Cheng (2023) Smoke-charged vortex doubles hemispheric aerosol in the middle stratosphere and buffers ozone depletion. *Science* (submitted).
604. Milner, J., R. Hughes, S. Chowdhury, R. Picetti, R. Ghosh, S. Yeung, J. Lelieveld, A.D. Dangour and P. Wilkinson (2023) Air pollution and child health impacts of decarbonization in 16 global cities: modelling study. *Environ. Int.* (submitted).
605. Christou, M., K. Yetismis, A.F. Martinou, V. Christodoulou, M. Koliou, M. Antoniou, Y. Ozbel, P. Georgiades, G.K. Georgiou, T. Christoudias, Y. Proestos, J. Lelieveld and K. Erguler (2023) Species checklist and spatiotemporal habitat suitability analysis for the Phlebotomine sand flies in Cyprus. *J. Vector Ecol*. (submitted).
606. Kuntic, M., I. Kuntic, R. Krishnankutty, A. Gericke, M. Oelze, T. Junglas, M.T. Bayo Jimenez, P. Stamm, M. Nandudu, O. Hahad, K. Keppeler, S. Daub, K. Vujacic-Mirski, S. Rajlic, L. Strohm, H. Ubbens, Q. Tang, S. Jiang, Y. Ruan, K.G. Macleod, S. Steven, T. Berkemeier, U. Pöschl, J. Lelieveld, H. Kleinert, A. von Kriegsheim, A. Daiber and T. Münzel (2023) Co-exposure to urban particulate matter and aircraft noise adversely impacts the cerebro-pulmonary-cardiovascular axis in mice. *Redox Biol. 59*, 102580.
607. Yousefi, R., A. Shaheen, F. Wang, Q. Ge, J. Lelieveld, R. Wu and X. Su (2023) Fine particulate matter (PM2.5) trends from land surface changes and air pollution policies in China during 1980–2020. *J. Environ. Manage*. *326*, 116847.
608. Chen, L., M. Yousaf, J. Xu, X. Ma, X. Zhou, G. Li, J. Symonds, R. Chen, S. Tang, F. Salehi, J.C.W. Njue and J. Lelieveld (2023) Transient measurements of ultrafine particle (UFP) deposition in the human respiratory tract. *Nano Lett.* (submitted).
609. Laskar, A.H., G. Adnew, S. Gromov, R. Peethambaran, B. Steil, J. Lelieveld, T. Blunier and T. Röckmann (2023) Large variations in atmospheric oxidants and temperature during the Holocene. *Nature* (submitted).

610. Röder, L.L., P. Dewald, C.M. Nussbaumer, J. Schuladen, J.N Crowley, J. Lelieveld and H. Fischer (2023) Data quality enhancement for atmospheric chemistry field experiments via sequential Monte Carlo filters. *EGUsphere.* (accepted).
611. Hadjinicolaou, P., A. Tzyrkalli, G. Zittis and J. Lelieveld (2023) Urbanisation signature in observed air temperature station trends over the Mediterranean and the Middle East-North Africa. *Earth Sys. Environ.* (submitted).
612. Neira, M., K. Erguler, H. Ahmady-Birgani, N.D. AL-Hmoud, R. Fears, C. Gogos; N. Hobbhahn, M. Koliou, L.G. Kostrikis, J. Lelieveld, A. Majeed, S. Paz, Y. Rudich, A. Saad-Hussein, M. Shaheen, A. Tobias and G. Christophides (2023) Climate change and human health in the Eastern Mediterranean and Middle East: Literature review, research priorities and policy suggestions. *Environ. Res*. *216*, 114537.
613. Ntoumos, A., P. Hadjinicolaou, G. Zittis, R. Vautard and J. Lelieveld (2023) Severe heat stress in the Middle East – North Africa (MENA) region under different levels of climate warming. *Weath. Clim. Extr.* (submitted).
614. Giannakis, E., J. Kushta, A. Violaris, N. Paisi and J. Lelieveld (2023) Economic structure, air pollution and human health in the European Union towards 2030. *Environ., Develop. Sustain.* (submitted).
615. Khomenko, S., E. Pisoni, P. Thunis, B. Bessagnet, M. Cirach, T. Lungman, E. Pereira Barboza, H. Khreis, N. Mueller, C. Tonne, K. de Hoogh, G. Hoek, S. Chowdhury, J. Lelieveld and M. Nieuwenhuijsen (2023) Spatial and sector-specific contributions to ambient air pollution and mortality in European cities. *Lancet Planet. Health* (submitted).
616. Hahad, O., S. Rajagopalan, J. Lelieveld, M. Sørensen, K. Frenis, A. Daiber, M. Basner, M. Nieuwenhuijsen, R.D. Brook and T. Münzel (2023) Noise and air pollution as risk factors for hypertension: part I – epidemiology. *Hypertension* (submitted).
617. Kohl, M., J. Lelieveld, S. Chowdhury, S. Ehrhart, D. Sharma, Y. Cheng, S.N. Tripathi, M. Sebastian, G. Pandithurai, H. Wang and A. Pozzer (2023) Numerical simulation and evaluation of global ultrafine particle concentrations at the Earth's surface. *Atmos. Chem. Phys. Discuss.* (submitted).