List of Rolf Sander's Publications

Last update: 2018-03-20

ORCID: 0000-0001-6479-2092

— 2018 —

96. Mallik, C., Tomsche, L., Bourtsoukidis, E., Crowley, J. N., Derstroff, B., Fischer, H., Hafermann, S., Hueser, I., Javed, U., Kessel, S., Lelieveld, J., Martinez, M., Meusel, H., Novelli, A., Phillips, G. J., Pozzer, A., Reiffs, A., Sander, R., Taraborrelli, D., Sauvage, C., Schuladen, J., Su, H., Williams, J., & Harder, H.: *Oxidation processes in the Eastern Mediterranean atmosphere: Evidence from the modelling of* HO_x *measurements over Cyprus*, Atmos. Chem. Phys. Discuss., 18, doi:10.5194/acp-2018-25 (2018)

— 2017 —

95. Derstroff, B., Hüser, I., Bourtsoukidis, E., Crowley, J. N., Fischer, H., Gromov, S., Harder, H., Janssen, R. H. H., Kesselmeier, J., Lelieveld, J., Mallik, C., Martinez, M., Novelli, A., Parchatka, U., Phillips, G. J., Sander, R., Sauvage, C., Schuladen, J., Stönner, C., Tomsche, L., & Williams, J.: *Volatile organic compounds (VOCs) in photochemically aged air from the eastern and western Mediterranean*, Atmos. Chem. Phys., 17, 9547–9566, doi:10.5194/acp-17-9547-2017 (2017)

94. Keßel, S., Cabrera-Perez, D., Horowitz, A., Veres, P. R., Sander, R., Taraborrelli, D., Tucceri, M., Crowley, J. N., Pozzer, A., Stönner, C., Vereecken, L., Lelieveld, J., & Williams, J.: *Atmospheric chemistry, sources, and sinks of carbon suboxide,* C_3O_2, Atmos. Chem. Phys., 17, 8789–8804, doi:10.5194/acp-17-8789-2017 (2017)

— 2016 —

93. Cabrera-Perez, D., Taraborrelli, D., Sander, R., & Pozzer, A.: *Global atmospheric budget of simple monocyclic aromatic compounds*, Atmos. Chem. Phys., 16, 6931–6947, doi:10.5194/acp-16-6931-2016 (2016)

92. Sukhodolov, T., Rozanov, E., Ball, W., Bais, A., Tourpali, K., Shapiro, A., Telford, P., Smyshlyaev, S., Fomin, B., Sander, R., Bossay, S., Chipperfield, M., Dhomse, S., Haigh, J., Peter, T., & Schmutz, W.: *Evaluation of simulated photolysis rates and their response to solar irradiance variability*, J. Geophys. Res. Atmos., 121, doi:10.1002/2015JD024277 (2016)

91. Jöckel, P., Tost, H., Pozzer, A., Kunze, M., Kirner, O., Brenninkmeijer, C. A. M., Brinkop, S., Cai, D. S., Dyroff, C., Eckstein, J., Frank, F., Garny, H., Gottschaldt, K.-D., Graf, P., Grewe, V., Kerkweg, A., Kern, B., Matthes, S., Mertens, M., Meul, S., Neumaier, M., Nützel, M., Oberländer-Hayn, S., Ruhnke, R., Runde, T., Sander, R., Scharffe, D., & Zahn, A.: *Earth System Chemistry integrated Modelling (ESCiMo) with the Modular Earth Submodel System (MESSy, version 2.51)*, Geosci. Model Dev., 9, 1153–1200, doi:10.5194/gmd-9-1153-2016 (2016)

90. Baumgaertner, A. J. G., Jöckel, P., Kerkweg, A., Sander, R., & Tost, H.: *Implementation of the Community Earth System Model (CESM1, version 1.2.1) as a new base model into version 2.50 of the MESSy framework*, Geosci. Model Dev., 9, 125–135, doi:10.5194/gmd-9-125-2016 (2016)

— 2015 —

89. Sander, R.: *Compilation of Henry's law constants (version 4.0) for water as solvent*, Atmos. Chem. Phys., 15, 4399–4981, doi:10.5194/acp-15-4399-2015 (2015)

88. Jordan, C. E., Pszenny, A. A. P., Keene, W. C., Cooper, O. R., Deegan, B., Maben, J., Routhier, M., Sander, R., & Young, A. H.: *Origins of aerosol chlorine during winter over north central Colorado, USA*, J. Geophys. Res. Atmos., 120, 678–694, doi:10.1002/2014JD022294 (2015)

— 2014 —

87. Sander, R., Jöckel, P., Kirner, O., Kunert, A. T., Landgraf, J., & Pozzer, A.: *The photolysis module JVAL-14, compatible with the MESSy standard, and the JVal PreProcessor (JVPP)*, Geosci. Model Dev., 7, 2653–2662, doi:10.5194/GMD-7-2653-2014 (2014)

86. Hens, K., Novelli, A., Martinez, M., Auld, J., Axinte, R., Bohn, B., Fischer, H., Keronen, P., Kubistin, D., Nölscher, A. C., Oswald, R., Paasonen, P., Petäjä, T., Regelin, E., Sander, R., Sinha, V., Sipilä, M., Taraborrelli, D., Tatum Ernest, C., Williams, J., Lelieveld, J., & Harder, H.: *Observation and modelling of* HO_x *radicals in a boreal forest*, Atmos. Chem. Phys., 14, 8723–8747, doi:10.5194/ACP-14-8723-2014 (2014)

85. Long, M. S., Keene, W. C., Easter, R. C., Sander, R., Liu, X., Kerkweg, A., & Erickson, D.: *Sensitivity of tropospheric chemical composition to halogen-radical chemistry using a fully coupled size-resolved multiphase chemistry-global climate system: halogen distributions, aerosol composition, and sensitivity of climate-relevant gases.*, Atmos. Chem. Phys., 14, 3397–3425, doi:10.5194/ACP-14-3397-2014 (2014)

84. Adame, J. A., Martínez, M., Sorribas, M., Hidalgo, P. J., Harder, H., Diesch, J.-M., Drewnick, F., Song, W., Williams, J., Sinha, V., Hernández-Ceballos, M. A., Vilà-Guerau de Arellano, J., Sander, R., Hosaynali-Beygi, Z., Fischer, H., Lelieveld, J., & De la Morena, B.: *Meteorology during the DOMINO campaign and its connection with trace gases and aerosols*, Atmos. Chem. Phys., 14, 2325–2342, doi:10.5194/ACP-14-2325-2014 (2014)

— 2013 —

83. Sander, R., Pszenny, A. A. P., Keene, W. C., Crete, E., Deegan, B., Long, M. S., Maben, J. R., & Young, A. H.: *Gas phase acid, ammonia and aerosol ionic and trace element concentrations at Cape Verde during the Reactive Halogens in the Marine Boundary Layer (RHaMBLe) 2007 intensive sampling period*, Earth Syst. Sci. Data, 5, 385–392, doi:10.5194/essd-5-385-2013 (2013)

82. Keller-Rudek, H., Moortgat, G. K., Sander, R., & Sörensen, R.: *The MPI-Mainz UV/VIS spectral atlas of gaseous molecules of atmospheric interest*, Earth Syst. Sci. Data, 5, 365–373, doi:10.5194/ESSD-5-365-2013 (2013)

81. van Eijck, A., Opatz, T., Taraborrelli, D., Sander, R., & Hoffmann, T.: *New tracer compounds for secondary organic aerosol formation from β-caryophyllene oxidation*, Atmos. Environ., 80, 122–130, doi:10.1016/J.ATMOSENV.2013.07.060 (2013)

80. Regelin, E., Harder, H., Martinez, M., Kubistin, D., Tatum Ernest, C., Bozem, H., Klippel, T., Hosaynali-Beygi, Z., Fischer, H., Sander, R., Jöckel, P., Königstedt, R., & Lelieveld, J.: HO_x *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, 10 703–10 720, doi:10.5194/ACP-13-10703-2013 (2013)

79. Young, A. H., Keene, W. C., Pszenny, A. A. P., Sander, R., Thornton, J. A., Riedel, T. P., & Maben, J. R.: *Phase partitioning of soluble trace gases with size-resolved aerosols in near-surface continental air over northern Colorado, USA, during winter*, J. Geophys. Res., 118, 9414–9427, doi:10.1002/jgrd.50655 (2013)

78. Long, M. S., Keene, W. C., Easter, R., Sander, R., Kerkweg, A., Erickson, D., Liu, X., & Ghan, S.: *Implementation of the chemistry module MECCA (v2.5) in the modal aerosol version of the Community Atmosphere Model component (v3.6.33) of the Community Earth System Model*, Geosci. Model Dev., 6, 255–262, doi:10.5194/GMD-6-255-2013 (2013)

— 2012 —

77. Sander, R. & Bottenheim, J.: *A compilation of tropospheric measurements of gas-phase and aerosol chemistry in polar regions*, Earth Syst. Sci. Data, 4, 215–282, doi:10.5194/ESSD-4-215-2012 (2012)

76. Sihler, H., Platt, U., Beirle, S., Marbach, T., Kühl, S., Dörner, S., Verschaeve, J., Frieß, U., Pöhler, D., Vogel, L., Sander, R., & Wagner, T.: *Tropospheric* BrO *column densities in the Arctic derived*

from satellite: retrieval and comparison to ground-based measurements, Atmos. Meas. Tech., 5, 2779–2807, doi:10.5194/AMT-5-2779-2012 (2012)

75. van Stratum, B. J. H., Vilà-Guerau deArellano, J., Ouwersloot, H. G., van den Dries, K., van Laar, T. W., Martinez, M., Lelieveld, J., Diesch, J.-M., Drewnick, F., Fischer, H., Hosaynali Beygi, Z., Harder, H., Regelin, E., Sinha, V., Adame, J. A., Sörgel, M., Sander, R., Bozem, H., Song, W., Williams, J., & Yassaa, N.: *Case study of the diurnal variability of chemically active species with respect to boundary layer dynamics during DOMINO*, Atmos. Chem. Phys., 12, 5329–5341, doi:10.5194/ACP-12-5329-2012 (2012)

74. Trebs, I., Mayol-Bracero, O. L., Pauliquevis, T., Kuhn, U., Sander, R., Ganzeveld, L., Meixner, F. X., Kesselmeier, J., Artaxo, P., & Andreae, M. O.: *Impact of the Manaus urban plume on trace gas mixing ratios near the surface in the Amazon Basin: Implications for the* NO-NO_2-O_3 *photostationary state and peroxy radical levels*, J. Geophys. Res., 117, D05307, doi:10.1029/2011JD016386 (2012)

— 2011 —

73. Hosaynali Beygi, Z., Fischer, H., Harder, H. D., Martinez, M., Sander, R., Williams, J., Brookes, D. M., Monks, P. S., & Lelieveld, J.: *Corrigendum to "Oxidation photochemistry in the Southern Atlantic boundary layer: unexpected deviations of photochemical steady state" published in Atmos. Chem. Phys., 11, 8497–8513, 2011*, Atmos. Chem. Phys., 11, 8825–8826, doi:10.5194/ACP-11-8825-2011 (2011b)

72. Frieß, U., Sihler, H., Sander, R., Pöhler, D., Yilmaz, S., & Platt, U.: *The vertical distribution of* BrO *and aerosols in the Arctic: Measurements by active and passive differential optical absorption spectroscopy*, J. Geophys. Res., 116D, D00R04, doi:10.1029/2011JD015938 (2011)

71. Zhang, H., Linford, J. C., Sandu, A., & Sander, R.: *Chemical mechanism solvers in air quality models*, Atmos., 2, 510–532, doi:10.3390/atmos2030510 (2011)

70. Hosaynali Beygi, Z., Fischer, H., Harder, H. D., Martinez, M., Sander, R., Williams, J., Brookes, D. M., Monks, P. S., & Lelieveld, J.: *Oxidation photochemistry in the Southern Atlantic boundary layer: unexpected deviations of photochemical steady state*, Atmos. Chem. Phys., 11, 8497–8513, doi:10.5194/ACP-11-8497-2011 (2011a)

69. Lawler, M. J., Sander, R., Carpenter, L. J., Lee, J. D., von Glasow, R., Sommariva, R., & Saltzman, E. S.: HOCl *and* Cl_2 *observations in marine air*, Atmos. Chem. Phys., 11, 7617–7628, doi:10.5194/ACP-11-7617-2011 (2011)

68. Klippel, T., Fischer, H., Bozem, H., Lawrence, M. G., Butler, T., Jöckel, P., Tost, H., Martinez, M., Harder, H., Regelin, E., Sander, R., Schiller, C. L., Stickler, A., & Lelieveld, J.: *Distribution of hydrogen peroxide and formaldehyde over Central Europe during the HOOVER project*, Atmos. Chem. Phys., 11, 4391–4410, doi:10.5194/ACP-11-4391-2011 (2011)

67. Sander, R., Baumgaertner, A., Gromov, S., Harder, H., Jöckel, P., Kerkweg, A., Kubistin, D., Regelin, E., Riede, H., Sandu, A., Taraborrelli, D., Tost, H., & Xie, Z.-Q.: *The atmospheric chemistry box model CAABA/MECCA-3.0*, Geosci. Model Dev., 4, 373–380, doi:10.5194/GMD-4-373-2011 (2011)

66. Morin, S., Sander, R., & Savarino, J.: *Simulation of the diurnal variations of the oxygen isotope anomaly* ($\Delta^{17}O$) *of reactive atmospheric species*, Atmos. Chem. Phys., 11, 3653–3671, doi:10.5194/ACP-11-3653-2011 (2011)

65. Liao, J., Sihler, H., Huey, L. G., Neuman, J. A., Tanner, D. J., Friess, U., Platt, U., Flocke, F. M., Orlando, J. J., Shepson, P. B., Beine, H. J., Weinheimer, A. J., Sjostedt, S. J., Nowak, J. B., Knapp, D. J., Staebler, R. M., Zheng, W., Sander, R., Hall, S. R., & Ullmann, K.: *A comparison of Arctic* BrO *measurements by chemical ionization mass spectrometery and long path-differential optical absorption spectroscopy*, J. Geophys. Res., 116D, D00R02, doi:10.1029/2010JD014788 (2011)

— 2010 —

64. Jöckel, P., Kerkweg, A., Pozzer, A., Sander, R., Tost, H., Riede, H., Baumgaertner, A., Gromov, S., & Kern, B.: *Development cycle 2 of the Modular Earth Submodel System (MESSy2)*, Geosci. Model Dev., 3, 717–752, doi:10.5194/GMD-3-717-2010 (2010)

63. Williams, J., Custer, T., Riede, H., Sander, R., Jöckel, P., Hoor, P., Pozzer, A., Wong-Zehnpfennig, S., Hosaynali Beygi, Z., Fischer, H., Gros, V., Colomb, A., Bonsang, B., Yassaa, N., Peeken, I., Atlas, E. L., Waluda, C. M., van Aardenne, J. A., & Lelieveld, J.: *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, doi:10.1071/EN09154 (2010)

62. Kubistin, D., Harder, H., Martinez, M., Rudolf, M., Sander, R., Bozem, H., Eerdekens, G., Fischer, H., Gurk, C., Klüpfel, T., Königstedt, R., Parchatka, U., Schiller, C. L., Stickler, A., Taraborrelli, D., Williams, J., & Lelieveld, J.: *Hydroxyl radicals in the tropical troposphere over the Suriname rainforest: comparison of measurements with the box model MECCA*, Atmos. Chem. Phys., 10, 9705–9728, doi:10.5194/ACP-10-9705-2010 (2010)

61. Sander, R. & Morin, S.: *Introducing the bromide/alkalinity ratio for a follow-up discussion on "Precipitation of salts in freezing seawater and ozone depletion events: a status report", by Morin et al., published in Atmos. Chem. Phys., 8, 7317-7324, 2008*, Atmos. Chem. Phys., 10, 7655–7658, doi:10.5194/ACP-10-7655-2010 (2010)

60. Gromov, S., Jöckel, P., Sander, R., & Brenninkmeijer, C. A. M.: *A kinetic chemistry tagging technique and its application to modelling the stable isotopic composition of atmospheric trace gases*, Geosci. Model Dev., 3, 337–364, doi:10.5194/GMD-3-337-2010 (2010)

59. Baumgaertner, A. J. G., Jöckel, P., Steil, B., Tost, H., & Sander, R.: *A fast stratospheric chemistry solver: the E4CHEM submodel for the atmospheric chemistry global circulation model EMAC*, Geosci. Model Dev., 3, 321–328, doi:10.5194/GMD-3-321-2010 (2010)

58. Zhu, S., Butler, T., Sander, R., Ma, J., & Lawrence, M. G.: *Impact of dust on tropospheric chemistry over polluted regions: a case study of the Beijing megacity*, Atmos. Chem. Phys., 10, 3855–3873, doi:10.5194/ACP-10-3855-2010 (2010)

57. Lee, J. D., McFiggans, G., Allan, J. D., Baker, A. R., Ball, S. M., Benton, A. K., Carpenter, L. J., Commane, R., Finley, B. D., Evans, M., Fuentes, E., Furneaux, K., Goddard, A., Good, N., Hamilton, J. F., Heard, D. E., Herrmann, H., Hollingsworth, A., Hopkins, J. R., Ingham, T., Irwin, M., Jones, C. E., Jones, R. L., Keene, W. C., Lawler, M. J., Lehmann, S., Lewis, A. C., Long, M. S., Mahajan, A., Methven, J., Moller, S. J., Müller, K., Müller, T., Niedermeier, N., O'Doherty, S., Oetjen, H., Plane, J. M. C., Pszenny, A. A. P., Read, K. A., Saiz-Lopez, A., Saltzman, E. S., Sander, R., von Glasow, R., Whalley, L., Wiedensohler, A., & Young, D.: *Reactive halogens in the marine boundary layer (RHaMBLe): the tropical North Atlantic experiments*, Atmos. Chem. Phys., 10, 1031–1055, doi:10.5194/ACP-10-1031-2010 (2010)

— 2009 —

56. Riede, H., Jöckel, P., & Sander, R.: *Quantifying atmospheric transport, chemistry, and mixing using a new trajectory-box model and a global atmospheric-chemistry GCM*, Geosci. Model Dev., 2, 267–280, doi:10.5194/GMD-2-267-2009 (2009)

55. Keene, W. C., Long, M. S., Pszenny, A. A. P., Sander, R., Maben, J. R., Wall, A. J., O'Halloran, T. L., Kerkweg, A., Fischer, E. V., & Schrems, O.: *Latitudinal variation in the multiphase chemical processing of inorganic halogens and related species over the eastern North and South Atlantic Oceans*, Atmos. Chem. Phys., 9, 7361–7385, doi:10.5194/ACP-9-7361-2009 (2009)

54. Taraborrelli, D., Lawrence, M. G., Butler, T. M., Sander, R., & Lelieveld, J.: *Mainz Isoprene Mechanism 2 (MIM2): an isoprene oxidation mechanism for regional and global atmospheric modelling*, Atmos. Chem. Phys., 9, 2751–2777, doi:10.5194/ACP-9-2751-2009 (2009)

— 2008 —

53. Zhao, T. L., Gong, S. L., Bottenheim, J. W., McConnell, J. C., Sander, R., Kaleschke, L., Richter, A., Kerkweg, A., Toyota, K., & Barrie, L. A.: *A three-dimensional model study on the production of* BrO *and Arctic boundary layer ozone depletion*, J. Geophys. Res., 113D, D24304, doi:10.1029/2008JD010631 (2008)

52. Xie, Z.-Q., Sander, R., Pöschl, U., & Slemr, F.: *Simulation of atmospheric mercury depletion events (AMDEs) during polar springtime using the MECCA box model*, Atmos. Chem. Phys., 8, 7165–7180, doi:10.5194/ACP-8-7165-2008 (2008)

51. Zhou, X., Davis, A. J., Kieber, D. J., Keene, W. C., Maben, J. R., Maring, H., Dahl, E. E., Izaguirre, M. A., Sander, R., & Smoydzin, L.: *Photochemical production of hydroxyl radical and hydroperoxides in water extracts of nascent marine aerosols produced by bursting bubbles from Sargasso seawater*, Geophys. Res. Lett., 35, L20803, doi:10.1029/2008GL035418 (2008)

50. Kerkweg, A., Jöckel, P., Pozzer, A., Tost, H., Sander, R., Schulz, M., Stier, P., Vignati, E., Wilson, J., & Lelieveld, J.: *Consistent simulation of bromine chemistry from the marine boundary layer to the stratosphere – Part 1: Model description, sea salt aerosols and pH*, Atmos. Chem. Phys., 8, 5899–5917, doi:10.5194/ACP-8-5899-2008 (2008)

49. Jöckel, P., Kerkweg, A., Buchholz-Dietsch, J., Tost, H., Sander, R., & Pozzer, A.: *Technical Note: Coupling of chemical processes with the Modular Earth Submodel System (MESSy) submodel TRACER*, Atmos. Chem. Phys., 8, 1677–1687, doi:10.5194/ACP-8-1677-2008 (2008)

48. Dillon, T. J., Tucceri, M. E., Sander, R., & Crowley, J. N.: *LIF studies of iodine oxide chemistry, part 3. Reactions* IO + NO_3 → OIO + NO_2, I + NO_3 → IO + NO_2, *and* CH_2I + O_2 → *(products): Implications for the chemistry of the marine atmosphere at night.*, Phys. Chem. Chem. Phys., 10, 1540–1554, doi:10.1039/B717386E (2008)

47. Franke, K., Eyring, V., Sander, R., Hendricks, J., Lauer, A., & Sausen, R.: *Toward effective emissions of ships in global models*, Meteorol. Z., 17, 117–129, doi:10.1127/0941-2948/2008/0277 (2008)

— 2007 —

46. Keene, W. C., Maring, H., Maben, J. R., Kieber, D. J., Pszenny, A. A. P., Dahl, E. E., Izaguirre, M. A., Davis, A. J., Long, M. S., Zhou, X., Smoydzin, L., & Sander, R.: *Chemical and physical characteristics of nascent aerosols produced by bursting bubbles at a model air-sea interface*, J. Geophys. Res., 112D, D21202, doi:10.1029/2007JD008464 (2007)

45. Simpson, W. R., von Glasow, R., Riedel, K., Anderson, P., Ariya, P., Bottenheim, J., Burrows, J., Carpenter, L. J., Frieß, U., Goodsite, M. E., Heard, D., Hutterli, M., Jacobi, H.-W., Kaleschke, L., Neff, B., Plane, J., Platt, U., Richter, A., Roscoe, H., Sander, R., Shepson, P., Sodeau, J., Steffen, A., Wagner, T., & Wolff, E.: *Halogens and their role in polar boundary-layer ozone depletion*, Atmos. Chem. Phys., 7, 4375–4418, doi:10.5194/ACP-7-4375-2007 (2007)

44. Grannas, A. M., Jones, A. E., Dibb, J., Ammann, M., Anastasio, C., Beine, H. J., Bergin, M., Bottenheim, J., Boxe, C. S., Carver, G., Chen, G., Crawford, J. H., Dominé, F., Frey, M. M., Guzmán, M. I., Heard, D. E., Helmig, D., Hoffmann, M. R., Honrath, R. E., Huey, L. G., Hutterli, M., Jacobi, H. W., Klán, P., Lefer, B., McConnell, J., Plane, J., Sander, R., Savarino, J., Shepson, P. B., Simpson, W. R., Sodeau, J. R., von Glasow, R., Weller, R., Wolff, E. W., & Zhu, T.: *An overview of snow photochemistry: evidence, mechanisms and impacts*, Atmos. Chem. Phys., 7, 4329–4373, doi:10.5194/ACP-7-4329-2007 (2007)

43. Stickler, A., Fischer, H., Bozem, H., Gurk, C., Schiller, C., Martinez-Harder, M., Kubistin, D., Harder, H., Williams, J., Eerdekens, G., Yassaa, N., Ganzeveld, L., Sander, R., & Lelieveld, J.: *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, doi:10.5194/ACP-7-3933-2007 (2007)

42. Kerkweg, A., Sander, R., Tost, H., Jöckel, P., & Lelieveld, J.: *Technical Note: Simulation of detailed aerosol chemistry on the global scale using MECCA-AERO*, Atmos. Chem. Phys., 7, 2973–2985, doi:10.5194/ACP-7-2973-2007 (2007)

41. Tost, H., Jöckel, P., Kerkweg, A., Pozzer, A., Sander, R., & Lelieveld, J.: *Global cloud and precipitation chemistry and wet deposition: tropospheric model simulations with ECHAM5/MESSy1*, Atmos. Chem. Phys., 7, 2733–2757, doi:10.5194/ACP-7-2733-2007 (2007)

40. Pozzer, A., Jöckel, P., Tost, H., Sander, R., Ganzeveld, L., Kerkweg, A., & Lelieveld, J.: *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, doi:10.5194/ACP-7-2527-2007 (2007)

39. Williams, J., Gros, V., Atlas, E., Maciejczyk, K., Batsaikhan, A., Schöler, H., Forster, C., Quack, B., Yassaa, N., Sander, R., & Van Dingenen, R.: *Possible evidence for a connection between methyl iodide emissions and Saharan dust*, J. Geophys. Res., 112D, D07302, doi:10.1029/2005JD006702 (2007)

— 2006 —

38. Pozzer, A., Jöckel, P., Sander, R., Williams, J., Ganzeveld, L., & Lelieveld, J.: *Technical note: The MESSy-submodel AIRSEA calculating the air-sea exchange of chemical species*, Atmos. Chem. Phys., 6, 5435–5444, doi:10.5194/ACP-6-5435-2006 (2006)

37. Sander, R., Burrows, J., & Kaleschke, L.: *Carbonate precipitation in brine – a potential trigger for tropospheric ozone depletion events*, Atmos. Chem. Phys., 6, 4653–4658, doi:10.5194/ACP-6-4653-2006 (2006)

36. Jöckel, P., Tost, H., Pozzer, A., Brühl, C., Buchholz, J., Ganzeveld, L., Hoor, P., Kerkweg, A., Lawrence, M. G., Sander, R., Steil, B., Stiller, G., Tanarhte, M., Taraborrelli, D., van Aardenne, J., & Lelieveld, J.: *The atmospheric chemistry general circulation model ECHAM5/MESSy1: consistent simulation of ozone from the surface to the mesosphere*, Atmos. Chem. Phys., 6, 5067–5104, doi:10.5194/ACP-6-5067-2006 (2006)

35. Kerkweg, A., Sander, R., Tost, H., & Jöckel, P.: *Technical note: Implementation of prescribed (OFFLEM), calculated (ONLEM), and pseudo-emissions (TNUDGE) of chemical species in the Modular Earth Submodel System (MESSy)*, Atmos. Chem. Phys., 6, 3603–3609, doi:10.5194/ACP-6-3603-2006 (2006)

34. Stickler, A., Fischer, H., Williams, J., de Reus, M., Sander, R., Lawrence, M. G., Crowley, J. N., & Lelieveld, J.: *Influence of summertime deep convection on formaldehyde in the middle and upper troposphere over Europe*, J. Geophys. Res., 111D, D14308, doi:10.1029/2005JD007001 (2006)

33. Tost, H., Jöckel, P., Kerkweg, A., Sander, R., & Lelieveld, J.: *Technical note: A new comprehensive SCAVenging submodel for global atmospheric chemistry modelling*, Atmos. Chem. Phys., 6, 565–574, doi:10.5194/ACP-6-565-2006 (2006)

32. Sandu, A. & Sander, R.: *Technical note: Simulating chemical systems in Fortran90 and Matlab with the Kinetic PreProcessor KPP-2.1*, Atmos. Chem. Phys., 6, 187–195, doi:10.5194/ACP-6-187-2006 (2006)

— 2005 —

31. de Reus, M., Fischer, H., Sander, R., Gros, V., Kormann, R., Salisbury, G., Van Dingenen, R., Williams, J., Zöllner, M., & Lelieveld, J.: *Observations and model calculations of trace gas scavenging in a dense Saharan dust plume during MINATROC*, Atmos. Chem. Phys., 5, 1787–1803, doi:10.5194/ACP-5-1787-2005 (2005)

30. Sander, R., Kerkweg, A., Jöckel, P., & Lelieveld, J.: *Technical note: The new comprehensive atmospheric chemistry module MECCA*, Atmos. Chem. Phys., 5, 445–450, doi:10.5194/ACP-5-445-2005 (2005)

29. Jöckel, P., Sander, R., Kerkweg, A., Tost, H., & Lelieveld, J.: *Technical Note: The Modular Earth Submodel System (MESSy) – a new approach towards Earth System Modeling*, Atmos. Chem. Phys., 5, 433–444, doi:10.5194/ACP-5-433-2005 (2005)

— 2004 —

28. Sander, R., Crutzen, P. J., & von Glasow, R.: *Comment on "Reactions at interfaces as a source of sulfate formation in sea-salt particles" (II)*, Science, 303, 628, doi:10.1126/SCIENCE.1090971 (2004)

27. Pszenny, A. A. P., Moldanová, J., Keene, W. C., Sander, R., Maben, J. R., Martinez, M., Crutzen, P. J., Perner, D., & Prinn, R. G.: *Halogen cycling and aerosol pH in the Hawaiian marine boundary layer*, Atmos. Chem. Phys., 4, 147–168, doi:10.5194/ACP-4-147-2004 (2004)

— 2003 —

26. Sander, R.: *Book review. Peter G. T. Fogg and James M. Sangster: Chemicals in the atmosphere - solubility, sources and reactivity*, J. Atmos. Chem., 46, 201–203, doi:10.1023/A:1026083827772 (2003)

25. Sander, R., Keene, W. C., Pszenny, A. A. P., Arimoto, R., Ayers, G. P., Baboukas, E., Cainey, J. M., Crutzen, P. J., Duce, R. A., Hönninger, G., Huebert, B. J., Maenhaut, W., Mihalopoulos, N., Turekian, V. C., & Van Dingenen, R.: *Inorganic bromine in the marine boundary layer: a critical review*, Atmos. Chem. Phys., 3, 1301–1336, doi:10.5194/ACP-3-1301-2003 (2003)

24. von Glasow, R., Lawrence, M. G., Sander, R., & Crutzen, P. J.: *Modeling the chemical effects of ship exhaust in the cloud-free marine boundary layer*, Atmos. Chem. Phys., 3, 233–250, doi:10.5194/ACP-3-233-2003 (2003)

— 2002 —

23. Gabriel, R., von Glasow, R., Sander, R., Andreae, M. O., & Crutzen, P. J.: *Bromide content of sea-salt aerosol particles collected over the Indian Ocean during INDOEX 1999*, J. Geophys. Res., 107D, 8032, doi:10.1029/2001JD001133 (2002)

22. von Glasow, R., Sander, R., Bott, A., & Crutzen, P. J.: *Modeling halogen chemistry in the marine boundary layer, 1. Cloud-free MBL*, J. Geophys. Res., 107D, 4341, doi:10.1029/2001JD000942 (2002a)

21. von Glasow, R., Sander, R., Bott, A., & Crutzen, P. J.: *Modeling halogen chemistry in the marine boundary layer. 2. Interactions with sulfur and the cloud-covered MBL*, J. Geophys. Res., 107D, 4323, doi:10.1029/2001JD000943 (2002b)

20. Keene, W. C., Pszenny, A. A. P., Maben, J. R., & Sander, R.: *Variation of marine aerosol acidity with particle size*, Geophys. Res. Lett., 29, doi:10.1029/2001GL013881 (2002)

— 2001 —

19. Sander, R. & Crutzen, P. J.: *Bodennahes Ozonloch in der Arktis*, Spektrum der Wissenschaft, pp. 12–13, http://www.rolf-sander.net/res/spektrum.html (2001)

18. von Glasow, R. & Sander, R.: *Variation of sea salt aerosol pH with relative humidity*, Geophys. Res. Lett., 28, 247–250, doi:10.1029/2000GL012387 (2001)

— 2000 —

17. Ariya, P. A., Sander, R., & Crutzen, P. J.: *Significance of* HO_x *and peroxides production due to alkene ozonolysis during fall and winter: A modeling study*, J. Geophys. Res., 105D, 17 721–17 738, doi:10.1029/2000JD900074 (2000)

16. Sander, R.: *"The volume of the solution is 1 kg" – Pleading for scientific writing*, Eos, Trans. AGU, 81, 6, doi:10.1029/00EO00007 (2000)

15. Sander, R. & Crutzen, P. J.: *Comment on "A chemical aqueous phase radical mechanism for tropospheric chemistry" by H. Herrmann et al.*, Chemosphere, 41, 631–632, doi:10.1016/S0045-6535(99)00541-X (2000)

— 1999 —

14. Sander, R., Rudich, Y., von Glasow, R., & Crutzen, P. J.: *The role of* $BrNO_3$ *in marine tropospheric chemistry: A model study*, Geophys. Res. Lett., 26, 2857–2860, doi:10.1029/1999GL900478 (1999)

13. Ingham, T., Bauer, D., Sander, R., Crutzen, P. J., & Crowley, J. N.: *Kinetics and products of the reactions* BrO + *DMS and* Br + *DMS at 298* K, J. Phys. Chem. A, 103, 7199–7209, doi:10.1021/JP9905979 (1999)

12. Vogt, R., Sander, R., von Glasow, R., & Crutzen, P. J.: *Iodine chemistry and its role in halogen activation and ozone loss in the marine boundary layer: A model study*, J. Atmos. Chem., 32, 375–395, doi:10.1023/A:1006179901037 (1999)

11. Sander, R.: *Modeling atmospheric chemistry: Interactions between gas-phase species and liquid cloud/aerosol particles*, Surv. Geophys., 20, 1–31, doi:10.1023/A:1006501706704 (1999)

— 1998 —

10. Sander, R.: *Comment on "Formation of molecular chlorine from the photolysis of ozone and aqueous sea-salt particles" by K. Oum et al.*, Science, (rejected, see http://www.rolf-sander.net/res/oumetal.html) (1998)

9. Keene, W. C., Sander, R., Pszenny, A. A. P., Vogt, R., Crutzen, P. J., & Galloway, J. N.: *Aerosol pH in the marine boundary layer: A review and model evaluation*, J. Aerosol Sci., 29, 339–356, doi:10.1016/S0021-8502(97)10011-8 (1998)

8. Ariya, P. A., Jobson, B. T., Sander, R., Niki, H., Harris, G. W., Anlauf, K. G., & Hopper, J. F.: *Measurements of* C_2-C_7 *hydrocarbons during the polar sunrise experiment 1994: Further evidence for halogen chemistry in the troposphere*, J. Geophys. Res., 103D, 13 169–13 180, doi:10.1029/98JD00284 (1998)

— 1997 —

7. Ariya, P. A., Catoire, V., Sander, R., Niki, H., & Harris, G. W.: *Trichloroethene and tetrachloroethene: tropospheric probes for* Cl *and* Br*-atom reactions during the polar sunrise*, Tellus, 49B, 583–591, doi:10.3402/TELLUSB.V49I5.16011 (1997)

6. Sander, R., Vogt, R., Harris, G. W., & Crutzen, P. J.: *Modeling the chemistry of ozone, halogen compounds, and hydrocarbons in the Arctic troposphere during spring*, Tellus, 49B, 522–532, doi:10.3402/tellusb.v45i5.16001 (1997)

— 1996 —

5. Vogt, R., Crutzen, P. J., & Sander, R.: *A mechanism for halogen release from sea-salt aerosol in the remote marine boundary layer*, Nature, 383, 327–330, doi:10.1038/383327A0 (1996)

4. Sander, R. & Crutzen, P. J.: *Model study indicating halogen activation and ozone destruction in polluted air masses transported to the sea*, J. Geophys. Res., 101D, 9121–9138, doi:10.1029/95JD03793 (1996)

— 1995 —

3. Sander, R., Lelieveld, J., & Crutzen, P. J.: *Modelling of the nighttime nitrogen and sulfur chemistry in size resolved droplets of an orographic cloud*, J. Atmos. Chem., 20, 89–116, doi:10.1007/BF01099920 (1995)

— 1994 —

2. Colvile, R. N., Sander, R., Choularton, T. W., Bower, K. N., Inglis, D. W. F., Wobrock, W., Maser, R., Schell, D., Svenningsson, I. B., Wiedensohler, A., Hansson, H.-C., Hallberg, A., Ogren, J. A., Noone, K. J., Faccini, M. C., Fuzzi, S., Orsi, G., Arends, B. G., Winiwarter, W., Schneider, T., & Berner, A.: *Computer modelling of clouds at Kleiner Feldberg*, J. Atmos. Chem., 19, 189–229, doi:10.1007/BF00696589 (1994)

— 1991 —

1. Sander, R. & Bettermann, H.: *Force field calculations for ethanedial, butanedione and some cyclic 1,2-diketones with respect to the influence of the intercarbonyl dihedral angle on their vibrational frequencies*, J. Mol. Struct., 263, 123–132, doi:10.1016/0022-2860(91)80060-H (1991)