

## REFERENCES

- Balabanov N., Shepler B., Peterson K. [2005] Accurate global potential energy surface and reaction dynamics for the ground state of HgBr<sub>2</sub>. *J. Phys. Chem. A*, vol. 109, pp. 8765-8773.
- Breivik K., Sweetman A., Pacyna J.M., Jones K.C. [2007] Towards a global historical emission inventory for selected PCB congeners - A mass balance approach-3. An update. *Science of the Total Environment*, vol.377, pp. 296-307.
- Bucheli T.D. and Gustafsson O. [2000] Quantification of soot-water distribution coefficient of PAHs provides mechanistic basis for enhanced sorption observations. *Environmental Science and Technology*, vol. 34, pp. 5144-5151.
- Calvert J.G., Atkinson R., Becker K.H., Kamens R.M., Seinfeld J.H., Wallington T.S., Yarwood G. [2002] The mechanism of atmospheric oxidation of aromatic hydrocarbons, Oxford. University Press, p.464.
- Calvert J.G and Lindberg S.E. [2005] Mechanisms of mercury removal by O<sub>3</sub> and OH in the atmosphere. *Atmospheric Environment*, vol. 39, 3355 – 3367.
- Carouge C., P. Bousquet, P. Peylin, P. J. Rayner, and P. Ciais [2010a] What can we learn from European continuous atmospheric CO<sub>2</sub> measurements to quantify regional fluxes – Part 1: Potential of the 2001 network. *Atmos. Chem. Phys.*, vol. 10, pp. 3107–3117.
- Carouge C., P. J. Rayner, P. Peylin, P. Bousquet, F. Chevallier, and P. Ciais [2010b] What can we learn from European continuous atmospheric CO<sub>2</sub> measurements to quantify regional fluxes – Part 2: Sensitivity of flux accuracy to inverse setup. *Atmos. Chem. Phys.*, vol. 10, pp. 3119–3129.
- Chen J., X. Quan, Y. Yang, W.J.G.M. Peijnenburg [2001] Quantative structure-property relationship studies on direct photolysis of selected polycyclic aromatic hydrocarbons in atmospheric aerosol, *Chemosphere*, vol. 42, pp. 263-270.
- Côté J., Desmarais J.-G., Gravel S., Méthot A., Patoine A., Roch M., and Staniforth A. [1998b] The operational CMC-MRB Global Environmental Multiscale (GEM) model: Part II - Results, *Mon. Wea. Rev.*, vol. 126, pp. 1397-1418.
- Côté J., Gravel S., Méthot A., Patoine A., Roch M., and Staniforth A. [1998a] The operational CMC-MRB Global Environmental Multiscale (GEM) model: Part I - Design considerations and formulation, *Mon. Wea. Rev.*, vol. 126, pp. 1373-1395.
- Donohoue D. L., D. Bauer, B. Cossairt, and A. J. Hynes [2006] Temperature and Pressure Dependent Rate Coefficients for the Reaction of Hg with Br and the Reaction of Br with Br: A Pulsed Laser Photolysis-Pulsed Laser Induced Fluorescence Study, *J. Phys. Chem. A*, vol. 110, pp. 6623 – 6632, DOI: 10.1021/jp054688j.
- Friedman C.L. and N.E. Selin [2012] Long-range atmospheric transport of polycyclic aromatic hydrocarbons: A global 3-D model analysis including evaluation of Arctic sources, *Environ. Sci. Technol.*, vol. 46(17), pp. 9501-9510.
- Goodsite M.E., Plane J.M.C. and Skov H. [2004] A Theoretical Study of the Oxidation of Hg<sup>0</sup> to HgBr<sub>2</sub> in the Troposphere, *Environ. Sci. Technol.*, vol. 38, pp. 1772–1776.
- Goodsite M.E., Plane J.M. C. and H.Skov [2012] Correction to A Theoretical Study of the Oxidation of Hg<sup>0</sup> to HgBr<sub>2</sub> in the Troposphere. *Environ. Sci. Technol.*, vol. 46, pp. 5262–5262.
- Hakami A., D.K.Henze, J.H.Seinfeld, T.Chai, Y.Tang, G.R.Carmichael, A.Sandu [2005] *J. of Geophysical Research*, vol. 110, pp. D14301, doi:10.1029/2004JD005671.
- Harner T. and T.F. Bidleman [1998] Octanol–air partition coefficient for describing particle/gas partitioning of aromatic compounds in urban air. *Environ. Sci. & Technol.*, vol. 32, No. 10, 1494-1502.
- Holmes C.D., Jacob D.J., Corbitt E.S., Mao J., Yang X., Talbot R. and Slemr F. et al. [2010] Global atmospheric model for mercury including oxidation by bromine atoms. *Atmos. Chem. Phys.*, vol. 10, pp. 12037–12057.
- Jonson J.E. and O. Travnikova (Eds) [2012] Global scale modeling within EMEP: Progress report, EMEP/MS-CHEM Technical Report 1/2012.
- Jun H. and Balasubramanian R. [2009] A study of gas/particle partitioning of SVOCs in the tropical atmosphere of Southeast Asia. *Atmos. Environ.*, vol. 43.
- Krol M.C., J.F. Meirink, P. Bergamaschi, J.E. Mak, D. Lowe, P. Jockel, S. Houweling and T. Rockmann [2008] What can CO measurements tell us about OH? *Atmospheric Chemistry Physics*, vol. 8, pp. 5033 - 5044.
- Kwamena N.-O.A., J.A. Thornton, J.P.D. Abbatt [2004] Kinetics of surface-bound benzo[a]pyrene and ozone on solid organic and salt aerosols, *J. Phys. Chem. A*, vol.108, pp. 11626-11634.
- Lazzati Z. [2009] Speciation of particulate matter organic fraction and its mechanism of action on human health, Phd Thesis: [http://boaboa.unimib.it/phd\\_unimib\\_R00789\\_\(1-7\).pdf](http://boaboa.unimib.it/phd_unimib_R00789_(1-7).pdf).

- Lohmann R. and G. Lammer [2004] Adsorptive and Absorptive Contributions to the Gas-Particle Partitioning of Polycyclic Aromatic Hydrocarbons: State of Knowledge and Recommended Parametrization for Modeling. *Environmental Science & Technology*, vol. 38, No. 14, 3793-3803.
- Marchuk G.I. [1986] Mathematical models in environmental problems. Studies In Mathematics and Its Applications, Vol. 16. Springer, Berlin.
- Meijer S.N., Ockenden W.A., Sweetman A., Breivik K., Grimalt J.O., and Jones K.C. [2003] Global Distribution and Budget of PCBs and HCB in Background Surface Soils: Implication for Sources and Environmental Processes. *Environ. Sci. Technol.* vol. 37, pp. 667-672.
- Michalakes J., J. Dudhia, D. Gill, T. Henderson, J. Klemp, W. Skamarock, and W. Wang [2004] The Weather Research and Forecast Model: software architecture and performance. In: Zwiefhofer W., Mozdzyński G. (Eds.), Proceedings of the Eleventh ECMWF Workshop on the Use of High Performance Computing In Meteorology. World Scientific, pp.156-168
- Pankow J.F. [1994] An absorption-model of gas-particle partitioning of organic compounds in the atmosphere. *Atmos. Environ.*, vol. 28, pp. 185-188.
- Perraudin E., H. Budzinski, E. Villenave [2007] Kinetic study of reaction of ozone with polycyclic aromatic hydrocarbons adsorbed on atmospheric model particles. *J.Atmos. Chem.*, vol.56, pp. 57-82.
- Pöschl U., Letzel T., Schauer C., Niessner R. [2001] Interaction of ozone and water vapor with spark discharge soot aerosol particles coated with benzo[a]pyrene: O<sub>3</sub> and H<sub>2</sub>O adsorption, benzo[a]pyrene degradation and atmospheric implications, *J. Phys. Chem. A*, vol.105, pp. 4029-4041.
- Seigneur C., Karamchandani P., Lohman K., Vijayaraghavan K. and R.-L. Shia [2001] Multiscale modelling of the atmospheric fate and transport of mercury. *J. Geophys. Res.*, vol. 106, No.D21, 27795-27809.
- Shatalov V., A. Gusev, S. Dutchak, O. Rozovskaya, V. Sokovykh, N. Vulykh W. Aas, K. Breivik [2012] Persistent Organic Pollutants in the Environment. EMEP Status Report 3/2012.
- Shepler B.C., Peterson K.A. [2003] Mercury Monoxide: A Systematic Investigation of Its Ground Electronic State. *Journal of Physical Chemistry A*. vol. 107, pp. 1783-1787.
- Skamarock, W. C., J. B. Klemp, J. Dudhia, D. O. Gill, D. M. Barker, W. Wang and J. G. Powers [2005] A Description of the Advanced Research WRF Version 2. NCAR Technical note NCAR/TN-468.
- Slemr F., Ebinghaus R., Brenninkmeijer C. A. M., Hermann M., Kock H. H., Martinsson B. G., Schuck T., Sprung D., van Velthoven P., Zahn A., and Ziereis H. [2009] Gaseous mercury distribution in the upper troposphere and lower stratosphere observed onboard the CARIBIC passenger aircraft. *Atmos. Chem. Phys.*, vol. 9, pp. 1957-1969.
- Tossell J.A. [2003] Calculation of the energetics for oxidation of gas-phase elemental Hg by Br and BrO. *Journal of Physical Chemistry A*. vol. 107. pp. 7804-7808.
- Travnikov O. and I.Ilyin [2009] The EMEP/MSC-E mercury modeling system, in Mercury Fate and Transport in the Global Atmosphere, edited by N. Pirrone and R. P. Mason, Springer, Dordrecht, 571-587.
- Travnikov O., J.E. Jonson, A.S. Andersen, M. Gauss, A. Gusev, O. Rozovskaya, D. Simpson, V. Sokovyh, S. Valiyaveetil and P. Wind [2009] Development of the EMEP global modelling framework: progress report. Model Updates, EMEP/MSC-E Technical Report 7/2009.
- Uliasz M. [1987] Application of influence functions in numerical modelling of air pollution dispersion. *Przegląd Geofizyczny*, Warsaw. vol. 32, no. 1, pp. 3-19.
- Van Noort, P.C.M. [2003] A thermodynamis-based estimation model for asorption of organic compounds by carbonaceous materials in environmental sorbents. *Environ. Toxicol. Chem.*, vol. 22, pp. 1179-1188.
- Villani M. G., P. Bergamaschi, M. Krol, J. F. Meirink, and F. Dentener [2010] Inverse modeling of European CH<sub>4</sub> emissions: sensitivity to the observational network, *Atmos. Chem. Phys.*, vol. 10, pp. 1249–1267.
- Yang X., Cox R., Warwick N., Pyle J., Carver G., O'Connor F., Savage N. [2005] Tropospheric bromine chemistry and its impacts on ozone: A model study. *J. Geophys. Res.* vol. 110, p. D23311.
- Yeh K.-S., Côté J., Gravel S., Méthot A., Patoine A., Roch M., and Staniforth A. [2002] The CMC–MRB Global Environmental Multiscale (GEM) Model. Part III: Nonhydrostatic Formulation. *Monthly Weather Review*: vol. 130, No. 2, pp. 339–356.
- Zhou S., Lee A., McWhinney R., Abbatt J. [2011] Effect of Organic Coatings on the Heterogeneous Reactivity of Ozone with Particle Borne PAHs: [http://presentations.copernicus.org/EGU2011-2557\\_presentation.pdf](http://presentations.copernicus.org/EGU2011-2557_presentation.pdf).