

## LAC Publications 2008

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### Journal Articles 2008

Aiken, A. C., P. F. DeCarlo, J. H. Kroll, D. R. Worsnop, J. A. Huffman, K. Docherty, I. M. Ulbrich, C. Mohr, J. R. Kimmel, D. Sueper, Q. Zhang, Y. Sun, A. Trimborn, M. Northway, P. J. Ziemann, M. Canagaratna, T. B. Onasch, M. R. Alfarra, A. S. H. Prevot, J. Dommen, J. Duplissy, A. Metzger, U. Baltensperger, and J. L. Jimenez, 2008:  
**O/C and OM/ OC ratios of primary, secondary, and ambient organic aerosols with high resolution time-of-flight aerosol mass spectrometer.**

*Environ. Sci. Technol.*, **42**, 4478-4485.

Allan, J. D., D. Baumgardner, G. B. Raga, O. L. Mayol-Bracero, F. Morales-García, F. García-García, G. Montero-Martínez, S. Borrmann, J. Schneider, S. Mertes, S. Walter, M. Gysel, U. Dusek, G. P. Frank, and M. Krämer, 2008:  
**Clouds and aerosols in Puerto Rico - a new evaluation.**

*Atmos. Chem. Phys.*, **8**, 1293–1309.

Andreani-Aksoyoglu, S., J. Keller, C. Ordonez, M. Tinguely, M. Schultz, and A. S. H. Prevot, 2008:

**Influence of various emission scenarios on ozone in Europe.**

*Ecological Modelling*, **217**, 209-218.

Andreani-Aksoyoglu, S., J. Keller, A. S. H. Prevot, U. Baltensperger, and J. Flemming, 2008:

**Secondary aerosols in Switzerland and northern Italy: Modeling and sensitivity studies for summer 2003.**

*J. Geophys. Res.*, **113**, doi:10.1029/2007JD009053.

Bahn, M., M. Rodeghiero, M. Anderson-Dunn, S. Dore, C. Gimeno, M. Drösler, M. Williams, C. Ammann, F. Berninger, C. Flechard, S. Jones, S. Kumar, C. Newesely, T. Priwitzer, A. Raschi, R. T. W. Siegwolf, S. Susiluoto, J. Tenhunen, G. Wohlfahrt, and A. Cernusca, 2008:

**Soil respiration in European grasslands in relation to climate and assimilate supply.**

*Ecosystems*, **11**, doi: 10.1007/s10021-008-9198-0.

Baltensperger, U., J. Dommen, M. R. Alfarra, J. Duplissy, K. Gaeggeler, A. Metzger, M. C. Facchini, S. Decesari, E. Finessi, C. Reinnig, M. Schott, J. Warnke, T. Hoffmann, B. Klatzer, H. Puxbaum, M. Geiser, M. Savi, D. Lang, M. Kalberer, and T. Geiser, 2008:

**Combined determination of the chemical composition and of health effects of secondary organic aerosols: The POLYSOA project.**

*Journal of Aerosol Medicine and Pulmonary Drug Delivery*, **21**, 145-154.

Baltensperger, U., and A. S. H. Prevot, 2008:

**Chemical analysis of atmospheric aerosols.**

*Anal. Bioanal. Chem.*, **390**, 277-280.

Balzani Lööv, J. M., S. Henne, G. Legreid, J. Staehelin, S. Reimann, A. S. H. Prevot, M. Steinbacher, and M. K. Vollmer, 2008:

**Estimation of background concentrations of trace gases at the Swiss Alpine site Jungfraujoch (3580 m asl).**

*J. Geophys. Res.*, **113**, D22305, doi:10.1029/2007JD009751.

Battipaglia, G., M. Jaeggi, M. Saurer, R. T. W. Siegwolf, and M. F. Cotrufo, 2008:

**Climatic sensitivity of  $d^{18}O$  in the wood and cellulose of tree rings: Results from a mixed stand of *Acer pseudoplatanus* L. and *Fagus sylvatica* L.**

*Palaeogeography Palaeoclimatology Palaeoecology*, **261**, 193-202.

Bayfield, N., P. Barancok, M. Furger, M. Sebastià, G. Domínguez, M. Lapka, E. Cudlinova, L. Vescovo, D. Ganielle, A. Cernusca, U. Tappeiner, and M. Drösler, 2008:

**Stakeholder Perceptions of the Impacts of Rural Funding Scenarios on Mountain Landscapes Across Europe.**

*Ecosystems*, **11**, 1368-1382 (doi:10.1007/s10021-008-9197-1).

Bohn, B., G. K. Corlett, M. Gillmann, S. Sanghavi, G. Stange, E. Tensing, M. Vrekoussis, W. J. Bloss, L. J. Clapp, M. Kortner, H.-P. Dorn, P. S. Monks, U. Platt, C. Plass-Dülmer, N. Mihalopoulos, D. E. Heard, K. C. Clemitshaw, F. X. Meixner, A. S. H. Prevot, and R. Schmitt, 2008:

**Photolysis frequency measurement techniques: results of a comparison within the ACCENT project.**

*Atmos. Chem. Phys.*, **8**, 5373-5391.

Bukowiecki, N., P. Lienemann, C. N. Zwicky, M. Furger, A. Richard, G. Falkenberg, K. Rickers, D. Grolimund, C. Borca, M. Hill, R. Gehrig, and U. Baltensperger, 2008:

**X-ray fluorescence spectrometry for high throughput analysis of atmospheric aerosol samples: The benefits of synchrotron X-rays.**

*Spectrochimica Acta Part B: Atomic Spectroscopy*, **63**, 929-938, doi:10.1016/j.sab.2008.05.006.

Choularton, T. W., K. N. Bower, E. Weingartner, I. Crawford, H. Coe, M. W. Gallagher, M. Flynn, J. Crosier, P. Connolly, A. Targino, M. R. Alfarra, U. Baltensperger, S. Sjögren, B. Verheggen, J. Cozic, and M. Gysel, 2008:

**The influence of small aerosol particles on the properties of water and ice clouds.**

*Faraday Discuss.*, **137**, 205-222.

Cozic, J., S. Mertes, B. Verheggen, D. J. Cziczo, S. J. Gallavardin, S. Walter, U. Baltensperger, and E. Weingartner, 2008:

**Black carbon enrichment in atmospheric ice particle residuals observed in lower tropospheric mixed phase clouds.**

*J. Geophys. Res.*, **113**, doi:10.1029/2007JD009266.

Cozic, J., B. Verheggen, E. Weingartner, J. Crosier, K. Bower, M. Flynn, H. Coe, S. Henning, M. Steinbacher, S. Henne, M. Collaud Coen, A. Petzold, and U. Baltensperger, 2008:

**Chemical composition of free tropospheric aerosol for PM1 and coarse mode at the high alpine site Jungfrauoch.**

*Atmos. Chem. Phys.*, **8**, 407-423.

DeCarlo, P. F., E. J. Dunlea, J. R. Kimmel, A. C. Aiken, D. Sueper, J. Crouse, P. O. Wennberg, L. Emmons, Y. Shinozuka, A. Clarke, J. Zhou, J. Tomlinson, D. R. Collins, D. Knapp, A. J. Weinheimer, D. D. Montzka, T. Campos, and J. L. Jimenez, 2008:

**Fast airborne aerosol size and chemistry measurements above Mexico City and Central Mexico during the MILAGRO campaign.**

*Atmos. Chem. Phys.*, **8**, 4027-4048.

Docherty, K. S., E. A. Stone, I. M. Ulbrich, P. F. DeCarlo, D. C. Snyder, J. J. Schauer, R. E. Peltier, R. J. Weber, S. M. Murphy, J. H. Seinfeld, B. D. Grover, D. J. Eatough, and J. L. Jimenez, 2008:

**Apportionment of primary and secondary organic aerosols in southern California during the study of organic aerosols in Riverside (SOAR-1).**

*Environ. Sci. Technol.*, **42**, 7655-7662.

Duplissy, J., M. Gysel, M. R. Alfarra, J. Dommen, A. Metzger, A. S. H. Prevot, E. Weingartner, A. Laaksonen, T. Raatikainen, N. Good, F. Turner, G. McFiggans, and U. Baltensperger, 2008:

**Cloud forming potential of secondary organic aerosol under near atmospheric conditions.**

*Geophys. Res. Lett.*, **35**, L03818, doi:10.1029/2007GL031075.

Fisseha, R., M. Saurer, M. Jäggi, R. T. W. Siegwolf, S. Szidat, V. Samburova, and U. Baltensperger, 2008:

**Determination of primary and secondary sources of organic acids and carbonaceous aerosols using stable carbon isotopes.**

*Atmos. Environ.*, **43**, 431-437.

Gaeggeler, K., A. S. H. Prevot, J. Dommen, G. Legreid, S. Reimann, and U. Baltensperger, 2008:

**Residential wood burning in an Alpine valley as a source for oxygenated volatile organic compounds, hydrocarbons and organic acids.**

*Atmos. Environ.*, **42**, 8278-8287.

Gietl, J. K., T. Tritscher, and O. Klemm, 2008:

**Size-segregated analysis of PM10 at two sites, urban and rural, in Münster (Germany) using five-stage Berner type impactors.**

*Atmos. Environ.*, **42**, 5721-5727.

Healy, R. M., J. C. Wenger, A. Metzger, J. Duplissy, M. Kalberer, and J. Dommen, 2008:

**Gas/particle partitioning of carbonyls in the photooxidation of isoprene and 1,3,5-trimethylbenzene.**

*Atmos. Chem. Phys.*, **8**, 3215-3230.

Hellen, H., J. Dommen, A. Metzger, A. Gascho, J. Duplissy, T. Tritscher, A. S. H. Prevot, and U. Baltensperger, 2008:

**Using proton transfer reaction mass spectrometry for online analysis of secondary organic aerosols.**

*Environ. Sci. Technol.*, **42**, 7347-7353.

Herich, H., L. Kammermann, M. Gysel, E. Weingartner, U. Baltensperger, U. Lohmann, and D. J. Cziczo, 2008:  
**In situ determination of atmospheric aerosol composition as a function of hygroscopic growth.**  
*J. Geophys. Res.*, **113**, doi:10.1029/2008JD009954.

Hoose, C., U. Lohmann, P. Stier, B. Verheggen, and E. Weingartner, 2008:  
**Aerosol processing in mixed-phase clouds in ECHAM5-HAM: Model description and comparison to observations.**  
*J. Geophys. Res. Atmos.*, **113**, doi:10.1029/2007jd009251

Joos, O., A. Heim, F. Hagedorn, M. Saurer, M. W. I. Schmidt, and R. T. W. Siegwolf, 2008:  
**Can we use CO<sub>2</sub> concentrations determined with IRMS from small samples for the Keeling plot approach? Comparison of LICOR 8100 and IRMS measurements.**  
*Rapid Communications in Mass Spectrometry*, **22**, 4029-4034.

Kahmen, A., K. Simonin, K. P. Tu, A. Merchant, A. Callister, R. Siegwolf, T. E. Dawson, and S. K. Arndt, 2008:  
**Effects of environmental parameters, leaf physiological properties and leaf water relations on leaf water d<sup>18</sup>O enrichment in different Eucalyptus species.**  
*Plant Cell and Environment*, **31**, 738-751.

Keller, J., S. Andreani-Aksoyoglu, M. Tinguely, J. Flemming, J. Heldstab, M. Keller, R. Zbinden, and A. S. H. Prevot, 2008:  
**The impact of reducing the maximum speed limit on motorways in Switzerland to 80 km h<sup>-1</sup> on emissions and peak ozone.**  
*Environmental Modelling & Software*, **23**, 322-332.

Kodama, N., R. L. Barnard, Y. Salmon, C. Weston, J. P. Ferrio, J. Holst, R. A. Werner, M. Saurer, H. Rennenberg, N. Buchmann, and A. Gessler, 2008:  
**Temporal dynamics of the carbon isotope composition in a Pinus sylvestris stand: from newly assimilated organic carbon to respired carbon dioxide.**  
*Oecologia*, **156**, 737-750.

Laaksonen, A., M. Kulmala, C. D. O'Dowd, J. Joutensaari, P. Vaattovaara, S. Mikkonen, K. E. J. Lehtinen, L. Sogacheva, M. Dal Maso, P. P. Aalto, T. Petäjä, A. Sogachev, Y. J. Yoon, H. Lihavainen, D. Nilsson, M. C. Facchini, F. Cavalli, S. Fuzzi, T. Hoffmann, F. Arnold, M. Hanke, K. Sellegri, B. Umann, W. Junkermann, H. Coe, J. D. Allan, M. R. Alfarra, D. R. Worsnop, M.-L. Riekkola, T. Hyötyläinen, and Y. Viisanen, 2008:  
**The role of VOC oxidation products in continental new particle formation.**  
*Atmos. Chem. Phys.*, **8**, 2657-2665.

Lanz, V. A., M. R. Alfarra, U. Baltensperger, B. Buchmann, C. Hueglin, S. Szidat, M. N. Wehrli, L. Wacker, S. Weimer, A. Caseiro, H. Puxbaum, and A. S. H. Prevot, 2008:  
**Source attribution of submicron organic aerosols during wintertime inversions by advanced factor analysis of aerosol mass spectra.**  
*Environ. Sci. Technol.*, **42**, 214-220.

Metzger, A., J. Dommen, K. Gaeggeler, J. Duplissy, A. S. H. Prevot, J. Kleffmann, Y. Elshorbany, A. Wisthaler, and U. Baltensperger, 2008:  
**Evaluation of 1,3,5 trimethylbenzene degradation in the detailed tropospheric chemistry mechanism, MCMv3.1, using environmental chamber data.**  
*Atmos. Chem. Phys.*, **8**, 6453-6468.

Morier, I., C. Guenat, R. Siegwolf, J.-C. Védy, and P. Schleppi, 2008:  
**Dynamics of atmospheric N deposition in a temperate calcareous forest soil.**  
*Journal of Environmental Quality*, **37**, 2012-2021

Morier, I., P. Schleppi, R. Siegwolf, H. Knicker, and C. Guenat, 2008:  
**N-15 immobilization in forest soil: a sterilization experiment coupled with (15)CPMAS NMR spectroscopy.**  
*European Journal of Soil Science*, **59**, 467-475.

Petzold, A., J. Hasselbach, P. Lauer, R. Baumann, K. Franke, C. Gurk, H. Schlager, and E. Weingartner, 2008:  
**Experimental studies on particle emissions from cruising ship, their characteristic properties, transformation and atmospheric lifetime in the marine boundary layer.**  
*Atmos. Chem. Phys.*, **8**, 2387-2403.

Rogiers, N., F. Conen, M. Furger, R. Stöckli, and W. Eugster, 2008:

**Impact of past and present land-management on the C-balance of a grassland in the Swiss Alps.**

*Global Change Biology*, **14**, 2613-2625, doi:10.1111/j.1365-2486.2008.01680.x.

Sandradewi, J., A. S. H. Prevot, S. Szidat, N. Perron, M. R. Alfarra, V. A. Lanz, E. Weingartner, and U. Baltensperger, 2008:

**Using aerosol light absorption measurements for the quantitative determination of wood burning and traffic emission contributions to particulate matter.**

*Environ. Sci. Technol.*, **42**, 3316-3323.

Sandradewi, J., A. S. H. Prevot, E. Weingartner, R. Schmidhauser, M. Gysel, and U. Baltensperger, 2008:

**A study of wood burning and traffic aerosols in an Alpine valley using a multi-wavelength aethalometer.**

*Atmos. Environ.*, **42**, 101-112.

Saurer, M., P. Cherubini, C. E. Reynolds-Henne, K. Treydte, W. T. Anderson, and R. T. W. Siegwolf, 2008:

**An investigation of the common signal in tree-ring stable isotope chronologies at temperate sites.**

*J. Geophys. Res.*, **113**, doi:10.1029/2008JG000689.

Sidorova, O. V., R. T. W. Siegwolf, M. M. Saurer, M. M. Naurzbaev, and E. A. Vaganov, 2008:

**Isotopic composition (d13C, d18O) in Siberian tree-ring chronology.**

*Geophys. Res. Biogeosciences*, **113**, doi:10.1029/2007JG000473.

Sjogren, S., M. Gysel, E. Weingartner, M. R. Alfarra, J. Duplissy, J. Cozic, J. Crosier, H. Coe, and U. Baltensperger, 2008:

**Hygroscopicity of the submicrometer aerosol at the high-alpine site Jungfrauoch, 3580 m a.s.l., Switzerland.**

*Atmos. Chem. Phys.*, **8**, 5715-5729.

Swietlicki, E., H.-C. Hansson, K. Hämeri, B. Svenningsson, A. Massling, G. McFiggans, P. H. McMurry, T. Petäjä, P. Tunved, M. Gysel, D. Topping, E. Weingartner, U. Baltensperger, J. Rissler, A. Wiedensohler, and M. Kulmala, 2008:  
**Hygroscopic properties of submicrometer atmospheric aerosol particles measured with H-TDMA instruments in various environments - a review.**

*Tellus*, **60B**, 432-469, doi:10.1111/j.1600-0889.2008.00350.x.

Vesna, O., S. Sjogren, E. Weingartner, V. Samburova, M. Kalberer, H. W. Gaggeler, and M. Ammann, 2008:

**Changes of fatty acid aerosol hygroscopicity induced by ozonolysis under humid conditions.**

*Atmos. Chem. Phys.*, **8**, 4683-4690.

Viana, M., T. A. J. Kuhlbusch, X. Querol, A. Alastuey, R. M. Harrison, P. K. Hopke, W. Winiwarter, M. Vallius, S. Szidat, A. S. H. Prevot, C. Hueglin, H. Bloemen, P. Wählín, R. Vecchi, A. I. Miranda, A. Kasper-Giebl, W. Maenhaut, and R. Hitznerberger, 2008:

**Source apportionment of particulate matter in Europe: A review of methods and results.**

*J. Aerosol Sci.*, **39**, 827-849.

Weimer, S., M. R. Alfarra, D. Schreiber, M. Mohr, A. S. H. Prevot, and U. Baltensperger, 2008:

**Organic aerosol mass spectral signatures from wood-burning emissions: influence of burning conditions and wood type.**

*J. Geophys. Res.*, **113**, doi:10.1029/2007JD009309.

Wohlfahrt, G., M. Anderson-Dunn, M. Bahn, M. Balzarolo, F. Berninger, C. Campbell, A. Carrara, A. Cescatti, T. Christensen, S. Dore, W. Eugster, T. Friborg, M. Furger, D. Gianelle, C. Gimeno, K. Hargreaves, P. Hari, A. Haslwanter, T. Johansson, B. Marcolla, C. Milford, Z. Nagy, E. Nemitz, N. Rogiers, M. Sanz, R. Siegwolf, S. Susiluoto, M. Sutton, Z. Tuba, F. Ugolini, R. Valentini, R. Zorer, and A. Cernusca, 2008:

**Biotic, Abiotic, and Management Controls on the Net Ecosystem CO<sub>2</sub> Exchange of European Mountain Grassland Ecosystems.**

*Ecosystems*, **11**, 1338-1351, doi:10.1007/s10021-008-9196-2.

Zardini, A. A., S. Sjögren, C. Marcolli, U. K. Krieger, M. Gysel, E. Weingartner, U. Baltensperger, and T. Peter, 2008:

**A combined particle trap/HTDMA hygroscopicity study of mixed inorganic/organic aerosol particles.**

*Atmos. Chem. Phys.*, **8**, 5589-5601.

Zeeman, M. J., R. A. Werner, W. Eugster, R. T. W. Siegwolf, G. Wehrle, J. Mohn, and N. Buchmann, 2008:

**Optimization of automated gas sample collection and IRMS analysis of d<sup>13</sup>C of CO<sub>2</sub> in air.**

*Rapid Communications in Mass Spectrometry*, **22** 3883-3892.

Zheng, J., R. Zhang, E. C. Fortner, R. M. Volkamer, L. Molina, A. C. Aiken, J. L. Jimenez, K. Gaeggeler, J. Dommen, S. Dusanter, P. S. Stevens, and X. Tie, 2008:

**Measurements of HNO<sub>3</sub> and N<sub>2</sub>O<sub>5</sub> using ion drift-chemical ionization mass spectrometry during the MILAGRO/MCMA-2006 campaign.**

*Atmos. Chem. Phys.*, **8**, 6823-6838.

**Books / Book Sections 2008**

Andreani-Aksoyoglu, S., J.Keller, M. R. Alfarra, A. S. H. Prévôt, J. J. Sloan, and Z. He, 2008:

**Contribution of biogenic emissions on carbonaceous aerosols in summer and winter in Switzerland: A modelling study.**

*29th NATO/CCMS International Technical Meeting on Air Pollution Modelling and its Application*, C. Borrego and A. I. Miranda (Eds.). Springer, Aveiro, Portugal, 101-108.

Baltensperger, U., and M. Furger, 2008:

**Aerosol chemistry in remote locations.**

*Environmental chemistry of aerosols*, I. Colbeck (Ed.). Blackwell Publishing, Oxford, UK, 217-252.

**Conference Proceedings 2008**

Andreani-Aksoyoglu, S., J.Keller, M.R.Alfarra, J.Sandredewi, A. S. H. Prévôt, and U.Baltensperger, 2008:

**An aerosol modelling study of winter and summer periods in Switzerland.**

Advanced Atmospheric Aerosol Symposium, Naples, Italy, November 9-12, Chemical Engineering Transactions, 45-52.

Andreani-Aksoyoglu, S., J. Keller, M. R. Alfarra, J. Sandradewi, and A. S. H. Prévôt, 2008:

**Seasonal variability of aerosol composition in Switzerland: A modelling study.**

The 12th International Conference on Harmonization within Atmospheric Dispersion Modelling for Regulatory Purposes, Cavtat, Croatia, Croatian Meteorological Journal, 282-286.

Chirico, R., M. Heringa, P. F. DeCarlo, T. Tritscher, M. Steiger, E. Weingartner, G. Wehrle, R. Richter, A. S. H. Prevot, and U. Baltensperger, 2008:

**Impact of a diesel car on primary and secondary organic aerosols** Chemical Engineering Transactions, Advanced Atmospheric Aerosol Symposium, Naples, Italy, November 9-12, AIDIC.

Coen, M. C., E. Weingartner, O. Schmid, R. Schmidhauser, A. Petzold, and U. Baltensperger, 2008:

**Minimizing light absorption measurement artifact of the Aethalometer: A new correction evaluation based on a 4-year dataset.**

European Aerosol Conference, Thessaloniki, Greece, August 24-29.

DeCarlo, P. F., E. Dunlea, J. Kimmel, I. Ulbrich, A. Aiken, J. Crouse, P. Wennberg, C. Widinmyer, T. Campos, D. Knapp, A. Weinheimer, D. Montzka, Y. Shinozuka, T. Clarke, J. Zhao, J. Tomlinson, D. Collins, and J. L. Jimenez, 2008:  
**Aircraft based measurement of organic aerosol: Characterization and evolution during the MILAGRO 2006 field campaign.**

American Association of Aerosol Research, Orlando FL, USA, October 21.

DeCarlo, P. F., E. Dunlea, J. Kimmel, I. Ulbrich, A. Aiken, J. Crouse, P. Wennberg, C. Widinmyer, T. Campos, D. Knapp, A. Weinheimer, D. Montzka, Y. Shinozuka, T. Clarke, J. Zhao, J. Tomlinson, D. Collins, and J. L. Jimenez, 2008:  
**Aircraft based measurement of organic aerosol: Characterization and evolution during the MILAGRO 2006 field campaign.**

European Aerosol Conference, Thessaloniki, Greece, August 24-29.

Duplissy, J., S. Sjoegren, M. Gysel, L. Kammermann, A. Metzger, J. Dommen, U. Baltensperger, N. Meyer, Z. Ristovski, N. Good, G. McFiggan, V. Michaud, R. Weigel, P. Villani, P. Laj, S. M. d. Santos, and E. Weingartner, 2008:  
**Intercomparison of 6 different HTDMAs.**

European Aerosol Conference, Thessaloniki, Greece, August 24-29.

Kamphus, M., S. Borrmann, S. Walter, J. Curtius, J. Schneider, S. Mertes, and E. Weingartner, 2008:  
**Mass spectrometric analysis of small ice crystal residuals in mixed phase clouds during the CLACE projects.**

International Conference on Clouds and Precipitation, Cancun, Mexico, July 7-11.

Keller, J., A. Prévôt, A. F. Béguin, V. Jutzi, and C. Ordonez, 2008:

**Trends of Ozone and Ox in Switzerland from 1992 to 2007: Observations at Selected Stations of the NABEL, OASI and ANU Networks Corrected for Meteorological Variability.**

PSI Report No. 08-03, Report, Paul Scherrer Institute, Villigen PSI, 62.

Mertes, S., B. Verheggen, M. Kamphus, S. Walter, M. Ebert, B. Nilius, J. Schneider, D. Cziczo, J. Curtius, J. Cozic, A.

Worringen, and E. Weingartner, 2008:

**Physico-chemical characterisation of ice particle residuals in tropospheric mixed-phase clouds based on ice particle collection using the counterflow virtual impactor technique.**

International Conference on Clouds and Precipitation, Cancun, Mexico, July 7-11.

Prevot, A. S. H., J. Sandradewi, M. R. Alfarra, S. Szidat, V. A. Lanz, N. Perron, A. Caseiro, A. Kasper-Giebl, H. Puxbaum, and U. Baltensperger, 2008:

**A comparison of new and classic methods to estimate the contribution of wood smoke at different sites in Switzerland.**

Advanced Atmospheric Aerosol Symposium, Napoli, Italy, November 9-12, 367-370.

Sandradewi, J., A. S. H. Prévôt, E. Weingartner, M. R. Alfarra, S. Szidat, M. N., Wehrli, M. Ruff, V. A. Lanz, N. Perron, M. Gysel, R. Schmidhauser, A. Caseiro, A. Kasper-Giebl, H. Puxbaum, L. Wacker, and U. Baltensperger, 2008:

**Study of Aerosol from Wood Burning Versus Other Sources (AEROWOOD) Using a Multiwavelength Aethalometer.**

Aerosol & Atmospheric Optics: Visual Air Quality and Radiation, Moab, USA, April 28 - Mai 2, <http://secure.awma.org/presentations/AerosolAtmosphericOptics08/papers/56-Weingartner.pdf>.

Schmidhauser, R., E. Weingartner, P. Zieger, G. Wehrle, A. Jefferson, J. A. Ogren, and U. Baltensperger, 2008:

**Aerosol Light Scattering at High Relative Humidity.**

Aerosol & Atmospheric Optics: Visual Air Quality and Radiation, Moab, USA,, April 28 - Mai 2, <http://secure.awma.org/presentations/AerosolAtmosphericOptics08/papers/57-Weingartner.pdf>.

Sidorova, O. V., T. Böttger, R. T. W. Siegwolf, M. Saurer, M. M. Naurzbaev, and E. A. Vaganov, 2008:

**Reaction of siberian subarctic larch trees to abrupt climatic changes derived from tree ring and isotope data.**

TRACE-Tree Rings in Archaeology, Climatology and Ecology 2007, Riga, Latvia, November, 121-128.

## Posters 2008

Barmpadimos, I., 2008:

**Evaluation and intercomparison of meteorology-chemistry models in Po basin, Italy.**

Atmospheric Boundary Layers: Concepts, Observations, and Numerical Simulations, Les Houches, France.

Cozic, J., B. Verheggen, E. Weingartner, U. Baltensperger, S. Mertes, D. J. Cziczo, S. J. Gallavardin, K. N. Bower, I. Crawford, M. Flynn, P. Connolly, M. Gallagher, S. Walter, J. Schneider, J. Curtius, and A. Petzold, 2008:

**Partitioning of aerosol particles in mixed-phase clouds.**

In: P. M. E. ABSTRACT (Editor), International conference on clouds and precipitation, Cancun, Mexico.

Dommen, J., A. Metzger, K. Gaeggeler, Y. Elshorbany, and J. Kleffmann, 2008:

**Increased HONO formation in smog chamber photo-oxidation experiments of 1,3,5 trimethylbenzene.**

Nitrous acid: Tropospheric Chemistry, Measurement Methods and Future Directions, Wuppertal, Germany.

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**Trace elements in hourly ambient aerosol samples determined with synchrotron XRF.**

European Conference on X-Ray Spectrometry, Cavtat, Dubrovnik, Croatia.

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**Wood burning emissions in an Alpine valley: Measurements of oxygenated volatile organic compounds, hydrocarbons and organic acids.**

EGU General Assembly, Vienna, Austria Geophysical Research Abstracts, Vienna, EGU2008-A-03723.

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**Quantification of peroxides in secondary organic aerosols by UV-VIS photometry.**

EGU General Assembly, Vienna Austria. Geophysical Research Abstracts, Vienna, EGU2008-A-09959.

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**Hygroscopic growth and cloud condensation nuclei activity of secondary organic aerosol formed through photo-oxidation of alpha-pinene.**

AAAR 27th annual conference. American Association for Aerosol Research, Orlando, FL, USA, Abstract no: 9B.07.

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**New approach for inversion of tandem differential mobility analyser measurements.**

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**Investigation of primary and secondary aerosols from wood combustion with online aerosol mass spectrometry.**

European Aerosol Conference, Thessaloniki, Greece.

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**Measurement at low carbon concentration with a semi-continuous OCEC thermo-optical analyzer.**

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**Cloud Forming Potential of Secondary Organic Aerosol.**

International Conference on Clouds and Precipitation (ICCP2008), Cancun, Mexico.

Juranyi, Z., M. Gysel, E. Weingartner, P. DeCarlo, M. Heringa, R. Chirico, and U. Baltensperger, 2008:

**Measuring and modeling the CCN concentration at the Alpine site Jungfraujoeh.**

EUCAARI Annual Meeting 2008, Helsinki, Finland.

Kammermann, L., H. Herich, D. J. Cziczo, M. Gysel, T. Holst, A. Arneth, E. Weingartner, U. Lohmann, and U. Baltensperger, 2008:

**Hygroscopicity and CCN Activation Behavior of a Remote Aerosol: First Results from a Campaign in Northern Sweden.**

European Aerosol Conference, Thessaloniki, Greece.

Kammermann, L., H. Herich, D. J. Cziczo, M. Gysel, T. Holst, A. Arneth, E. Weingartner, U. Lohmann, and U. Baltensperger, 2008:

**Hygroscopicity and CCN Activation Behavior of Atmospheric Aerosols.**

Empa PhD Student's Symposium 2008, Empa St. Gallen.

Keller, J., A. Prévôt, A. F. Béguin, V. Jutzi, and C. Ordóñez, 2008:

**Trends of ozone in Switzerland from 1992 to 2007: observations at air quality stations of 3 monitoring networks corrected for meteorological variability.**

IGAC 10th International Conference. Bridging the scales in Atmospheric Chemistry : Local to Global, Annecy, France.

Kress, A., M. Saurer, M. Saurer, U. Büntgen, and H. Bugmann, 2008:

**High Sensitivity of an Alpine Isotope Tree-Ring Series to Temperature and Precipitation.**

Swiss Global Change Day, Bern.

Kress, A., M. Saurer, R. Siegwolf, and H. Bugmann, 2008:

**An Alpine Isotope Tree-Ring Series.**

Millennium Milestone Meeting 2008, Mallorca, Spain.

Kress, A., M. Saurer, R. Siegwolf, U. Büntgen, and H. Bugmann, 2008:

**High Sensitivity of an Alpine Isotope Tree-Ring Series to Temperature and Precipitation.**

Joint European Stable Isotope User Meeting (JESIUM), Toulon, France.

Perron, N., L. Besnier, A. S. H. Prévôt, S. Szidat, M. Ruff, S. Fahrni, and U. Baltensperger, 2008:

**Optimised separation of OC and EC for radiocarbon-based source apportionment of carbonaceous aerosol.**

9th ICCPA, 2008, Berkeley, USA.

Perron, N., S. Szidat, A. H. S. Prévôt, M. Ruff, S. Fahrni, and U. Baltensperger, 2008:

**Improved separation of OC and EC for radiocarbon-based source apportionment of carbonaceous aerosol.**

EUCAARI annual meeting, Helsinki, Finland.

Richard, A., M. Furger, N. Bukowiecki, P. Lienemann, M. Nachttegaal, A. S. H. Prévôt, and U. Baltensperger, 2008:

**Elemental analysis of ambient aerosol samples with synchrotron XRF.**

Workshop on X-ray absorption spectroscopy and advanced XAS techniques, PSI Villigen.

Schmidhauser, R., E. Weingartner, P. Zieger, G. Wehrle, A. Jefferson, J. A. Ogren, and U. Baltensperger, 2008:

**Aerosol light scattering at high relative humidity.**

Aerosol & Atmospheric Optics: Visual Air Quality and Radiation Balance, Moab, Utah, USA.

Sidorova, O., R. Siegwolf, M. Saurer, A. V. Kirilyanov, and A. Shashkin, 2008:

**Climatic changes in Central Siberia inferred from tree ring width and stable isotope data for the last century.**

Millennium Milestone Meeting 2, Calla Millor, Mallorca, Spain, 50-51.

Sidorova, O. V., R. T. W. Siegwolf, M. Saurer, and E. A. Vaganov, 2008:

**Response of Siberian larch trees to major volcanic eruptions reflected in tree ring and isotope data.**

9th Swiss Global Change Day, Bern, Switzerland.

Tritscher, T., M. Heringa, R. Chirico, M. Steiger, J. Duplissy, M. Gysel, P. DeCarlo, J. Dommen, E. Weingartner, and U. Baltensperger, 2008:

**Properties of aged combustion aerosols. First results from smog chamber experiments.**

12th ETH-Conference on Combustion Generated Nanoparticles, Zürich.

Tritscher, T., Z. Jurányi, R. Chirico, J. Duplissy, M. Ziese, S. Henning, M. Gysel, J. Dommen, E. Weingartner, F. Stratmann, and U. Baltensperger, 2008:

**Hygroscopic growth of pure secondary organic aerosols (SOA) and aged diesel soot particles.**

European Aerosol Conference, Thessaloniki, Greece.

Weingartner, E., and R. Schmidhauser, 2008:

**Aerosol Light Scattering at High Relative Humidity.**

Aerosol & Atmospheric Optics: Visual Air Quality and Radiation, Moab, USA.

Zieger, P., R. Schmidhauser, M. Gysel, L. Kammermann, E. Weingartner, and U. Baltensperger, 2008:

**Effects of relative humidity on aerosol light scattering.**

EGU General Assembly, Vienna, Austria.

Zieger, P., R. Schmidhauser, M. Gysel, L. Kammermann, E. Weingartner, and U. Baltensperger, 2008:

**Effects of relative humidity on aerosol light scattering.**

Light Scattering: Mie and More - Commemorating 100 Years Mie's 1908 Publications, Forschungszentrum Karlsruhe, Karlsruhe, Germany.

## Theses 2008

### PhD Theses

J. Duplissy

**Hygroscopicity properties of secondary organic aerosols**

Ph.D. Thesis, No. 17980, ETH Zürich, October 15, 2008.

K. Gäggeler

**Small molecular weight organic acids in the gas and aerosol phase**

Ph.D. Thesis, No. 18042, ETH Zürich, October 15, 2008.

A. Metzger

**Chamber studies of secondary organic aerosol formation: from gas phase degradation to aerosol yields**

Ph.D. Thesis, No. 17853, ETH Zürich, June 4, 2008.

J. Sandradewi

**A study of wood burning versus traffic aerosols using a multi-wavelength aethalometer (AEROWOOD)**

Ph.D. Thesis, No. 17694, ETH Zürich, March 18, 2008.

S. Weimer

**Particle emission of traffic and wood combustion and its impact on spatial distributions of submicron particulate matter**

Ph.D. Thesis, No. 17995, ETH Zürich, September 19, 2008.

### Diploma Theses

C. Caprez

**Wood burning emission and diesel exhaust experiments at the smog chamber: PTR-MS results**

University of Zürich, 2008.

C. Good

**Source apportionment of a highly time and spatially resolved organic aerosol dataset from the Rhine valley by the use of positive matrix factorization**

ETH Zürich, August 2008.



M. Steiger

**An overview of diesel and wood burning soot smog chamber experiments and a loading effect correction for aethalometer measurements**

ETH Zürich, July 2008.

## Semester Theses

L. Besnier

**Characterisation of carbonaceous particles with an ECOC instrument**

Paul Scherrer Institut, 2008.

## Invited Talks 2008

Baltensperger, U., 2008:

**Aerosol Research at the High-Alpine Site Jungfrauoch.**

Grosses Physikalisches Kolloquium an der Universität zu Köln, Germany.

Baltensperger, U., 2008:

**Aerosole - winzige Teilchen beeinflussen globales Klima.**

Klimasonntag, PSI, Villigen.

Baltensperger, U., 2008:

**Aerosole und ihre abkühlende Wirkung auf das Klima. Lokal messen, Global verstehen.**

Schweizer Klimabeobachtung als globaler Beitrag, Swiss GCOS, Zürich.

Baltensperger, U., 2008:

**Atmospheric Aerosols - Recent Development in Elucidating Their Sources.**

4th Aarhus Winter Meeting, Trends in Modern Chemistry, Aarhus, Denmark.

Baltensperger, U., 2008:

**Atmospheric Aerosols - Sources, Transformation, Processes and Impact.**

3rd Conference on Atmospheric Science, Gothenborg, Sweden.

Baltensperger, U., 2008:

**Chemical and Physical Properties of Organic Aerosols.**

EGU, Vienna, Austria.

Baltensperger, U., 2008:

**Das CLOUD-Projekt am CERN.**

AMI Maschinenbau-Kolloquium, PSI Villigen.

Baltensperger, U., 2008:

**Der Beitrag der Holzfeuerungen zum Feinstaub-Hintergrund und Forschung am PSI.**

Medienkonferenz Feinstaub aus Holzheizungen, Balsthal.

Baltensperger, U., 2008:

**Feinstaub in der Schweiz - Zusammensetzung, Quellen, Auswirkungen.**

Forum Medizin und Energie, Aarau.

Baltensperger, U., 2008:

**Feinstaub: kleine Teilchen mit grossen Auswirkungen.**

Forschung im Zelt, PSI, Aarau.

Baltensperger, U., 2008:

**Formation and transformation of secondary organic aerosols.**

University of Colorado, Boulder, USA.

Baltensperger, U., 2008:

**New Frontiers on Organic Aerosols.**

Plenary talk, EAC 2008, Thessaloniki, Greece.

Baltensperger, U., 2008:

**Nucleation, growth, and aging of secondary organic aerosol.**

Workshop on Organic Aerosols, Telluride, USA.

Baltensperger, U., 2008:

**Primary and Secondary Organic Aerosol from Diesel Engines.**

12th ETH-Conference on Combustion Generated Nanoparticles, Zürich.

Baltensperger, U., 2008:

**Secondary organic aerosols: formation, transformation, and source apportionment.**

University of California, Berkeley, CA, USA.

Baltensperger, U., 2008:

**Sekundärorganisches Aerosol, HULIS, Polysäuren, hochmolekulare Verbindungen: Eine Wanderung durch den Terminologie-Dschungel und erste Einblicke in Bildungsprozesse und Eigenschaften.**

Start-Treffen der DFG-Forschergruppe 763, Oberflockenbach, Germany.

Baltensperger, U., 2008:

**Sources of Organic Aerosols in the Atmosphere - Recent Results from Lab and Field Experiments.**

University of Copenhagen, Sweden.

Baltensperger, U., and E. Weingartner, 2008:

**Aerosol Measurements at the High-Alpine Station Jungfrauoch, Switzerland.**

CANDAC Workshop, Toronto Canada.

Baltensperger, U., and E. Weingartner, 2008:

**Aerosol Measurements in the context of the Global Atmosphere Watch Programme and several EC Projects.**

Spawning the Atmosphere Measurements of Jungfrauoch, Bern.

DeCarlo, P. F., 2008:

**Characterizing Submicron Aerosols with the High Resolution Time-of-Flight Aerosol Mass Spectrometer.**

Online Aerosol Mass Spectrometry Workshop, Leeds, UK.

Furger, M., 2008:

**Feinstaub: kleine Teilchen mit grossen Auswirkungen.**

Forschung im Zelt, PSI, Waldshut, Germany.

Gysel, M., 2008:

**Hygroscopic properties of laboratory generated and atmospheric aerosol particles and their interaction with clouds.**

Johann Wolfgang Goethe Universität, Frankfurt am Main, Germany.

Mohr, C., 2008:

**Analyse primärer organischer Feinstaub-Emissionen aus Grillaktivitäten.**

Bundesamt für Umwelt BAFU, Bern.

Mohr, C., 2008:

**Partikelzusammensetzung im Rheintal und in der Stadt Zürich.**

Ostluft-Vollversammlung, Fildern.

Prevot, A. S. H., 2008:

**Aerosolmassenspektrometer.**

Fachtagung Immissionstechnik, Empa, Dübendorf.

Prevot, A. S. H., 2008:

**Fine and ultrafine particle measurements in Central Europe in ambient air.**

International Workshop on Environmental Nanoparticles, Tsukuba, Japan.

Prevot, A. S. H., 2008:

**Fine and ultrafine particle measurements in Switzerland in ambient air.**

University of Tokyo, Japan.

Prevot, A. S. H., 2008:

**Organic carbon source analysis in aerosols.**

Organics in the Atmosphere, Vienna, Austria.

Prevot, A. S. H., 2008:

**Source apportionment of particulate organics in ambient air and secondary organic aerosol formation studies**

**in the smogchamber at the Paul Scherrer Institute in Switzerland.**

University of Stockholm, Sweden.

Saurer, M., 2008:

**The climatic content of carbon and oxygen isotope ratios in tree-rings from northern Eurasia.**

Barnaul, Russia.

Saurer, M., 2008:

**The use of isotopes in ecosystem studies.**

Pisa, Italy.

Weingartner, E., 2008:

**CPC, SMPS, APS im Messbetrieb.**

Fachtagung Immissionsmesstechnik, Empa Dübendorf.

Weingartner, E., 2008:

**Current Aerosol Measurement at the Jungfrauoch.**

Air Pollution and Climate Change at Contrasting Altitude and Latitude, Murten.

Weingartner, E., 2008:

**Feinstaub: kleine Teilchen mit grossen Auswirkungen.**

Forschung im Zelt, PSI, Baden.

Weingartner, E., 2008:

**Study of Aerosol from Wood Burning Versus Other Sources (AEROWOOD) Using a Multiwavelength Aethalometer.**

Aerosol & Atmospheric Optics: Visual Air Quality and Radiation, Moab, USA.

## **Newspaper Articles 2008**

U. Baltensperger

**Feinstaub aus Holzfeuerungen: heute agieren – nicht morgen**

Journal: HP, das Fachmagazin für Hafner und Plattenleger, Nr. 7, 2008

U. Baltensperger

**Möglichst wenig Staub aufwirbeln**

Zeitungsartikel: Solothurner Zeitung, Oltener Tagblatt, October 3, Zofinger Tagblatt, October 4, 2008.

U. Baltensperger

**Holzofenbauer gehen gegen den Feinstaubausstoss vor**

Zeitungsartikel: Die Südostschweiz, Bote der Urschweiz, Höfener Volksblatt, March-Anzeiger, Sarganserländer, Werdenberger&Obertoggenburger, October 3, 2008.

U. Baltensperger

**Forschung für saubere Öfen**

Zeitungsartikel: Solothurner Tagblatt, October 4, 2008.

U. Baltensperger

**Schadstoffärmere Holzfeuerungen**

Zeitschriftartikel: TEC21, October 27, 2008.

U. Baltensperger

**Fortschritte dank oberem Abbrand und Blähglimmer**

Zeitungsartikel: WALD und HOLZ, November 7, 2008.

U. Baltensperger

**Organische Aerosole als wichtiger Schadstoff**

Zeitungsartikel: NZZ, December 3, 2008.

U. Baltensperger

**Feinstaub aus Holzheizungen: Heute agieren, nicht morgen reagieren**

Journal: IZA, Sicherheit und Gesundheit, June 2008.

E. Weingartner

**Die Partei befiehlt Sonne**

Zeitungsartikel: NZZ am Sonntag, August 3, 2008.

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