

Manuela van Pinxteren



Dr. Manuela van Pinxteren

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Funktion

wissenschaftliche Mitarbeiterin

Abteilung:

Chemie der Atmosphäre

Forschungsgebiete & Arbeitsschwerpunkte:

- Interaktion zwischen Ozean und Atmosphäre
- Analytische Methodenentwicklung für die Spurenanalyse natürlicher organischer Bestandteile in marinen Proben (MS-Kopplungstechniken: GC-MS, LC-MS)
- Planung und Durchführung von Feldkampagnen zur Beprobung mariner Aerosolpartikel und Seewasser (Schiffsexpeditionen, Atmosphärenstationen)

Aktuelle Projekte:

- PI im SAW-Projekt "MarParCloud" (2016-2019)
- DFG-Projekt: Aliphatic amines in the tropical marine environment: Sources, budgets and phase partitioning ("ALAMARE") (2016-2017)
- Transregio-Projekt: "Arctic Amplification" (AC³) (2016-2019)
- BMBF-Projekt: Surface Ocean Processes in the Anthropocene ("SOPRAN") (2013-2016) ⇒ PI im Subprojekt: Oceanic export of organic matter: comprehensive data interpretation"

Lehre:

- seit 2012: Lehrende im Aufbaustudiengang "Analytics and Spectroscopy" an der Universität Leipzig

Gremien/Mitgliedschaften:

- 10/2015: Teilnahme am "Future Leaders Programme of the Science and Technology in Society Forum" (STS-Forum), Kyoto, Japan
- seit 2012: Mitglied des internen Wissenschaftsrats am TROPOS

Lebenslauf (CV):*Akademische Qualifikation:*

1997-2002	Study of Chemistry with the focus of Environmental Chemistry	Universität Leipzig
09/2002	Diploma in Chemistry (Environmental Chemistry) with the grade „very good“(1,3)	Universität Leipzig
09-12/1999	DAAD practical training (Development and testing of catalysts)	University of Campinas, Brasil
2003-2005	Teaching activities during GDCh courses in gas chromatography	
01/2003-04/2006	Doktorandin	Helmholtz-Centre for Environmental Research (UFZ), Leipzig, Department of Analytical Chemistry
05/2006-06/2011	Postdoc in the Department of Analytical Chemistry	Helmholtz-Centre for Environmental Research (UFZ)
Since 07/2011	Scientist at the Atmospheric Chemistry Department	Leibniz-Institute for Tropospheric Research (TROPOS), Leipzig

Diplomthema: "Gas chromatographic investigations of the products of pre-treated wood samples" (Betreuer: Prof. Dr. Werner Engewald)

Dissertation: "Development and Application of New Techniques for the Extraction of Organic Contaminants in Different Matrices" (Betreuende: Dr. habil. Peter Popp, Prof. Dr. Bäbel Schulze), Abschluss: Dr. rer. nat. mit "*summa cum laude*"

Publikationen, van Pinxteren / Schellin:

- **van Pinxteren**, M., Barthel, S., Fomba, K., Müller, K., von Tümpling, W., and Herrmann, H. (2017) The influence of environmental drivers on the enrichment of organic carbon in the sea surface microlayer and in submicron aerosol particles – measurements from the Atlantic Ocean *Elem Sci Anth*, 5, doi.org/10.1525/elementa.225
- Engel, A., Bange, H., Cunliffe, M., Burrows, S., Friedrichs, G., Galgani, L., Herrmann, H., Hertkorn, N., Johnson, M., Liss, P., Quinn, P., Schartau, M., Soloviev, A., Stolle, C., Upstill-Goddard, R., **van Pinxteren**, M., and Zäncker, B. (2017) The Ocean's Vital Skin: Toward an Integrated Understanding of the Sea Surface Microlayer *Front. Mar. Sci.*, 4, doi: 10.3389/fmars.2017.00165, (2017).
- Huang, S., Poulain, L., van Pinxteren, D., **van Pinxteren**, M., Wu, ZJ., Herrmann, H., Wiedensohler, A. (2017) Latitudinal and Seasonal Distribution of Particulate MSA over the Atlantic using a Validated Quantification Method with HR-ToF-AMS *Environ. Sci. Technol.* 2017, 51(1). DOI:10.1021/acs.est.5b02388
- **van Pinxteren**, M., Fiedler, B., van Pinxteren, D., Iinuma, Y., Körtzinger, A., Herrmann, H. (2015) Chemical characterization of sub-micrometer aerosol particles in the tropical Atlantic Ocean: marine and biomass burning influences *J Atmos. Chem* 72(2): 105-125, DOI 10.1007/s10874-015-9307-3
- Ciuraru, R., Fine, L., **van Pinxteren**, M., D'Anna, B., Herrmann, H., George, C. (2015) Unravelling New Processes at Interfaces: Photochemical Isoprene Production at the Sea Surface *Environ. Sci. Technol.* 2015; 49(22). DOI:10.1021/acs.est.5b02388
- Ciuraru, R., Fine, L., **van Pinxteren**, M., D'Anna, B., Herrmann, H., George, C. (2015) Photosensitized production of functionalized and unsaturated organic compounds at the air-sea interface *Sci. Rep.* (2015) 5:12741
- Fomba, K. W.; Mueller, K.; van Pinxteren, D.; Poulain, L.; **van Pinxteren**, M.; Herrmann, H. (2014) Long-term chemical characterization of tropical and marine aerosols at the CVAO: field studies (2007 to 2011) *Atmos. Chem. Phys.* 14, (3), 3917-3971
- **van Pinxteren**, M., Herrmann, H. (2013) Glyoxal and Methylglyoxal in Atlantic Seawater and marine Aerosol Particles: Method development and first application during the Polarstern cruise ANT XXVII/4. *Atmos. Chem. Phys.* 13, 15301-15331
- **van Pinxteren**, M., Müller, C., Iinuma, Y., Stolle, C., Herrmann, H. (2012) Chemical Characterization of Dissolved Organic Compounds from Coastal Sea Surface Microlayers (Baltic Sea, Germany) *Environ. Sci. Technol.* 2012, 46, 10455–10462

- Möder, M., Bauer, C., Popp, P., **van Pinxteren**, M., Reemtsma, T. (2012) Determination of pesticide residues in wine by membrane-assisted solvent extraction and high-performance liquid chromatography-tandem mass spectrometry Anal., Bioanal. Chem, 403 (6), 1731-1741
- Chimuka, L., **van Pinxteren**, M., Billing, J., Yilmaz, E., Jönsson, J.A. (2011) Selective extraction of triazine herbicides based on a combination of membrane assisted solvent extraction and molecularly imprinted solid phase extraction J. Chromatogr. A, 1218, 647–653
- **van Pinxteren** (née Schellin), M., Paschke, A., Popp, P. (2010) Silicone rod and silicone tube sorptive extraction – a review J. Chromatogr. A, 1217, 2589–2598
- **van Pinxteren** (née Schellin), M., Bauer C., Popp, P. (2009) High performance liquid chromatography-tandem-mass spectrometry for the analysis of 10 pesticides in water: A comparison between membrane-assisted solvent extraction and solid phase extraction J. Chromatogr. A, 1216, 5800-5806
- **van Pinxteren**, M., Montero, L., Jaesch, S., Paschke, H., Popp, P. (2009) Headspace sorptive extraction using silicone tubes for the determination of chlorobenzenes in water Anal Bioanal Chem 393, 767–775
- **Schellin**, M., Popp, P. (2007): Application of a polysiloxane-based extraction method combined with large volume injection gas chromatography-mass spectrometry of organic compounds in water samples J.Chromatogr.A 1152 (1-2), 175-183
- Rodil, R., **Schellin**, M., Popp, P. (2007): Analysis of polycyclic-aromatic hydrocarbons in water and beverages using membrane assisted solvent extraction in combination with large volume injection-gas chromatography mass spectrometric detection J.Chromatogr.A 1163 (1-2), 288-297
- Möder, M., **Schellin**, M., Popp, P. (2006): Miniaturisierte Probenvorbereitungstechniken zur Bestimmung von organischen Verbindungen in wässrigen Proben LC-GC Ads Oktober 2006, 28-35
- **Schellin**, M., Popp, P. (2006): Miniaturized membrane-assisted solvent extraction combined with gas chromatography/electron-capture detection applied to the analysis of volatile organic compounds J.Chromatogr.A 1103 (2), 211-218
- Zuin, V. G., **Schellin**, M., Montero, L., Yariwake, J. H., Augusto, F., Popp, P. (2006): Comparison of stir bar sorptive extraction and membrane-assisted solvent extraction as enrichment techniques for the determination of pesticide and benzo[a]pyrene residues in Brazilian sugarcane juice J.Chromatogr.A 1114 (2), 180-187
- **Schellin**, M., Popp, P. (2005): Membrane-assisted solvent extraction of seven phenols combined with large volume injection-gas chromatography-mass spectrometric detection J.Chromatogr.A 1072 (1), 37-43
- Hauser, B., **Schellin**, M., Popp, P. (2004): Membrane-assisted solvent extraction of triazines, organochlorine, and organophosphorus compounds in complex samples combined with large-volume injection-gas chromatography/mass spectrometric detection Anal.Chem. 76 (20), 6029-6038
- **Schellin**, M., Hauser, B., Popp, P. (2004): Determination of organophosphorus pesticides using membrane-assisted solvent extraction combined with large volume injection-gas chromatography-mass spectrometric detection J.Chromatogr.A 1040 (2), 251-258
- **Schellin**, M., Popp, P. (2003): Membrane-assisted solvent extraction of polychlorinated biphenyls in river water and other matrices combined with large volume injection-gas chromatography-mass spectrometric detection J.Chromatogr.A 1020 (2), 153-160

Medien:

- Studiogast at „MDR um 11“, Thema: Arktisexpedition mit der Polarstern“, TV Report, MDR, 15.08.17
- „Bericht aus der Arktis: Expedition mit dem Forschungsschiff Polarstern“ TV-Report, MDR-Sachsenspiegel, 08.08.17
- „Wolkenmacher Meer - Gase aus dem Meer beeinflussen Klima“, TV-Report, 3sat-nano, 16.01.15
- „Klimaforscher interessieren sich für den Oberflächenfilm der Ozeane“, SWR2, 12.01.15
- „Zwischen Luft und Wasser“, Nachrichten aus der Chemie, 2014, 62, 970-974. Oktober 2014

Publikationen in anderen Zeitschriften:

- **van Pinxteren**, M. (2014) Zwischen Luft und Wasser Nachrichten aus der Chemie 62(10), October 2014
- **van Pinxteren**, M., Herrmann, H. (2014) Carbonyl compounds in marine aerosol particles and the sea surface microlayer SOLAS Newsletter, issue 16, 14-15
- **van Pinxteren**, M., Popp, P. (2008): Automatisierte Membranextraktion – Vorteile und Grenzen, GIT Labor Fachzeitschrift 3/2008 271-274

Vorträge auf internationalen Konferenzen, **van Pinxteren** / **Schellin**:

- **van Pinxteren**, M. Aliphatic amines in the tropical marine environment: abundance, possible origins and air-sea fluxes, European Geoscience Union (EGU), April 2018, Vienna, Austria
- **van Pinxteren**, M. The influence of environmental drivers on the enrichment of organic carbon in the sea surface microlayer and in submicron aerosol particles Ocean Science Meeting, February 2018, Portland, U.S.A.

- **van Pinxteren**, M. Organic carbon in the sea surface microlayer and in marine aerosol particles: measurements from the Atlantic Ocean European Geoscience Union (EGU), April 2016, Vienna, Austria
- **van Pinxteren**, M. Marine aerosol particles: production, composition and connection to the surface ocean International workshop 'The Ocean Surface Microlayer and Biogeochemical Feedbacks in the Earth System', July 2015, Kiel, Germany (invited keynote speaker)
- **van Pinxteren**, M. Ocean Atmosphere Interaction and Marine Multiphase Chemistry 249th American Chemical Society meeting, March 2015, Denver, U.S.A.
- **van Pinxteren**, M. Glyoxal and Methylglyoxal in Atlantic Seawater and in marine Aerosol Particles Ocean Science Meeting, February 2014, Hawaii, U.S.A.
- **van Pinxteren**, M. Organic export from the ocean to the atmosphere SETAC 2012, Leipzig, Germany
- **van Pinxteren**, M. Membrane extraction of pesticides – an example of environment-friendly sample preparation International Conference on Chemistry and the Environment, June 2009, Stockholm, Sweden
- **van Pinxteren**, M. Probenvorbereitung mit Membranen User meeting of the company Gerstel, 2009, Potsdam and Mülheim a.d. Ruhr, Germany
- **Schellin**, M. Different devices of membrane-assisted solvent extraction for the determination of a variety of organic compounds in liquid samples Analytical Days, June 2006, Göteborg, Sweden (invited speaker)
- **Schellin**, M. Application of a Polysiloxane-based Extraction Method for the Determination of Organochlorine and Organophosphorus compounds in water ExTech 2005, November 2005, Campinas, Brasil
- **Schellin**, M. Determination of Organic Pollutants in Water Samples applying Membrane-Assisted Solvent Extraction combined with Large Volume Injection-Gas Chromatography-Mass Spectrometric Detection 28th International Symposium on Capillary Chromatography and Electrophoresis, May 2005, Las Vegas, U.S.A.
- **Schellin**, M. Membranunterstützte Lösungsmittelextraktion zur Bestimmung organischer Kontaminanten in Flüssigproben User Meeting of the company Gerstel, 2005, Berlin and Hannover, Germany
- **Schellin**, M. Membranunterstützte Lösungsmittelextraktion zur Bestimmung organischer Kontaminanten in Flüssigproben PhD seminar of the working group „Separation Science“ in the GDCH, 2005, Kloster Banz, Bayreuth, Germany
- **Schellin**, M. Membrane-assisted solvent extraction for the determination of organic compounds in liquid samples International Postgraduate Program (IPP), 2004, University of Leipzig, Germany
- **Schellin**, M. Membrane-assisted solvent extraction- a novel, solvent-reduced technique for the determination of a variety of organic compounds in liquid samples ExTech 2004, September 2004, Leipzig, Germany

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