# **Committee on Energy and Commerce** U.S. House of Representatives Witness Disclosure Requirement - "Truth in Testimony"

Required by House Rule XI, Clause 2(g)

1.	Your Name: Rainer Lohmann		
2.	Are you testifying on behalf of the Federal, or a State or local	Yes	No
	government entity?		x
3.	Are you testifying on behalf of an entity that is not a government	Yes	No
	entity?		х
4.	Other than yourself, please list which entity or entities you are represent	ng:	
	n/a		
5.	Please list any Federal grants or contracts (including subgrants or subco	ntracts)	that
	you or the entity you represent have received on or after October 1, 2011	:	
	NSF OPP ARC 1203486 (2012-2015)		
	NSF OPP ANT 1332492 (2013-2014)		
6.	If your answer to the question in item 3 in this form is "yes," please descr	ibe you	
	position or representational capacity with the entity or entities you are re	presenti	ing:
	n/a		
_		<b>X</b> 7	N
7.	If your answer to the question in item 3 is "yes," do any of the entities	res	NO
	disclosed in item 4 have parent organizations, subsidiaries, or		
	partnerships that you are not representing in your testimony?		
8.	If the answer to the question in item 3 is "yes." please list any Federal gra	nts or	
~.	contracts (including subgrants or subcontracts) that were received by the	entities	listed
	under the question in item 4 on or after October 1, 2011, that exceed 10 n	ercent	f the
	revenue of the entities in the year received including the source and amo	unt of e	h
	grant or contract to be listed:		
	e		
9.	Please attach your curriculum vitae to your completed disclosure form.		

Signature:

Date: 07/08/2013

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# I. PERSONAL AND PROFESSIONAL INFORMATION

#### **Personal:**

Date of Birth: March 15, 1971 Place of Birth: Kiel, Germany Citizenship: German

#### **Education:**

2000	Environmental Science	Ph.D.	Lancaster University, U.K.
1996	Chemical Engineering	Master (Diplom)	EHICS, Strasbourg, France.
1993	Biochemistry	Vordiplom	Ruhr-Universität Bochum, Germany

#### **Professional Appointments:**

- 2007 present Editor, CLEAN Air, Soil, Water, Wiley-VCH
- 2013 present Editor, Environmental Toxicology and Chemistry
- 2009 present Editorial board member, Atmospheric Pollution Research
- 2013 present Editorial board member, EST Letters
- 2013 present Editorial board member, Environmental Pollution
- 2012 2013 Editorial board member, The Scientific World
- 2008 2010 Editorial board member, Environmental Toxicology and Chemistry
- 2007 2012 Editorial board member, Open Environmental & Biological Monitoring
- 2011 *Humboldt Fellow*, University of Tübingen (Germany)
- 2011 *Visiting Associate Professor*, IIT Madras, Chennai (India)
- 2010 *Visiting Fellow*, National Institute of Oceanography Goa (India)
- 2013 present Full Professor, Graduate School of Oceanography.
- 2009 2013 Associate Professor, Graduate School of Oceanography.
- 2004 2009 Assistant Professor, Graduate School of Oceanography.
- 2004 Fellow, Research Center for Ocean Margins, University of Bremen, Germany
- 2003 *Research Associate*, Lancaster University, U.K.
- 2003 *summer Fellow*, Max-Planck Institute of Meteorology, Hamburg, Germany
- 2000 2002 DAAD Fellow, Massachusetts Institute of Technology, Cambridge (MA)

#### Areas of Specialization:

Marine Organic geochemistry; global transport and fate of persistent organic pollutants; bioavailability of sedimentary organic contaminants; fluxes of black carbon in lakes and oceans; passive sampling development; global mass balance of organic compounds.

#### Awards and Fellowships:

2013	INNOLEC Visiting Lectureship Masyruk University, Brno (Czech Republic)
2011	Excellence in Review Award, Environmental Science & Technology
2011	Humboldt Fellow, University of Tübingen (Germany)
2011	Montgomery Watson Harza/AEESP 1 <sup>st</sup> place Master Thesis Advisor award
2011	Visiting Associate Professor, IIT Madras, Chennai (India)
2010	Visiting Fellow, National Institute of Oceanography Goa (India)
2007	1 <sup>st</sup> Runner-up for Environmental Technology Paper of the year, <i>Environmental</i>
	Science & Technology
2006	Recipient of the Roy F. Weston Environmental Chemistry Award by the Society
	of Environmental Toxicology and Chemistry (SETAC).
2006	URI Exceptional Salary Increase.
2004	Fellowship, Research Center for Ocean Margins, University of Bremen (GER).
2003	Fellowship, Max-Planck Institute of Meteorology, Hamburg (GER).
2002	Best Poster Price, Gordon Res. Conference 'Environmental Sciences: Water'.
2000-2002	DAAD Fellow, Massachusetts Institute of Technology, Cambridge (MA).

#### **II. UNIVERSITY TEACHING AND ADVISING EXPERIENCE**

I have instructed every term when present at URI, teaching undergraduate and graduate courses and advising graduate students. In the fall, I teach my own graduate class at GSO (either OCG 523 or OCG 693). Over the last few years, enrollment in these courses has doubled (to around 10 per course) by attracting graduate students from Engineering, Geosciences and Pharmacy in addition to those from Oceanography. In the spring I have co-taught with John King OCG 480/580 (Introduction to Marine Pollution). Last year, I taught the class on my own, enrollment has increased to around 15. In addition, I have supervised and trained at least 3 undergraduate students per year in research projects in my laboratory. I have created a new 600-level graduate class in Marine Organic Chemistry, and introduced group assignments as part of the curriculum. At the beginning of each year, I have participated in the 'Instructional Development Workshop' to further improve my teaching. For my graduate students at GSO, I have introduced a public, 45 min presentation as part of their thesis defense. This defense format has since become the norm at URI-GSO. Most of my graduate students have received awards from URI, national and international organizations for their work and presentations. An ongoing objective of my teaching is to make connections between classroom instruction, advising, and research.

Semester	Course No.	Course Title	Credit	Contact Hours	No. of Students	Sole Instructor/ Team Taught
Spring	(University of	Groundwater Pollution	3	2.5 hrs/wk	12	Team taught with
2004	Bremen)	(European Masters Program				Kay Hamer
		in Geology)				
Fall 2005	OCG 523	Organic Geochemistry of	3	2.5 hrs/wk	4	Sole

#### **Undergraduate and Graduate Teaching Experience**

		Natural Waters				
Spring	OCG 480/580	Introduction to Marine	3	2.5 hrs/wk	4 (480)	Team taught
2006		Pollution			5 (580)	with John King
Fall 2006	OCG 693	Marine Organic Chemistry	3	2.5 hrs/wk	4	Sole
2006	OCG 631	Seminar in Marine and	1	1 hr/wk	~ 12	Organizer
		Atmospheric Chemistry,				
		'New Approaches and Tools				
		in Oceanography'				
Spring	OCG 480/580	Introduction to Marine	3	2.5 hrs/wk	2 (480)	Team taught
2007		Pollution			5 (580)	with John King
2007	OCG 631	Seminar in Marine and	-	1 hr/wk	~ 12	Organizer
		Atmospheric Chemistry				
Fall 2007	OCG 593*	Organic Geochemistry of	3	2.5 hrs/wk	2	Sole
		Natural Waters				
Spring	OCG 480/580	Introduction to Marine	3	2.5 hrs/wk	4 (480)	Team taught
2008		Pollution			2 (580)	with John King
2008	OCG 631	Seminar in Marine and	-	1 hr/wk	~ 12	Organizer
		Atmospheric Chemistry				
Fall 2008	OCG 6XX	Marine Organic Chemistry	3	2.5 hrs/wk	4	Sole
Spring	OCG 480/580	Introduction to Marine	3	2.5 hrs/wk	5 (580)	Team taught
2009		Pollution				with John King
Spring	OCG 593	Independent study	3	2 hrs/wk	1	Sole
2009						
Fall 2009	OCG 523	Organic Geochemistry of	3	2.5 hrs/wk	6	sole
		Natural Waters				
Spring	OCG 480/580	Introduction to Marine	3	2.5 hrs/wk	3 (580)	Team taught
2010		Pollution			10 (480)	with John King
Spring	Short-term	Environmental	n/a	5 lectures	20	Team taught with
2011	Training	Chemodynamics				Ravi Krishna
	Course	(IIT Madras)				
Fall 2011	OCG 693	Marine Organic Chemistry	3	2.5 hrs/wk	10	Sole
Spring	OCG 480/580	Introduction to Marine	3	2.5 hrs/wk	5 (580)	Sole
2012		Pollution			10 (480)	
Fall 2012	000 522	Organic Geochemistry of	3	2.5 hrs/wk	8	Sole
1 all 2012	000 525	- 0				
1 all 2012	000 525	Natural Waters				
Spring	OCG 480/580	Natural Waters Introduction to Marine	3	2.5 hrs/wk	4 (580)	Sole

My most recent teaching evaluation implies that I have been very successful in interacting with my students, and being able to present clear and coherent lectures. One of my aims is to engage the students in the classroom, by interacting frequently with them. I establish this interaction by reviewing the last lecture at the beginning of each class, by initiating small group projects within each class, and by inviting the students to ask questions, suggest answers and reflect on the topic of each class. Since URI used the IDEA metrics, my overall evaluation scores have improved markedly from a good 4.0 (out of 5.0) in my 2009 OCG 480/580 Marine Pollution class towards an excellent 4.5 in 2010. For my graduate-only fall classes, my scores also improved from an adjusted 4.2 (Organic Geochemistry, OCG 523, in Fall 2009) to an outstanding summary evaluation score of 4.6 out of 5.0 for my 2011 OCG 693 (Marine Organic Chemistry) class.

course	Analytical/synthetic	Organization	Instructor – group	Instructor
	approach	clarity	interaction	individual student
				interaction
OCG 480/580	4.40 / 5.00	4.29 / 5.00	4.80 / 5.00	4.45 / 5.00
OCG 480/580	5.00 / 5.00	4.83 / 5.00	5.00 / 5.00	4.95 / 5.00
	Course OCG 480/580 OCG 480/580	course      Analytical/synthetic approach        OCG 480/580      4.40 / 5.00        OCG 480/580      5.00 / 5.00	courseAnalytical/synthetic approachOrganization clarityOCG 480/5804.40 / 5.004.29 / 5.00OCG 480/5805.00 / 5.004.83 / 5.00	course    Analytical/synthetic approach    Organization clarity    Instructor – group interaction      OCG 480/580    4.40 / 5.00    4.29 / 5.00    4.80 / 5.00      OCG 480/580    5.00 / 5.00    4.83 / 5.00    5.00 / 5.00

#### SET scores for OCG 480/580

ID LIT CVUI	untion in b	cores (auja	stea)			
categories	Course	Summary	Progress on	Excellent	Excellent	Summary
		evaluation	relevant objectives	teacher	course	evaluation
Spring 2009	OCG 480/580	4.0	58* (50)	58* (52)	57* (45)	58* (50)
Fall 2009	OCG 523	4.2	52 (49)	58* (58)	57* (54)	55 (53)
Spring 2010	OCG 480	4.5	57* (56*)	61* (60*)	61* (60*)	59* (58*)
Spring 2010	OCG 580	4.5	58* (50)	58* (52)	57* (45)	58* (50)
Fall 2011	OCG 693	4.6	61* (61*)	56* (57*)	61* (60*)	59* (59*)
Spring 2012	OCG 480	4.4	54 (49)	55 (52)	65* (62*)	57* (53)
Spring 2012	OCG 580	4.3	53 (46)	55 (52)	60* (52)	56* (49)
Fall 2012	OCG 523	4.4	58* (58*)	57* (59*)	55 (55)	56* (57*)

#### **IDEA** evaluation – raw scores (adjusted)

\* denotes in the higher 20% of evaluations, all others in the 'similar' (middle) range

#### Graduate Student Advising Experience (\*denotes year student graduated)

Student	Degree Thesis or Non-Thesis Option	Year Graduated/Expected
Eric Morgan	M.Sc., Oceanography, GSO (Thesis)	2005 - 2007*
Pamela Luey	M.Sc., Oceanography, GSO (Thesis)	2007 - 2010*
Matthew Lambert	M.Sc., Oceanography, GSO (Thesis)	2007 - 2010*

Carey Friedman	Ph.D., Oceanography, GSO	2006 - 2010*
Victoria Sacks	M.Sc., Oceanography, GSO (Thesis)	2008 - 2010*
Lin Zhang	Ph.D., Oceanography, GSO	2007 - 2012*
Shifra Yonis	M.Sc., Oceanography, GSO (Thesis)	2009 - 2012*
Zoe Ruge	M.Sc., Oceanography, GSO (Thesis)	2011-2013
Kari Pohl	Ph.D., Oceanography, GSO (Thesis)	2009 - 2014
Erin Markham	M.Sc., Oceanography, GSO (Thesis)	2012-2014
Jennifer Cragan	M.Sc., Oceanography, GSO (Thesis)	2012-2014
Carrie McDonough	Ph.D., Oceanography, GSO (Thesis)	2012-2017
Caoxin Sun	Ph.D., Oceanography, GSO (Thesis)	2013-2018

# Graduate Student Awards

2007	Eric Morgan - Kester-Corless Award for best MAC seminar
2008	Carey Friedman - Kester-Corless Award for best MAC seminar
2008	Carey Friedman – SETAC travel award
2008	Victoria Dekany – AGU travel award
2009	Carey Friedman - Webb award
2009-2010	<i>Carey Friedman</i> – Graduate student fellowship by the Hudson River Foundation (\$ 14,000)
2009	Matt Lambert – SETAC travel award
2009	Matt Lambert – SETAC best poster presenter for MS students (\$ 250)
2009	Lin Zhang – SETAC travel award
2010	Alison Brandeis - Ocean Sciences travel award
2010	Victoria Sacks - Kester-Corless Award for best MAC seminar
2010	<i>Victoria Sacks</i> – North-Atlantic SETAC – best poster price and travel award (\$ 1,000)
2011	<i>Lin Zhang</i> –North American SETAC Student Training Exchange Opportunity (STEO) award (\$ 1,000)
2011	<i>Victoria Sacks</i> – 1 <sup>st</sup> place Montgomery Watson Harza/AEESP Master Thesis award (\$ 1,500)
2012	Kari Pohl - Kester-Corless Award for best MAC seminar

Student	Committee	Year
Ryan	Ph.D. defense, Rutgers University,	2013
	External examiner	
Laura Schiffmann	Ph.D. Candidate (URI Geology), Thesis Committee Member	2012-14
Abd El Monem El Sayed	Ph.D. defense, Alexandria University (Egypt),	2012
Atia Ali	External examiner	

# Service on Graduate Student Committees

Fiona Wong	Ph.D. defense, University of Toronto (Canada),	
	External examiner	
Matthew Baumann	Ph.D. candidate (URI GSO), Thesis Committee Member	2009-
Haiwei Shen	Ph.D. candidate (URI GSO), Thesis Committee Member	2005 - 8
Michael E. Bartkow	Ph.D. thesis, The University of Queensland (Australia),	2005
	External examiner	
Elly Speicher	M.Sc. (URI GSO), Thesis Committee Member	2005 - 6
Joshua Klement	M.Sc. Candidate (URI Geology), Thesis Committee Member	2006 - 8
Elena Jurado	Ph.D. defense, The Free University in Barcelona (Spain),	2006
	External examiner	
Aaron Socha	Ph.D. (URI Pharmacy), Thesis Committee Member	2007 -8
James Allen	M.Sc. (URI Geology), Committee Chair	2007
Darryl Flynn	M.Sc. 2005 (URI Ocean Engineering), Committee Chair	2007

#### **Course Development:**

1. 2008-2013, Developed new URI course entitled "Marine organic Chemistry" (OCG 519), crosslisted with GEO.

# Other teaching and student advising not covered above:

OCG 493/4 Independent Study in Oceanography research for URI undergraduates:

- 1. Michael Vansco (URI Chemistry via CHM 353), Spring 2013 (3 credits)
- 2. Torey Hart (Marine Affairs), Spring 2013 (3 credits)
- 3. Taylor Perkins (URI Chemistry), Fall 2011 (3 credits)
- 4. Julia Sullivan (Wildlife Conservation Biology), Coastal Fellow, Fall 2009 (3 credits)
- 5. Stephanie Schubert (Chemistry/Chemical Oceanography), Fall 2008 (3 credits)
- 6. Julia Sullivan (Wildlife Conservation Biology), Coastal Fellow, Fall 2008 (3 credits)
- 7. Deanna Silva (Chemistry/Chemical Oceanography), Spring 2008 (3 credits)
- 8. Stephanie Schubert (Chemistry/Chemical Oceanography), Fall 2007 (3 credits)
- 9. Kevyn Bollinger (Ocean Engineering) Honors student, Fall 2007 (3 credits)
- 10. Andrew Johnson (Geology/Geological Oceanography), Spring 2007 (3 credits)
- 11. Deanna Silva (Chemistry/Chemical Oceanography), Summer 2007 (1 credit)
- 12. Nora Sturgeon (Marine Biology), Spring 2006 (2 credits)
- 13. Bridget Reaney (Chemistry/Chemical Oceanography), Fall 2005 (credits)

# SURFO Advisor / non-URI undergraduates:

- 1. NSF-REU, SURFO-Advisor for Dmitro Martynowych (University of Scranton), 2013
- 2. NSF-REU, SURFO-Advisor for Maureen Haynes (Manhattan College), 2012
- 3. NSF-REU, SURFO-Advisor for Hilary Hamer (Rensellaer Polytechnique), 2010
- 4. NSF-REU, SURFO-Advisor for Alison Brandeis (Colby College), 2009
- 5. NSF-REU, SURFO-Advisor for Victoria Dekany (University of Dallas), 2008
- 6. NSF-REU, SURFO-Advisor for Christie Lavoie (Framingham State College), 2007

- 7. NSF-REU, SURFO-Advisor for Ilana Cohen (Brandeis University), 2005
- 8. R/V Endeavor advisor for Kate Rossi-Snook (Roger Williams University), 2006
- 9. R/V Roger Revelle Pacific cruise Kate Rossi-Snook (Roger Williams University), 2006

#### Teaching Development

- 1. Instructional Development Program attended Fall 2006 Teaching effectively.
- 2. 'Creating good writing assignments and developing evaluation rubrics' 2-day workshop 2006.
- 3. Instructional Development Program attended Fall 2007 Grading.
- 4. Instructional Development Program attended Fall 2008 Student involvement.
- 5. Instructional Development Program attended Fall 2009 Testing and Grading; Meeting the first class
- 6. Faculty Forum Learning the Challenges of a new generation January 2010
- 7. IDEA Forum April 2013

#### **III. RESEARCH ACTIVITIES**

**Brief description of my research specialization:** My main research interests combine marine organic geochemistry and environmental chemistry. On the molecular scale, my research focuses on the global transport and fate of recalcitrant organic compounds, such as persistent organic pollutants. At URI-GSO, I have begun exploring the geochemical cycle of black carbon particles, by linking atmospheric emission predictions with their sedimentary fluxes in sediments.

I have engaged with decision-makers by working with scientists from the U.S. Environmental Protection Agency and Environment Canada to advance the use of novel sampling devices to better characterize fluxes of organic pollutants in water and air (e.g., Lohmann and Muir, 2010). This has lead to the use of passive samplers at various Superfund sites to better characterize bioavailability and risk posed by organic pollutants. The United Nations Environment Program currently considers passive sampling as a means of validating their efforts to curb global emissions. I have teamed up with other leading scientists to propose global initiatives to detect the presence and trends of global marine pollutants. For example, I co-wrote a 10-year assessment of the Stockholm Protocol (Klanova et al., 2011) which was disseminated to national and international regulatory agencies. In April 2012, I will meet with a small group of scientists to assess whether we can define a 'planetary boundary' for chemical pollution. This again highlights that I am working as part of an interdisciplinary network of environmental leaders who seek to transfer their findings and results into global action by alerting the public and through the targeted dissemination of reports to key agencies. I was awarded the Roy F. Weston award by SETAC for the advancement of environmental problem solving in 2006. Over the least few years I have advised international visitors, including a Fulbright scholar (Dr Mohammed Khairy), a post-doc funded by the Brazilian Government (Dr. Rodrigo Meires) and a POGO visitor from Pakistan (Sanober Kahkashan). During my sabbatical leave (2011-2012) I was awarded a prestigious Humboldt fellowship from the German Government, and was given an 'Excellence in Reviewing Award' by Environmental Science and Technology for my sustained high-quality reviews for this leading ACS journal.

I have > 70 peer-reviewed publications, which have been cited > 2,000 times, and participated in over 10 research cruises. My h-index is 25 (25 publications with at least 25 citations each). Since 2004, I have been awarded > 3 Mio in external funding from the U.S. National Science Foundation (NSF), National Ocean and Atmospheric Administration (NOAA), the U.S. Environmental Protection Agency (EPA), private foundations and other Federal and State funding agencies. A number of research projects have been conducted in collaboration with investigators at other institutions, both nationally and internationally. I am leading a collaboration with scientists from Environment Canada to assess the spatial and temporal gradients of legacy and emerging contaminants across the Great Lakes on a 5-year grant from EPA. In a recently funded project by NSF's Office of Polar Programs, I collaborate with PIs from Harvard and MIT to understand the effect of climate change on the transport and fate of legacy and emerging contaminants in the Arctic Ocean.

I have been invited to give presentations at over 50 places, including talks at 2 Gordon Research Conferences (Oceans and Human Health in 2012, Environmental Sciences: Water in 2008). My group has given over 100 presentations of our research results at conferences.

#### PEER REVIEWED JOURNAL ARTICLES AND BOOK SECTIONS (web of science citation number as of October'12 in brackets) \* denotes most important publications

- <u>Thomas, G.O.</u>; Sweetman, A.J.; Lohmann, R.; Jones, K.C. Derivation and field testing of airmilk and feed-milk transfer factors for PCBs. *Environ Sci Technol* **1998**, *32*, 3522 3528.
  (18)
- Lohmann, R.; Jones, K.C. Dioxins and furans in air and deposition: a review of levels, behaviour and processes. *Sci Total Environ* 1998, 219, 53-81. (200)
- 3. <u>Lee, R.G.M.</u>; Green, N.J.L.; Lohmann, R.; Jones, K.C. Seasonal, anthropogenic, air mass and meteorological influences on the atmospheric concentrations of PCDD/Fs: Evidence for the importance of diffuse combustion sources. *Environ Sci Technol* **1999**, *33*, 2864 2871. (48)
- Lohmann, R.; Green, N.J.L.; Jones, K.C. Atmospheric transport of PCDD/Fs across the UK and Ireland: Evidence of emission and degradation. *Environ Sci Technol* 1999, *33*, 2872-2878. (36)
- 5. Lohmann, R.; Green, N.J.L.; <u>Jones, K.C.</u> Detailed studies of the factors controlling atmospheric PCDD/F concentrations. *Environ Sci Technol* **1999**, *33*, 4440-4447. (38)
- Lohmann, R.; Lee, R.G.M.; Green, N.J.L.; Jones, K.C. Gas-particle partitioning of PCDD/Fs in daily air samples. *Atmos Environ* 2000, *34*, 2529-2537. (46)
- Lohmann, R.; Northcott, G.C.N.; Jones, K.C. Assessing the contribution of diffuse domestic burning as a source of PCDD/Fs, PCBs and PAHs to the UK atmosphere. *Environ Sci Technol* 2000, *34*, 2892-2899. (80)

- Lohmann, R.; Nelson, E.; Eisenreich, S.J.; Jones, K.C. Evidence for Dynamic Air Water Exchange of PCDD/Fs: A study in the Raritan Bay / Hudson River Estuary. *Environ Sci Technol* 2000, *34*, 3086-3093. (31)
- 9. <u>Lohmann, R.;</u> Harner, T.; Thomas, G.O.; Jones, K.C. A comparative study of the gas-particle partitioning of PCCD/Fs, PCBs and PAHs. *Environ Sci Technol* **2000**, *34*, 4943-4951. (93)
- Lohmann, R.: Corrigan, B.P.; Howsam, M.; Jones, K.C.; Ockenden, W.A. Further developments in the use of semi-permeable membrane devices (SPMDs) as passive air samplers for persistent organic pollutants: Field application in a spatial survey of PCDD/Fs and PAHs. *Environ Sci Technol* 2001, *35*, 2576-2582. (62)
- 11. <u>Ockenden, W.A.</u>; Lohmann, R.; Shears, J.R.; Jones, K.C. The significance of PCBs in the atmosphere of the southern hemisphere. *Environ Sci Pollut Res* **2001**, *8*, 189-194. (12)
- Lohmann, R.; Ockenden, W.A.; Shears, J.; Jones, K.C. Atmospheric Distribution of Polychlorinated Dibenzo-*p*-dioxins, Dibenzofurans (PCDD/Fs) and non-*ortho* Biphenyls (PCBs) along a North-South Atlantic Transect. *Environ Sci Technol* 2001, *35*, 4046-4053. (47)
- 13. Lohmann, R.; Ockenden, W.A.; Shears, J.; Jones, K.C. On the occurrence and distribution of dioxins. Short Review in *Directions in Science, TheScientificWorld* **2002**, *1*, 7-9.
- <u>Dachs, J.</u>; Lohmann, R.; Ockenden, W.A.O.; Méjanelle, L.; Eisenreich, S.J.; Jones, K.C. Oceanic biogeochemical controls on global dynamics of persistent organic pollutants. *Environ Sci Technol* 2002, *36*, 4229-4237 (\*Editor's highlight\*). (97)
- Lohmann, R.; Brunciak, P.L.; Dachs, J. Gigliotti, C.L.; Nelson, E.; Van Ry, D.; Glenn, T.; Eisenreich, S.J.; Jones, J.L.; Jones, K.C. Processes controlling diurnal variations of PCDD/Fs in the New Jersey coastal atmosphere. *Atmos Environ* 2003, *37*, 959-969. (19)
- 16. <u>Lohmann, R.</u> The emergence of black carbon as a super-sorbent in Environmental Chemistry: the end of octanol? *Environ Forensics* **2003**, *4*, 161-165. (10)
- Lohmann, R.; Jaward, F.; Durham, L.; Barber, J.L.; Jones, K.C.; Bruhn, R.; Lakaschus, S.; Dachs, J.; Booij, K. Potential contamination of ship-board air samples with PCBs and other persistent organic pollutants: implications and solutions. *Environ Sci Technol* 2004, *38*, 3965-3970. (20)
- 18. <u>Lohmann, R.</u>; Lammel, G. Adsorptive and absorptive contributions to the gas particle partitioning of polycyclic aromatic hydrocarbons: State of knowledge and recommended parameterisation for modelling. Critical review *Environ Sci Technol* **2004**, *38*, 3793-3803.

(85)

- Jaward, F.; Barber, J.L.; Booij, K.; Dachs, J.; Lohmann, R.; Jones, K.C. Evidence for dynamic air-water coupling of persistent organic pollutants over the open Atlantic Ocean. *Environ Sci Technol* 2004, *38*, 2617-2625. (54)
- Jurado, E.; Lohmann, R.; Meijer, S.; Jones, K.C.; <u>Dachs, J.</u> Latitudinal and seasonal capacity of the surface Oceans as a reservoir of polychlorinated biphenyls. *Environ Pollut* 2004, *128*, 149-162. (22)
- 21. <u>Burgess, R.M.</u>; Lohmann, R. Role of Black Carbon on the Partitioning and Bioavailability of Organic Pollutants, Letter to the Editor. *Environ Toxicol Chem* **2004**, *23*, 2531-2533. (8)
- Lohmann, R.; Burgess, R.M.; Cantwell, M.G.; Ryba, S.A.; MacFarlane, J.K.; Gschwend, P.M. Dependency of Polychlorinated Biphenyl and Polycyclic Aromatic Hydrocarbon Bioaccumulation in *Mya arenaria* on Both Water Column and Sediment Bed Chemical Activities. *Environ Toxicol Chem* 2004, 23, 2551-2562. (32)
- Jurado, E.; Jaward, F.M.; Lohmann, R.; Jones, K.C.; Simo, R.; Dachs, J. Atmospheric dry deposition of persistent organic pollutants to the Atlantic and inferences for the global Oceans. *Environ Sci Technol* 2004, *38*, 5505-5513 (\*Editor's highlight\*). (51)
- Lohmann, R.; MacFarlane, J.K.; Gschwend, P.M. On the Importance of Black Carbon to Sorption of PAHs, PCBs and PCDDs in Boston and New York Harbor Sediments. *Environ Sci Technol* 2005, *39*, 141-148. (133)
- Lee, R.G.M.; Coleman, P.; Jones, J.L.; Jones, K.C.; <u>Lohmann, R.</u> Emission factors of PCDD/Fs, PCBs, PCNs and PAHs from the domestic burning of coal and wood. *Environ Sci Technol* 2005, *39*, 1436-1447. (72)
- Jurado, E.; Jaward, F.M.; Lohmann, R.; Jones, K.C.; Simo, R.; Dachs, J. Wet deposition of persistent organic pollutants to the global Oceans. *Environ Sci Technol* 2005, *39*, 2426 2435.
- 27. Lohmann, R.; Lee, R.G.M.; Abbott, J.; Coleman, P.; Jones, K.C. Verifying emission factors and national POPs emission inventories for the UK using measurements and modelling at two rural locations. *J Environ Monit* 2006, *8*, 70-88. (3)
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- 47. Sacks, Victoria P., Lohmann, R. Occurrence and transport of PBDE, triclosan, and alkylphenols in a highly urbanized estuary determined using polyethylene passive samplers. Poster Presentation. 20<sup>th</sup> annual SETAC Europe Meeting. Seville, Spain. May 2010.
- 48. Sacks, Victoria P., Lohmann, R. Leaching of technical nonylphenols from polyethylene into the oceans. Platform Presentation. 20th annual SETAC Europe Meeting. Seville, Spain. May 2010.
- 49. Lohmann, R.; Brandeis, A. Detecting Vertical Gradients of Polycyclic Aromatic Hydrocarbons in Narragansett Bay Using Passive Samplers. Poster Presentation. 20<sup>th</sup> annual SETAC Europe Meeting. Seville, Spain. May 2010.
- 50. Lohmann, R,; Muir, D. Global Aquatic Passive Sampling (AQUA-GAPS): Using passive samplers to monitor POPs in the waters of the world. Platform Presentation. 20th annual SETAC Europe Meeting. Seville, Spain. May 2010.
- 51. Friedman, C; Lohmann, R. Fate and Transport of PCDD/Fss in Newark Bay, New Jersey, USA. Poster Presentation. 20<sup>th</sup> annual SETAC Europe Meeting. Seville, Spain. May 2010.
- 52. Friedman, C; Burgess, R.M.; Perron, M.M.; Cantwell, M.; Ho. K.T.; Lohmann, R. Polyethylene Passive Sampling To Estimate Bioavailability: A Laboratory And Field Comparison. Poster Presentation. 20<sup>th</sup> annual SETAC Europe Meeting. Seville, Spain. May 2010.
- 53. Burgess, R.M.; Lohmann, R.; Luey, P.M.; Friedman, C.L. Schubauer-Berigan, J.P. Comparing the accumulation of PCBs by passive samplers and mussels from the water column at a contaminated sediment site. Poster Presentation. 20<sup>th</sup> annual SETAC Europe Meeting. Seville, Spain. May 2010
- 54. Lohmann, R., Morgan, E., Bollinger, K., Brandeis, A., Adelman, D. Passive sampling of atmospheric POPs using polyethylene samplers, ACS National meeting, San Francisco (CA), March 2010.
- 55. Sacks, V.P., Brandeis, A. Lohmann, R.: Detecting concentrations and gradients of EDCs in the water column using passive polyethylene samplers, ACS National meeting, San Francisco (CA), March 2010.

- 56. Lohmann, R., Gioia, R., Jones, K.C., Nizzetto L., Temme, C. Xie, Z., Schulz-Bull, D., Hand, I., Morgan, E.J., Jantunen, L.: POPs in the atmosphere and surface water of the North Atlantic & Arctic Ocean, ACS National meeting, San Francisco (CA), March 2010.
- 57. Brandeis, A. E. and Lohmann, R.: Detecting Vertical Gradients of Polycyclic Aromatic Hydrocarbons in Narragansett Bay Using Passive Samplers, Ocean Sciences 2010, Portland (OR), February 2010.
- 58. Lohmann, R.: Use of passive samplers to determine water quality and bioavailability of organic contaminants, Environment & Water Resources Institute (EWRI) meeting of the American Association of Civil Engineers in Chennai, India, Jan. 2010
- 59. Lohmann, R.; Friedman, C.; Burgess, R.M. Predicting the bioaccumulation of sedimentary hydrophobic organic contaminant to benthic invertebrates using EqP and passive samplers. North American SETAC National meeting, New Orleans (LA) November 2009.
- 60. Lohmann, R.; Friedman, C.; Lambert, M. The Availability of Sedimentary Dioxins in the upper Newark Bay. North American SETAC National meeting, New Orleans (LA) November 2009.
- Friedman, C; Lohmann, R. Using Passive Samplers to Examine the Fate and Transport of Dioxins and Furans in Newark Bay. North American SETAC National meeting, New Orleans (LA) November 2009.
- 62. Friedman, C; Lohmann, R. Resuspension of Contaminated Field Sediments and Effect on PCB Partitioning. North American SETAC National meeting, New Orleans (LA) November 2009.
- 63. Lambert, M.; Friedman, C.; Lohmann, R. The Role of Black Carbon on the Sorption of Polychlorinated Dibenzo-*p*-dioxins and Polychlorinated Dibenzofurans at the Diamond Alkali Superfund site, Newark Bay, NJ. North American SETAC National meeting, New Orleans (LA) November 2009.
- 64. Zhang, L.; Lohmann, R. Atmospheric Chemistry and Air-Water Exchange of PCBs and HCB in the Remote Pacific. North American SETAC National meeting, New Orleans (LA) November 2009.
- 65. Sacks, V.P.; Lohmann, R. Development of polyethylene passive samplers to measure polar contaminants. North American SETAC National meeting, New Orleans (LA) November 2009.
- 66. Hansina Hill, Rainer Lohmann, and Pierre Herckes: Characterization of Carbonaceous Aerosol over the Atlantic Ocean. American Association for Aerosol Research, Minneapolis (MN) October 2009.

- 67. Luey, P.; Lohmann, R. Verification of Polyethylene and Solid Phase Micro-extraction Passive Sampling Devices in Hyper-saline, Arctic conditions. EU-SETAC, Gothenborg, May 2009.
- 68. Luey, P.; Burgess, R.B.; Lohmann, R. Uptake of Polychlorinated Biphenyls utilizing Polyethylene Passive Samplers Effects of Temperature, Thickness and Duration. EU-SETAC, Gothenborg, May 2009.
- 69. Lohmann, R.; Gioia, R.; Jones, K.C.; Nizzetto, L.; Temme, C.; Xie, Z.; Morgan, E.; Schulz-Bull, D.; Hand, I.; Jantunen, L. Organochlorine Pesticides and PAHs in the North Atlantic and Arctic Ocean: Atmospheric Long-range transport versus re-cycling. EU-SETAC, Gothenborg, May 2009.
- 70. Lohmann, R.; Dapsis, M.; Morgan, E. Detecting Sources and Trends of PAHs in an Urban Estuary Using Passive Samplers. EU-SETAC, Gothenborg, May 2009.
- 71. Sacks, V.P.; Lohmann, R. Using passive polyethylene samplers to detect emerging contaminants. EU-SETAC, Gothenborg, May 2009.
- 72. Nizzetto, L.; Lohmann, R; Gioia, R.; Jones, K.C. Evidence of a global scale decrease in the background air concentration of dioxins and furans. EU-SETAC, Gothenborg, May 2009.
- 73. Friedman, C.; Lohmann, R. Using passive samplers to examine the fate and transport of dioxins and furans in Newark Bay, New Jersey. Poster at NAC SETAC 15th annual meeting at the University of New Hampshire, Durham, NH, June 10-12 2009.
- 74. Dekany, V.; Lohmann, R. A Comparison of Silicone-coated Paper Samplers and Polyethylene in Narragansett Bay. ACS Spring meeting, Salt Lake City (UT), March 2009.
- 75. Burgess, R.M.; Zhang, Y.; McKee, M. P.; Lohmann, R.; Luey, P.J.; Friedman, C.L.; Schubauer-Berigan, J.P.; Lefkovitz, L. Evaluating PCB Bioavailability using Passive Samplers and Mussels at a Contaminated Sediment Site. Battelle Conference on remediation of contaminated sediments, Jacksonville (FL) February 2009.
- 76. Sullivan, J.; Lohmann, R.; Bollinger, K.; King, J.; Cantwell, M.; Caprio, T. Black carbon and sorption of PAHs in natural fire-impacted sediments from Oriole Lake (CA). AGU Fall meeting, San Francisco, December 2008.
- 77. Dekany, V.; Lohmann, R. A Comparison of Silicone-coated Paper Samplers and Polyethylene in Narragansett Bay. AGU Fall meeting, San Francisco, December 2008.
- <u>Lohmann</u>, R.; Zhang, L.; Nizzetto, L.; Gioia, R.; Jones, K.C.; Dachs, J.; Temme, C. Global transport and fate of POPs – an Oceanic perspective. North American SETAC National meeting, Tampa Bay (FL) November 2008.

- 79. <u>Lohmann</u>, R.; Morgan, E. Detecting Air-Water and Surface-Deep Water Gradients of PCBs Using Polyethylene Passive Samplers. North American SETAC National meeting, Tampa Bay (FL) November 2008.
- 80. Burgess, R.M.; Zhang, Y.; McKee, M. P.; Lohmann, R.; Luey, P.J.; Friedman, C.L.; Schubauer-Berigan, J.P.; Lefkovitz, L. Comparison of Passive Sampling Devices for Measuring Dissolved PCBs in the Water Column of a Marine Superfund Site. North American SETAC National meeting, Tampa Bay (FL) November 2008.
- Lohmann, R.; Bollinger, K.; King, J.; Cantwell, M.; Caprio, T. Black carbon and sorption of PAHs in natural fire-impacted sediments form Oriole Lake (CA). Goldschmidt Conference, Vancouver (Canada), July 2008.
- 82. Luey, P; Burgess, R.B., Lohmann, R. Uptake of Polychlorinated Biphenyls Utilizing Polyethylene Passive Samplers - Effects of Temperature, Thickness and Duration, Gordon Research Conference – Environmental Sciences: Water, Holderness (NH), June 2008.
- 83. Zhang, L.; Lohmann, R. Atmospheric Chemistry and Air-Water Exchange of Chlorinated Organic Pollutants in the Remote South Pacific, Gordon Research Conference Environmental Sciences: Water, Holderness (NH), June 2008.
- 84. Morgan, E.; Lohmann, R. Detecting Air-Water and Surface-Deep Water Gradients of PCBs Using Polyethylene Samplers, Gordon Research Conference Environmental Sciences: Water, Holderness (NH), June 2008.
- 85. Friedman, C.L.; Burgess, R.M.; Perron, M.M.; Ho, K.T.; Cantwell, M.G.; Ryba, S.A.; McKinney, R.A.; Lohmann, R. Comparing Polychaete Bioaccumulation and Passive Sampler Uptake to Assess the Effects of Sediment Resuspension on Contaminant Bioavailability Gordon Research Confernce – Environmental Sciences: Water, Holderness (NH), June 2008.
- 86. Lammel, G.; Sehili, A.M.; Bond, T.C.; Lohmann, R. Gas-particle Partitioning of Polycyclic Aromatic Hydrocarbons in a Global Modelling Study, Joint International Conference on Intercontinental Transport of Atmospheric Mercury and Persistent Organic Pollutants, Organized by the UNEP Global Partnership of Atmospheric Mercury Transport and Fate Research, Rome (Italy), April 2008.
- Lohmann, R.; Jones, K.C.; Eisenreich, S.J.; Lammel, G. Assessing the importance of ab- and adsorption to the gas-particle partitioning of different POPs, Goldschmidt conference, Koeln (Germany), August 2007.
- Morgan, E; Lohmann, R. (2007). Determining the Sources of Polychlorinated Biphenyls to Demersal Fish in Narragansett Bay, R.I., USA. ICES Annual Science Conference, Helsinki (Finland), September 2007.
- 89. Herckes, P.; Cox, J.; Knight, K.; Upadhyay, N.; Prapaipong, P.; Lohmann, R.; Nizzetto, L. Characterization Of Particulate Matter Along A North –South Transect Of The Atlantic Ocean, American Association of Aerosol Research, September 2007

- 90. Burgess, R.M.; Friedman, C.L.; Sturgeon, N.B.; Perron, M.M.; Cantwell, M.G.; Ryba, S.A. Ho, K.T.; Rego, S.A.; Lohmann, R. Comparison of Polyethylene and Organism Uptake of Polychlorinated Biphenyls (PCBs) in a Standard Laboratory Bioaccumulation Study with Superfund Site Sediments, North Atlantic Chapter SETAC meeting, June 2007.
- 91. Lohmann, R. Process-based studies and parameters POPs in oceans: measurement, understanding, cycling. Barcelona, June 2007.
- 92. Lohmann, R.; Morgan, E. Detecting fluxes of PAHs in an estuary using passive samplers, EU-SETAC, Porto, May 2007.
- 93. Nizzetto, L.; Lohmann, R.; Gioia, R.; Jahnke, A.; Temme, C.; Dachs, J.; Di Guardo, A.; Jones, K. C. On the occurrence of dioxin along a N-S Atlantic transect, EU-SETAC, Porto, May 2007.
- 94. Lohmann, R.; Morgan, E. Bioaccumulation of PCBs by fish and passive samplers, EU-SETAC, Porto, May 2007.
- 95. Lohmann, R., Global Fate of POPs, AquaTerra, Subproject Meeting BIOGEOCHEM, University of Tuebingen, March 2007.
- 96. Morgan, E.; Lohmann, R. Passive Sampling of Persistent Organic Pollutants in an Urbanized Estuary: Contributions from Different Reservoirs. Poster Presented at 7th Passive Sampling Workshop and Symposium at USGS in Reston, VA, April 2007
- 97. Adams, R.G.; Lohmann, R.; Fernandez, L.A.; MacFarlane, J.K.; Gschwend, P.M. Using polyethylene devices for passive in situ measurements of dissolved hydrophobic organic compounds in aquatic environments. Southern California SETAC meeting, April, 2007.
- 98. Lohmann, R.; Burgess, R.M.; Cantwell, M.G.; Ryba, S.A.; Gschwend, P.M. Temporal gradients in the sediment-water exchange of persistent organic pollutants. Battelle Remediation of Contaminated Sediments, Savannah (GA), January 2007.
- 99. Herckes, P.; Cox, J. S.; Lohmann, R.; Nizetto, L. CharacterizationOf Carbonaceous Particles Along A North-South Transect Of The Atlantic Ocean, AGU National meeting, San Francisco, December 2006.
- Lohmann, R.; Burgess, R.M.; Cantwell, M.G.; Ryba, S.A.; Gschwend, P.M. Temporal gradients in the sediment-water exchange of persistent organic pollutants. Partners in Environmental Technology Technical Symposium & Workshop, Washington (D.C.), November 2006.
- 101. Lohmann, R.; Jurado, E.; Dachs, J.; Lohmann, U.; Jones, K. C. Quantifying The Importance Of The Atmospheric Sink For PCDD/Fs Relative To Other Global Loss Processes, ACS National meeting, San Francisco (CA), November 2006.

- 102. Lohmann, R.; Jurado, E.; Pilson, M.E.Q.; Dachs, J. Oceanic deep water formation as a sink of persistent organic pollutants, ACS National meeting, San Francisco (CA), November 2006.
- 103. Lohmann, R. Use of Passive Samplers for detecting organic compounds North-Atlantic Regional Meeting-SETAC Portland (ME) June 2006.
- 104. Lohmann, R.; Hand, I.; Schulz-Bull, D.; Nizetto, L.; DiGuardo, A.; Gioia, R.; Jones, K.C.; Xie, Z.; Caba, A; Temme, C. POPs transport and partitioning on a transect from Northern Europe to the high Arctic. SETAC Baltimore, November 2005.
- 105. Lohmann, R.; Lammel, G. Importance of black carbon adsorption for the gas particle partitioning of polycyclic aromatic hydrocarbons. Abstracts of papers of the American chemical society 230: U1509-U1509 20-ENVR August 2005.
- 106. Lohmann, R.; Burgess, R.M.; Cantwell, M.G.; Ryba, S.; MacFarlane, J.K.; Gschwend, P.M. Seasonality of water column activities of hydrophobic organic contaminants and implications for their bioaccumulation. Abstracts of papers of the American chemical society 230: U1762-U1763 97-GEOC August 2005.
- 107. Lohmann, R.; Burgess, R.M.; Cantwell, M.G.; Ryba, S.A.; Gschwend, P.M. Temporal gradients in the sediment-water exchange of persistent organic pollutants. DFG workshop on Biogeochemical gradients, Tuebingen, Germany, June 2005.
- 108. Lohmann, R.; Burgess, R.M.; Cantwell, M.G.; Ryba, S.A.; Gschwend, P.M. Temporal gradients in the sediment-water exchange of persistent organic pollutants. Collaborative Science for Environmental Solutions, U.S. EPA Science Forum, Washington D.C., May' 05
- 109. Lohmann, R.; Lammel, G.; Valiyaveethil, S. On the role of black carbon for the long-range transport of PAHs, North-American *SETAC*, November 2004.
- 110. Jaward, F.; Barber, J.; Durham, L.; Lohmann, R.; Jones, K.C. POPs over the Atlantic, North-American *SETAC*, November 2004.
- 111. Lohmann, R.; Dachs, J.; Jurado, E.; Jones, K.C. The marine sink of organic pollutants, *SETAC* German Language Branch in Aachen (Germany), October 2004.
- 112. Lohmann, R.; Dachs, J.; Jurado, E.; Jones, K.C. The marine sink of organic pollutants, Gordon Research Conference Environmental Sciences: Water, New Hampshire, June 2004.
- 113. Lohmann, R.; Jones, K.C.; Jurado, E.; Dachs, J. The marine sink of organic pollutants, DFG-NSF conference on geosciences, Washington (DC), April 2004.
- 114. Lohmann, R.; Burgess, R.M.; Cantwell, M.G.; Ryba, S.A.; Gschwend, P.M. The bioaccumulation of PAHs and PCBs by the benthic clam *Mya arenaria* as a function of exchange with the water column and sediments, *NA-SETAC*, Austin (USA), November 2003.

- 115. Lohmann, R. Does adsorption to black carbon dominate the partitioning of persistent organic pollutants?, *NA-SETAC*, Austin (USA), November 2003.
- 116. Lohmann, R.; Burgess, R.M.; Cantwell, M.G.; Ryba, S.A.; Gschwend, P.M. Erfassung der Bioverfügbarkeit sedimentgebundener organischer Schadstoffe, *GDCh*, Munich (Germany), October 2003.
- 117. Lohmann, R.; Jurado, E.; Dachs, J.; Jones, K.C. Oceans and atmosphere as global sinks of PCDD/Fs, *Dioxin 2003*, Boston (USA), August 2003.
- 118. Lohmann, R.; Gioia, L.; Eisenreich, S.J.; Jones, K.C. Adsorption to black carbon dominates gas-particle partitioning of PCDD/Fs in the New Jersey coastal atmosphere, *European SETAC*, Hamburg (Germany), April 2003.
- 119. Lohmann, R.; Burgess, R.M.; Cantwell, M.G.; Ryba, S.A.; Gschwend, P.M. Bioaccumulation of pyrogenic and non-pyrogenic hydrophobic organic contaminants by *Mya arenaria* and *Nereis spp., NA-SETAC*, Salt Lake City (USA), November 2002.
- 120. Lohmann, R.; MacFarlane, J.K.; Gschwend, P.M On the Importance of Black Carbon to Sediment-Water Equilibria of PAHs, PCBs and PCDDs, American Chemical Society national meeting, Boston (USA), August 2002.
- 121. Lohmann, R.; MacFarlane, J.K.; Gschwend, P.M On the Importance of Black Carbon to Sediment-Water Equilibria of PAHs, PCBs and PCDDs, best poster award and talk; Gordon Research Conference – Environmental Sciences: Water, New Hampshire (USA), June 2002.
- 122. Lohmann, R.; Adams, R.G.; Ewald, G.; MacFarlane, J.K.; Gschwend, P.M. Understanding the bioaccumulation of dioxins by *Mya arenaria*, interactive poster session, *NA-SETAC*, Baltimore (USA), November 2001.
- 123. Lohmann, R.: Understanding the availability of sediment-bound contaminants, *Late Summer Workshop der Deut. Wasserchem. Ges.*, Maurach (Germany), October 2001.
- 124. Lohmann, R.; Eisenreich, S.J.; Jones, K.C. Spatial and temporal variability of PCDD/Fs in the New Jersey atmosphere, *NA-SETAC*, Nashville (USA), November 2000.
- 125. Lohmann, R.; Ockenden, W.A.; Shears, J.; Jones, K.C. Global distribution of dioxins and furans in ambient air, *NA-SETAC*, Nashville (USA), November 2000.
- 126. Lohmann, R.; Ockenden, W.A.; Shears, J.; Jones, K.C. Atmospheric Transport of PCDD/Fs along a Global North-South Transect, *Dioxin 2000*, Monterey (USA), August 2000.
- 127. Lohmann, R.; Brunciak, P.L.; Gigliotti, C.L.; Nelson, E.; Van Ry, D.; Glenn, T.; Eisenreich, S.J.; Jones, J.L.; Jones, K.C. PCDD/Fs in the New Jersey coastal atmosphere:

Evidence for secondary sources and OH-radical initiated depletion reactions, *Dioxin 2000*, Monterey (USA), August 2000.

- 128. Lohmann, R.; Harner, T.; Thomas, G.O.; Jones, K.C. A comparative study of the gasparticle partitioning of PCDD/Fs, PCBs and PAHs, *Dioxin 2000*, Monterey (USA), August 2000.
- 129. Lohmann, R.; Jones, K.C.; Nelson, E.; Eisenreich, S.J. Air-water exchange of PCDD/Fs in the Hudson River Estuary/ Raritan Bay, *North-American Society of Environmental Toxicology and Chemistry" (NA-SETAC)*, Philadelphia (USA), November 1999.
- 130. Lohmann, R.; Green, N.J.L.; Jones, K.C. A detailed study of factors influencing atmospheric PCDD/F concentrations in northern England, *NA-SETAC*, Philadelphia (USA), November 1999.
- 131. Lohmann, R.; Green, N.J.L.; Jones, K.C. Air concentrations and atmospheric transport of PCDD/Fs across the UK and Ireland, *Dioxin 1998*, Stockholm (Sweden), August 1998.

#### **INVITED PRESENTATIONS**

1. INNOLEC presentations: *1. Marine pollution and a lack of oxygen*, Masaryk University, *Brno (Czech Republic)*, May 2013.

2. INNOLEC presentations: 2. *The fate of organic pollutants in the oceans over space and time*, Masaryk University, Brno (Czech Republic), May 2013.

3. INNOLEC presentations: 3. Ocean circulation as a vector for emerging and submerging pollutants, Masaryk University, Brno (Czech Republic), May 2013.

4. Lohmann, R. Fate of POPs in the Oceans, Lancaster University (UK), May 2013.

5. Lohmann, R. *Emerging and Submerging Organic Pollutants in the Ocean* Gordon Research Conference Oceans and Human Health, Biddeford (ME) June 2012.

6. Lohmann, R. *Environmental transport, fate and bioavailability of POP mixtures*, Northeast Superfund Research Program integrative research translation activity (RTA), "Complex Mixtures and Exposures: Analyzing, Modeling and Predicting Fate and Effects at Multiple Levels of Environmental and Biological Systems" Marine Biological Laboratory in Woods Hole, (MA) April 2012

- 7. Lohmann, R. *In Search of Planetary Boundaries for Chemical Pollution*, 1st IPCP Scientific Workshop, Chalmers University of Technology, Gothenburg (Sweden) April, 2012.
- 8. *Transport and fate of aqueous organic pollutants: from the local to global scale* Brown University (RI), February 2012.
- 9. *Transport and fate of aqueous organic pollutants* IfM Geomar Kiel (Germany), February 2012.
- 10. Global Aquatic Passive Sampling (AQUA-GAPS): Using Passive Samplers To Monitor POPs In The Waters Of The World. Symposium on the Future of Operational Oceanography Hamburg (Germany) October 2011.
- 11. Transport and fate of aqueous organic pollutants Yale University, September 2011.
- 12. Use of passive samplers to determine the transport and fate of aqueous organic pollutants Norwegian Insitute for Water Research, NIVA, Oslo (Norway), August 2011.
- 13. Use of passive samplers to determine the transport and fate of aqueous organic pollutants Helmholtz-Zentrum München (Germany), August 2011.
- 14. Using passive samplers to detect concentrations, gradients and trends of legacy and emerging POPs in the water, RECETOX WORKSHOP Identifying the research needs in the global assessment of toxic compounds ten years after the signature of the Stockholm Convention. Brno, Czech Republic, May 2011
- 15. Use of passive samplers to determine the transport and fate of aqueous organic pollutants University of Tübingen (Germany), April 2011.
- 16. Use of passive samplers to measure organic contaminants, Indian Institute of Technology Madras (Chennai, Tamil Nadu), India, February 2011.
- 17. Origin and fluxes of black carbon in sediments, National Institute of Oceanography, Kochi (Kerala), India, January 2011.

- 18. Using passive samplers to determine the transport and bioaccumulation of trace organic compounds in the Sea, National Institute of Oceanography, Mumbai (Maharashtra), India, December 2010.
- 19. Using passive samplers to determine the transport and bioaccumulation of trace organic compounds in the Sea, National Institute of Oceanography, Dona Paula (Goa), India, November 2010.
- 20. Origin and fluxes of black carbon in sediments, National Institute of Oceanography, Vishakhapatnam (Andra Pradesh), India, October 2010.
- 21. Origin and fluxes of black carbon in sediments, National Institute of Oceanography, Dona Paula (Goa), India, September 2010.
- 22. *World Ozone Day Global/ Climate Change*, Eco-teachers workshop, National Green Corps Goa, Verna (Goa), India, September 2010.
- 23. World Ozone Day Global/ Climate Change, Eco-teachers workshop, National Green Corps Goa, Panjim (Goa), India, September 2010.
- 24. *Role of microplastics on transport and fate of POPs*, International Maritime Organization (IMO) GESAMP workshop on microplastics, June 2010, Paris (France).
- 25. *Marine fate of organic pollutants: Air-water exchange and in-water gradients*, Environment Canada, Burlington (ON), February 2010.
- 26. Research excellence in water quality and supply, National Risk Management Research Laboratory, Cincinnati (OH), November 2009.
- 27. Black carbon in sediments origin, fluxes and effects, MARUM Research Center, University of Bremen (Germany), November 2009.
- 28. Dioxins in the Passaic River Buried and Gone, or Recycling? Hudson River Foundation, New York City, May 2009.
- 29. *Global Fate of POPs*, Institute of biogeochemistry and pollutant dynamics (IBP), Swiss Institute of Technology, Zürich (Switzerland), November 2008.
- 30. Global air-water transfers of organic pollutants. URI Dept of Chemistry, November 2008.
- 31. *Global fate of POPs A marine perspective*. South Florida University, Environmental Research Interdisciplinary Colloquium, November 2008.
- 32. *Transport and fate of POPs an Oceanic perspective*. MIT/WHOI biogeochemistry seminar series, at EAPS (MIT), October 2008.
- 33. *Global transport and fate of POPs an Oceanic perspective*. NOAA Workshop on the fate of microplastics in the Ocean, Seattle, September 2008.

- 34. Use of passive samplers to determine dissolved concentrations of PAHs in Narragansett Bay, RI DEM Bay Assessment and Response Team (BART) Annual meeting, URI, July 2008.
- 35. *Global transport and fate of POPs: Water*, Gordon Research Conference Environmental Sciences: Water, Holderness (NH), June 2008.
- 36. *Biogeochemical cycling of persistent organics*, Distinguished Speaker Series, Chesapeake Biological Laboratory, February 2008.
- 37. Using passive samplers to measure dissolved components from oil spills, CRRC-SINTEF, Trondheim, January 2008.
- 38. *Process-based studies and parameters of POPs in oceans:* Measurement, understanding, cycling; IIQAB, Barcelona, June 2007.
- 39. *Recent studies on POPs in oceans & estimating the global dioxin budget*, Lancaster University Research Partners Workshop, Lancaster (UK), October 2006.
- 40. Marine chemistry of POPs along the Atlantic Ocean, Distinguished Speaker Series, Chesapeake Biological Laboratory, October 2006.
- 41. Tracing surface and deep waters using GC-MS, MAC seminar, URI-GSO, October 2006.
- 42. The marine sink of organic pollutants, Lancaster University, July 2006.
- 43. An Atlantic transect of organic pollutants in air and water. ARMADA workshop talk, URI-GSO, June 2006.
- 44. Use of Passive Samplers for detecting organic compounds, Short course on new sampling approaches at the North-Atlantic Regional Meeting-SETAC Portland (ME) June 2006.
- 45. *The marine sink of organic pollutants*, University of Connecticut Avery Point, Marine Science seminar, May 2006.
- 46. Black Carbon as a supersorbent? The availability of organic pollutants. Binghamton University, October 2005.
- 47. Global Fate of POPs revisited Connecticut College, October 2005.
- 48. Global fate of POPs, SURFO hot topic seminar, GSO, July 2005.
- 49. Sampling of POPs over the Atlantic dealing with contamination, GKSS Research Center, Geesthacht (Germany), February 2005.
- 50. *Black carbon as a supersorbent? The availability of organic pollutants*, Graduate School of Oceanography, University of Rhode Island, Narragansett (USA), March 2004.

- 51. *The marine sink of organic pollutants*, Graduate School of Oceanography, University of Rhode Island, Narragansett (USA), March 2004.
- 52. *Marine sink of organic pollutants*, Institut for Baltic Sea Research (IOW), Rostock-Warnemünde (Germany), February 2004.
- 53. *The air-water sinking flux of organic pollutants: competition between phytoplankton and black carbon*, Symposium on Ocean Margins, Bremen (Germany), August 2003.
- 54. Atmospheric sources, chemistry and fate of persistent organic pollutants, Ocean University of China, Qingdao (China), June 2003.
- 55. Does black carbon dominate the partitioning of organic pollutants?, Department of Environmental Chemistry (IIQAB-CSIC), Barcelona (Spain), March 2003.
- 56. *The (bio)availability of sediment-bound organic pollutants*, Institute of Applied Environmental Research (ITM), Stockholm (Sweden), September 2002.
- 57. *The (bio)availability of sediment-bound organic pollutants*, Institute for Baltic Sea Research (IOW), Rostock-Warnemünde (Germany), September 2002.
- 58. *The (bio)availability of sediment-bound organic pollutants*, EAWAG, Swiss Institute of Technology, Zürich (Switzerland), May 2002.
- 59. The real partitioning and behaviour of dioxins and other organic pollutants in the environment, Institute for Waterchemistry, Technical University München (Germany), June 2001.
- 60. Atmospheric partitioning and behaviour of organic pollutants, Max-Planck-Institute for Chemistry, Mainz (Germany), Juni 2001.

Year	Title of Project	Funding Agency	Total Award	URI Award	% Effort
2005	Characterization and Properties of Environmentally Relevant Black Carbon Particulates – Travel Grant for speakers at ACS Symposium,	American Chemical Society – Petroleum Research Fund SE Grant	\$ 3,600	\$ 3,600	100%
2005/6	An East-West Atlantic Transect of Black Carbon and POPs	Rhode Island Endeavor Program	\$ 20,000	\$ 20,000	100%
2005	Pyrogenic Black Carbon and	URI Council for	\$ 9,885	\$ 9,885	100%

#### **Research Funding Record**

	PAHs in South Atlantic Sediments	Research			
2005	Developing a seasonal passive sampler for persistent organics	URI-Partnership for Ocean Instrumentation	\$ 23,000	\$ 23,000	100%
2006	Use of carbon isotopes to determine whether there are natural sources of dioxins	URI Council for Research	\$ 10,000	\$ 10,000	100%
2006/7	Use of passive samplers to determine dissolved concentrations of PAHs at different locations in Narragansett Bay	Rhode Island Department of Environmental Management /BART	\$ 21,140	\$ 21,140	100%
2006	Acquisition of a high-resolution GC-Mass spectrometer	Vetlesen and Monel Foundation	\$ 300,000	\$ 300,000	100%
2006/7	Field Monitoring to Assess Effects of Remedial Dredging on Resuspension and Release of PCBs at the New Bedford Harbor Superfund Site	Subcontract to EPA Contract 68-C-03- 041 WA#3-46 NBH Dredging Research	\$ 80,000	\$ 32,000	40%
2007/8	Evaluation of Passive Sampling Devices for Measuring Dissolved and Bioavailable PCBs in the Water Column	Subcontract to EPA Contract 68-C-03- 041 WA#4-46 NBH Dredging Research	\$ 194,000	\$ 43,200	22%
2006-8	Atmospheric Chemistry and air- water exchange of halogenated organic compounds in the remote South Pacific	SGER – NSF Atmospheric Chemistry	\$ 56,183	\$ 56,183	100%
2007-9	Are Natural Chars important for the sorption of PAHs? A field study with lake sediments and soils in Oriole Lake	ACS – Petroleum Research Fund	\$ 40,000	\$ 40,000	100%
2007- 10	The Role of Black Carbon in Attenuating the Availability of Sedimentary Dioxins in the Lower Hudson River Estuary and Implications for their Bioaccumulation	Hudson River Foundation	\$ 172,960	\$ 172,960	100%
2008- 09	Detecting dissolved PAHs from oil spills using passive samplers in cold water and ice cores	UNH-CRRC (NOAA)	\$ 533,879	\$ 144,034	27%
2008- 10	Collaborative Research: Constraining the marine nitrogen cycle using a new approach to measuring nitrogen	NSF Chemical Oceanography	\$ 321,096	\$ 42,627	13%

	isotopes of porphyrins (co-PI) with R. Robinson (URI-GSO) and Harvard University				
2008- 11	Using passive samplers to detect emerging contaminants and predict their bioavailability to benthic organisms	UNH-CICEET (NOAA)	\$298,938	\$298,938	100%
2009	Use of PE samplers to detect PCBs in Palos Verdes	U.S. EPA	\$ 2,641	\$ 2,641	100%
2009- 10	Reconstructing natural fire events, their strength and causes: A case study in Oriole Lake	Joint Fire Science Project	\$ 80,174	\$ 75,174	95%
2009	An Atlantic Transect of the Americas of Black Carbon and POPs	Rhode Island Endeavor Program	\$ 20,000	\$ 20,000	100%
2009- 10	A South-Atlantic Transect of Black Carbon and POPs	Rhode Island Endeavor Program	\$ 25,000	\$ 25,000	100%
2009- 13	Collaborative research: persistent organic pollutants in the Antarctic marine food Web: Impact of climate change and insights into the feeding ecology of apex Predators (with R. Dickhut, VIMS)	NSF – Office of Polar Programs	\$ 499,636	\$ 101,822	20%
2009- 13	The Black Carbon Cycle: Budget and Fluxes of Black Carbon in South Atlantic Sediments	NSF – Chemical Oceanography	\$ 392,494	\$ 392,494	100%
2009- 10	Using Passive Samplers to Predict Bioaccumulation of Sedimentary Organic Contaminants (for Carey Friedman)	Graduate Fellowship by the Hudson River Foundation	\$ 16,000	\$ 16,000	100%
2010- 11	Canadian travel grant (for Lin Zhang)	Government of Canada	\$ 4,000	\$ 4,000	100%
2010- 2015	Enhancing IADN with Passive Sampling to Assess the Spatial Variability and Air-Water Exchange of Persistent Bioaccumulative Toxics	EPA – Great Lakes Program	\$ 869,401	\$ 869,401	100%
2010- 12	Using passive samplers to detect legacy and emerging organic PBTs in Lake Superior, and their air-water exchange	Great Lakes Air Deposition (GLAD) Program	\$ 130,798	\$ 130,798	100%
2011- 13	The Availability and Bioaccumulation of Sedimentary 2,3,7,8-TCDD and other Persistent Organic	Hudson River Foundation	\$ 206,042	\$ 206,042	88%

River				
Collaborative research: Evaluating the competing impacts of global emission reductions and climate change on the distribution and retention of selected POPs in the Arctic Ocean (with E. Sunderland, University of the Selin	NSF – Office of Polar Programs ARC 1203486	\$ 837,501	\$ 313,083	37%
Harvard and N. Eckley Selin, MIT) RAPID: ORIGIN OF PERSISTENT ORGANIC POLLUTANTS IN THE ANTARCTIC ATMOSPHERE, SNOW AND MARINE FOOD WEB	NSF – Office of Polar Programs ANT 1332492	\$ 111,468	\$ 111,468	100%
	River Collaborative research: Evaluating the competing impacts of global emission reductions and climate change on the distribution and retention of selected POPs in the Arctic Ocean (with E. Sunderland, Harvard and N. Eckley Selin, MIT) RAPID: ORIGIN OF PERSISTENT ORGANIC POLLUTANTS IN THE ANTARCTIC ATMOSPHERE, SNOW AND MARINE FOOD WEB	RiverNSF – Office ofCollaborative research:NSF – Office ofEvaluating the competingPolar Programsimpacts of global emissionARC 1203486reductions and climate changeARC 1203486on the distribution and retentionof selected POPs in the ArcticOcean (with E. Sunderland,Harvard and N. Eckley Selin,MIT)RAPID: ORIGIN OFNSF – Office ofPERSISTENT ORGANICPolar ProgramsPOLLUTANTS IN THEANT 1332492ANTARCTIC ATMOSPHERE,SNOW AND MARINE FOODWEBWEB	RiverNSF – Office of Polar Programs\$ 837,501Evaluating the competing impacts of global emission reductions and climate change on the distribution and retention of selected POPs in the Arctic Ocean (with E. Sunderland, Harvard and N. Eckley Selin, MIT)ARC 1203486RAPID: ORIGIN OF PERSISTENT ORGANIC POLLUTANTS IN THE ANTARCTIC ATMOSPHERE, SNOW AND MARINE FOODNSF – Office of Polar Programs\$ 111,468WEBWEBNSF – Office of Polar Programs\$ 111,468	RiverNSF – Office of Polar Programs\$ 837,501\$ 313,083Evaluating the competing impacts of global emission reductions and climate change on the distribution and retention of selected POPs in the Arctic Ocean (with E. Sunderland, Harvard and N. Eckley Selin, MIT) RAPID: ORIGIN OF PERSISTENT ORGANIC POlar Programs POLLUTANTS IN THE ANTARCTIC ATMOSPHERE, SNOW AND MARINE FOODNSF – Office of Polar Programs\$ 111,468\$ 111,468Rand Polar Programs Polar ProgramsNSF – Office of Polar Programs\$ 111,468\$ 111,468WEBNST 1332492NT 1332492NT 1332492

Total Funding:	\$4,734,418	(Total Awards)
	\$3,485,490	(Lohmann effort; average = \$387 K/year, since 2004 at URI)

#### **Scientific Collaborators:**

Pollutants in the Lower Passaic

P Appleby<sup>21</sup>;JL Barber<sup>1</sup>; C Balducci<sup>26</sup>; K Barrett<sup>9</sup>; T Bidleman<sup>12</sup>; K Blaha<sup>27</sup>; L Blaha<sup>24</sup>; K Bollinger<sup>14</sup>; K Booij<sup>2</sup>; H Bouwman<sup>28</sup>; K Breivik<sup>17</sup>; R Burgess<sup>3</sup>; M Cantwell<sup>3</sup>; A Caprio<sup>20</sup>; J Dachs<sup>4</sup>; D DeMaster<sup>23</sup>; M Diamond<sup>25</sup>; R Dickhut<sup>15</sup>; A Di Guardo<sup>18</sup>; R Ebinghaus<sup>11</sup>; S Eckhardt<sup>29</sup>; H Feichter<sup>7</sup>; H Fiedler<sup>30</sup>; I Fischer-Bruns<sup>7</sup>; P Garriques<sup>31</sup>; R Gioia<sup>4</sup>; T Gouin<sup>17</sup>; P Grathwohl<sup>8</sup>; I Hand<sup>10</sup>; T Harner<sup>12</sup>; P Helm<sup>22</sup>; P Herckes<sup>13</sup>, KU Hinrichs<sup>6</sup>; K Ho<sup>3</sup>; I Holoubek<sup>24</sup>; GA Hodges<sup>17</sup>; H Hung<sup>12</sup>; A Jahnke<sup>11</sup>; L Jantunen<sup>12</sup>; F Jaward<sup>16</sup>; KC Jones<sup>1</sup>; E Jurado<sup>7</sup>; J King<sup>14</sup>; J Klanova<sup>24</sup>; G Lammel<sup>8</sup>; B Ligouis<sup>22</sup>; U Lohmann<sup>19</sup>; M MacLeod<sup>33</sup>; K Magulova<sup>30</sup>; S Mosca<sup>26</sup>; L Nizzetto<sup>18</sup>; D Muir<sup>12</sup>; M Perron<sup>3</sup>; N Pirrone<sup>26</sup>; A Pistocchi<sup>34</sup>; N Roche<sup>17</sup>; M Scheringer<sup>19</sup>; D Schulz-Bull<sup>10</sup>; N Selin<sup>42</sup>; V Semeena<sup>7</sup>; S Simonich<sup>35</sup>; F Smedes<sup>36</sup>; E Stephanou<sup>37</sup>; E Sunderland<sup>43</sup>; A Sweetman<sup>1</sup>; K Sebkova<sup>27</sup>; M Vernier<sup>38</sup>; M Vighi<sup>39</sup>; B Vrana<sup>24</sup>; F Wania<sup>25</sup>; R Weber<sup>40</sup>; M Weinstein<sup>5</sup>; P Weiss<sup>41</sup>; C Temme<sup>11</sup>; Z Xie<sup>11</sup>; M Zabel<sup>6</sup> <sup>1</sup>Lancaster Univ. (UK); <sup>2</sup>NIOZ (NL); <sup>3</sup>US-EPA RI; <sup>4</sup>CSIC (Spain); <sup>5</sup>Montclair State <sup>6</sup>Bremen Univ. (GER); <sup>7</sup>MPI Meteorol. (GER); <sup>8</sup> U of Tuebingen (GER); <sup>9</sup>Manhattan College; <sup>10</sup>IOW (GER); <sup>11</sup>GKSS (GER); <sup>12</sup>Environment Canada (CA); <sup>13</sup>Arizona State University; <sup>14</sup>URI-GSO; <sup>15</sup>VIMS; <sup>16</sup>USF; <sup>17</sup>Unilever; <sup>18</sup>University of Insubria (IT); <sup>19</sup>ETH (CH); <sup>20</sup>NPS (CA); <sup>21</sup>U of Liverpool (UK); <sup>22</sup>Ontario MOE (CA); <sup>23</sup>North Carolina State; <sup>24</sup>Recetox (CZ); <sup>25</sup>U of Toronto (CA); <sup>26</sup>CNR Rome (IT); <sup>27</sup>Czech MoE (CZ); <sup>28</sup>NW University (SA); <sup>29</sup>NILU (NO); <sup>30</sup>UNEP (CH); <sup>31</sup>U of Bordeaux (FR); <sup>32</sup>CNR Rome (IT); <sup>33</sup>Stockholm University (SW); <sup>34</sup>GECO Cesena (IT); <sup>35</sup>OSU Corvallis; <sup>36</sup>Deltares (NL); <sup>37</sup>U of Crete (GR); <sup>38</sup>Indiana University; <sup>39</sup>U of Milano (IT); <sup>40</sup>POPs Env Consult. (GER); <sup>41</sup>FEA Vienna (AU); <sup>42</sup>MIT; <sup>42</sup>Harvard SPH.

Graduate Students, Postdoctoral Fellows, and Technical Personnel:

Graduate Students (current position indicated in brackets):

- 1. Monika Truemper, M.Sc. (University of Bremen) 2005 Co-advisor (PhD-student, NILU, Norway)
- 2. Eric Morgan, M.Sc. 2007. Major Professor (PhD-student, MPI for Biogeochemistry Jena, Germany)
- 3. Pamela Luey, M.Sc. 2010. Major Professor (Environmental Chemist, Narragansett Bay Commission).
- 4. Matthew Lambert, M.Sc. 2010. Major Professor (EPA Office of Research and Development)
- 5. Carey Friedman, Ph.D. 2010. Major Professor (Post-doc, MIT)
- 6. Victoria Sacks, M.Sc. 2010. Major Professor (Environmental Chemist, Environ)
- 7. Sanober Kahkashan, NIO Pakistan, POGO Training Fellow. 2009 Sept-Dec 2009
- 8. Lin Zhang, Ph.D. 2012. Major Professor (Post-doc, WHOI)
- 9. Shifra Yonis, M.Sc. 2012. Major Professor
- 10. Kari Pohl, Ph.D. candidate. Major Professor
- 11. Zoe Ruge, M.Sc. candidate. Major Professor
- 12. Carrie McDonough, Ph.D. candidate. Major Professor
- 13. Erin Markham, M.Sc. candidate.
- 14. Jennifer Cragan, M.Sc. candidate.
- 15. Caoxin Sun, Ph.D. candidate.

#### Post-doctoral Fellows:

- 1. Dr. Mohammed Khairy (Alexandria University, Egypt), Fulbright fellow. May 2011 January 2012.
- 2. Dr. Mohammed Khairy, Postdoc. February 2012 February 2014.
- 3. Dr. Rodrigo O. Meiras (Rio De Janeiro Federal University, Brazil), Postdoc. May October 2012.

#### Technical Personnel:

- 1. Eddy Roggenstein, Marine Research Specialist, 2005 (part-time)
- 2. Kevyn Bollinger, undergraduate student (Ocean Engineering), 2005-6 (part-time)
- 3. Meredith Dapsis, undergraduate student, 2006-2007 (part-time)
- 4. Bridget Reanay, undergraduate student (Chemistry/ Chem. Oceanogr.), 2006 (part-time)
- 5. Craig Mallen, Marine Research Specialist, 2006 (part-time)
- 6. Daniel MacDonald, undergraduate student (Chemistry/ Chem. Ocean.), 2007 (part-time)
- 7. Kevin Borsay, undergraduate student (Ocean Engineering), 2007 (part-time)
- 8. Deanna Silva, undergraduate student (Chemistry/ Chem. Ocean.), 2007 (part-time)
- 9. Eric Morgan, M.Sc. 2007. Partial support, 2007 (Instructor, Simmons College)
- 10. Dave Alderman, Marine Research Specialist, 2008-current, since 2010 with benefits.
- 11. Kevyn Bollinger, undergraduate student (Ocean Engineering), 2007-8 (part-time)
- 12. Julia Sullivan, undergraduate student (Biology), 2008-9 (part-time)

- 13. Kari Pohl, graduate student (Roger Williams), 2009 (part-time)
- 14. Kevyn Bollinger, graduate student (URI Ocean Engineering), 2009, part-time
- 15. Steven Cahill, undergraduate student (URI Chemistry) 2010 2012, part-time
- 16. Taylor Perkins, undergraduate student (URI Chemistry) 2010 2011, part-time

#### **Research Cruise Participation:**

- Key: A. Sampling conducted by myself and/or my research group.
  - **B.** Sampling conducted by others on behalf of my research group.
  - C. Chief Scientist.
- 1. 2013 R/V Knorr, Montevideo to Bermudas, March 15 May 1, 2013 A
- 2. 2011 R/V Endeavor, EN-500 Narragansett Narragansett , October (6 days) A
- 3. 2010 *R/V Endeavor*, EN-479 St Petersburg Barbados Dakar Narragansett , July (14 days) **A**, **C**
- 4. 2010 R/V Endeavor, EN-480 Barbados Barbados, July-August (14 days) A, C
- 5. 2010 *R/V Endeavor*, EN-481 Barbados Dakar, August (25 days) A, C
- 6. 2010 *R/V Endeavor*, EN-482 Dakar Narragansett , August-September (14 days) A, C
- 7. 2009 R/V Endeavor, EN-464 Walvis Bay (Namibia) Rhode Island, July (21 days) A
- 8. 2009 R/V Endeavor, EN-462 Ft Lauderdale (FL) Fortaleza (Brazil) May (14 days) A
- 9. 2008 R/V Knorr, NABE, Reykjavik to Reykjavík, May 1 May 22, 2008 A
- 10. 2008 R/V Knorr, ICEALOT, Woods Hole to Tromso, March 17 April 11, 2008 A
- 11. 2007 Sediment coring of Oriole Lake in Sequoia and Kings Canyon National Park A
- 12. 2006 *R/V Roger Revelle*, San Diego Samoa Sample collection for NSF atmospheric chemistry grant (15 days) **A**
- 2006/7 *R/V Roger Revelle*, Pacific Sample collection for NSF atmospheric chemistry grant (33 days) B
- 14. 2006 *R/V Endeavor*, EN-415 Narragansett Nice (France) March (22 days) PI Lohmann A, C
- 15. 2006 *R/V Endeavor*, EN-421 Heraklion, Crete (Greece) Narragansett June (22 days) PI Morgan **A**, **C**
- 16. 2005 *FS Polarstern*, ANT-XXII/1: Bremerhaven Cape Town, Air-Water Exchange of POPs and Black Carbon, Chief scientist: Dr. van der Loeff, AWI (32 days) **A**

- 2004 FS Polarstern, ARK-XX/1 Bremerhaven Longyearbyen, Atmospheric delivery and water column dynamics of POPs in the Arctic, Chief scientist: Prof. Peter Lemke, AWI (35 days) B
- 18. 2004 FS Polarstern, ARK-XX/2 Longyearbyen Tromsø, Atmospheric delivery and water column dynamics of POPs in the Arctic, Chief scientist: Prof. Peter Lemke, AWI (45 days) A
- 19. 2001 *MV Samantha Miller*, Hudson River Sediment resuspension release of POPs, Chief scientist: Dr Rockwell Geyer, WHOI (2 days) **A**
- 20. 1998/9 *RRS Bransfield* Grimsby (England) Halley (Antarctic) Montevideo (Uruguay), Global transport and distribution of persistent Organic Pollutants, Chief scientist: Dr. John hears, British Antarctic Survey (12 weeks) **A**
- 21. 1998 *RV Walford*, Hudson River estuary Atmospheric PCDD/Fs; Air-water exchange, Chief Scientist: Prof. Steve Eisenreich, Rutgers University (4 days) **A**

# IV. SERVICE: CONTRIBUTIONS TO THE UNIVERSITY AND EXTRAMURAL COMMUNITY

I was elected to become editor of '*Environmental Toxicology and Chemistry*', the flagship journal of the *Society of Environmental Toxicology and Chemistry*, starting in 2013. From 2008 to 2010 I had served on its editorial Board. I also serve as Editor for the newly launched journal '*CLEAN* – *Air, Soil and Water*', led by Dr. Mufit Bahadir (Braunschweig, Germany) since 2007. CLEAN aims to represent the environmental science of the  $21^{st}$  century from an international perspective, presenting answers to the question 'Based on all we have learned over the last 50 years, what happens next'?

Lastly, I agreed to serve on the Editorial Board of '*Environmental Pollution*' and the new online journal '*Atmospheric Pollution Research*', but stepped down from the Editorial Boards of the '*Scientific World*'.

I am a member of the steering committee of "Microplastics in the Ocean' NOAA working group. I served on several science panels:

- Hudson River Fund Science member panel'09
- National Science Foundation PIRE program in GeoClimate May'09
- EPA STAR Fellowships

In 2013 I was appointed to the UN EP's Pool of Experts for the upcoming World Ocean Assessment. Previously, I served in numerous meetings to define organizations research directions, such as

- Steering committee for establishment of passive sampling of POPs May 2011.
- International Maritime Organization Microplastics Workshop June'10
- Narragansett Bay Estuarine Program's Biological Conditions Gradient workshop on defining goals for a better management of the Bay (October'09)
- NOAA's Marine Debris Program to define the state-of knowledge and threat of microplastics in the Oceans (September'08)
- The Department of Defense's (DoD) Strategic Environmental Research and Development Program (SERDP) and the Environmental Security Technology Certification Program

(ESTCP)'s Research and Development Needs for Understanding and Assessing the Bioavailability of Contaminants in Soils and Sediments (August'08).

- NSF's Office of Polar Program collaboration with the Swedish Research Council to define research on the R/V ODEN (March'08)
- The Hudson River Foundation's 'Toxic Substances in the Hudson River: State of knowledge, research needs and future directions' meeting (July'05).

Within Rhode Island, I was appointed to the <u>RI Aquatic Science Collaborative</u> (formerly the River, Bays and Watershed Council).

I also serve as a member of the 'Bay Assessment and Response Team' (BART). BART is set-up to aid the State of Rhode Island in case of an emergency with scientific and expert advice. I am also a Senior fellow of URI's Coastal Institute, which aims to Advance Knowledge and Develop Solutions to Environmental Problems in Coastal Ecosystems.

In terms of outreach, I have served as a

- PHD-MS Mentor at the AGU Annual fall meeting in 2008
- PHD-MS mentor at Ocean Sciences Meeting Salt Lake City, February 2012
- PHD-MS mentor at the AGU Annual fall meeting in 2012
- ARMADA teacher mentor on an R/V Endeavor cruise in 2005
- Supervisor to SURFO, Coastal Fellow and Honors student research projects at URI-GSO
- For my CICEET funded work on validating passive samplers, I have involved citizenscientists from around RI to deploy passive samplers in Narragansett Bay.
- Collaboration with METCALF institute on journalist training in 'theory and practice of emerging contaminants', June 2012
- Outreach to general public at America's Cup with hands-on display and talk on 'Trash Talk: marine Pollution' June 2012
- Webinar as part of Atmospheric Toxics GLAD seminar, July 2012
- Taking part in 'Sharpening your message' (NSF EPSCoR) 2-day workshop July 2012
- Presentation to GSO's Dean's Advisory Council May 2013
- Public presentation to Community Center at Temple Emmanu-El, Providence (RI), June 2013.

# Service to the University Community:

- 1. GSO Vision committee (06/2006 2008)
- 2. GSO Faculty Search Committee EPSCoR (04-10/2007)
- 3. GSO EPC committee (2007-2009)
- 4. GSO Faculty Search Committee Chemical Oceanographer (2007-2008)
- 5. GSO Marine committee (2008-2010)
- 6. GSO MERL renovation grant committee (06/2009 -09/2009)
- 7. GSO Ocean Class Operator proposal committee (04/2009 2011)
- 8. URI-wide DIVERSITY task force (08/2009 08/2011)
- 9. GSO Student Admission and Review Committee (2009 until present)
- 10. Mentor for new faculty hire Brice Loose (Dec 2011 until present)
- 11. URI-wide Global Steering Committee (04/2012 until present)
- 12. Search committee for cluster hire proposal 'Water' across URI (on-going)
- 13. URI Graduate Council (2012 2015)

14. URI's member representative to UCAR (University Corporation for Atmospheric research) (2012 until present)

### Service to the Extramural Community (invited):

- 1. Chair North American SETAC with Dr Jordi Dachs (IDEA Barcelona): Marine and plastics, Nashville (TN) November 2013.
- 2. Chair Ocean Sciences Meeting with Dr Carrie Masiello (Rice University): Sources, transformation and sinks of black carbon in the Ocean, Salt Lake City (UT) February 2012.
- 3. Chair North American SETAC with Dr Cripin Halsall (Lancaster University) and Dr. Perihan Kurt-Karakus (Environment Canada): Climate Change Impacts on Contaminant Behavior in the Polar Regions, Boston (MA) November 2012.
- 4. Chair North American SETAC with Dr Jordi Dachs (CSIC Barcelona, Spain): AQUAFATE—The Fate of Organic Pollutants in Aquatic Environments, Boston (MA) November 2012.
- 5. Chair North American SETAC: Black Carbon and its Role on the (Bio)Availability of Organic Contaminant, Boston (MA) November 2012.
- 6. Chair, EU-SETAC with Dr. Jordi Dachs (CSIC Barcelona, Spain) and Dr. Zhiyong Xie (GKSS, Germany): Environmental fate and bioaccumulation of organic pollutants in aquatic systems Milan (Italy), May 2011.
- 7. Discussion Leader 'Ocean and Coastal Water Quality', Gordon Research Conference Environmental Science: Water, June, 2010.
- 8. Chair, EU-SETAC with Dr. Jordi Dachs (CSIC Barcelona, Spain) and Dr. Mathijs Smit (StatOilHydro, Norway): 'Fate of Organic Pollutants in the marine Environment From Estuaries to the Open Ocean and Arctic', Seville (Spain), May 2010.
- 9. Chair, EU-SETAČ with Dr. Mathijs Smit (StatOilHydro, Norway): 'Polar marine ecotoxicology, risk assessment and monitoring', Gothemburg (Sweden), May 2009.
- 10. NOAA International Research Workshop on Microplastic Marine Debris, Seattle (WA) September 2008, *presenter and member of steering committee*.
- 11. DoD Workshop on bioavailability of contaminants in sediments and soils, Annapolis (MD), August 2008, *participant*.
- 12. US NSF- Sweden Workshop on scientific priorities on the ODEN, Stockholm (Sweden), February 2008, *participant*.
- 13. NOAA- Coastal Response Research Center Workshop on fate of oil in ice, Tromso (Norway), January 2008, *presenter*.
- 14. Chair, Goldschmidt Conference with Dr. Kevin Jones (Lancaster University): 'Atmospheric Organic Pollutants: the role of and interplay with geochemistry' Koeln, Aug, 2007.
- 15. Collaboration with the College of the Bahamas (COB) Teaching 14-day course 'Introduction to Marine Pollution' for COB faculty and students, May 2007.
- 16. ARMADA mentor: Gioya DeSouza-Fennelly IS143- Roosevelt Middle School (New York, NY) *An East-West Atlantic Transect of Black Carbon and POPs*, June 2006.
- Chair, North-American Society of Environmental chemistry and Toxicology (NA-SETAC) with Dr. Jordi Dachs (CSIC, Barcelona, Spain): 'Marine Environmental Chemistry of Organic pollutants' Baltimore (MD) Nov. 2005.
  Chair, American Chemical Society's 230<sup>th</sup> Annual meeting with Prof. Bill Ball and Prof
- Chair, American Chemical Society's 230<sup>th</sup> Annual meeting with Prof. Bill Ball and Prof Howard Fairbrother (JHU): 'Characterization and Properties of Environmentally Relevant Black Carbon Particulates' in Washington (DC), Aug., 2005.
- 19. Hudson River Foundation Workshop Research agenda for toxics in the Hudson River, July 2005, *participant*.
- 20. DFG Workshop on Biogeochemical gradients, sponsored by DFG, Tuebingen, Germany, May 2005, *participant*.

- 21. Chair, NA-SETAC with Dr. Matt MacLeod (ETH Zurich, Switzerland): 'Atmospheric transport and fate', 4<sup>th</sup> SETAC World, Portland (OR) 2004.
- 22. Chair, SETAC German Language Branch with Dr. Remi Laame (NIOZ, The Netherlands): 'Contamination of the marine environment and air-sea exchange of trace substances'. Aachen (GER), 2004.
- 23. DFG-NSF co-sponsored meeting on Earth, Fire Water / Geosciences, Washington, D.C., March 2004, *participant*.
- 24. Chair, NA-SÉTAC with Dr. Jordi Dachs (CSIC, Barcelona, Spain) 'Global fate of persistent organic pollutants' Austin (TX) 2003.
- 25. Chair, NA-SETAC with Dr. Robert Burgess (U.S. EPA): 'The role of soot in the partitioning and bioavailability of organic pollutants' Salt Lake City (UT) 2002.

Expert reviewers

- 26. Selected as independent expert for review of the US-EPA National Air Monitoring Dioxin Network (NAMDN), 2002.
- 27. Selected as independent expert for review of the US-EPA Dioxin produced from burning oil at Sea, 2010.
- 28. Reviewer of UNEP Year Book 2011 section on 'Plastic Debris in the Ocean', 2010.
- 29. Selected as independent expert for review of the NOAA Fate of dredged material placed in Confined Aquatic Disposal, 2011.
- 30. Tenure and promotion recommendation letter for Dr Jaward (South Florida University), Aug 2012
- 31. Tenure and promotion recommendation letter for Dr Vlahos (Connecticut University), Sept 2012

#### Editorial, Journal, and Proposal Review Service:

#### 1. Editorial Service:

*Convener* with R. Burgess (U.S. EPA) of special symposium issue in *Environ. Toxicol. Chem.* 'Role of Black Carbon in the Partitioning and Bioavailability of Organic Pollutants.' 2004 *Convener* with G. Lammel (MPI Chemistry Mainz, Germany) of special symposium issue in *Environ. Sci. Poll. Res.* 'Identifying the research needs in the global assessment of toxic compounds 10 years after the signature of the Stockholm Convention' 2012

Editor, CLEAN – Air, Soil, Water, Wiley-VCH	2007 – present
Editor, Environmental Toxicology and Chemistry (SETAC, Wiley)	2013 – present
Editorial board member, EST Letters (ACS)	2013 – present
Editorial board member, Environmental Pollution (Elsevier)	2013 – present
Editorial board member, Environmental Toxicology and Chemistry	2008 - 2010
Editorial board member, Open Environmental & Biological Monitoring	2007 - 2012
Editorial board member, Atmospheric Pollution Research	2009 - present
Editorial board member, TheScientific World	2011 - present

#### 2. Journal Reviewer:

Environmental Science and Technology Atmospheric Environment Geophysical Research Letters Journal of Geophysical Research - Atmospheres Atmospheric Chemistry and Physics

Environmental Toxicology and Chemistry Analytical Chemistry Geology Fuel Chemosphere Environmental Pollution Journal of Atmospheric Chemistry *Limnology and Oceanography* Marine Pollution Bulletin Deep-Sea Research Science of the Total Environment CLEAN – Soil, Air, Water Internat. Journal of Earth Science – Geologische Rundschau Marine Chemistry Estuaries and Coasts Global Biogeochemical Cycles Critical Reviews in Environmental Science and Technology Environmental Engineering Science *Limnology & Oceanography – Methods* Journal of Environmental Monitoring Canadian Journal of Fisheries Sciences Journal of Hazardous Materials Terra Nova International Journal of Environmental Analytical Chemistry Biogeosciences

#### 3. Grant Proposal Reviewer:

NSF Major Research Instrumentation NSF Environmental Engineering NSF Geobiology and Low Temperature Geochemistry NSF Chemical Oceanography NSF PIRES CICEET Hudson River Foundation UK Natural Environmental Research Council Norwegian Research Council Swiss National Science Foundation Canada's Northern Contaminants Program Canadian Foundation for Climate and Atmospheric Sciences. CUNY proposal review Washington SeaGrant **Czech Science Foundation Chilean Science Foundation** Portuguese Foundation for Science and Technology Kuwait Foundation for the Advancement of Sciences

# **Professional Memberships**

- Society of Environmental Toxicology and Chemistry (SETAC)
- American Chemical Society (ACS)
- American Geophysical Union (AGU)
- Association of Environmental Engineering & Science Professors (AAESP)
- International Association for Great Lakes Research (IAGLR)