

# CURRICULUM VITA

**NAME:** Marta Venier

## EDUCATION

- Laurea degree in Chemistry, University of Trieste, Italy, 2002. Supervisor: Edoardo Reisenhofer. Dissertation: *Percutaneous Absorption of Industrial Toxic Chemicals*.
- Ph.D. in Environmental Sciences, School of Public and Environmental Affairs, Bloomington, Indiana, 2008. Supervisor: Ronald A. Hites. Dissertation: *Investigation of Toxic Organic Chemicals in the Environment*.

## ACADEMIC APPOINTMENTS

- July 2011-present; School of Public and Environmental Affairs, Indiana University, Bloomington; **Assistant Scientist**
- July 2008-June 2011; School of Public and Environmental Affairs, Indiana University, Bloomington; **Postdoctoral Research Associate**
- August 2004-May 2008; School of Public and Environmental Affairs, Indiana University, Bloomington; **Graduate Research Assistant**
- December 2003-July 2004; Department of Biology, University of Trieste, Trieste, Italy; **Graduate student**
- January 2002- December 2003; Department of Chemistry, University of Trieste, Trieste, Italy; **Research Assistant**

## PROFESSIONAL SOCIETIES

- Member of the Society of Environmental Toxicology and Chemistry
- Member of the American Chemical Association
- Member of the International Panel on Chemical Pollution (IPCP)

## PROFESSIONAL ACTIVITIES

### Professional Service

- March 2015- Present: Member of Editorial Board of “Emerging Contaminants”.
- Reviewer for peer-reviewed scientific journals (e.g. Environmental Science and technology, Chemosphere, Environment International).
- Member of the Program Committee of the North America 36<sup>th</sup> meeting of the Society of Environmental Toxicology and Chemistry (Scientific Committee).

- Member of the Scientific Committee of the 37th International Symposium on Halogenated Persistent Organic Pollutants.
- Member of the Scientific Advisory Committee for the annual Science and Policy Workshop held in conjunction with the International Symposium on Halogenated Persistent Organic Pollutants.

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### **Oral Presentations at Scientific Meetings (presentations where I wasn't the speaker are not included)**

- September 2017 – “Chasing toxic chemicals in the environment”. Seminar at SPEA.
- August 2017 – “Flame retardants accumulation in the paired egg and plasmas of bald eagle “ Presented at the 37th International Symposium on Halogenated Persistent Organic Pollutants, Vancouver, Canada.
- June 2017 - “Flame retardants are everywhere” seminar at the Human Genetic Foundation, Turin, Italy.
- June 2017 - “Flame retardants: What's old and what's new” seminar at the Department of Chemistry, University of Turin, Italy.
- October 2016 – “Flame retardants: What's old and what's new”. Webinar for the Integrated Flame Retardant Campaign Science.
- May 2016 – “Flame retardants: What's old and what's new” Presented at 16th Annual Workshop on Brominated and Other Flame Retardants, Toronto, Canada. **Plenary speaker.**
- September 2015 – “A Great Lakes perspective on flame retardants: lessons from the Integrated Atmospheric Deposition Network” Presented at the SCIX 2015 conference, Providence, RI. **Invited speaker.**
- September 2014 - "Halogenated Flame Retardants: Do the fire safety benefits justify the risks?" Presented at Improving Kid's Environment- Midwest Healthy Homes and Childcare Conference.
- September 2014 – “A Great Lakes Perspective on brominated flame retardants: Lessons from the Integrated Atmospheric Deposition Network” Presented at the 34th International Symposium on Halogenated Persistent Organic Pollutants, Madrid, Spain.
- November 2013 – “Organophosphorus Flame Retardants in Chicago’s Atmosphere” Presented at the 34th North American meeting of the Society of Environmental Toxicology and Chemistry, Nashville, Tennessee.
- November 2012 – “Organochlorine pesticides in the Great Lakes region: trends and sources”, Presented at the 33rd North American meeting of the Society of Environmental Toxicology and Chemistry, Long Beach, California.
- June 2012 – “Bromobenzenes flame retardants in the Great Lakes atmosphere”, presented at the 13th Workshop on Brominated and other Flame Retardants, Winnipeg, Canada.
- April 2012 – “Legacy and new POPs: What the North American Great Lakes can tell us; lessons from a long term atmospheric monitoring network”. **Plenary speaker** at the 6th POPs Network Conference, Birmingham, UK
- February 2012 – “Flame Retardants in the Environment: An overview”, Presented at the Flame Retardant Reduction Strategy Informal Meeting, Grand Rapids, Mi. **Invited speaker.**

- August 2011 – “Alternative flame retardants in the atmosphere near the Great Lakes”. Presented at the 31<sup>st</sup> International Symposium on Halogenated Persistent Organic Pollutants, Brussels, Belgium.
- June 2011 – Persistent Organic Pollutants in the air around the Great Lakes (in Italian), Dept. of Chemistry and Pharmaceutical Sciences, University of Trieste (invited).
- May 2011 – “Determining the temporal trends of POPs in the atmosphere around the Great Lakes: different statistical approaches.” Presented at the workshop “Identifying the research needs in the global assessment of POPs ten years after the signature of the Stockholm Convention” in Brno, Czech Republic.
- May 2011 – “Emerging flame retardants in the atmosphere of the Great Lakes.” Presented at the 21st Annual European Meeting of the Society of Environmental Toxicology and Chemistry, Milan, Italy, 15-19 May 2011.
- November 2010 – “Identification of new brominated flame retardants in the atmosphere around the Great Lakes.” Presented at the 31<sup>th</sup> North American meeting of the Society of Environmental Toxicology and Chemistry, Portland, Oregon.
- September 2010 – “Measurements of brominated flame retardants in pet dogs and their food.” Presented at the 30<sup>th</sup> International Symposium on Halogenated Persistent Organic Pollutants, San Antonio, Texas.
- November 2009 – “Flame retardants in plasma samples from bald eagles from the Great Lakes region.” Presented at the 30<sup>th</sup> North American meeting of the Society of Environmental Toxicology and Chemistry, New Orleans, Louisiana.
- May 2009 – “Flame Retardants in plasma samples from bald eagles from the Great Lakes region.” Presented at the 52<sup>nd</sup> Annual Conference of the International Association for Great Lakes Research, Toledo, Ohio.
- November 2008 – “Flame retardants in plasma samples from bald eagles from the Great Lakes region.” Presented at the 29<sup>th</sup> North American meeting of the Society of Environmental Toxicology and Chemistry, Tampa, Florida. **Invited speaker.**
- February 2008 – “Brominated flame retardants are ubiquitous: Measurements in the atmosphere and in cats.” Presented at the Environmental Science and Policy Seminar Series, School of Public and Environmental Affairs, Indiana University.
- April 2007 – “Measurements of PBDEs in cat serum and cat food: Is there a relationship with feline hyperthyroidism?” Presented at the 4<sup>th</sup> International Workshop on Brominated Flame Retardants, Amsterdam, the Netherlands.
- May 2006 – “Atmospheric brominated flame retardants and dioxins in the Great Lakes.” Presented at the 49<sup>th</sup> Annual Conference of the International Association for Great Lakes Research, Windsor, Ontario, Canada.
- April 2004 – “In vitro percutaneous absorption of metal powders.” Presented at the Evaluations and Predictions of Dermal Absorption of Toxic Chemicals (EDETTOX) Symposium at the 9<sup>th</sup> International Conference “Perspectives in Percutaneous Penetration”, La Grande Motte, France.

## **FUNDING**

### **Current:**

- “Brominated and Organophosphate Flame Retardants in Childcare Environments”, Toxic Free Future, with Amina Salamova (SPEA). Funding period: 09/21/2017-09/30/2018. Total amount awarded: \$6,000. Role: co-Principal Investigator.
- “Synergizing International Efforts to understand the Fate of Consumer Chemicals in the Waste System (INTERWASTE), EU, with Prof. Harrad. 01/01/2017- 12/31/2020 US institutions are not eligible to receive direct funding but IU will host 2 secondments for students/postdocs from other participants.
- “Air Pollution Exposures among a Rural Disparities Population”, NIH Academic Research Enhancement Award (AREA) Program (R15) with Michael Hendryx (School of Public Health) and Amina Salamova (SPEA). Funding period: 09/01/2016-08/31/2018. Total amount awarded: \$470,249. Role: co-Principal Investigator.
- “Operation of the Integrated Atmospheric Deposition Network (IADN)”. US Environmental Protection Agency. Funding period: 11/01-2014-10/31/2019. Total awarded: \$ 6,000,000. Role: co-Principal Investigator

### **Past:**

- “Investigation of Exposure to Flame Retardants among Electronic Waste Recycling Workers”, Ontario Ministry of Labor. Funding period: 09/2015-08/2017. Total awarded: CAD\$225,000. Role: co-Principal Investigator.
- “Analysis of polychlorinated biphenyl (PCB) congeners and brominated, chlorinated and organophosphate ester (OPE) flame retardants in water samples from Lake Michigan tributaries”, US Geological Survey. Funding period: 01/15/2015-12/31/2017. Total awarded: \$297,450. Role: Principal Investigator.
- “Brominated flame retardants in the environment”, Czech-American Scientific Cooperation Program (AMVIS) with Prof. Jana Klanova, Research Centre for Toxic Compounds in the Environment, Czech Republic (\$100,000, 2012-2015): money is administered by the Czech Institution. IU hosted three student or scientists from the Czech Republic for a period of 2-3 months each year. Role: co-Principal Investigator.

### **Pending:**

- “Primate Ecotoxicology: Decoupling effects of naturally-occurring phytosteroids and anthropogenic endocrine disruptors in a tropical forest-agricultural landscape mosaic” submitted to the National Science Foundation (NSF 18-503) with Dr. Michael Wasserman (Anthropology, Indiana University), Dr. Eduardo Brondizio (Anthropology, Indiana

University), Dr. Virginia Vitzthum (Anthropology, Indiana University). Funding period: 8/1/18 - 7/31/22. Total amount requested: \$ \$1,598,817. Role: co-Principal Investigator.

## AWARDS

“Reviewer Excellence Award”, *Environmental Science & Technology*, May 2008.

## PUBLICATIONS

48 Publications in peer reviewed journals. According to Google Scholar they received 1650 citations resulting in an *h-index* of 26 (as of May, 2018). Break line indicates paper published in the Assistant Scientist position.

### Published

1. Stubbings, W. A., Guo, J., Simon, K., Romanak, K., Bowerman, W., **Venier, M.** Flame Retardant Metabolites in Addled Bald Eagle Eggs from the Great Lakes Region. In press at *Environmental Science and Technology Letters*.
2. Wang, S., Salamova, A., Hites, R.A., Venier, M. Occurrence, spatial, and seasonal distribution of current use pesticides (CUPs) in the atmosphere of the Great Lakes, In press at *Environ. Sci. Technol.*
3. Guo, J., Salamova, A., **Venier, M.**, Dryfhout-Clark, H., Alexandrou, N., Backus, S., Bradley, L., Hung, H., Hites, R.A. Atmospheric Flows of Semi-volatile Organic Pollutants to the Great Lakes Estimated by the United States’ Integrated Atmospheric Deposition and Canada’s Great Lakes Basin Monitoring and Surveillance Networks. In press at *Journal of Great Lakes Research*.
4. Stubbings, W. A., Schreder, E. D., Thomas, M. B., Romanak, K., **Venier, M.**, and Salamova, A. Exposure to Brominated and Organophosphate Flame Retardants in Childcare Environments: Effect of Removal of Flame-retarded Nap Mats on Indoor Levels. In press at *Chemosphere*.
5. Olukunle, O. I., **Venier, M.**, Hites, R.A., Salamova, A. Atmospheric concentrations of hexabromocyclododecane (HBCDD) in the Great Lakes region. *Chemosphere*, 200, 464-470.
6. Guo, J., Stubbing, W., Romanak, K., Nguyen, L., Jantunen, L., Melymuk, L., Arrandale, V., Diamond, M., **Venier, M.** Identification of an Alternative Flame Retardant in E-waste

- Recycling Facility and House Dust in North America. *Environ. Sci. Technol.* 2018, 52 (6), 3599–3607.
7. Guo, J., Simon, K., Romanak, K., Bowerman, W., **Venier, M.** Accumulation of flame retardant in paired egg and plasma of bald eagles. *Environmental Pollution*, 237, 499-507.
  8. Guo, J., Romanak, K., Westenbroek, S., Hites, R. A., Li, A.; Kreis, R.; **Venier, M.**, (2017) Updated polychlorinated biphenyl mass budget for Lake Michigan. *Environ. Sci. Technol.*, 2017, 51 (21), 12455–12465.
  9. Guo, J., Romanak, K., Westenbroek, S., Hites, R. A., **Venier, M.**, (2017) Flame Retardants in Lake Michigan Tributaries. *Environ. Sci. Technol.*, 2017, 51 (17), pp 9960–9969
  10. Vykoukalová, M., **Venier, M.**, Vojta, S., Melymuk, L., Bečanová, J., Romanak, K., Prokeš, R., Okeme, J., Saini, A., Diamond, M.L., Klanova, J. (2017) Organophosphate flame retardants in the indoor environment: A comparison of Central Europe and North America. *Environment International*, 106, 97-104.
  11. Stubbings, W., Riddell, N., Chittim, B., **Venier, M.** (2017) Challenges in the analyses of organophosphate esters. *Environmental Science and Technology Letters*, 4 (7), pp 292–297.
  12. Guo, J., **Venier, M.**, Salamova, A., Hites, R. A. (2017) Bioaccumulation of Dechloranes, organophosphate esters, and other flame retardants in Great Lakes fish. *Science of the Total Environment*, 583, 1–9.
  13. Guo, J., **Venier, M.**, Romanak, K., Westenbroek, S., Hites, R. A. (2016). Identification of Marbon in the Indiana Harbor and Ship Canal. *Environmental Science & Technology*, 50(24), 13232-13238.
  14. Salamova, A., Pevery, A. A., **Venier, M.**, Hites, R. A. (2016). Spatial and Temporal Trends of Particle Phase Organophosphate Ester Concentrations in the Atmosphere of the Great Lakes. *Environmental Science & Technology*, 50(24), 13249-13255.
  15. **Venier, M.**, Audy, O., Vojta, Š., Bečanová, J., Romanak, K., Melymuk, L., Krátká, M., Kukučka, P., Okeme, J., Saini, A., Diamond, M. L., Klánová, J. (2016). Brominated flame retardants in the indoor environment - Comparative study of indoor contamination from three countries. *Environment International*, 94, 150-60.
  16. Karásková, P., **Venier, M.**, Melymuk, L., Bečanová, J., Vojta, S., Prokeš, R., Diamond, M.L., Klanova, J. Perfluorinated alkyl substances (PFASs) in household dust in Central Europe and North America. *Environment International*, 2016, 94, 315-324.
  17. Liu, L. Y., Salamova, A., **Venier, M.**, and Hites, R. A Novel Flame Retardant in the Great Lakes Atmosphere: 3,3',5,5'-Tetrabromobisphenol A bis(2,3-dibromopropyl) ether. *Environmental Science and Technology Letters*, 2016, 3(5), 194-199.
  18. Liu, L. Y., Salamova, A., **Venier, M.**, and Hites, R. Trends in the levels of halogenated flame retardants in the Great Lakes atmosphere over the period 2005-2013. *Environment International*, 2016, 92, 442-449.
  19. Wöhrschimmel, M. Scheringer, Bogdal, C., Hung, H., Salamova, A., **Venier, M.**, A. Katsoyiannis, A., K. Hungerbühler, K., Fiedler, H., and Hites, R. Ten years after entry into force of the Stockholm Convention: What do air monitoring data tell about its effectiveness? *Environmental Pollution*, 2016, 217, 149-158.
  20. **Venier, M.**, Salamova, A., and Hites, R.A. Temporal Trends of Persistent Organic Pollutant Concentrations in Precipitation around the Great Lakes, *Environmental Pollution*, 2016, 217, 143-148.
  21. Pevery, A.A., O'Sullivan, C., Liu, L.Y., **Venier, M.**, Martinez, A., Hornbuckle, K.H., and Hites, R.A., Chicago's Sanitary and Ship Canal sediment: Polycyclic aromatic hydrocarbons,

- polychlorinated biphenyls, brominated flame retardants, and organophosphate esters, *Chemosphere*, 2015, 134, 380-386.
22. **Venier, M.**, Salamova, A., and Hites, R.A. Halogenated flame retardants in the Great Lakes environment, 2015, *Accounts of Chemical Research* 48 (7), 1853-1861.
  23. Peverly, A.A., Ma, Y., **Venier, M.**, Rodenburg, Z., Spak, S.N., Hornbuckle, K.H., and Hites, R.A., Variations of flame retardant, polycyclic aromatic hydrocarbon, and pesticide concentrations in Chicago's atmosphere measured using passive sampling, *Environmental Science & Technology*, 2015, 49 (9), 5371-5379
  24. Salamova, A., **Venier, M.**, and Hites, R.A., Revised temporal trends of persistent organic pollutant concentrations in air around the Great Lakes, *Environmental Science & Technology Letters*, 2015, 2 (2), 20-25.
  25. **Venier, M.**, Dove, A., Romanak, K., Backus, S., and Hites R.A., Flame retardants and legacy chemicals in Great Lakes' water, *Environmental Science & Technology*, 2014, 48 (16), 9563-9572.
  26. **Venier, M.** and Hites R.A, DDT and HCH, two discontinued organochlorine insecticides in the Great Lakes region: Isomer trends and sources, *Environment International* (2014), 69, 159-165
  27. Liu, L.-Y.; Kukučka, P.; **Venier, M.**; Salamova, A.; Klánova, J.; Hites, R.A., Differences in spatiotemporal variations of atmospheric PAH levels between North America and Europe: data from two air monitoring projects. *Environment International*, Volume 64, March 2014, Pages 48-55
  28. Salamova, A., Ma, Y., **Venier, M.** and Hites, R.A., High levels of organophosphate flame retardants in the Great Lakes atmosphere, *Environmental Science & Technology Letters*, 2014, 1 (1), pp 8-14.
  29. Ma, Y., Salamova, A., **Venier, M.** and Hites, R. A., Has the phase-out of PBDEs affected their atmospheric levels? Trends of PBDEs and their replacements in the Great Lakes atmosphere, *Environmental Science & Technology*, 2013, 47 (20), 11457-11464.
  30. Ma, Y., **Venier, M.** and Hites, R. A., Tribromophenoxy flame retardants in the Great Lakes atmosphere, *Environmental Science & Technology*, 2012, 46 (24), 13112-13117.
  31. **Venier, M.** , Ma, Y., and Hites, R. A., Bromobenzene flame retardants in the Great Lakes atmosphere, *Environmental Science & Technology*, 2012, 46 (16), 8653-8660.
  32. **Venier, M.**, Hung, H., Tych, W. and Hites, R. A., Temporal trends of persistent organic pollutants: A comparison of different time series models, *Environmental Science & Technology*, 2012, 46 (7), 3928-3934.
  33. Ma, Y., **Venier, M.** and Hites, R. A., 2-ethylhexyl tetrabromobenzoate and bis-2-ethylhexyl tetrabromophthalate flame retardants in the Great Lakes atmosphere, *Environmental Science & Technology*, 2012, 46 (1), 204-208.
  34. Klanova, I. Diamond, M., Jones, K., Lammel, G., Lohmann, R., Pirrone, N., Scheringer, M., Balducci, C., Bidleman, T., Blaha, K., Blaha, L., Booiij, K., Bouwman, H., Breivik, K., Eckhardt, S., Fiedler, H., Garrigues, P., Harner, T., Holoubek, I., Hung, H., MacLeod, M., Magulova, K., Mosca, S., Pistocchi, A., Simonich, S., Smedes, F., Stephanou, E., Sweetman, A., Sebkova, K., **Venier, M.**, Vighi, M., Vrana, B., Wania, F., Weber, R., and Weiss, P. Identifying the research and infrastructure needs for the global assessment of hazardous chemicals ten years after establishing the Stockholm Convention, Viewpoint, *Environmental Science & Technology*, 2011, 45 (18), pp 7617-7619.
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35. **Venier, M.** and Hites, R. A., Flame retardants in the serum of pet dogs and in their food, *Environmental Science & Technology*, 2011, 45 (10), 4602–4608.
36. **Venier, M.** and Hites, R. A., Time trend analysis of atmospheric POPs concentrations in the Great Lakes region since 1990, *Environmental Science & Technology*, 2010, 44 (21), 8050–805.
37. **Venier, M.**, Wierda, M., Bowerman, W. W., and Hites, R. A., Flame retardants and organochlorine pollutants in bald eagle plasma from the Great Lakes region, *Chemosphere*, Vol. 80, Issue 10, August 2010, Pages 1234-1240.
38. **Venier, M.** and Hites, R. A., Regression model of partial pressures of PCBs, PAHs, and organochlorine pesticides in the Great Lakes' atmosphere, *Environmental Science & Technology* 2010, 44 (2), 618–623.
39. Basu, I., Arnold, K., **Venier, M.** and Hites, R.A., Partial pressures of PCB-11 in air from several Great Lakes sites, *Environmental Science & Technology* 2009, 43 (17), 6488–6492.
40. **Venier, M.**; Ferrario, J and Hites, R. A., Polychlorinated dibenzo-p-dioxins and dibenzofurans in the atmosphere around the Great Lakes, *Environmental Science & Technology* 2009, 43 (4), 1036–1041.
41. **Venier, M.** and Hites, R. A., Atmospheric deposition of PBDEs to the Great Lakes featuring a Monte Carlo analysis of errors, *Environmental Science & Technology* 2008, 42 (24) 9058–9064.
42. **Venier, M.** and Hites, R. A., Flame retardants in the atmosphere near the Great Lakes, *Environmental Science & Technology* 2008, 42 (13), 4745–4751.
43. Dye, J. A., **Venier, M.**, Zhu, L., Ward, C. R., Hites, R. A., and Birnbaum, L. S., Elevated PBDE levels in pet cats: sentinels for humans?, *Environmental Science & Technology* 2007, 41, (18), 6350–6356.
44. **Venier, M.** and Hites, R. A., Chiral organochlorine pesticides in the atmosphere. *Atmospheric Environment* 2007, 41, (4), 768–775.
45. Larese, F., Gianpietro, A., **Venier, M.**, Maina, G., and Renzi, N., In vitro percutaneous absorption of metal compounds. *Toxicology Letters* 2007, 170, (1), 49–56.
46. Adami, G., Larese, F., **Venier, M.**, Barbieri, P., Lo Coco, F., and Reisenhofer, E., Penetration of benzene, toluene and xylenes contained in gasolines through human abdominal skin in vitro. *Toxicology in Vitro* 2006, 20, (8), 1321–1330.
47. **Venier, M.**; Adami, G., Larese, F., Maina, G., and Renzi, N., Percutaneous absorption of 5 glycol ethers through human skin in vitro, *Toxicology in Vitro* 2004, 18, (5), 665–671.
48. Filon, F. L., Maina, G., Adami, G., **Venier, M.**, Coceani, N., Bussani, R., Massiccio, M., Barbieri, P., and Spinelli, P., In vitro percutaneous absorption of cobalt, *International Archives of Occupational and Environmental Health* 2004, 77, (2), 85–89.