



**Chemical  
Insights**

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SCIENCE COMMUNICATIONS HUB

# **Environmental Pollution and Health Impacts: Measurements, Sources, and Solutions**

# CONTENTS

|   |    |
|---|----|
| NATIONAL REPORT PUBLICATIONS.....   | 3  |
| SCIENTIFIC JOURNAL PUBLICATIONS .....   | 3  |
| CONFERENCE PROCEEDINGS .....  | 6  |
| SUMMIT PROCEEDINGS .....  | 8  |
| KEY TECHNICAL PRESENTATIONS.....  | 8  |
| STANDARDS AND GUIDANCE DOCUMENTS.....   | 19 |
| TECHNICAL REPORTS.....  | 20 |
| TECHNICAL BRIEFS, BULLETINS, APPLICATION NOTES, SCIENCE INSIGHTS, AND FACT SHEETS ..... | 21 |
| OTHER PUBLICATIONS.....   | 26 |
| TOOLKITS.....   | 27 |
| LEARNING ASSETS .....   | 27 |
| LANDING PAGES.....  | 28 |
| E-LEARNING MODULES .....  | 28 |
| E-LEARNING VIDEOS.....  | 29 |
| INTERNAL REPORTS (FOR RESEARCH PURPOSES ONLY) .....                                     | 32 |
| E-NEWSLETTERS .....   | 32 |
| PRESS RELEASES AND NEWS ALERTS .....  | 35 |
| PODCASTS AND LIVE BROADCASTS.....   | 38 |
| OTHER ARTICLES .....  | 38 |

## NATIONAL REPORT PUBLICATIONS

National Academies of Sciences, Engineering, and Medicine. 2022. *The Chemistry of Fires at the Wildland-Urban Interface*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26460>.

## SCIENTIFIC JOURNAL PUBLICATIONS

Zhang, Qian and Marilyn Black. "Exposure Hazards of Particles and Volatile Organic Compounds Emitted from Material Extrusion 3D Printing: Consolidation of Chamber Study Data." *Environment International* 182 (2023). <https://doi.org/10.1016/j.envint.2023.108316>.

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Zhang, Qian, Jennifer Jisoo Jeon, Marilyn Black, Travis Goldsmith, Roby Greenwald, and Christa Wright. "Characterization of an Electronic Nicotine Delivery System (ENDS) Aerosol Generation Platform to Determine Exposure Risks." *Toxics* 11, no. 2 (2023): 99. <https://doi.org/10.3390/toxics11020099>.

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## CONFERENCE PROCEEDINGS

- Wright, Christa. "The Unknowns of Vaping: Oxidative Stress, Toxicity, and DNA Damage Across the Device Lifetime." In *The Toxicologist: Supplement to Toxicological Sciences*, Society of Toxicology (SOT) 61<sup>st</sup> Annual Meeting and ToxExpo. San Diego, CA, 2022. <https://www.toxicology.org/pubs/docs/Tox/2022Tox.pdf>.
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## SUMMIT PROCEEDINGS

Underwriters Laboratories Inc. "Summary Statement: The CIRI + USGBC Building Resilience for Health Summit." Atlanta, GA, 2023. <https://chemicalinsights.org/wp-content/uploads/2023/10/CIRI-Summit-Summary-of-Proceedings-102623-Final.pdf>.

Underwriters Laboratories Inc. "Proceedings of the Future of Fire Safety: Exploring the Intersection of Wildfires and Human Health, a Symposium Presented at the Society of Toxicology (SOT) 62<sup>nd</sup> Annual Meeting and ToxExpo." Nashville, TN, 2023. [https://chemicalinsights.org/wp-content/uploads/2023/06/Chemical-Insights\\_2023-SOT-Symposium-Proceedings\\_Fin.pdf](https://chemicalinsights.org/wp-content/uploads/2023/06/Chemical-Insights_2023-SOT-Symposium-Proceedings_Fin.pdf).

Underwriters Laboratories Inc. "A Summary: Managing Fire and Chemical Exposure Risks of Residential Upholstered Furniture." 4<sup>th</sup> Furniture Flammability and Human Health Summit. Virtual, 2021.  
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Underwriters Laboratories Inc. "Proceedings of the Safety Science of 3D Printing Summit." 1<sup>st</sup> 3D Printing and Human Health Summit. Atlanta, GA, 2017. [https://chemicalinsights.org/wp-content/uploads/2017/06/3DP\\_Proceedings\\_Final.pdf](https://chemicalinsights.org/wp-content/uploads/2017/06/3DP_Proceedings_Final.pdf).

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Underwriters Laboratories Inc. "A Read-Out of Furniture Flammability and Human Health." 1<sup>st</sup> Furniture Flammability and Human Health Summit. Atlanta, GA, 2013. [https://chemicalinsights.org/wp-content/uploads/2013\\_FFHH\\_Summit\\_Summary.pdf](https://chemicalinsights.org/wp-content/uploads/2013_FFHH_Summit_Summary.pdf).

## KEY TECHNICAL PRESENTATIONS

Bell-Huff, Cristi. "Vaping on Campus: What the Research Says on Emissions and Potential Health Impacts." Presented at the Campus Safety, Health, and Environmental Management Association (CSHEMA) Webinar Series, Virtual, December 5, 2023.



Barnett, Lillie, Xiaojia He, Jennifer Jeon, Qian Zhang, Saeed Alqahtani, Jonathan Shannahan, Marilyn Black, and Christa Wright. "Real-Time Exposure to 3D Printer Emission Elicits Inflammatory Responses and Metabolic Perturbations in Human Airway Epithelial Cells." Presented at the American College of Toxicology 44<sup>th</sup> Annual Meeting, Orlando, FL, November 13, 2023.

Stelmack, Annette, Mark Wilson, Steve Kerber, and Christa Wright. "The Latest Science on WUI Fires and the Built Environment." Presented at the GreenCE Professional Development Webinar, Virtual, November 6, 2023.

Watt, Alister, and Marilyn Black. "Preparing for Natural Disasters Part One: Fire and Smoke." Presented at the Land Trust Alliance Webinar, Virtual, October 26, 2023.

Yang, Irene, Xiaojia He, Henry Claussen, Robert Arthur, Jennifer Jeon, Pam Cushenan, Marilyn Black, Jonathan Shannahan, and Christa Wright. "Exploring the Impact of Vaping Behavior on the Subgingival Microbiome of ENDS Users." Presented at the Fall 2023 Tobacco Regulatory Science Meeting (TRSM), Bethesda, MD, October 17, 2023.

Zhang, Qian, Rodney J. Weber, Todd P. Luxton, Derek M. Peloquin, Eric J. Baumann, and Marilyn S. Black. "Particle Emission and Metal Composition Characterizations for Fused Filament Fabrication 3D Printers Using Emerging Materials." Presented at the American Association for Aerosol Research (AAAR) Annual Conference, Portland, OR, October 5, 2023.

Greenwald, Roby, Yu-Jung (Grace) Lin, Donghai Liang, and Christina H. Fuller. "Introducing the Air Pollution Exposure in Child Care Settings (APECCS) Study: Measuring Indoor/Outdoor Air Quality at Child Care Centers and Residential Environments in the Atlanta Metropolitan Area." Presented at the American Association for Aerosol Research (AAAR) Annual Conference, Portland, OR, October 4, 2023.

Lin, Yu-Jung (Grace), Karl Armstrong, and Roby Greenwald. "Comparison of Low-Cost PM Sensors with a Direct Mass Measurement at Sites Representing Road and Non-Road PM Sources." Presented at the American Association for Aerosol Research (AAAR) Annual Conference, Portland, OR, October 3, 2023.

Wilson, Mark, Christa Wright, Steve Kerber, and Annette Stelmack. "The Latest Science on WUI Fires and the Built Environment: Exploring Atmospheric Emissions from WUI Fires." Presented at the Greenbuild International Conference & Expo, Washington, DC, September 27, 2023.

Black, Marilyn, Birgitte Messerschmidt, and Elliott Horner. "Resiliency for Health." Presented at the Greenbuild International Conference & Expo, Washington, DC, September 26, 2023.

Jeon, Jennifer, Qian Zhang, Joseph Hess, Xiaojia He, Jonathan Shannahan, Marilyn Black, and Christa Wright. "Characterization of Potential Exposure and Inhalation Risks During Firsthand and Secondhand Vaping." Presented at the International Society of Exposure Science National Conference, Chicago, IL, August 29, 2023.

He, Linchen, Shoshana Evans, Christina Norris, Karoline Barkjohn, Xiaoxing Cui, Zhen Li, Feng Li, Yinping Zhang, Marilyn Black, Michael H. Bergin, and Junfeng (Jim) Zhang. "Associations Between Personal Apparent Temperature Exposures and Asthma Symptoms in Children with Asthma." Presented at the International Society of Exposure Science National Conference, Chicago, IL, August 29, 2023.

Zhang, Qian, Rodney J. Weber, Todd P. Luxton, Derek M. Peloquin, Eric J. Baumann, and Marilyn S. Black. "Exposure to Metal-Containing Aerosols Emitted from Material Extrusion 3D Printing with Thermoplastic and Composite Materials." Presented at the International Society of Exposure Science National Conference, Chicago, IL, August 29, 2023.

He, Xiaojia, Jennifer Jeon, Joseph Hess, Qian Zhang, Jonathan Shannahan, Marilyn Black, and Christa Wright. "Utilizing Cheminformatics to Determine Primary and Secondhand Vaping Exposure and Health Risks." Presented at the American Chemical Society (ACS) National Conference, San Francisco, CA, August 16, 2023.

Bell-Huff, Cristi. "Forever Chemicals: What Designers Need to Know." Presented at the American Society of Interior Design GATHER Conference, Los Angeles, CA, August 14–15, 2023.

Henderson, Holley. "Understanding WUI and How to Protect Our Homes." Presented at the American Society of Interior Design GATHER Conference, Los Angeles, CA, August 13–14, 2023.

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