



Stephany I. Mason, PhD
SENIOR CONSULTANT

simason@engsys.com

Dr. Mason is a Senior Consultant with Engineering Systems Inc. (ESi). She is experienced in indoor air and environmental quality assessment and improvement, construction product chemistry and sustainable attributes, and environmental and geochemistry. Dr. Mason brings significant expertise in environmental chemistry and science, with a focus on the planning, evaluation and design of “green” buildings – energy and resource efficient structures that are optimized for the health and safety of occupants while minimizing environmental impacts. An experienced researcher Dr. Mason has a wealth of hands-on laboratory experience, particularly in the development and execution of analytical test methods, reports and processes. She has also provided expert testimony in deposition and at trial regarding chemical exposures in indoor spaces resulting from product emissions.

Prior to joining ESI, Dr. Mason owned and operated her own “green” consulting company, where she helped clients with sustainability planning and analysis, indoor air and environmental quality assessment and improvement, “green” program implementation, and certification management. She has set up laboratories for chemical product testing, environmental geochemistry, and sensor development including the development and launch of new capabilities for testing the isotopes and determining sources of nitrate and dissolved organic carbon in water, and the production of a fluorescence-based sensor to measure levels of carbon dioxide in seawater.

Dr. Mason earned both a Ph.D. in Earth and Environmental Science and an M.Phil. in Geological Sciences from Columbia University. She also holds an M.S.E. (Materials Science and Engineering) degree from the University of Pennsylvania. A dynamic speaker, Stephany has presented at numerous scientific and industry forums, and her work has been published in a variety of peer-reviewed journals and publications.

Areas of Specialization

Material Analysis
Chemical Analysis
Material Compatibility
Plastics, Polymers, and Rubbers
Building Materials
Technical Litigation
Indoor Air Quality
Composite Materials
Paints and Coatings
Toxin Exposure

Education

Ph.D., Earth and Environmental Science, Columbia University, New York, NY, 2000
M.Phil., Geological Sciences, Columbia University, New York, NY, 1996
M.S.E., Materials Science and Engineering, University of Pennsylvania, Philadelphia, PA, 1991
B.S., Geology, University of Illinois, Urbana, IL, 1987

January 2021



Other Certifications

LEED AP

Climate Reality Leader

Industrial Hygienist (AIHA)

Professional Affiliations/Honors

ASTM International

Recording Secretary – **D20.96** Subcommittee on Environmentally Degradable Plastics and Biobased Products

Section Chair – **D20.96.11** on Material Content Origin (Beginning of Life)

Member – Committees **D22** on Air Quality and **E60** on Sustainability; Subcommittees **D22.03** on Ambient Atmospheres and Source Emissions, **D22.05** on Indoor Air Quality, **E60.21** on Terminology, and **E60.80** on General Sustainability Standards

Former Member-At-Large – **D22.90** Executive Committee

American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE)

Corresponding Member **TAC-TC02.03**, **TAC-TC02.08**

Former Voting Member **SSPC 189.1**, **SSPC 62.2**, **GPC 27**

Former Non-Voting Member **SSPC 189.3**, **SSPC 62.1**

American Chemical Society (ACS)

Member

International Society of Indoor Air Quality and Climate (ISIAQ)

Member STC11 Sources, Monitoring and Evaluation: Chemical Pollutants

American Chemical Society (ACS)

Member

USGBC Florida	2016 – present
Embodied Carbon Network	2018 - present
Mindful Materials Content Working Group	2016 – 2019
Green Schools' Catalyst Journal Editorial Board	2016 – 2019
Green Schools Conference Steering Committee	2016 – 2018

Positions Held

Engineering Systems Inc., Miami, Florida

Senior Consultant, August 2020 – Present

Green Elephant Consulting, LLC., Boca Raton, Florida

Owner and President, 2018 – 2020

Beta Analytic, Inc., Miami, Florida

Vice President, Research & Development, 2018 - 2020

Collaborative for High Performance Schools (CHPS), Sacramento, California

Technical Director, 2014 - 2018

Eurofins Air Toxics, INC., Folsom, California

Vice-President, Business Development / Principal Scientist, 2012 - 2014

UL Air Quality Sciences, Marietta, Georgia

Principal Scientist, 2003 – 2012

Georgia Institute of Technology, Department of Earth and Atmospheric Sciences, Atlanta, Georgia

Research Scientist II, 2001 – 2004

YSI, INC., Yellow Springs, Ohio

Analytical Chemist, 1999 – 2000

Publications

Gershon H., A. Lykkeberg, F. Goren, and **S. Mason**, "Identifying Fraudulent Natural Products: A Perspective on the Application of Carbon-14 Analysis," *Journal of Agricultural and Food Chemistry*, 2019, 67 (49), 13393-13399

Okamoto, K., R. Narayan, **S. Mason**, and H. Gershon, "Captured Carbon vs. Biobased," *bioplastics MAGAZINE*, March 2019, Vol 14, 48-49

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Mason, S.I., "The Collaborative for High Performance Schools: An Evolution in Green K-12 Educational Facilities". *Green Schools Catalyst Quarterly*, Vol. 1, March 2017

Mason, S.I., "Greening Schools from the Inside Out: An Occupant First Approach", www.greenschoolsnationalnetwork.org/news, October 11, 2016

Mason, S. I., R. Oppl, and C. Laffargue, "Limit Values for VOC Emissions from Construction and Decorative Products around the Globe", *Indoor Air Proceedings of the Indoor Air Conference*, July 2014

Laffargue, C, R. Oppl, and **S.I. Mason**, "Harmonization of VOC Emissions Testing in Europe – the new Standard CEN/TS 16516", *Indoor Air Proceedings of the Indoor Air Conference*, July 2014

Howard-Reed, C., Z. Liu, J. Benning, S. Cox, D. Samarov, D. Leber, A.T. Hodgson, **S.I. Mason**, D. Won and J.C. Little, "Diffusion-Controlled Reference Material for Volatile Organic Compound Emissions Testing: Pilot Inter-laboratory Study", *Building and Environment*, vol. 46, no. 7, p.1504-1511, July 2011

Mason, S. I. and A. Worthan, "The Use of TVOC in Conjunction with Individual Volatile Organic Compound Criteria to Create High Performance Indoor Spaces", *Indoor Air Proceedings of the Indoor Air Conference*, June 2011

Mason, S. I. and A. Ceragioli, "Paint Volatile Organic Compound Emissions and Volatile Organic Compound Content Comparison Study", *Indoor Air Proceedings of the Indoor Air Conference*, June 2011

Mason, S.I., W.E. Horner, D. Cortes, "Detection of Gaseous Effluents and By-Products of Fungal Growth that Affect Environments", *HVAC&R Research*, vol. 16, no. 2, March 2010

Bernstein, J.A., N. Alexis, H. Bacchus, I.L. Bernstein, P. Fritz, E. Horner, N. Li, **S.I. Mason**, A. Nel, J. Oullette, K. Reijula, T. Reponen, J. Seltzer, A. Smith, and S.M. Tarlo, "The Health Effects of Nonindustrial Indoor Air Pollution", *J Allergy Clin Immunol*, vol. 121, no. 3, p.585-591, March 2008

Daggett, D.A., J.D. Hamilton, R. Israel, **S.I. Mason**, and M. Black "A Method to Evaluate the Impact of Cleaning Products and Processes on Indoor Air Quality", *CIRI / UNLV 2007 State of Cleaning Science Symposium*, May 2007

Mason, S.I., E.M. Spohn, and M.S. Black, "The Significance of Component Emissions Testing to Predicted Air Concentrations - The Effects of Scaling", *A&WMA/EPA Proceedings of the Indoor Environmental Quality: Problems, Research & Solutions Conference*, July 2006

Rubin, S.I., "Carbon Dioxide and Nutrient Cycling in the Upper Water Column across the Polar Frontal Zone and Antarctic Circumpolar Current along 170°W", *Global Biogeochemical Cycles*, 10.1029/2002GB001900, 2003

Rubin, S.I., S.L. King, R.A. Jahnke, and P.N. Froelich, "Benthic Barium and Alkalinity Fluxes: Is Ba an Oceanic Paleo-Alkalinity Proxy for Glacial Atmospheric CO₂?", *Geophysical Research Letters*, 10.1029/2003GL017339, 2003

Rubin, S.I. and R.M. Key, "Separating Natural and Bomb-Produced Radiocarbon in the Ocean: The Potential Alkalinity Method", *Global Biogeochemical Cycles*, 10.1029/2001GB001432, 2002

Broecker, W.S., S.L. Peacock, S. Walker, R. Weiss, E. Fahrbach, M. Schroeder, U. Mikolajewicz, C. Heinze, R. Key, T.-H. Peng, and **S.I. Rubin**, "How Much Deep Water is Formed in the Southern Ocean?", *Journal of Geophysical Research*, 103(C8), pp.15,833-15,843, 1998

Rubin, S.I., T. Takahashi, D.W. Chipman and J.G. Goddard, "Primary Productivity and Nutrient Utilization Ratios in the Pacific Sector of the Southern Ocean Based on Seasonal Changes in Seawater Chemistry", *Deep-Sea Research*, 45(8), pp. 1211-1234, 1998

Presentations

Mason, S. and R. King, "Learning Opportunities in High-Performance Buildings", *Green California Schools Summit*, Pasadena, CA, November 2017

Jobson, A. and **S. Mason**, "Building on Prop 39 - Beyond Energy Efficient to High Performance with CHPS", *CASH Workshop - The Path to Zero Net Energy (ZNE): Going Beyond Lighting and HVAC on School Sites*, Ontario, CA, June 2017

Mason, S., A. Massey, M. Ammon, and J. Collins, "US-CHPS: A National Occupant First Approach to High Performance Schools", *Green Schools Conference & Expo*, Atlanta, GA, March 2017

Mason, S., J. Balfe, J. da Silva, R. DiNola, "ZNE High Performance Schools", *NESEA Building Energy Boston*, Boston, MA, 2017

Mason, S., "CHPS - Greening Schools from the Inside Out", *Edu-Tech Facilities*, Tampa, FL, February 2017
Mason, S., C. Filardo, and J. Zinner, "CHPS PreFAB: A Fast, Affordable Solution for Schools Wanting Healthy, High Performance Prefabricated Classrooms Pre-Verified to CHPS Criteria", *Green California Schools Summit*, Pasadena, CA, November 2016

Mason, S.I., J. Balfe, H. Chatto-Flint, and S. O'Donnell, "ZNE and High Performance – The Perfect Partnership for Schools", Green Schools Conference & Expo, Pittsburgh, PA, April 2016

Orr, W., **S. Mason**, "PreFAB: From prototype to production to two-story", Green California Schools Summit, Pasadena, CA, October 2015

Mason, S.I., I. Padilla, and A. Ferra, "Leveraging California Policy and Programs to Increase TDP Procurement to Public Schools", CalRecycle 2015 California Tire Conference, Sacramento, CA, August 2015

Mason, S.I., "CHPS - Designing Toxins Out of Healthy, High- Performance Schools", CASH Conference, Sacramento, CA, February 2015

Mason, S.I., A. Jobson, M. Gonzalez, and A. Hopkins, "Creating High Performance Schools with the 2014 CACHPS Criteria", Green California Schools Summit, Pasadena, CA, November 2014

Mason, S.I., "Forum - Indoor Air Quality: Measuring (S)VOC emissions from Spray Polyurethane Foam (SPF) Insulation, Harmonization of Consensus Methods – Commercial Laboratory Perspective", Indoor Air 2014, Hong Kong, July 2014

Mason, S.I., "Assessment of Adhesive and Sealant Chemical Material Ingredients – Hazard or Risk", Adhesives and Sealants Council (ASC) Spring Conference, Orlando, FL, April 2014

Mason, S.I. and H.C. Hayes, "VOC Sampling for IAQ Assessments and Investigations: Method Selection and Application", IAQA 17th Annual Meeting, Nashville, TN, March 2014

Mason, S.I., "New Technologies for the Rapid Assessment of Adhesive and Sealant Chemical Impacts", Adhesives and Sealants Council (ASC) Spring Conference, Atlanta, GA, April 2013

Mason, S.I., "Healthy Buildings: Product Emissions Testing and Building Air Testing", Health in Buildings Roundtable: Making the Human Health Commission, Washington, D.C., April 2013

Mason, S.I. and W.E. Horner, "Initial Results of Testing for Ultrafine PM from Hardcopy Devices as per ECMA- 328 and ISO/IEC 28360", American Association for Aerosol Research (AAAR) 31st Annual Conference, Minneapolis, MN, October 2012

Mason, S.I. and S. Wolfersberger, "Green Chemistry of Insulation: Lower VOC Emissions Plus", American Chemical Society (ACS) 16th Annual Green Chemistry and Engineering Conference, Washington, D.C., June 2012

Mason, S.I., "Energy Conservation and Healthy Indoor Environments in Green Buildings: Maintaining Balance", Energy, Utilities, and Environment Conference (EUEC), Phoenix, AZ, January 2011