

Exponent®
Engineering & Scientific Consulting

June Bott, Ph.D., P.E., CFEI

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Professional Profile

Dr. Bott is a licensed Metallurgical Engineer specializing in materials science and engineering and failure analysis. Her specific expertise includes metallurgy, materials science, mechanical behavior of materials, fracture, fatigue, and materials characterization.

Dr. Bott has led failure investigations on a variety of projects, ranging across plumbing and HVAC failures, corrosion failures, fires and explosions, personal injuries, product safety/liability, heavy equipment failure, and hot particle ignition of wildland fires. Her clients have included manufacturers, utilities, attorneys, and insurance companies. Dr. Bott excels at applying advanced materials science and engineering principles to efficiently and effectively identify the root causes of component failures, and to translating elaborate scientific concepts into easy to understand language. Dr. Bott has extensive experience leading and collaborating with multi-disciplinary teams to solve complex problems.

Dr. Bott's graduate research involved the study of high temperature oxidation behavior and aluminum nitride formation in iron alloys containing aluminum. Dr. Bott has experience characterizing materials and failures using optical microscopy, scanning electron microscopy (SEM), energy-dispersive x-ray spectroscopy (EDS), x-ray diffraction (XRD), x-ray imaging, CT radiography, and 3D laser/light scanning.

Academic Credentials & Professional Honors

Ph.D., Materials Science and Engineering, Carnegie Mellon University, 2014

M.S., Materials Science and Engineering, Carnegie Mellon University, 2011

B.S., Materials Science and Engineering, University of California, Berkeley, 2010

The Gringer Foundation Frontiers of Engineering Alumna (US FOE), National Academy of Engineering (2024)

Licenses and Certifications

Professional Engineer Metallurgical, California, #MT 2037

Professional Engineer, Colorado, #PE.0057476

Professional Engineer Metallurgical, Oregon, #101275PE

Professional Engineer, Washington, #57134

FI-210, Wildland Fire Origin and Cause Determination

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Certified Fire and Explosion Investigator (CFEI)

Prior Experience

Director, Materials Science and Engineering, Jensen Hughes, 2020-2022

Senior Materials Engineer, Jensen Hughes, 2018-2020

Materials Engineer, CASE Forensics/Jensen Hughes, 2014-2018

Professional Affiliations

ASM International

National Association of Fire Investigators

Publications

“Signature Recognition of Energetic Materials,” Bott, J., Lewis, K., Scheiff, S., and McCary, J., Fire and Materials 2017 Conference Proceedings, 2017.

“Electronic Ballast Fire Analysis,” Scheiff, S., Lewis, K., Rice, C., Rayment, K., McClelland M., and Bott, J., Fire and Materials 2017 Conference Proceedings, 2017.

“Influence of Gas Composition and Exposure Cycle on the Formation of Surface and Subsurface Oxides in Iron-Aluminum-Based Alloys at High Temperature,” Bott, J., Yin, H., Sridhar, S., and Auinger, M., Metallurgical and Materials Transactions B, Volume 47, pp. 2157-2163, 2016 (DOI 10.1007/s11663-016-0671-4).

“Theoretical and Experimental Analysis of Selective Oxide and Nitride Formation in Fe-Al alloys,” Bott, J., Yin. H., Sridhar, S., and Auinger, M., Corrosion Science, Volume 92, pp. 37-45, 2015 (DOI 10.1016/j.corsci.2014.10.024).

"AlN Formation in Fe-Al Alloys in N2-O2 Atmospheres," Bott J., Yin H., Sridhar, S., Materials and Corrosion, Volume 65, pp. 296-304, 2014 (DOI 10.1002/maco.201307257).

"The Effect of Heating Rate on Subsurface AlN Formation in Fe-Al Alloys in N2-O2 Atmospheres," Bott. J., Yin, H., Sridhar, S., Metallurgical and Materials Transactions B, Volume 45, pp. 2222-2231, 2013 (DOI 10.1007/s11663-014-0116-x).

Presentations

Bott, J., Lenz, O., “The Science and Risk of Lithium Battery Fires in Aircraft,” King County Bar Association 2025 Aviation Law Section Annual Conference. (2025)

Bott, J., Elster, J., and Phillips, V., “The Third Dimension – The Future of Scene Documentation,” NASP Spring Conference 2021. (2021)

Bott, J., Christian, J., Cornell, W., Fowler, W., and Levy, J. “New Building Products and Systems: What You Don’t Know Will Hurt You,” CLM Construction Conference. (2020)

Bott, J., Lewis, K. Hot Particle Ignition Assessment for Wildland Fires, International Association of Arson Investigators, 2018 International Training Conference, Frisco, TX. (2018)

Bott, J., Lewis, K., Scheiff, S., Signature Recognition of Energetic Materials, Fire and Materials 2017, San Francisco, CA. (2017)

Bott, J., AIN Formation in Fe-Al Alloys, multiple locations:

- Graduate Student Symposium, Carnegie Mellon University Department of Materials Science and Engineering, Pittsburgh, PA (2013)
- Association for Iron and Steel, AISTech, Pittsburgh, PA (2013)
- ASM/NACE Joint meeting, Pittsburgh, PA (2013)
- Materials Science and Technology, MS&T13, Montreal, Quebec, Canada (2013)
- Association for Iron and Steel, AISTech, Atlanta, GA (2012)
- EFC Workshop: Beyond Single Oxidants, Frankfurt am Main, Germany (2012)
- The 5th International Conference on the Science and Technology of Steelmaking, Dresden, Germany (2012)
- Gordon Research Seminar and Conference, New London, NH (2013)

Center for Iron and Steelmaking Research, Bi-annual meeting, Carnegie Mellon University, Pittsburgh, PA (2011)

Peer Reviews

Corrosion Science

Metallurgical and Materials Transactions B