

Mark Weiss is a Senior Staff Consultant for ESi. He is a highly skilled laboratory chemist with over 30 years of experience in materials analysis and characterization, and failure analysis. He is exceptionally experienced and skilled in the investigation of issues involving the physical and chemical properties of polymers and other organic materials, and the effects of processing, contamination and lot-to-lot variation on material performance. His expertise includes materials characterization by FTIR, RV, VN, MFR, GPC, DSC, TGA, KFT and microstructural analysis by scanning electron and optical microscopy techniques. Mark has a strong analytical, mechanical and engineering aptitude with exceptional skills in test method and instrumentation selection and usage. Mark has an excellent reputation with clients as a results-focused and highly competent and knowledgeable scientific professional.

Education

BS, Science Chemistry/Polymers. Michigan Technology University. 1996

Positions Held

Engineering Systems Inc., Plymouth, Minnesota

- Senior Staff Consultant, 2019 – Present

Crane Engineering, Plymouth, Minnesota

- Analytical & Polymer Chemist, 2012-2018

Thermotech / The Polymerlab.com, Hopkins, Minnesota

- Lab Chemist / Senior Lab Technician, 1996-2012

Dow Chemical Company, Midland, Michigan

- Lab Technician Contractor, 1986-1992

Dow Corning Corporation, Midland, Michigan

- Lab Technician Contractor, 1990

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ESi Plymouth, Minnesota

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Areas of Specialization

- Corrosion
- Failure Analysis
- Fatigue and Fracture
- Industrial Services
- Laboratory Testing
- Materials Testing
- Microstructural Analysis
- Polymers
- Welding/Joining

Professional Affiliations/Honors

ASM International

ASM International, Minnesota Chapter, Board of Directors, June 2014 – Present

- Minnesota Chapter, Student Materials Camp Coordinator, December 2023 – Present
- Minnesota Chapter, Treasurer, December 2022 – Present
- Minnesota Chapter, Past Chair, October 2022 – May 2023
- Minnesota Chapter, Chair, 2021-2022.
- Minnesota Chapter, Past Chair, June 2017 – June 2018
- Minnesota Chapter, Chair, June 2016 – June 2017
- Minnesota Chapter, Vice Chair, June 2015 – June 2016

American Chemical Society (ACS)

Society of Plastic Engineers (SPE)

Presentations

“Field Evaluation of Treated Lumber by Use of X-ray Fluorescence Spectroscopy”, **M.E. Weiss**, L. Meissner, R. Cooley, presented at IMAT, Detroit, MI, October 22, 2025.

“Failure Analysis of Prefinished Engineered Hardwood Flooring after Large Splinter Injury”, **M.E. Weiss**, L. Meissner, R. Cooley, presented at IMAT, Detroit, MI, October 22, 2025.

“FTIR Imaging via FPA in the Characterization of Polymers”, J.R. Babcock, **M.E. Weiss**, presented at IMAT, September 14, 2022.

“Exploiting Physical, Mechanical, and Chemical Properties to Identify Contaminants”, **M.E. Weiss**, webinar presenter for Engineering Systems, Inc. (ESI) Webinar, 2020.

“FTIR Imaging via FPA in the Characterization of Polymer Oxidation”, **M.E. Weiss** and J.R. Babcock, presented at ASM Minnesota Symposium, Brooklyn Park, MN, February 19, 2020.

“Carbonyl Index Depth Profiling via Micro FTIR”, J.R. Babcock, **M.E. Weiss**, D.B. Edwards, D.E. Duvall, and A.R. Shah, presented at MS&T Technical Meeting and Exhibition, Portland, OR, September 30, 2019.