

**MATERIALS
ENGINEERING
SEMINAR**

**“Accomplishments and Opportunities
in Environmental R&D for the Electronics
Industry”**

by

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ABSTRACT

This seminar will focus on what factors led to the environmental accomplishments during the past twenty years in the electronics industry, it will give a brief summary of the current issues in the industry, and then discuss the opportunities for future R&D activities to lessen the environmental impact of the industry and to reduce the environmental burden of human activity.

Short Bio:

Dr. Pfahl is Vice President of Global Operations at the International Electronics Manufacturing Initiative (iNEMI). Dr. Pfahl has been actively involved with iNEMI since the consortium's beginning fifteen years ago. He leads their global efforts to reduce the environmental impact of electronic products. Over the past decade iNEMI members have been the leaders in developing the technology to allow the electronics industry to eliminate lead (Pb) from their products. Previously Dr. Pfahl was Director of International and Environmental Research and Development at Motorola Labs, where he led Motorola's Environmental Technology R&D and Advanced Technology R&D labs in China and Germany. Prior to joining Motorola, he was with Bell Labs/Western Electric in a number of research and management positions related to electronics and semiconductor manufacturing. In his 35-year career in the electronics industry, Dr. Pfahl was a pioneer in developing reflow soldering processes. He holds nine U.S. patents in electronics manufacturing technology and is the inventor of the vapor phase soldering process.

Over the course of his career, Dr. Pfahl has developed an expertise in environmental issues affecting the electronics industry. He participated in the pioneering 1994 National Research Council's study, "The Greening of Industrial Ecosystems." Dr. Pfahl was a founding member of the International Society of Industrial Ecology. Pfahl is a member of the editorial board of the Journal of Industrial Ecology. He served as a member of the National Materials Advisory Board (NMAB) and the Board on Manufacturing and Engineering Design (BMED) of the National Research Council (USA) and is currently a member of their National Materials and Manufacturing Board (NMMB). In recognition of his efforts to eliminate the use of CFCs in the electronics industry, Dr. Pfahl received the United States EPA Stratospheric Ozone Protection Award. He also received the Electronic Goes Green Award 2008+ from the German Fraunhofer Society "for his commitment to environmental protection and inspiring ideas concerning sustainable development in technology and business solutions." Dr. Pfahl received his BME, MS, and PhD in mechanical engineering from Cornell University, Ithaca, NY, where he majored in heat transfer and fluid mechanics.

**Date: Monday,
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Time: 3:30 refreshments
3:45 - Seminar
Place: ARMS 1010**

Purdue Materials:

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