

Carnegie Mellon University

Materials Science & Engineering

presents

What Every Materials Scientist Should Know

Dr. Elizabeth A. Holm

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ABSTRACT:

Engineering is not merely a career – it is also a profession, and every profession maintains a fund of common knowledge. The radiologist can converse about the effectiveness of this year's flu vaccine; the patent lawyer has an opinion about the Kevin Spacey case. Likewise, the professional materials scientist should understand the materials issues that confront the public, from Gorilla Glass to exploding lithium batteries. However, much of our education and research focuses not on the everyday materials around us (windows, car bumpers, eggs) but on materials and phenomena that are too small or opaque or enclosed to be observed during everyday use. In this talk, we will explore examples of materials common knowledge, with the goal of encouraging your curiosity. Bring your questions. There will be a quiz.

BIOGRAPHY:



Elizabeth A. Holm is a Professor of Materials Science and Engineering at Carnegie Mellon University. Prior to joining CMU in 2012, she spent 20 years as a computational materials scientist at Sandia National Laboratories, working on simulations to improve processes for lighting manufacture, microcircuit aging and reliability, and the processing and welding of advanced materials. Her research areas include the theory and modeling of microstructural evolution, the physical and mechanical response of microstructures, atomic-scale properties of internal interfaces, and the intersection between computer science and materials

science. Dr. Holm obtained her B.S.E in Materials Science and Engineering from the University of Michigan, S.M in Ceramics from MIT, and dual Ph.D. in Materials Science and Engineering and Scientific Computing from the University of Michigan. Active in professional societies, Dr. Holm has received several honors and awards, is a Fellow of ASM International, 2013 President of The Minerals, Metals, and Materials Society, an organizer of numerous international conferences, and has been a member of the National Materials Advisory Board. Dr. Holm has authored or co-authored over 140 publications.

Doherty Hall 2210, 11:30AM
Friday, January 25, 2019