

Materials Science & Engineering Graduate Seminar

Wednesday, November 6, 2019, 4:10 – 5:00 PM, WEB 1230

Dr. John Hoffman

Principal Scientist (Glass), Insulation Systems | R&D Core Technologies, Owens Corning

Presentation: In 1987, IARC declared glass and mineral wool fibers, commonly used in thermal insulation, to be a 'potential carcinogen'. 14 years later, IARC reversed this classification and exonerated non-biopersistent fibers from classification.

In this presentation we'll first review why the classification decision was initially made. From there, we'll go into the scientific understanding which was developed leading to the change in classification. This change resulted from a broadly collaborative industry-lead effort to understand the science behind fibers and malignant respiratory disease. The key was establishing that the biopersistence of the fibers dictated disease potential, which in turn is related to fiber material chemistry and its relationship to the biological processes within the pleural space.

In the later half of the discussion, we'll move to discuss how as product developers and product stewards we apply this scientific understanding to ensure our products remain safe to manufacture and use – translating knowledge into action. Finally, we'll touch on how we're evolving the science to meet new challenges, including reduction or elimination of animal testing as a regulatory adjunct.

Biography: John Hoffman is a Principle Scientist (Glass) with Owens-Corning Insulation S & T Core Technology team. John holds a BS PhD in Glass Science from Alfred University, and an MS in Materials Science from the University of Cincinnati.

A member of the Senior Technical Staff at Owens Corning, John leads fiber health related work globally within Insulation S&T while also supporting material and process innovation projects.

John started his full time industrial experience with Corning in the optical fiber area. John spent 9+ years was with Federal-Mogul Ignition Products (Champion Spark Plug), developing glass to metal seals, ceramics, and ignition components for automotive, small engine, and industrial ignition applications. John joined Owens-Corning Insulation S&T in November 2011. In addition to technical leadership around fiber health, John leads in a variety of areas including development of high R value fiber insulation, new product/process development, and within Corporate Development projects. John is a member of the OC Product Stewardship Review Board, and actively participates in industry-level cooperative work globally. He holds 12 US patents.

John, his wife Desiree and their daughter, Lauren, live in the New Albany, Ohio area. In the rare moments outside of work, John enjoys fishing and carpentry, as well as recently having become a SCUBA fanatic.