



## WEBINAR

# Technical Talk on "Challenges of Solder Materials and the Solution with Durafuse Technology"

 24 FEBRUARY 2022, THURSDAY

 9.00 AM - 11.00AM



*Presented by*

**Dr. HongWen Zhang**

IEM Students: FOC  
IEM Members: RM15  
Non-IEM Members: RM70

BEM APPROVED CPD HOURS: 2.0  
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# SYNOPSIS

Durafuse Technology allows the quick prototype of new design, and combines the merits of both constituents powders. The success of Durafuse LT open the window of a novel low-mid temperature solders with excellent drop shock performance. Durafuse HT offered the opportunity of a new drop-in solution to replace high-lead with better performance.

## BIODATA OF SPEAKER

**Dr. HongWen Zhang** is Manager of the Alloy Group in Indium Corporation's Research & Development Department. His focus is on the development of lead-free solder materials and the associated technologies for high-temperature and high-reliability applications. He and Dr. Ning-Cheng Lee invented the mixed powder solder technique to combine the merits of constituents to improve wetting, reduce processing temperatures, modify the bonding interface, and control the joint's morphology, thus improving the reliability. On the basis of this technique, the BiAgX®solder system was invented as an alternative high-temperature lead-free solder.

Dr. HongWen Zhang has a bachelor's degree in metallurgical physical chemistry from Central South University of China, a master's degree in materials science and engineering from the Institute of Metal Research, Chinese Academy of Science, a master's degree in mechanical engineering and a Ph.D. in material science and engineering from Michigan Technological University. He has extensive experiences in various aluminum (Al) alloys and fiber/particle-reinforced Al-based composite materials, and Al-rich and ZrHf-based amorphous alloys. Dr. HongWen Zhang co-authored two book chapters on high-temperature lead-free bonding materials. He and his colleagues had seven patents granted globally and numbers of patents filed. He has published approximately 20 journal publications in the field of metallurgy, materials science and engineering, physics, electronics materials, and mechanics. He has also been invited as a peer reviewer for numerous journals. Dr. HongWen Zhang has a Six Sigma Green Belt from the T-hayer School of Engineering at Dartmouth College. He is also a certified IPC Specialist for IPC-A-600 and IPC-A-610D.