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Material Engineering Technical Division (MaTD), IEM and
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WEBINAR

TALK ON “POST-SILICON ERA OF POWER- ELECTRONIC DEVICES”

BEM APPROVED CPD HOURS: 2.0
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Prof. Dr. Jisheng Han

**10 FEBRUARY 2022
THURSDAY
10.00 AM - 12.00 PM
VIRTUAL PLATFORM**

Synopsis

This presentation reviews the key requirements as a power switch device. Based on these requirements, the comparison of the devices based Si, SiC and GaN is reviewed in terms of blocking voltage, power dissipation and switching frequency etc. The presentation also reviews the current status of the development of SiC Schottky diodes. Specific clarifications relating to the earlier and the latest results about the development of the SiC MOSFET are discussed. The presentation reviews the interface nitridation technology to improve the channel mobility and reliability on MOS devices. Finally the current activities at Griffith University and Shandong University are summarised.

About Speaker

Jisheng Han received the B.S. and M.S. degrees in solid-state physics from Shandong University, Jinan, China, and the Ph.D. degree from the University of South Australia, Adelaide SA, Australia. He was a Research Fellow with the School of Microelectronic Engineering, Griffith University. He has been a Research Fellow, Senior Research Fellow, and Principal Research Fellow with the Queensland Micro and Nanotechnology Centre, Griffith University. He has about 20 years clean room chip fabrication processing experience at university and industry. He has been working with numerous industry partners such as On semiconductors, Infineon, General Electric, and venture capital company Qs semiconductor during his career. Currently he holds a distinguished professor position at Institute of Novel Semiconductors, Shandong University.