

清華大學電子工程研究所

演講公告

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The Past and Future History of Silicon Carbide Power MOSFETs

James A. Cooper Jr.
Professor, Purdue University
IEEE Life Fellow

時間：2014年9月17日，10：00 - 11：30。

地點：國立清華大學 台達館R919。

Dr. James A. Cooper is the Jai N. Gupta Professor of Electrical and Computer Engineering at Purdue University. He received his MSEE from Stanford in 1969, and his Ph.D. from Purdue in 1973. From 1973 to 1983 he was a member of technical staff of Bell Laboratories, Murray Hill, NJ, where he was principal designer of AT&T's first CMOS microprocessor and developed a time-of-flight technique to study high-field transport in silicon inversion layers. He joined the faculty of Purdue University in 1983, where he was the founding director of the Purdue Optoelectronics Research Center. Since 1990 he has explored device technology in SiC. His group demonstrated the first monolithic integrated circuits in SiC (1993), the first DMOS power transistors (1996), and the first self-aligned short-channel DMOSFETs (2003). The group has also developed NVRAMs, CCDs, Schottky diodes, BJTs, IGBTs, SITs, and IMPATT diodes in SiC. Professor Cooper was elected Fellow of the IEEE in 1993. He served as Associate Editor of IEEE Transactions on Electron Devices from 1983 through 1986, co-editor of the 1999 and 2008 special issues of IEEE Transactions on Electron Devices on SiC technology, and currently serves on the editorial advisory board of IEEE Proceedings. He has co-authored over 240 technical papers and conference presentations, 5 book chapters, and 13 US patents. He has graduated 24 PhD students and was a founding co-director of the Birck Nanotechnology Center at Purdue.