

State of the art Power Switching Devices in SiC

A seminar by Prof. Dr. Mikael Östling of KTH Royal Institute of Technology, Stockholm Sweden on September 19, 2016 at 4:30 PM in ECEC 202. (Co-Sponsored by ECE DEpt and IEEE).



Abstract

This paper gives an overview of the current state of the art device technology for SiC discrete devices and applications. The superior switching performance is discussed as well as the energy efficiency of SiC devices. New emerging applications of SiC devices are also discussed focusing on high temperature capability such as integrated digital and analog circuits up to 600 C.

Bio

Mikael Östling received his MSc and the PhD degrees from Uppsala University, Sweden. He holds a position as professor in solid state electronics at KTH, Royal Institute of Technology in Stockholm, Sweden. He is currently department head of Integrated Devices and Circuits and was the dean of the School of Information and Communication Technology, KTH, between 2004–12. Östling was a senior visiting Fulbright Scholar at Stanford University, and a visiting professor with the University of Florida, Gainesville. In 2005 he co-founded the company TranSiC, acquired in full by Fairchild Semiconductor 2011. He was awarded the first ERC grant for advanced investigators. His research interests are nanoscaled Si and Ge device technologies and emerging 2D materials, as well as device technology for wide bandgap semiconductors for high power / high temperature applications. He has supervised 35 PhD theses work and co-authored 500+ scientific papers published in international journals and conferences. Mikael Östling was an editor of the IEEE Electron Device Letters 2005-2014 and appointed vice president of EDS 2014-15. He is editor of the IEEE J-EDS since 2014. Mikael is a Fellow of the IEEE.