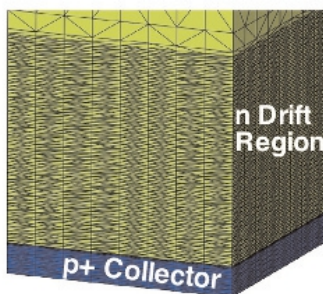
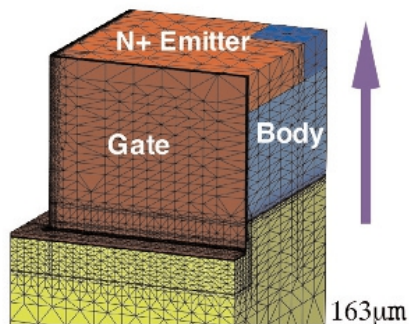


EECS 598 Power Semiconductor Devices

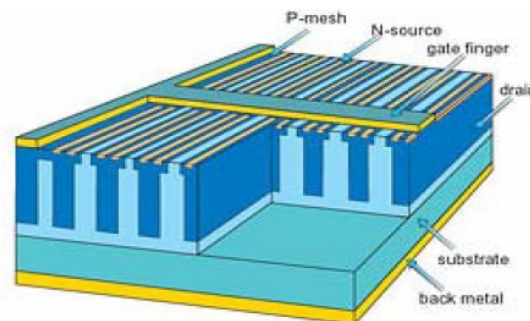
Fall 2016

Power devices are at the heart of all modern electronics, from the grid and renewable energy sources to fuel-efficient vehicles and mobile devices. This course will cover semiconductor switches and rectifiers for discrete and integrated power electronics. Devices to be discussed include the power MOSFET, IGBT, HEMT, thyristors, Schottky and PIN diodes, as well as new and emerging device architectures. We will use analytical and numerical modeling to understand DC and switching behavior. We will also look at semiconductor materials, device fabrication and packaging of power devices. Students will work in teams on device modeling, and will do a final

group presentation on a topic of their choice. *The course will be of interest to graduate and undergraduate students studying Solid State/Nano, IC/VLSI, MEMS, Power/Energy, and other related areas.*



SiC IGBT simulation



Merged PIN-Schottky Diode

Course: F16 EECS 598 Section 001
Prerequisites: (EECS 320 or equivalent) or graduate standing
Lectures: Monday & Wednesday 1:30-3:00pm
Instructor: Prof. Becky Peterson, EECS, blpeters@umich.edu