NPTEL Video Course - Electrical Engineering - NOC:Fundamentals of Semiconductor Devices

Subject Co-ordinator - Prof. Digbijoy N. Nath

Co-ordinating Institute - IISc - Bangalore

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 30 - MOS
Lecture 31 - MOS
Lecture 32 - Ideal MOS system
Lecture 33 - MOS C-V in more details
Lecture 34 - MOSFET - An introduction
Lecture 35 - Gradual Channel Approximation
Lecture 36 - Substrate bias effect and subthreshold conduction in MOSFET
Lecture 37 - Short Channel Effects in MOSFET
Lecture 38 - Introduction to compound semiconductors
Lecture 39 - Basics of heterojunctions
Lecture 40 - Band diagram of heterojunctions
Lecture 41 - Heterojunctions (Continued....)
Lecture 42 - Heterojunction transistors
Lecture 43 - III-nitrides
Lecture 44 - Solar cell basics
Lecture 45 - Solar cell (Continued...)
Lecture 46 - Solar cell
Lecture 47 - Basics of photodetectors
Lecture 48 - Photodetectors
Lecture 49 - Junction photodetectors
Lecture 50 - Basics of recombination
Lecture 51 - Basics of LED
Lecture 52 - LED
Lecture 53 - Visible LED
Lecture 54 - Transistors for power electronics
Lecture 55 - Transistors for power electronics (Continued...) and for RF electronics
Lecture 56 - Transistors for RF (Continued...) and transistors for Memory
Lecture 57 - Basics of microelectronic fabrication
Lecture 58 - Microelectronic fabrication (Continued...)
Lecture 59 - Summary