

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Biotechnology - NOC:Optical Spectroscopy and Microscopy: Fundamentals of Optical Measure

Subject Co-ordinator - Prof. Balaji Jayaprakash

Co-ordinating Institute - IISc - Bangalore

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

Lecture 1 - Optical Focus and Localisation of Light
Lecture 2 - Relating Photon's Momentum to Spot Size
Lecture 3 - Shortest Pulse of Light
Lecture 4 - Behaviour of light through polarizers
Lecture 5 - Nature of Light
Lecture 6 - Revisiting Polarisation Through Ket Vectors
Lecture 7 - Light through Polarisers
Lecture 8 - Light through Polarisers
Lecture 9 - Time Dependent Perturbation Theory (TDPT)
Lecture 10 - TDPT in Steps-1
Lecture 11 - TDPT in Steps-2
Lecture 12 - TDPT in Steps-3
Lecture 13 - Fermi's Golden Rule
Lecture 14 - Beer Lambert's Law from TDPT
Lecture 15 - Einstein's Phenomenology
Lecture 16 - Einstein's Coefficients, Fluorescence and Lifetime
Lecture 17 - Fock States and Photonic Treatment of Light
Lecture 18 - Operators in Fock State Space
Lecture 19 - Light Matter Interaction and Rudimentary Feynman Diagrams
Lecture 20 - Emergence of Spontaneous and Stimulated Emission Processes
Lecture 21 - Lecture 21
Lecture 22 - Lecture 22
Lecture 23 - Lecture 23
Lecture 24 - Lecture 24
Lecture 25 - Lecture 25
Lecture 26 - Introduction to LASER
Lecture 27 - LASER population dynamics
Lecture 28 - LASER population dynamics - Part- 2
Lecture 29 - Real world LASER and characteristics of LASER emission

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

www.digimat.in

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 30 - Temporal and Spatial Coherence
- Lecture 31 - Transverse and Longitudinal modes of LASER
- Lecture 32 - Pulsed LASER
- Lecture 33 - Q-switching in detail
- Lecture 34 - Q-switching in detail - Part 2
- Lecture 35 - Basics of mode locking
- Lecture 36 - Basics of mode locking - Part 2
- Lecture 37 - Pulse compression
- Lecture 38 - Real world system (Mode lock Part-2)
- Lecture 39 - TEM mode
- Lecture 40 - Alignment basics
- Lecture 41 - Non-Linear Optics
- Lecture 42 - Confocal Detection
- Lecture 43 - Interference Filters
- Lecture 44 - Laser Scanning System - 1
- Lecture 45 - Laser Scanning System - 2
- Lecture 46 - Alignment of Moving Beams
- Lecture 47 - Decoding an Objective Lens - 1
- Lecture 48 - Decoding an Objective Lens - 2
- Lecture 49 - Designing Lens Systems
- Lecture 50 - Astigmatism and Field Curvature
- Lecture 51 - Intro to Lab Session
- Lecture 52 - Optics in LAB
- Lecture 53 - Optics in Lab
- Lecture 54 - Kinematic Mounts
- Lecture 55 - Alignment with out iris
- Lecture 56 - Fluorescence Spectrometer - 1
- Lecture 57 - Fluorescence Spectrometer - 2
- Lecture 58 - Ti