

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

NPTEL Video Course - Mechanical Engineering - NOC:Heat Transfer and Combustion in Multiphase Systems

Subject Co-ordinator - Prof. Saptarshi Basu

Co-ordinating Institute - IISc - Bangalore

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

- Lecture 1 - Introduction to Multiphase
- Lecture 2 - Thermodynamics of Multiphase systems
- Lecture 3 - Thermodynamics of Interface - I
- Lecture 4 - Thermodynamics of Interface - II
- Lecture 5 - Interfacial phenomena key concepts - I
- Lecture 6 - Interfacial phenomena key concepts - II
- Lecture 7 - Interfacial heat and mass transfer - I - Interfacial mass, momentum and energy balance, Surface t
- Lecture 8 - Interfacial heat and mass transfer - II - Interfacial dynamics, Instabilities of the interface
- Lecture 9 - Interfacial heat and mass transfer - III - Evaporation from thin films
- Lecture 10 - Governing equations and interfacial conditions
- Lecture 11 - Governing equations
- Lecture 12 - Governing equations
- Lecture 13 - Governing equations
- Lecture 14 - Interface shapes
- Lecture 15 - Transport processes at interface with key concepts - I
- Lecture 16 - Transport processes at interface with key concepts - II
- Lecture 17 - Interfacial transport
- Lecture 18 - Interfacial transport including dynamic behavior
- Lecture 19 - Interface behavior
- Lecture 20 - Heat transfer and evaporation in droplets
- Lecture 21 - Droplet vaporization models - I
- Lecture 22 - Droplet vaporization models - II
- Lecture 23 - Droplet vaporization dynamics - I
- Lecture 24 - Droplet vaporization dynamics - II
- Lecture 25 - Droplet liquid phase transport
- Lecture 26 - Comprehensive droplet vaporization model and correlations - I
- Lecture 27 - Comprehensive droplet vaporization model and correlations - II
- Lecture 28 - Comparison of droplet vaporization models
- Lecture 29 - Species transport in droplet

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- Lecture 30 - Heat transfer and transport processes in sessile droplets
- Lecture 31 - Introduction to atomization
- Lecture 32 - Atomization principles and governing parameters
- Lecture 33 - Spray / droplet breakup models \hat{A} I (TAB model)
- Lecture 34 - Spray / droplet breakup models \hat{A} II (WAVE model)
- Lecture 35 - Droplet combustion - I
- Lecture 36 - Droplet combustion - II
- Lecture 37 - Regimes in spray combustion
- Lecture 38 - Boiling - I
- Lecture 39 - Boiling - II (Bubble dynamics)
- Lecture 40 - Boiling - II (Bubble dynamics and critical heat flux)