NPTEL Video Course - Chemistry and Biochemistry - NOC:Chemical Kinetics and Transition State Theory

Subject Co-ordinator - Prof. Amber Jain

Co-ordinating Institute - IIT - Bombay

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

Lecture 30 - Problem solving session - 3
Lecture 31 - Problem solving session - 4
Lecture 32 - Hills and valleys of potential energy surfaces
Lecture 33 - Molecular dynamics: rolling spheres on potential energy surfaces
Lecture 34 - Predictions from potential energy surfaces - rotational vs vibrational energies
Lecture 35 - Free energy and potential of mean force
Lecture 36 - Transmission coefficient and molecualr dynamics
Lecture 37 - Problem solving session - 5
Lecture 38 - Microcanonical rate constant: putting balls in jars
Lecture 39 - Microcanonical rate constant: RRK model
Lecture 40 - Microcanonical rate constant: magic of Marcus - RRKM model
Lecture 41 - Canonical TST from micrononical RRKM model
Lecture 42 - Sum and density of states
Lecture 43 - Unimolecular decay - revisited
Lecture 44 - Unimolecular decay: RRK's approach
Lecture 45 - Unimolecular decay: RRKM's approach
Lecture 46 - Problem solving session - 6