

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

NPTEL Video Course - Chemistry and Biochemistry - Heterocyclic Chemistry

Subject Co-ordinator - Prof. D.R. Mal

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Definition and Scope
- Lecture 2 - Single - Step Methods for IVPs
- Lecture 3 - Systematic Nomenclature
- Lecture 4 - Nomenclature (Continued...) and Important Names
- Lecture 5 - Overview of Structure Determination in Heterocyclic Chemistry
- Lecture 6 -  $^{15}\text{N}$  NMR in Heterocyclic Chemistry
- Lecture 7 - Effects of Ring Nitrogen - A
- Lecture 8 - Effects of Ring Nitrogen - B
- Lecture 9 - Effects of Ring Nitrogen - C
- Lecture 10 - Oxidation in Heterocyclic Chemistry
- Lecture 11 - Oxidation in Heterocyclic Chemistry (Continued...)
- Lecture 12 - Reduction in Heterocyclic Chemistry
- Lecture 13 - Radicals in Heterocyclic Chemistry - I
- Lecture 14 - Radicals in Heterocyclic Chemistry - II
- Lecture 15 - Lithiation for 5-membered heterocycles
- Lecture 16 - Lithiation for 5-membered heterocycles (Continued...)
- Lecture 17 - Lithiation of 6-membered heterocycle and non-aromatic heterocycles
- Lecture 18 - Magnetiation and Zincation in Heterocyclic Chemistry
- Lecture 19 - Transition metal catalyzed cross coupling
- Lecture 20 - Transition metal catalyzed cross coupling (Continued...)
- Lecture 21 - Dehydrogenative (Oxidative) cross coupling
- Lecture 22 - Tert-amino effect in heterocycle synthesis
- Lecture 23 - [4 plus 2] cycloaddition in heterocyclic chemistry
- Lecture 24 - [4 plus 2] cycloaddition in heterocyclic chemistry (Continued...)
- Lecture 25 - [3 plus 2] Cycloaddition in heterocyclic chemistry
- Lecture 26 - Cycloaddition
- Lecture 27 - [4 plus 3] Cycloaddition
- Lecture 28 - [5 plus 2] Cycloaddition
- Lecture 29 - [2 plus 2 plus 2] Cycloaddition

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- Lecture 30 - Pyrrole Synthesis - I
- Lecture 31 - Pyrrole Synthesis - II
- Lecture 32 - Indole Synthesis - I
- Lecture 33 - Indole Synthesis - II
- Lecture 34 - Furan Synthesis
- Lecture 35 - Thiophene Synthesis
- Lecture 36 - Oxazole, Imidazole and Thiazole Synthesis
- Lecture 37 - Pyridine Synthesis
- Lecture 38 - Synthesis of Quinolines and Isoquinolines
- Lecture 39 - Bicyclic Polyheteroatomic Heterocycles
- Lecture 40 - Heterocyclic Rearrangements