NPTEL Video Course - Chemistry and Biochemistry - NOC:Multidimensional NMR Spectroscopy for Structural Studie

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Co-ordinating Institute - IISc - Bangalore

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

Lecture 1 - Introduction to NMR spectroscopy
Lecture 2 - Energy levels in NMR spectroscopy
Lecture 3 - Observing the NMR signal
Lecture 4 - Basic concepts in 1D NMR
Lecture 5 - Basic concepts in 1D NMR
Lecture 6 - Basic concepts in 2D NMR spectroscopy
Lecture 7 - Principles of 2D correlation spectroscopy COSY
Lecture 8 - Principles of 2D Total correlation spectroscopy (TOCSY)
Lecture 9 - 2D Nuclear Overhauser Effect Spectroscopy (NOESY)
Lecture 10 - 2D NOESY and 2D ROESY
Lecture 11 - Principles of 2D Heteronuclear NMR
Lecture 12 - 2D Heteronuclear NMR
Lecture 13 - Heteronuclear multiple quantum coherence (HMQC) and single quantum coherence (HSQC) - Part I
Lecture 14 - Heteronuclear multiple quantum coherence (HMQC) and single quantum coherence (HSQC) - Part II
Lecture 15 - 2D HSQC-TOCSY
Lecture 16 - 3D NMR Spectroscopy - Part I
Lecture 17 - 3D NMR Spectroscopy - Part II
Lecture 18 - 3D HNCA and 3D HNCO
Lecture 19 - 3D HNCACB and 3D HN(CO)CACB
Lecture 20 - Protein Backbone resonance assignment and side chain resonance assignment
Lecture 21 - Basic concepts of protein structure
Lecture 22 - Introduction to Structure Determination of Bio-Molecules by NMR
Lecture 23 - Over-expression of proteins in Bacteria
Lecture 24 - Isotope labeling of proteins for NMR studies - Part I
Lecture 25 - Isotope labeling of proteins for NMR studies - Part II
Lecture 26 - Isotope labeling of proteins for NMR studies - Part III
Lecture 27 - Isotope labeling of proteins for NMR studies - Part IV
Lecture 28 - Resonance assignments of Proteins - Part I
Lecture 29 - Resonance assignments of Proteins - Part II

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Lecture 30 - Resonance assignments of Proteins - Part III
Lecture 31 - Determination of protein secondary structure from NMR data
Lecture 32 - Determination of protein secondary structure from NMR data
Lecture 33 - Determination of protein tertiary structure from NMR data - Part I
Lecture 34 - 3D NOESY HSQC
Lecture 35 - Determination of protein tertiary structure from NMR data - Part II
Lecture 36 - Understanding Protein ligand interaction by NMR
Lecture 37 - Understanding Protein ligand interaction by NMR
Lecture 38 - Understanding Protein ligand interaction by NMR
Lecture 39 - Understanding Protein ligand interaction by NMR
Lecture 40 - Understanding Protein ligand interaction by NMR
Lecture 41 - Understanding Protein ligand interaction by NMR
Lecture 42 - Understanding Protein ligand interaction by NMR
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