NPTEL Video Course - Chemistry and Biochemistry - NOC:Inorganic Chemistry of Life: Principles and Perspective

Subject Co-ordinator - Prof. C.P. Rao

Co-ordinating Institute - IIT - Bombay

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

Lecture 1 - Overview of inorganic chemistry of life
Lecture 2 - Elements in biology and or life
Lecture 3 - Selection and criteria for elements
Lecture 4 - Biomolecules
Lecture 5 - Coordination in enzymes
Lecture 6 - Amino acids, peptides and proteins - An introduction
Lecture 7 - Nucleoside, nucleotide and nucleic acids and DNA
Lecture 8 - General introduction of metalloproteins
Lecture 9 - Coordination chemistry aspects - An introduction
Lecture 10 - Stability and lability
Lecture 11 - Techniques used inorganic chemistry life
Lecture 12 - Techniques used inorganic chemistry life (Continued...)
Lecture 13 - Techniques used inorganic chemistry life (Continued...)
Lecture 14 - Techniques used inorganic chemistry life (Continued...)
Lecture 15 - Recap on metalloenzymes
Lecture 16 - Role of Alkali, Alkaline earth elements in life
Lecture 17 - Role of Alkali, Alkaline earth elements in life (Continued...)
Lecture 18 - Role of Alkali, Alkaline earth elements in life (Continued...) Ion transport and ionophores
Lecture 19 - Role of Alkali, Alkaline earth elements in life (Continued...) Ion transport and ionophores
Lecture 20 - Functioning of ATPases and nucleases [Na,K]ATPase
Lecture 21 - Role of vanadium in life - General perspectives
Lecture 22 - Role of vanadium in life - Haloperoxidases
Lecture 23 - Enzymes based on manganese in life
Lecture 24 - Role of Iron in life - General perspectives
Lecture 25 - Role of Iron in life - Transport systems
Lecture 26 - Role of Iron in life - Transport and Storage systems
Lecture 27 - Role of Iron in life - Electron transfer
Lecture 28 - Role of Iron in life - Perspectives of electron transfer proteins
Lecture 29 - Role of Iron in life - Monooxygenases

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Lecture 30 - Role of Iron in life - Mono-and di-oxygenases
Lecture 31 - Role of Iron in life - Reductases
Lecture 32 - Role of Iron in life - Reductases and Phosphatases
Lecture 33 - Role of Iron in life - Reductases and Phosphatases (Continued...)
Lecture 34 - Role of Cobalt in life
Lecture 35 - Role of Nickel in life - General perspectives
Lecture 36 - Role of Nickel in life - Hydrolase, hydrogenase and SOD
Lecture 37 - Role of Nickel in life - Carbonmonoxide dehydrogenase (CODH)
Lecture 38 - Role of Copper in life - General perspectives
Lecture 39 - Role of Copper in life - Type I and Type 2 copper enzymes
Lecture 40 - Role of Copper in life - Multicenter copper oxidases and SOD
Lecture 41 - Role of Zinc in life - General perspectives including oxidoreductases and hydrolases
Lecture 42 - Role of Zinc in life - Carbonic anhydrase and carboxypeptidase
Lecture 43 - Role of Zinc in life - Transferases, ligages and isomerases
Lecture 44 - Role of Molybdenum in life - Introductory aspects
Lecture 45 - Role of Molybdenum in life - Nitrogenase
Lecture 46 - Role of Molybdenum in life - Oxidoreductases
Lecture 47 - Role of Mercury in the environment - Mercury reductase
Lecture 48 - Role of Selenium in life - Glutathione perioxidase
Lecture 49 - Inorganics in medicine - Introductory aspects and cis-platin
Lecture 50 - Inorganics in medicine - Apoptosis
Lecture 51 - Inorganics in medicine - PDT, MRI and Barium tests
Lecture 52 - Inorganics in medicine - Titanium in biomedical
Lecture 53 - Highlights of the course - Part I
Lecture 54 - Highlights of the course - Part II
Lecture 55 - Highlights of the course - Part III
Lecture 56 - Highlights of the course - Part IV
Lecture 57 - Tutorials - Part I
Lecture 58 - Tutorials - Part II
Lecture 59 - Tutorials - Part III
Lecture 60 - Tutorials - Part IV and overall
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