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

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NPTEL Video Course - Biotechnology - NOC: Nanotechnology in Agriculture
Subject Co-ordinator - Prof. Mainak Das
Co-ordinating Institute - IIT - Kanpur
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Introduction
Lecture 2 - What is Nanotechnology
Lecture 3 - An outline
Lecture 4 - Agriculture
Lecture 5 - Modern Agriculture
Lecture 6 - A Restart
Lecture 7 - Classifying nanomaterials Based on Shape and Geometry
Lecture 8 - Classifying Nanomaterials Based on Chemical Nature
Lecture 9 - Physical Approaches to Nanomaterial Synthesis
Lecture 10 - Biological and Chemical Approaches to Nanomaterial Synthesis
Lecture 11 - Detailed Physical Techniques - I
Lecture 12 - Detailed Physical Techniques - II
Lecture 13 - Detailed Chemical Techniques
Lecture 14 - Detailed Biological Techniques
Lecture 15 - Basic Characterisation Techniques of Nanomaterials
Lecture 16 - Characterisation techniques for physical and chemical surface properties of a material
Lecture 17 - Nanomaterials in Agriculture
Lecture 18 - Iron pyrite and seed pre-treatment
Lecture 19 - nano-Pyrite and its lab trial with chickpea
Lecture 20 - nano-Pyrite field trial with spinach and its mechanistic details
Lecture 21 - Mechanistic details of the action of Pyrite nano-particle
Lecture 22 - Application of Pyrite nano-particle in different crops
Lecture 23 - Application of different nano-particles in Agriculture - I
Lecture 24 - Benefits of nanoparticles in Agriculture
Lecture 25 - Nanotechnology in animal production
Lecture 26 - Antioxidant nanomaterial in animal production - I
Lecture 27 - Antioxidant nanomaterial in animal production - II
Lecture 28 - Antioxidant nanomaterial in animal production - III
Lecture 29 - Antioxidant nanomaterial in skeletal muscle development - I
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Lecture 30 - Antioxidant nanomaterial in skeletal muscle development - II

Lecture 31 - Skeletal muscle development and nanomaterial intervention

Lecture 32 - Fabrication of nano-micro devices to study force generation in muscles

Lecture 33 - Summarising role of nanomaterials in animal production

Lecture 34 - Nanomaterials in food processing and preservation - I

Lecture 35 - Nanomaterials in food processing and preservation - II

Lecture 36 - Multifunctionality of nanomaterial

Lecture 37 - Futuristic multifunctional, sustainable and green nanomaterial

Lecture 38 - Case study of Titanium dioxide - I

Lecture 39 - Case study of Titanium dioxide - II

Lecture 40 - The future
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