Mindluster Platform

About the course metamaterials Fundamentals

metamaterials course in hindi, in this course Explore the science and applications of metamaterials, artificial materials engineered to exhibit unique and unprecedented properties.

Engineering Category's Courses

Course Lesson(37)

Lesson 1 : **Nanophotonics Plasmonics And Metamaterials Introduction Video**

Lesson 2 : **Lec 1 Introduction to Nanophotonics Plasmonics**

Lesson 3 : **Lec 2 Introduction to Metamaterials and Metasurfaces**

Lesson 4 : **Lec 3 Overview current status**

Lesson 5 : **Lec 4 Electromagnetic theory of light**

Lesson 6 : **Lec 5 Electromagnetic properties of material**

Lesson 7 : **Lec 6 Electromagnetic waves in dielectric media**

Lesson 8 : **Lec 7 Polarization of light**

Lesson 9 : **Lec 8 Reflection and refraction Fresnel equations**

Lesson 10 : **Lec 9 Absorption dispersion scattering of light**

Lesson 11 : **Lec 10 Matrix theory of dielectric layered media**

Lesson 12 : **Lec 11 1D Photonic crystals**

Lesson 13 : **Lec 12 Dispersion relation and photonic band structure**

Lesson 14 : **Lec 13 Real and reciprocal lattices**

Lesson 15 : **Lec 14 2D and 3D Photonic crystals**

Lesson 16 : **Lec 15 Emerging Applications of Photonic Crystals**

Lesson 17 : **Lec 16 Optical properties of metals**

Lesson 18 : **Lec 17 Surface Plasmon Polaritons SPP Fundamentals**

Lesson 19 : **Lec 18 Applications of SPPs**

Lesson 20 : **Lec 19 Localized surface plasmon resonance LSPR**

Lesson 21 : **Lec 20 Plasmonic nanoparticles Antenna Waveguides**

Lesson 22 : **Lec 21 Applications of LSPR**

Lesson 23 : **Lec 22 Fundamentals of metamaterials**

Lesson 24 : **Lec 23 Effective medium theories**

Lesson 25 : **Lec 24 Single and Double Negative Metamaterials**

Lesson 26 : **Lec 25 Metamaterial Perfect absorbers**

Lesson 27 : **Lec 26 Super lens Hyperbolic Metamaterials Hyper lens**

Lesson 28 : **Lec 27 Tunable photonic metamaterial based devices**

Lesson 29 : **Lec 28 Metasurfaces Frequency selective surfaces**

Lesson 30 : **Lec 29 Guided mode resonances GMR**

Lesson 31 : **Lec 30 Applications of metasurfaces GMR devices**

Lesson 32 : **Lec 31 Transformation Optics TO Invisibility Cloaks**

Lesson 33 : **Lec 32 Carpet cloaking TO metamaterials**

Lesson 34 : **Lec 33 Introduction to alternative materials**

Lesson 35 : **Lec 34 Nanofabrication Physical Chemical methods**

Lesson 36 : **Lec 35 Lithography Pattern transfer**

Lesson 37 : **Lec 36 Nanophotonic characterization methods**

Related courses

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