

REGINNA 4.0 Second Summer School: Diving into high-innovation potential areas: Entrepreneurship and Business Strategies related to Industry 4.0 and Nanotechnology

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Nanomaterials - Introduction

Thursday, 7 September 2023 09:00 (1h 30m)

Nanotechnology and nanomaterials.
Classifications of nanomaterials, their properties.
Historical overview of nanomaterials.
Reasons for special properties of nanoscale materials.
Classical and quantum size effects.
Basic concepts of quantum physics.
The energy of an electron in an atom.
Harmonic oscillator: transition from classical to quantum.
Wave-particle duality. Uncertainty principle.
Condensed matter physics. Electrons in crystals.
Quantum dots and their applications.
Quantum tunneling.
Application of nanomaterials.

Presenter: Prof. TUROVSKA, Liliia (Vasyl Stefanyk Precarpathian National University)

Session Classification: main session 07/09/23