

Synthesis, characteristics, uses and detection of engineered nanostructured materials

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The presentation aims at offering to the students an introduction to the world of nanostructured materials. The synthetic production techniques will be elucidated and the ample variety of properties that the nanomaterials can achieve will be discussed according to the synthetic strategy.

We will illustrate some example of the current and past utilization of nanostructured materials according to their characteristics and dimensions. In addition, the techniques to detect and characterize the nanomaterials, such as XRD (X-ray diffraction), TEM (Transmission microscopy), SEM (scanning electron microscopy) with EDX (X-ray dispersive detector) and others will be illustrated with some examples.