***Vladimiro Mujica***

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**Computational design and properties of nanostructured materials**

**Lecture I: Size-dependent properties in nano-systems**

A general introduction to the quantum and statistical description of size-dependent optical, chemical and magnetic properties.

**Lecture II: Introduction to nano-magnetism**

An introduction to the physics of magnetism in nano-systems, with emphasis on systems that are diamagnetic in bulk phase.

**Lecture III: SERS as a probe for charge and energy transport in nano-interfaces.**

A general introduction to the use of Raman techniques to follow charge and energy transfer across interfaces in nano-systems.