

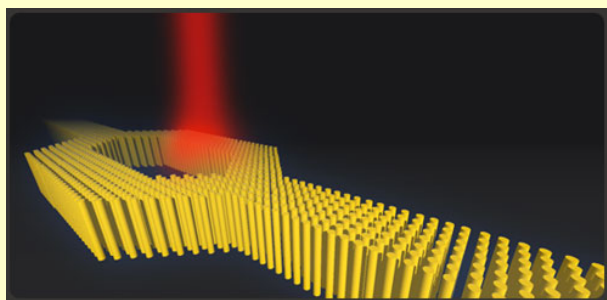
**Ciclo especialmente orientado a estudiantes**

# *Plasmonics: a new wave in science and society*

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The emerging field of plasmonics is growing at an almost unprecedented pace and is attracting scientists from a broad variety of disciplines ranging from fundamental physics and chemistry to applied and engineering sciences and medicine. In this very basic and broad overview talk, I will introduce the science underlying plasmonics and discuss many of the important applications responsible for the almost explosive growth of the field. Most of the talk will be devoted to applications: plasmonic structures can serve as ultrasensitive sensors detect individual molecules; plasmonic nanostructures can function as ultrasmall waveguides and logical devices that can be used in future computers and processors; plasmonic nanostructures can be used in energy applications to enhance the light harvesting in photovoltaics. Finally, I will discuss how plasmonic nanostructures can be used in medical applications to enhance the resolution in medical imaging and to photothermally destroy cancer cells in vivo.



**Martes 30 de octubre 13:30 h**  
**Aula 1. Facultad de CC.Físicas UCM**