



TATSUMA LAB.

[Nanoscale Photochemistry]



Center for Photonics Electronics Convergence

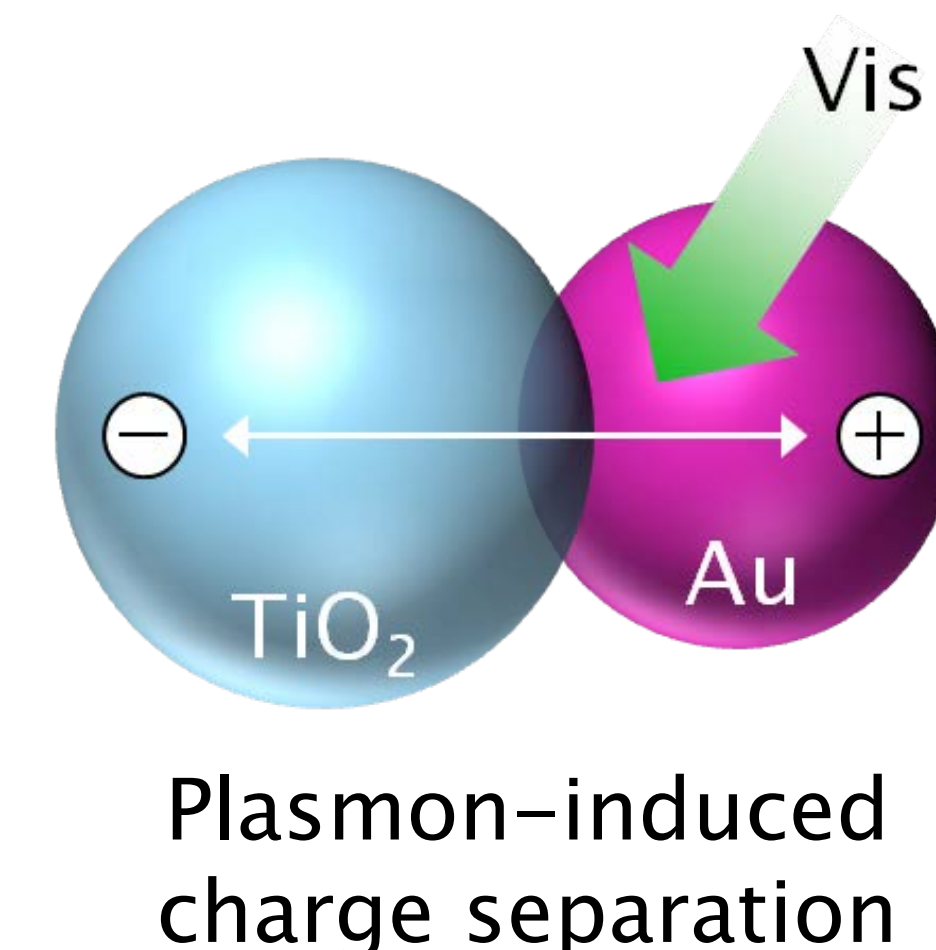
<http://www.iis.u-tokyo.ac.jp/~tatsuma/>

Advanced Electrochemical Devices

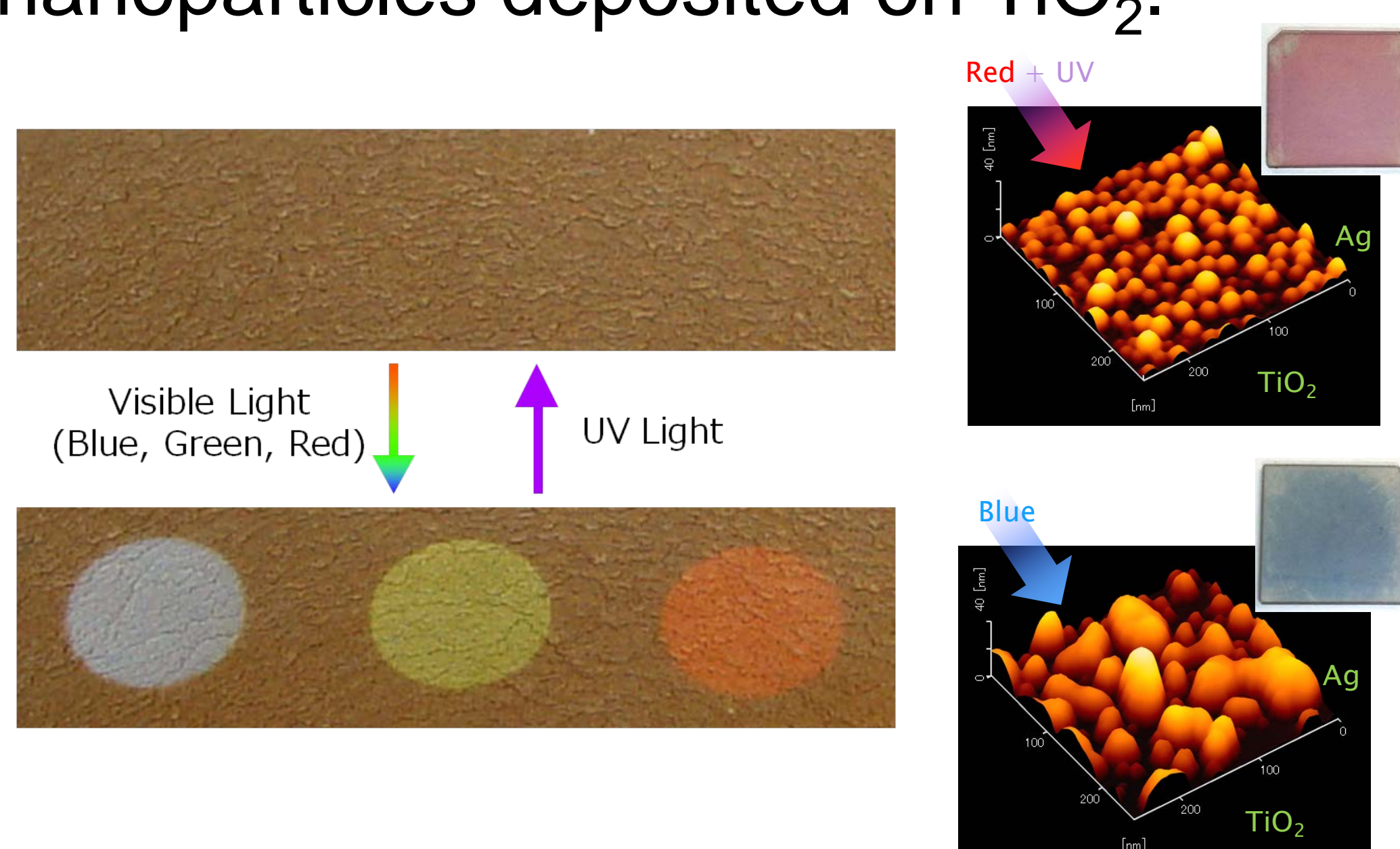
Department of Applied Chemistry
Department of Advanced
Interdisciplinary Studies

Photofunctional Nanomaterials

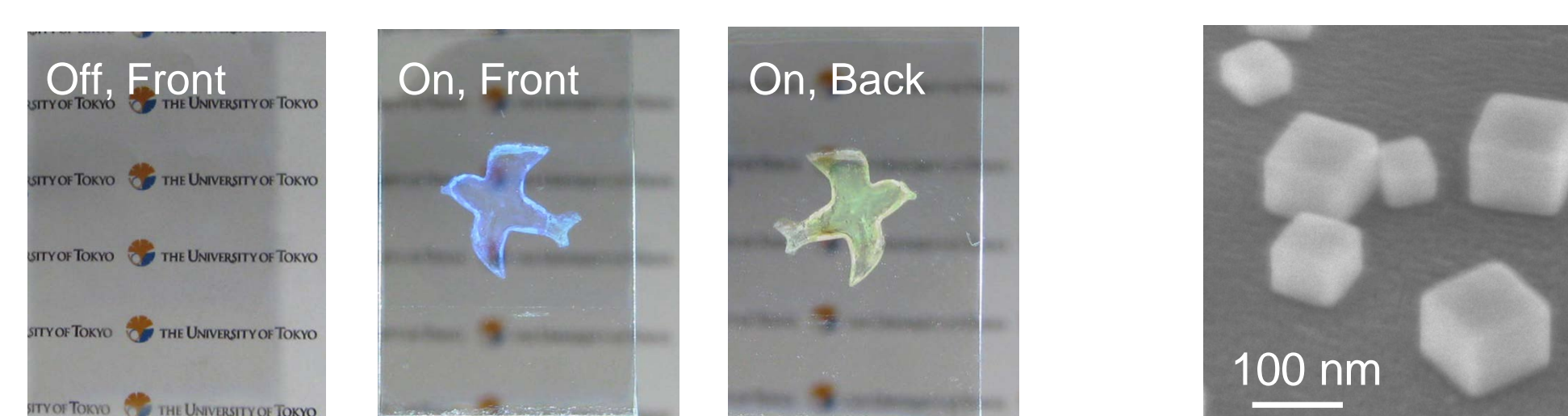
We found that plasmon-induced charge separation is possible at the metal nanoparticle-semiconductor interface. We have applied it to multicolor photochromism, photovoltaic systems, photocatalysis, and sensors.



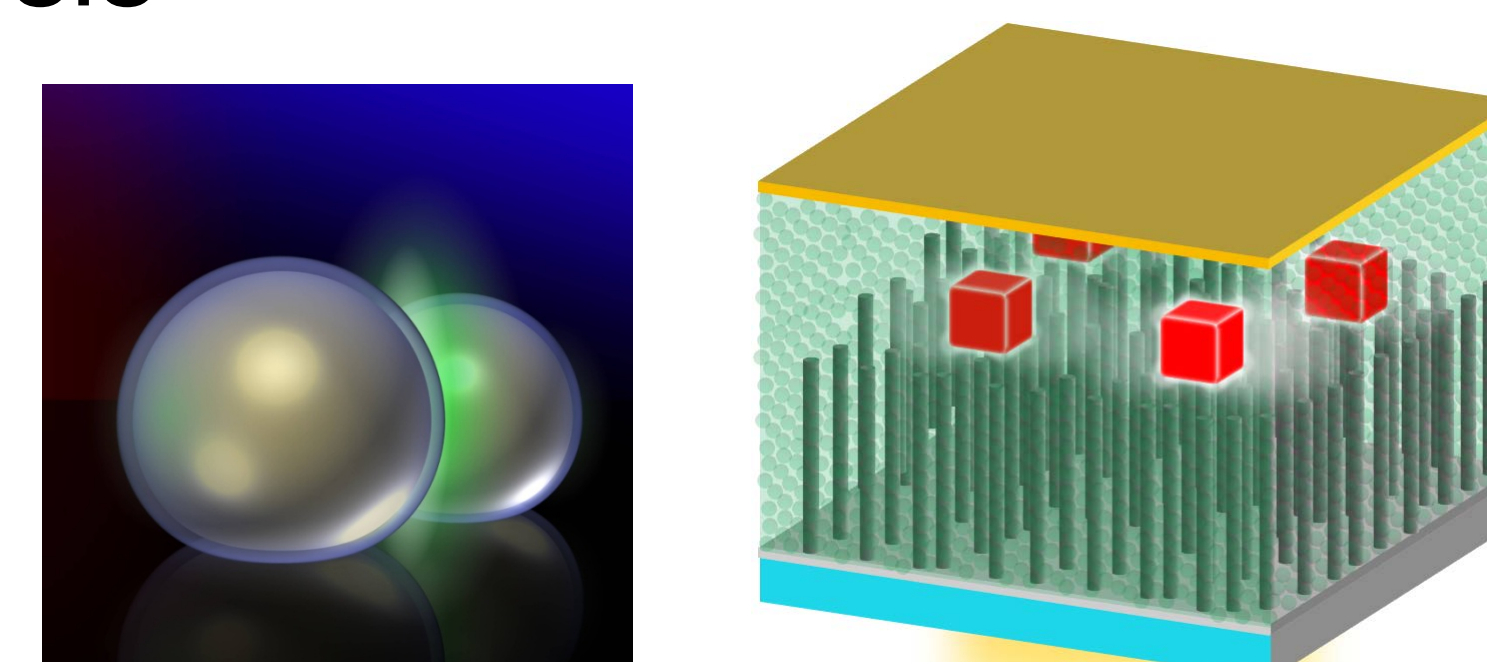
◆ Multicolor photochromism of silver nanoparticles deposited on TiO₂.



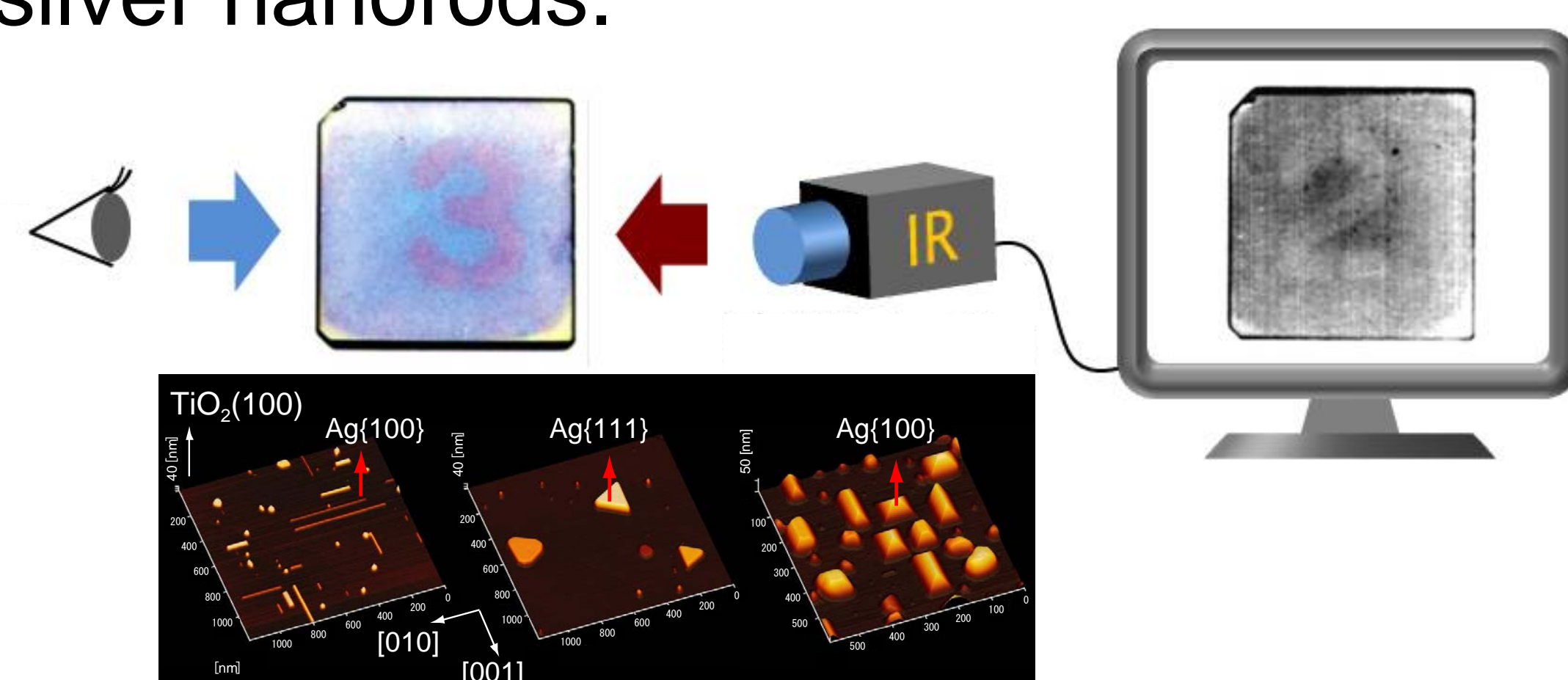
◆ Material showing asymmetric scattering behavior.



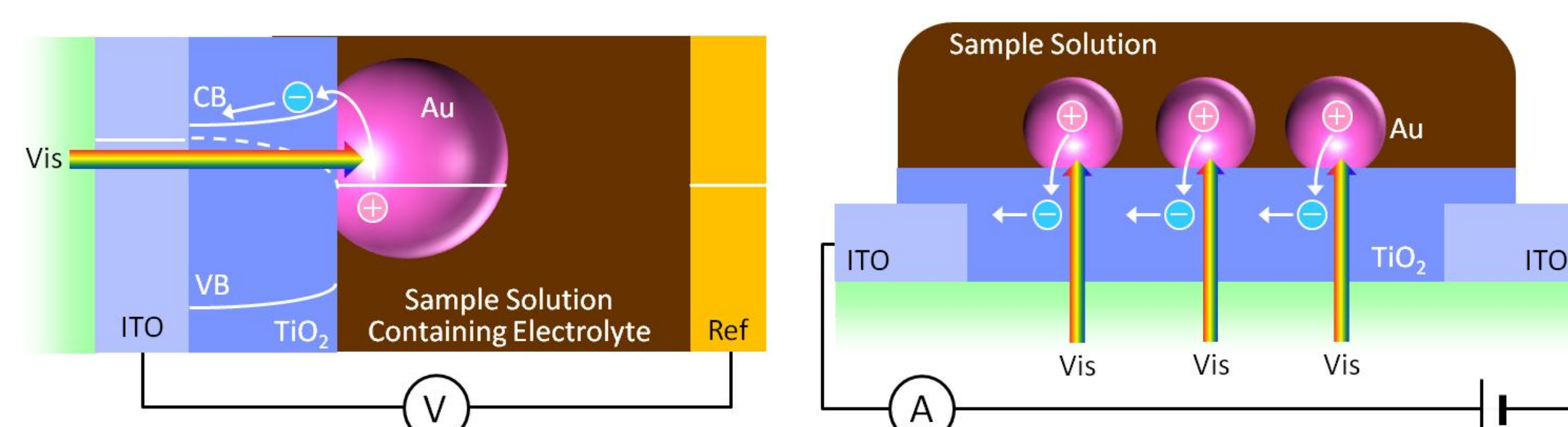
◆ Efficiency enhancement of photovoltaics and photocatalysis by plasmonic nanoparticles.



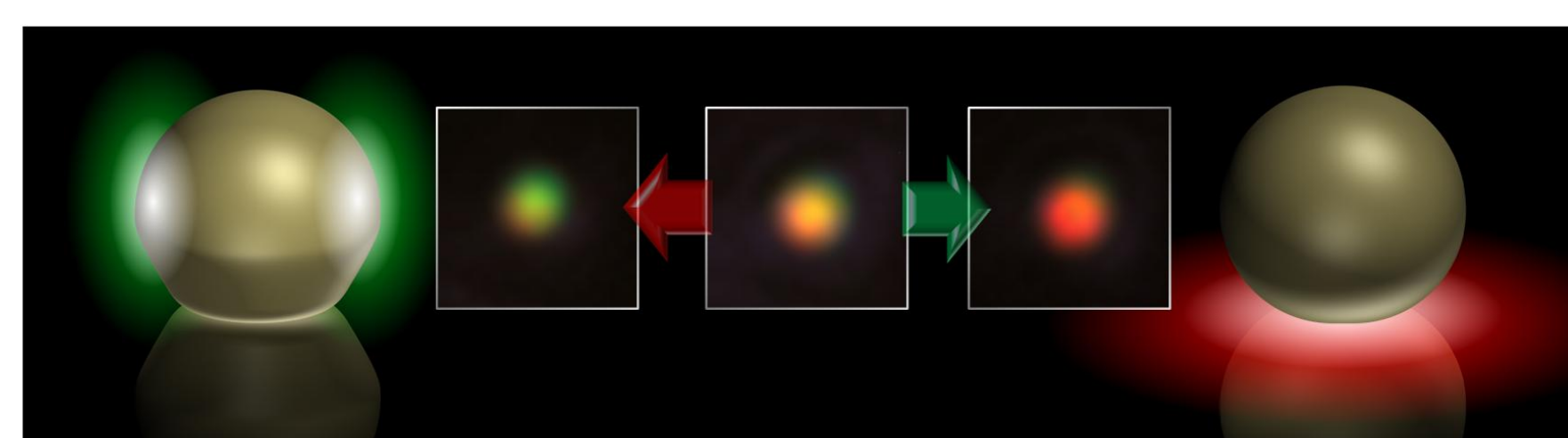
◆ Infrared photochromism of pyramidal silver nanorods.



◆ Plasmonic sensors.



◆ Multicolor changes of single plasmonic nanoparticles.



◆ Visible light-driven photocatalysts with energy storage abilities.

