
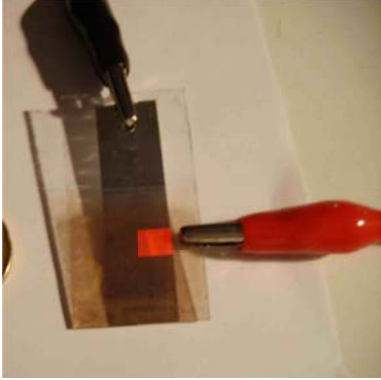
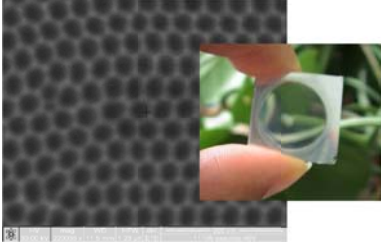
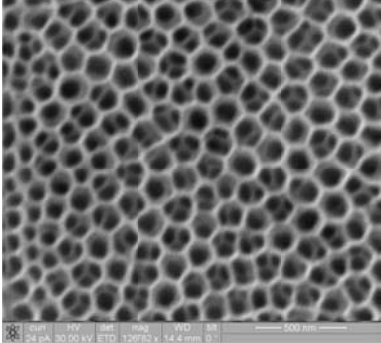


Thin Film Deposition

Self Assembly Tools

Centro Ricerche FIAT (CRF), Italy



Contact:	Dr. Marzia Paderi Email marzia.paderi@crf.it Phone +39(11)908-3602 • Phone +39(11)908-3591 (Lab) • Fax +39(11)908-3666						
Material class:	Silicon	Polymer	Metal X	Ceramic X	Glass	Organic	Other X
Short technology description:	Fabrication of highly regular nanostructure of emitting nanocrystals, metallic and ceramic nanoclusters and porous anodic templates (alumina, titania). Robot for layer-by-layer deposition (LbL) with large area stage (300x300 mm) software controlled. Anodization station for the fabrication of highly regular porous anodic alumina and titania templates (typical round shape 20 mm diameter).						
Typical structures and designs:			Deposition robot for layer-by-layer deposition				
			Nanocrystal light emitting device fabricated by layer-by-layer deposition				
			Transparent highly regular porous alumina by electrochemical self assembling				
			Regular anodized titania				

Special features:	<ul style="list-style-type: none"> - High number of layers deposition - Range of nanostructures dimensions from few nm to 400 nm - Very high aspect ration of porous anodic alumina (>100) - Self standing membranes
Limitations, constraints:	<ul style="list-style-type: none"> - Suspension materials preparation - Difficult to manage large area substrates
Material examples:	<ul style="list-style-type: none"> - Electroluminescent nanocrystals (CdSe, CdS, CdTe) - Porous anodic alumina and titania - SiO₂ opals