Processing of titanium dioxide thin films for solar hydrogen production

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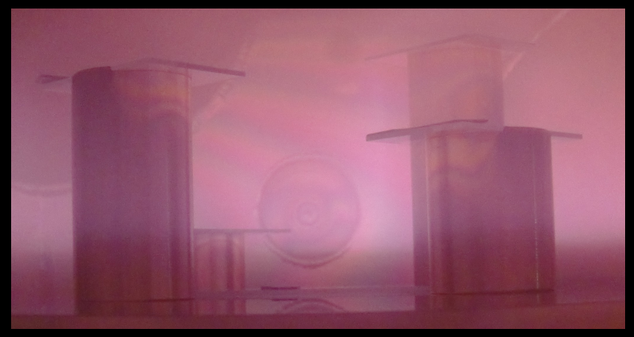
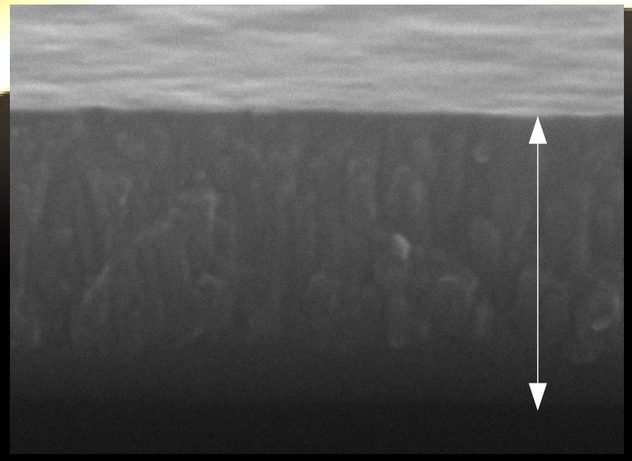
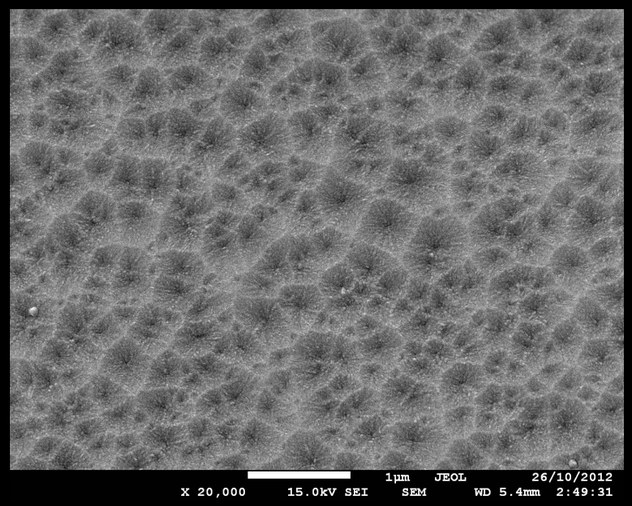


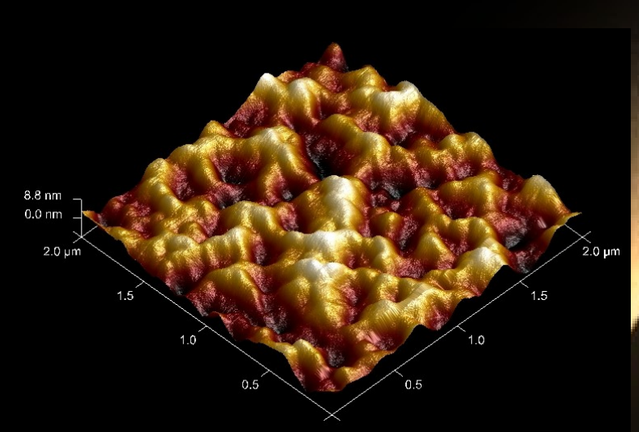
Plasma thin film deposition process: magnetron sputtering

Water splitting in action
Light shining on left electrode and hydrogen bubbling off right elctrode



Scanning Electron Microscope image of thin film Cross section 500 nanometers thick (above) and surface structures (below)





Atomic Force Microscope image of the titanium dioxide thin film surface:
area 4 µm ^{2}, < 10 nm height

Thesis aim:

To engineer magnetron sputtered thin films of titanium dioxide to achieve improved performance of solar hydrogen production

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