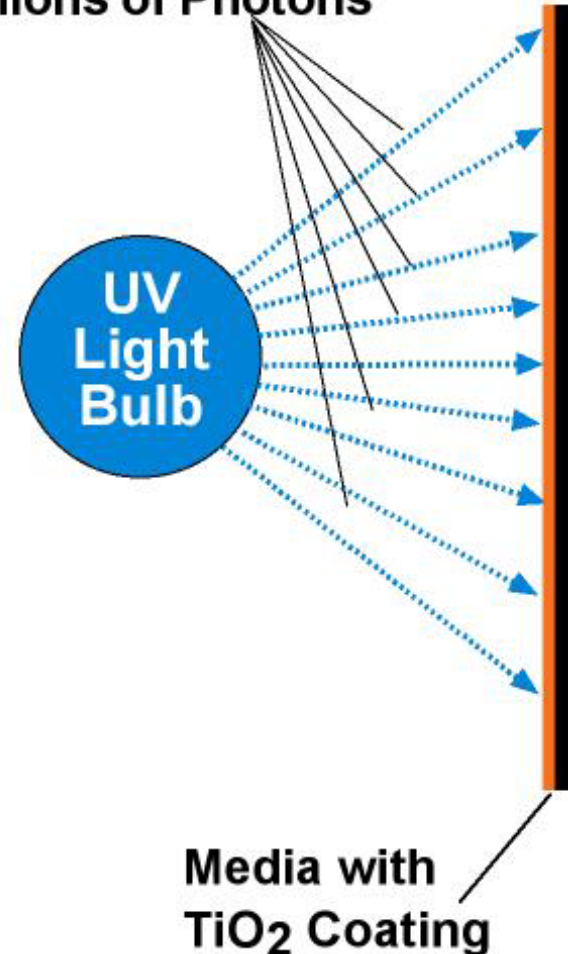


# Photo-catalytic Oxidation (PCO)

## Phase 1

- UV light creates millions of photons which are a form of light energy.
- Those photons travel from the UV light bulb and strike the Titanium Dioxide ( $\text{TiO}_2$ ) catalyst which is embedded on the media surface.

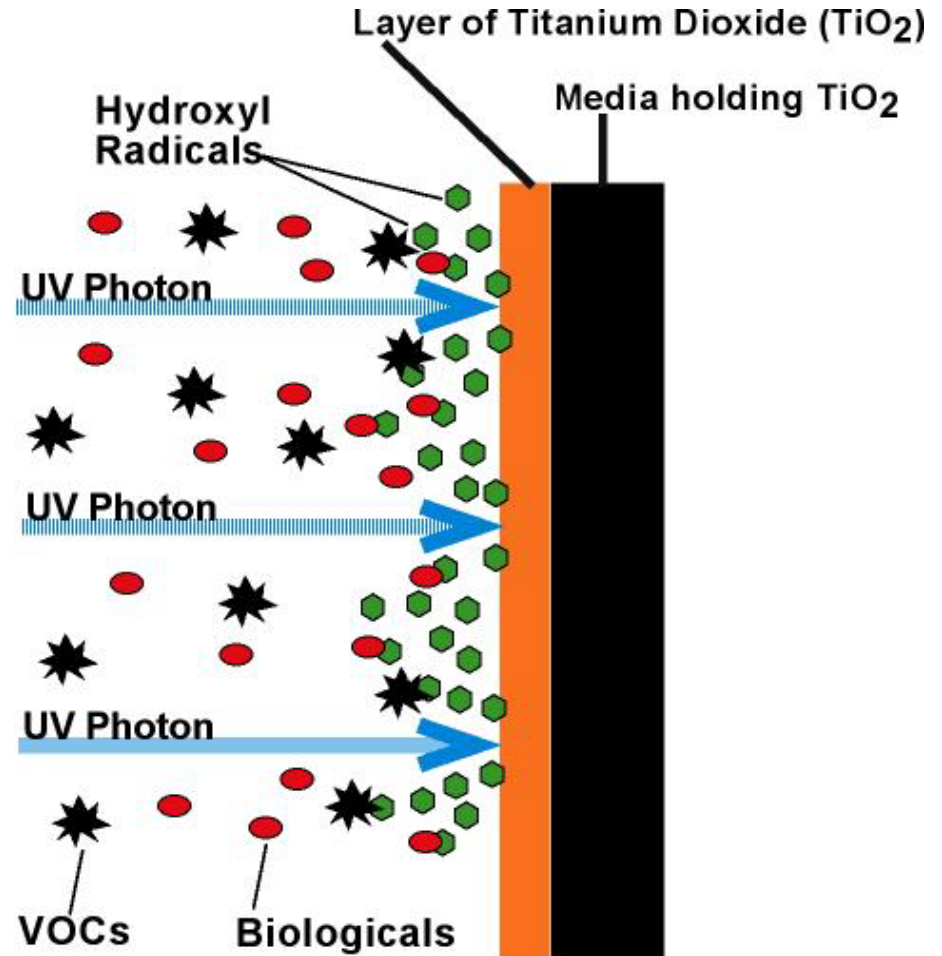
UV Light “emits”  
Millions of Photons



# Photo-catalytic Oxidation (PCO)

## Phase 2

- UV light photons are “catalyzed” when they strike the  $\text{TiO}_2$  forming Hydroxyl Radicals.
- Hydroxyl radicals last less than 1/10 of a second & create a “cloud” which biologicals and VOCs must pass through.



# Photo-Catalytic Oxidation can neutralize airborne germs & VOCs

- Hydroxyl radicals can:
  1. Oxidize airborne biological particles
  2. Convert VOCs into H<sub>2</sub>O & CO<sub>2</sub>
- UV Photons will continue to catalyze Hydroxyl Radicals as long as the UV light is producing photons in sufficient quantities.