

# Water photoreduction with $\text{Cu}_2\text{O}$ quantum dots on $\text{TiO}_2$ nano-particles

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## Abstract

Photocatalyst  $\text{TiO}_2/\text{Cu}_2\text{O}$  made by depositing  $\text{Cu}_2\text{O}$  quantum dots on  $\text{TiO}_2$  nano-particles, photoreduces water under sacrificial conditions as a result of efficient separation of electrons and holes into  $\text{TiO}_2$  and  $\text{Cu}_2\text{O}$ , respectively. Although oxidations take place at  $\text{Cu}_2\text{O}$  sites, these quantum dots remained stable towards oxidation.

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