

### TiO<sub>2</sub>

\*

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TiO<sub>2</sub> 가 , bandgap, , ,  
 . TiO<sub>2</sub> rutile(tetragonal, space group: P4<sub>2</sub>/mmm), anatase(tetragonal, space group: I4<sub>1</sub>/amd), and brookite(orthorhombic, space group: Pbcn ) 3가 가 .  
 Rutile anatase 1972 Fujishima Honda가 TiO<sub>2</sub>  
 가 . brookite ,  
 rutile anatase 가 .  
 brookite TiO<sub>2</sub>  
 . TiO<sub>2</sub> , additive sheet,  
 tube, wire, pyramidal 4가 morphologies 가 . morphologies SEM TEM  
 wire anatase, pyramidal brookite XRD TEM SAED pattern sheet, tube,  
 , brookite anatase photoelectrochemical photoelectrochemical