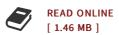




## Heterojunctions on Titanium Oxide Nano Particles

By Shih, Tsung-Hsiang

Condition: New. Publisher/Verlag: VDM Verlag Dr. Müller | Heterojunctions of Zinc Selenide and Zinc Sulfide on Titanium Oxide Nano Particles and Their Photocatalyses | Nanocrystalline anatase phase titanium oxide converted from ammonium oxofluorotitanate by thermal treatment was developed and a large bandgap reduction due to the co-doping of high concentrations of fluorine and nitrogen. It is 1.3 times the photocatalytic activities of P-25 due to the visible region usage of Hg lamp light source. The 11.2 times the visible photocatalytic activities of P-25 using blue light-emitting diode as the light source is obtained. The heterostructure of zinc selenide/titanium oxide and zinc sulfide/titanium oxide were prepared by metal-organic chemical vapor deposition. The energy bandgap of zinc sulfide is much larger than that of titanium oxide and can act as a window for titanium oxide. It would not hinder titanium oxide absorption and preserve the role of fluorine and nitrogen co-doping. The energy bandgap of zinc selenide is near the maximum intensity of solar spectrum and acts as a sensitizer of titanium oxide. Their photocatalytic activities are further improved to 2.0 and 1.5 times higher than that of commercial P-25, respectively. | Format: Paperback | Language/Sprache: english | 180 pp.



## Reviews

This is an incredible book that I have ever read through. It can be rally exciting through reading through time period. I discovered this publication from my i and dad recommended this pdf to find out.

-- Friedrich Lynch DDS

This ebook is fantastic. It is actually writter in straightforward terms rather than hard to understand. Its been designed in an extremely straightforward way and it is merely soon after i finished reading through this ebook through which in fact modified me, alter the way i really believe.

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