



## Research on the optical properties of Fe/TiO<sub>2</sub> core/shell nanowire arrays

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### Abstract:

Fe/TiO<sub>2</sub> core/shell nanowire arrays can be used in the field of magnetic recording and microwave absorption.[1] In the present work, the optical properties of Fe/TiO<sub>2</sub> core/shell nanowire arrays was investigated based on the method of discrete dipole approximation (DDA).[2] Not only the cross section, but also the efficiency factor of absorption and scattering have been gained, and extinction spectrum is subsequently deduced. Influences of Fe/TiO<sub>2</sub> Nano composite's size and dielectric environment on optical properties are simulated and analyzed. The computed results are very sensitive to the diameter of the Fe/TiO<sub>2</sub> core/shell nanowires.

### Biography:

Prof. Angyang Yu studied Applied Physics at Dalian University of Technology (China) and obtained his B.Sc. in 2003. He received his M.Sc. in 2006 after conducting his master thesis on molecular reaction dynamics in Dalian Institute of Chemical Physics, Chinese Academy of Sciences. After obtaining his Ph.D. degree at Jilin University in China, he was awarded a Postdoctor's Fellowship to study titanium alloys' oxidation at Institute of Metal Research, Chinese Academy of Sciences. His research interests include calculations of molecular spectra, chemical kinetics, molecular excited states, molecular reaction dynamics and engineering alloy design.



### Recent Publications:

- Ang-Yang Yu, Int J Biol Macromol. 2020
- Ang-Yang Yu, Water Sci Technol. 2019
- Ang-Yang Yu, Anal Chem. 2019
- Ang-Yang Yu, Anal Bioanal Chem. 2018
- Ang-Yang Yu, Anal Chem. 2016

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