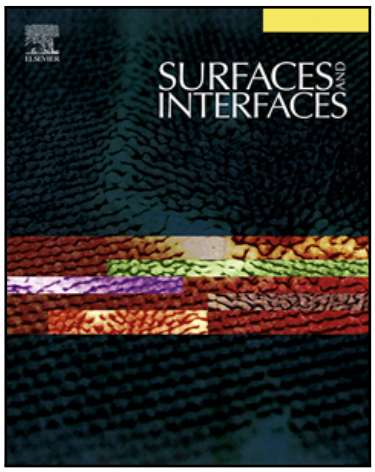

Exploration of vectorial charge transfer mechanism in $TiO_2/SrTiO_3$ composite under UV light illumination for the degradation of 4-Nitrophenol: A comparative study with TiO_2 and $SrTiO_3$

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PII: S2468-0230(18)30104-4
DOI: 10.1016/j.surfin.2018.02.005
Reference: SURFIN 181

To appear in: *Surfaces and Interfaces*

Received date: 8 August 2017
Revised date: 19 February 2018
Accepted date: 24 February 2018

Please cite this article as: L. Gomathi Devi , B.G. Anitha , Exploration of vectorial charge transfer mechanism in $TiO_2/SrTiO_3$ composite under UV light illumination for the degradation of 4-Nitrophenol: A comparative study with TiO_2 and $SrTiO_3$, *Surfaces and Interfaces* (2018), doi: 10.1016/j.surfin.2018.02.005

Highlights

- The activity of $SrTiO_3/TiO_2$ composite is compared with its individual counter parts
- Slight mismatch of band edge positions induces potential gradient at the interface
- Potential gradient at the interface of composite leads to the charge separation
- Vectorial transfer of electrons and holes take place in opposite directions
- Presence of additional electron acceptors enhances the reaction rate