

# Publications

## Published

1. *K. P. Shejale, D. Laishram, R. Gupta and R. K. Sharma, Electron Trapper ZnO-TiO<sub>2</sub> Heterojunction Solid Nanosphere as a Photoanode for Efficient Dye Sensitized Solar Cells, Energy Technol., 2017, 5, 489.*
2. *D. Laishram, K. P. Shejale, R. K. Sharma and R. Gupta, Enhancement in Optical Properties of hydrogenated TiO<sub>2</sub> by HfO<sub>2</sub> Nanodots, RSC Adv., 2016, 6, 78768.*
3. *K. P. Shejale, D. Laishram, and R. K. Sharma, High Performance Dye Sensitized Solar Cell Using Dimensionally Controlled Titania Synthesized at Low Temperatures, RSC Adv., 2016, 6, 23459.*
4. *K. P. Shejale, D. Laishram, M. S. Roy, M. Kumar and R. K. Sharma, On the Study of Phase and Dimensionally Controlled Titania Nanostructures Synthesis at Sub-Zero Temperatures, Mater. Design, 2016, 92, 535.*

## Articles in progress

1. *K. P. Shejale, D. Laishram, R. Gupta and R. K. Sharma, Solid nanosphere ZnO-TiO<sub>2</sub>: Energy harvesting and a novel photo-assisted membrane system for environmental remediation, Environ. Sci. Technol., 2017.*
2. *K. P. Shejale, P. Rawal, D. Laishram, and R. K. Sharma, Review on sub-zero temperature sol-gel synthesis of titania, Appl. Mater. Interfaces. 2017 (writing).*

## Conference Publication

1. *S. K. Prakash, R. K. Sharma, M. S. Roy and M. Kumar, Investigation of Graphene Synthesized through Graphene Oxide as Counter Electrode for Dye Sensitized Solar Cells, AIP Conference Proceedings 2014, 1620, 223.*
2. *S. K. Prakash, R. K. Sharma, M. S. Roy and M. Kumar, Carbon Coated Stainless Steel as Counter Electrode for Dye Sensitized Solar Cells, AIP Conference Proceedings 2014, 1620, 218.*

## Patent

Sub-zero temperature process for production of high surface area, phase and dimensionally controlled nano-titania for solar cell and water treatment application thereof. (Application No. 201611022531)

## Book (In process)

low temperature titanium dioxide synthesis.

## Conference presentations

1. *K. P. Shejale, D. Laishram, and R. K. Sharma. Sub-zero temperature synthesis of dimensionally controlled titania and its application in dye sensitized solar cells. Nature Conference on Materials for Energy 2016 at Wuhan University of Technology China, 11-14 June 2016.*
2. *K. P. Shejale, D. Laishram, and R. K. Sharma. Low temperature synthesis of dimensionally controlled titania and its application in dye sensitized solar cells. ICONSAT 2016, IISER Pune, India, 28 Feb -2 March 2016.*
3. *S. K. Prakash, R. K. Sharma, M. S. Roy and M. Kumar. Studies of carbon material based counter electrode for dye sensitized solar cells. SERIUS - Research Directions in Solar Energy - 2014 IISc Bangalore, India, 1-2 April, 2014.*
4. *S. K. Prakash, R. K. Sharma, M. S. Roy and M. Kumar. Investigation of synthesized graphene counter electrode for DSSCs. Optics'14 - International Conference on light at NIT Calicut, India, 19-21 March 2014.*
5. *S. K. Prakash, R. K. Sharma, M. S. Roy and M. Kumar. Investigation of synthesized graphene counter electrode for dye sensitized solar cells. IURMS-ICA 2013 at IISc Bangalore, India, 10-20 December 2013.*