

13<sup>th</sup> International Conference on

# NANOTEK & EXPO

December 05-07, 2016 Phoenix, USA

## Photocatalytic degradation studies of ZnO nanoparticles on propaquizafop residues in water

Y Prashanthi<sup>1</sup> and Tentu Nageswara Rao<sup>2</sup><sup>1</sup>Mahatma Gandhi University, India<sup>2</sup>Krishna University, India

Photocatalytic study was conducted to determine the decontamination deeds of propaquizafop in acidic buffer (pH 4), neutral buffer (pH 7), basic buffer (pH 9) and Milli Q water by ZnO nanoparticle. Photocatalytic reaction was conducted under direct solar light. Propaquizafop residues in water was determined by HPLC-UV detector and calculated the rate constant, DT50 and DT90 values obtained from the data. Consequence of photo catalysis on pH, on amount of photocatalyst, at light intensity, on radical quencher, on sensitizer was studied. ZnO nanoparticle was greatly decontaminating the propaquizafop in water and observed first order reaction rate.

### Biography

Y Prashanthi has completed his PhD from Osmania University, Hyderabad, India and Post-doctoral studies from National Taiwan University, Taiwan, Taipei. Presently, she is an Assistant Professor in Department of Chemistry, Mahatma Gandhi University, India. She has published more than 40 papers in reputed journals and has been serving as an Editorial Board Member of repute.

puttaprashanthi@gmail.com

### Notes: