



**DCT's Dhempe College of Arts and Science,
Miramar, Goa**

Research work on Dye Degradation by Principal Prof.Vrinda Borker

Principal Prof. Vrinda Borker guided Ph.D. student Dr. Rajashree Karmali,
Topic: *Metal oxides for environmental friendly applications*

She also published and presented many research papers. The list is given below,

Papers Published

- 1. *Bactericidal Action of N doped ZnO in Sunlight*** by Rajashri S. Karmali, Amruta Bartakke, Vrinda P. Borker, Koyar S. Rane in *Biointerface research in Applied Chemistry*, Vol.1. March, 2011
- 2. *Value addition to the low grade iron ore rejects*** by Rajashri Karmali, Vrinda Borker, K.S. Rane & C. G. Naik in *Journal of Solid waste Technology and management* Vol.38(4) November, 2012
- 3. *Comparison of degradation of methylene blue dye by ZnO, N-doped ZnO and iron ore rejects*** by V. Borker, R. Karmali and K.S. Rane, *European Chemical Bulletin*, 2014, section B, 3(6), 520-529

Papers Presented at National and International conferences

1. Paper '**Nd₂Zr₂O₇ lattice as host for radioactive fission products**' by V. P. Borker, R. Karmali K.S. Rane at 100th session of The Indian Science Congress held at Kolkata from 3rd to 7th January, 2013.
2. Paper '**Comparison of degradation of methylene blue by N doped ZnO and iron ore rejects by Vrinda Borker, Rajashri Karmali, Koyar Rane**' at The 28th International Conference on Solid Waste Technology and Management held at Philadelphia, PA U.S.A. on March 10-13, 2013
3. Paper '**Photocatalytic degradation of Methylene Blue by TiO₂, ZnO, N-doped TiO₂ and ZnO, and iron ore rejects: a comparative study**' by R. Karmali, V. Borker and K. S. Rane was



presented at XXXII Annual conference of the Indian Council of Chemist held at Karnatak University, Dharwad on 28th -30th November, 2013.

Paper "Pyrochlore Oxides for disposal of nuclear wastes" by R. Karmali, V. Borker and K. S. Rane was presented at UGC sponsored National Conference "Physics and Chemistry of Advanced Materials" organised by C. B. Khedgi's Basaveshwar Science, Raja Vijaysinh commerce & Raja Jaisinh Arts College, Akkalkot, Solapur on 18-19th December 2013. **The paper was awarded second prize for Best Oral Presentation**

5. Presented a Paper at 2nd National Conference on Emerging Trends in Chemistry Materials Science organised by Gogte Institute of Technology, Belagavi, Karnataka on 23rd February, 2016, and 'Effect of Dyeing Chemicals and Additives on Methylene Blue Degradation by Iron Ore Rejects'

6. Presented paper at National conference SMART2015 on 27-28th November, 2015 organised by Faculty of Basic Sciences, Shoolini University, Solan, Himachal Pradesh 'Doping of zinc oxide to alter its properties' and **won the Best Paper Award**

7. At Crystal Ball Vision on Science and Engineering for Societal Upliftment, National Institute of Oceanography, Goa organized by Japan Science Agency on 7th and 8th August 2017 'Enhanced photodegradation of organic dyes improved bacterial Activity and optimised DO/COD/BOD'

8. At 20th International Conference on Industrial Waste Treatment and Control International Research Conference, Wembley, London on 28th and 29th June 2018, 'Effect of doping on band gap of zinc oxide and degradation of MB and industrial effluent' by V.Borker, K.S. Rane, A.S. Bhobe, R.Karmali won **Best Paper award**

9. At International conference on advancement of science and technology at Vishwabharati Shanti-Niketan Bengal on 3rd and 4th September 2018 'MB degradation over metal oxide catalyst under sunlight irradiation Chemical and chromatographic analysis of the degradation products' Neemakthar Momin, Vrinda Borker, K.S.rane

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V Borker

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unempe College of Arts & Science,
Panaji-Goa.