

**Rayat Shikshan Sanstha's  
R.B. Narayanrao Borawake College, Shrirampur**



## Faculty Profile

- 1. Name of the faculty:** Mr. Bankar Digambar Babasaheb
- 2. Name of the Department:** Chemistry
- 3. Educational qualification:** M.Sc., NET (JRF)
- 4. Present position:** Assistant Professor
- 5. Address for correspondence:** R.B. Narayanrao Borawake College, Shrirampur, Dist Ahmednagar
- 6. E-mail and contact number:** bankardb100@gmail.com
- 7. Specialization:** Organic Chemistry
- 8. Total teaching experience:** 08 years
- 9. Courses taught:** B. Sc. (Organic, Inorganic), M.Sc. (Organic Chemistry)
- 10. Research experience:** 05 Years
- 11. Publication of research papers:** 08
- 12. Minor research projects completed:** Nil
- 13. Major research projects completed:** Nil
- 14. Academic Qualification:**

| Sr. No. | Degree   | Subject           | Year of Passing | Board/University  | Percentage |
|---------|----------|-------------------|-----------------|---|------------|
| 1       | B.Sc.    | Chemistry         | July-2005       | Savitribai Phule Pune University, Pune                          | 84.66      |
| 2       | M.Sc.    | Organic Chemistry | July-2007       | Savitribai Phule Pune University, Pune                          | 68.50      |
| 3       | NET(JRF) | Chemical Science  | December-2011   | CSIR-UGC  | AIR-34     |
| 4       | Ph.D.    | Chemistry         | Pursuing        | Savitribai Phule Pune University (Research Center: C-MET, Pune) | ---        |

**15. Presentation in Seminar/Conference/Symposia/Workshop:**

| Sr. No. | Title  | Name of sponsoring agency                          | Level    | Oral/Poster | Date                    |
|---------|--|--|----------|-------------|-------------------------|
| 1       | Emerging Trends in Organic Chemistry                   | Maharaja Jivajirao Shinde Mahavidyalaya, Shrigonda | National | Poster      | 22/12/2015-23/12/2015   |
| 2       | Interdisciplinary Approach in Scientific Research      | S. M. Joshi College, Hadapsar, Pune-28             | National | Poster      | 11/01/2016-12/01/2016   |
| 3       | Recent Trends in Green Chemistry                       | Hutatma Rajguru Mahavidyalaya, Rajgurunagar        | State    | Oral        | 13/08/2016              |
| 4       | Frontier Areas in Chemical Sciences                    | Y.C. College, Satara                               | National | Oral        | 27/01/2017-28/01/2017   |
| 5       | Recent Innovation in Chemical & Environmental Sciences | Annasaheb Awate College, Manchar                   | National | Oral        | 30/01/2018 – 31/01/2018 |

**16. Seminar/Conference/Symposia/Workshop etc attended:**

| Sr. No. | Title  | Name of sponsoring College                         | Level            | Date                    |
|---------|--|--|------------------|-------------------------|
| 1       | Women Infanticide: Awareness                     | Mahatma Phule Mahavidyalaya, Pimpri                | State            | 16/2/2013-17/2/2013     |
| 2       | The Prospectus of Research                       | Radhabai Kale Mahila Mahavidyalaya, Ahmednagar     | State            | 15/2/2013               |
| 3       | Green Approach in Applied Science                | Dada Patil Mahavidyalay, Karjat                    | National         | 14/3/2013-15/3/2013     |
| 4       | Significance of Bionanotechnology                | Mahatma Phule Mahavidyalaya, Pimpri                | State            | 20/9/2013-21/9/2013     |
| 5       | Patent Process                                   | Y.C. College, Satara                               | State            | 20/04/2013              |
| 6       | New Credit Based System For PG (Science) Courses | D.Y. Patil College, Pimpri, Pune                   | University Level | 17/08/2013              |
| 7       | Review of progress in nanoscience                | New Arts College, Amednagar                        | State            | 13/02/2015-14/02/2015   |
| 8       | SET/NET/JRF Preparations & Opportunities         | Arts, Commerce & Science College, Narayangaon      | College Level    | 06/08/2016              |
| 9       | 2015 International Mind Education Seminar        | Savitribai Phule Pune University, Pune             | International    | 16/10/2015              |
| 10      | Review of Progress in Nanoscience                | New Arts, Commerce and Science College, Ahmednagar | State            | 13/02/2015 – 14/02/2015 |

## 17. List of Publications:

- [1] **Bankar, D.B.**, Hawaldar, R.R., Arbuj, S.S., Moulavi, M.H., Shinde, S.T., Takle, S.P., Shinde, M.D., Amalnerkar, D.P. and Kanade, K.G., **2019**. ZnCl<sub>2</sub> loaded TiO<sub>2</sub> nanomaterial: an efficient green catalyst to one-pot solvent-free synthesis of propargylamines. *RSC Advances*, 9(56), pp.32735-32743.
- [2] **Bankar, D.B.**, Hawaldar, R.R., Arbuj, S.S., Shinde, S.T., Gadde, J.R., Rakshe, D.S., Amalnerkar, D.P. and Kanade, K.G., **2020**. Palladium loaded on ZnO nanoparticles: Synthesis, characterization and application as heterogeneous catalyst for Suzuki–Miyaura cross-coupling reactions under ambient and ligand-free conditions. *Materials Chemistry and Physics*, 243, p.122561.
- [3] **Bankar, D.B.**, Kanade, K.G., Hawaldar, R.R., Arbuj, S.S., Shinde, M.D., Takle, S.P., Amalnerkar, D.P. and Shinde, S.T., **2020**. Facile synthesis of nanostructured Ni-Co/ZnO material: An efficient and inexpensive catalyst for Heck reactions under ligand-free conditions. *Arabian Journal of Chemistry*, 13(12), pp.9005-9018.
- [4] Takle, S.P., Apine, O.A., **Bankar, D.B.**, Tarlekar, A.S., Bhujbal, N.N., Kale, B.B. and Sonawane, R.S., **2020**. Sunlight mediated degradation of spent wash using hydrothermally synthesized orthorhombic shaped Cu–TiO<sub>2</sub> nanoparticles. *New Journal of Chemistry*, 44(41), pp.17724-17734.
- [5] Moulavi, M.H., Kale, B.B., **Bankar, D.**, Amalnerkar, D.P., Vinu, A. and Kanade, K.G., **2019**. Green synthetic methodology: An evaluative study for impact of surface basicity of MnO<sub>2</sub> doped MgO nanocomposites in Wittig reaction. *Journal of Solid State Chemistry*, 269, pp.167-174.
- [6] Shinde, S., Karale, B., **Bankar, D.**, Arbuj, S., Moulavi, M., Amalnerkar, D. and Kim, T., **2019**. Nanocrystalline Cu–ZnO as an green catalyst for one pot synthesis of 4, 4'-((phenyl) methylene) bis (3-methyl-1-phenyl-1H-pyrazol-5-ol) derivatives. *Journal of nanoscience and nanotechnology*, 19(8), pp.4623-4631.
- [7] **Bankar D.B.**, Kanade K.G., Hawaldar R.R., Arbuj S.S., Shinde S.T., Kale A.A., and Gaikwad D.N., **2018**. A Review on recent advances in the coumarin derivatives synthesis via Knoevenagel and Pechmann condensation. *International Journal of Chemical and Physical Sciences*, 7, pp.188-192.
- [8] Shinde S.T., Kanade K.G., Karale B.K., Arbuj S.S., Kale A.A., **Bankar D.B.**, and Kunde S.P., **2018**. Synthesis and characterization of transition metals doped zinc oxide nanocrystalline materials by solution based precipitation technique. *International Journal of Chemical and Physical Sciences*, 7, pp. 224-231.

**18. Innovative processes developed in teaching and learning. PPTs, Study material, video lectures etc.**

Video Lectures:

| <b>Class: M.Sc. II Organic Chemistry</b>   |  |   |
|--|--|---|
| <b>Subject: CHO-353 (Section I: Protection-Deprotection and Chiron Approach)</b> |  |   |
| <b>Sr. No.</b>   | <b>Topic</b>   | <b>Link</b>   |
| 1  | Introduction about Protection-deprotection concept used in organic synthesis   | <a href="https://youtu.be/xjV2ClbjTlw">https://youtu.be/xjV2ClbjTlw</a>   |
| 2  | Hydroxyl protecting groups (Methyl ether, benzyl ether, tertiary butyl ether, Trityl protection, TMS and TBDMS protection)     | <a href="https://youtu.be/I32sNI0qsNU">https://youtu.be/I32sNI0qsNU</a>   |
| 3  | Hydroxyl protecting groups (THP, MOM, MEM, acyl protection)  | <a href="https://youtu.be/LSqf5Q4BRZw">https://youtu.be/LSqf5Q4BRZw</a>   |
| 4  | Hydroxyl protecting groups (Diol protection)<br>Amino protecting group (Benzyl protection, acyl protection and CBZ protection) | <a href="https://youtu.be/DU2yHPp7X-k">https://youtu.be/DU2yHPp7X-k</a>   |
| 5  | Amino protecting group (BOC protection, Fmoc protection and Trityl protection)   | <a href="https://youtu.be/zFD19SV4ofM">https://youtu.be/zFD19SV4ofM</a>   |
| 6  | Carboxyl protecting groups (ester protection, DCCI protection, TMS protection)   | <a href="https://youtu.be/9SOObObSLzFg">https://youtu.be/9SOObObSLzFg</a> |
| 7  | DIPCDI carboxyl protecting group<br>Aldehyde and ketone protecting groups  | <a href="https://youtu.be/pW4a9Z1W-jk">https://youtu.be/pW4a9Z1W-jk</a>   |
| 8  | Problem based on protection-deprotection   | <a href="https://youtu.be/AuNrmCTgTz4">https://youtu.be/AuNrmCTgTz4</a>   |
| 9  | Problem based on protection-deprotection   | <a href="https://youtu.be/dMoXdwbAZjs">https://youtu.be/dMoXdwbAZjs</a>   |
| 10   | Chiron Approach: Introduction and Synthesis of (S)- Propanediol molecule   | <a href="https://youtu.be/FyEJLyuNMFQ">https://youtu.be/FyEJLyuNMFQ</a>   |
| 11   | Chiron Approach: Synthesis of (R) and (S) Epichlorohydrin, and L- (+) Alanine molecules  | <a href="https://youtu.be/xdNWBp3Ytxg">https://youtu.be/xdNWBp3Ytxg</a>   |
| 12   | Chiron Approach: Synthesis of (Multistriatin molecule  | <a href="https://youtu.be/Qq9Qw9JUDRQ">https://youtu.be/Qq9Qw9JUDRQ</a>   |
| 13   | Chiron Approach: Synthesis of (-) Pentenomycin molecule  | <a href="https://youtu.be/zwwVegTcGdw">https://youtu.be/zwwVegTcGdw</a>   |

|    |  |   |
|----|--|---|
| 14 | Chiron Approach: Synthesis of (-) Shikimic acid molecule | <a href="https://youtu.be/-KksO0D4gJA">https://youtu.be/-KksO0D4gJA</a> |
| 15 | Chiron Approach: Retrosynthesis                          | <a href="https://youtu.be/ShwirPuLl8I">https://youtu.be/ShwirPuLl8I</a> |
| 16 | Chiron Approach: Retrosynthesis                          | <a href="https://youtu.be/oSD03kQCrBw">https://youtu.be/oSD03kQCrBw</a> |

**19. Examination:** Internal/External Examiner for University B.Sc. and M.Sc. practical examination

**20. Participation in co-curricular and extra-curricular activities:**

- Worked as coordinator for CHEMIAD Competition organized by department of Chemistry, Savitribai Phule Pune University, Pune.
- Delivered lectures for M. Sc Part I and II students, Hutatma Rajguru Mahavidyalaya, Rajgurunagar (20/03/2016 & 12/04/2017)
- Delivered lectures for T.Y.B.Sc. students, D.G. Walse Patil College, Pargaon (31/12/2016 & 02/01/2017).
- Delivered lectures for T.Y.B.Sc. students, B.D. Kale College, Ghodegaon (08/03/2015 & 08/02/2017).

**21. Refresher/Orientation/Faculty development Programme / short term courses attended:**

| Sr. No | Name of Programme                         | Year | Duration                       | Sponsored agency         |
|--------|---|------|--------------------------------|--------------------------|
| 1.     | 158 <sup>th</sup> Orientation Programme   | 2015 | 01/10/2015<br>to<br>28/10/2015 | SPPU, Pune               |
| 2.     | Refresher Course in Environmental Studies | 2018 | 22/11/2018<br>to<br>12/12/2018 | SPPU, Pune               |
| 3      | Faculty Development Programme (FDP)       | 2020 | 02/07/2020<br>to<br>17/07/2020 | Ramanujan College, Delhi |