

## About Department

Department of Chemistry and Forensic Science (DOCFS) was established in June 2018, under the Bhakta Kavi Narsinh Mehta University, Junagadh, a state university of Government of Gujarat (India). The department offers Post graduation and Ph.D. programme in Chemical Sciences. The Masters program offers specialization in Organic and Analytical chemistry which fully emphasis on Medicinal chemistry and Analytical techniques. The programme also accomplish basic requirements for pharma and chemical industries, academic institution and research studies. The Ph.D. Programme provides high-level, polyvalent researchers who are skilled in research, development and production across the entire spectrum of the chemical industry with research areas including synthesis of organic compounds with medicinal interest, creation of new chemical entities with interesting structures, magnetic and electrochemical properties, molecular modelling, analytical chemistry including method development and validation, impurity profiling, stability study, extraction of natural products, thermodynamics, and computational chemistry.



## Academic Program

The academic programs and teaching profile of the department are designed to gratify diverse needs of the student community. Whether it is for a doctoral student seeking knowledge at the forefront of modern research, or a master student seeking to establish the fundamentals, the Chemistry department offers suitable courses and programs to meet the needs. The department offers Master and Doctoral program along the lines of the premier academic institutions of the nation.

## Master of Science

The department currently offer M.Sc. Chemistry with specialization in organic chemistry and analytical chemistry. The program is blended with various courses of basic and applied chemistry. Department also offers Forensic Science in Specialization with Forensic and Toxicology.

## Doctoral Program

The doctoral program of the department is aimed to produce skill and regional needs required for industrial and social upliftment. The students for this program are admitted via either nation/state-wide qualifying examinations or through Ph.D. Entrance Test.



## Staff

### Atul Bapodra, Professor & Head

Email: [bapodraatul@gmail.com](mailto:bapodraatul@gmail.com)

- Ph. D. Suarashtra University, 1992
- Assistant Professor, M.D. Science College, Porbandar, 1991-2003
- Associate Professor, M.D. Science College, Porbandar, 2003-2016
- Professor & Head, Department of Chemistry & Forensic Science, BKNMU, 2018 onward
- Registrar (OSD), BKNMU from 2016 to 2018
- Exam (OSD) from 2016 to present
- Member of Executive council & Academic Council
- Member of Board of Governors & Finance Committee
- Member of Building & Estate Committee
- Member of Finance Committee & BUTR



### Professional Skill

#### Teaching

- Fundamental of Analytical Chemistry
- Chromatography
- Spectroscopy

#### Research Interests

- Analytical Method Development and Validation
- Impurity Profiling of API's
- Natural Products
- Synthetic Chemistry

#### Research Contribution

- Research article published: 26 (Impact factor range: 0.6 to 3.5)
- Ph.D. Student Guided: 05
- Student perusing Ph.D: 02
- Research Project Completed: 01
- Book Published: 15

#### Most Sited Articles

- Study of impurity carryover and impurity profile in Febuxostat drug substance by LC-MS/MS technique, Journal of Pharmaceutical and Biomedical Analysis, 56, 749-757, (2011).
- Chromatographic Separation and Spectroscopic Characterization of the E/Z Isomers of Acrivastine, Chirality, 23, 955-960, (2011).
- A validated UPLC method for the determination of process-related impurities in Azathioprine bulk drug, Anal. Methods, 3, 198, (2011).

**Dr. Naval Kapuriya**  
**Associate Professor**

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- Ph. D., Academia Sinica, Taiwan, 2009
- Postdoctoral Researcher, The Ohio State University, USA, 2009-2012
- Assistant Professor, M. & N. Virani Science College (Autonomous), Rajkot, 2012-2018
- Associate Professor, Department of Chemistry & Forensic Science, BKNMU, 2018 onward
- Member of Executive council
- Co-ordinator, SIRF



**Professional Skill**

**Teaching**

- Retrosynthesis-A Disconnection Approach
- Organic Reactions & Mechanism
- Stereo Chemistry
- Medicinal Chemistry
- QSAR & Combinatorial Chemistry

**Research Interests**

- Target Based Anticancer Drug Design and Synthesis
- Drug Design Based on Privileged Scaffolds
- DNA Alkylating Agents as Antitumor Agents
- Synthetic Methodology

**Research Contribution**

- Research article published: **27** (Impact factor range: **0.9 to 6.6**)
- Proceedings in AACR: **04**
- h index: **15**
- Patent filed: **01+01**
- Invited talk: **14**

**Most Sited Articles**

- Triethanolamine-catalyzed expeditious and greener synthesis of 2-amino-4H-chromenes, Journal of Chinese Chemical Society, 66, 1-6, (2018). (TAIWAN)
- Exploitation of the Ability of  $\gamma$ -Tocopherol to Facilitate Membrane Co-localization of Akt and PHLPP1 to Develop PHLPP1-Targeted Akt Inhibitors, Journal of Medicinal Chemistry, 58, 2290-2298, (2015). (USA)
- Vitamin E facilitates the inactivation of the kinase AKT by the phosphatase PHLPP1, Science Signaling, 6, 267, (2013). (USA)

## **Dr. Mrunal Ambasana**

### **Assistant Professor**

Email: [ambasanamrunal@gmail.com](mailto:ambasanamrunal@gmail.com)

- Ph. D., Saurashtra University, 2011
- Assistant Professor, M. & N. Virani Science College (Autonomous), Rajkot, 2011-2015
- Quality Head, Anlon Healthcare Pvt. Ltd., Rajkot, 2015-2018
- Assistant Professor, Department of Chemistry Forensic Science, BKNMU, 2018 onward
- Co-ordinator, Student Startup & Innovation Cell



### **Professional Skill**

#### **Teaching**

- Modern Analytical Techniques
- Intellectual Property Right (IPR)
- Regulatory Affairs
- Pharmaceutical Quality Policy
- Chromatography

#### **Research Interests**

- Analytical method development and validation
- Dissolution studies of API's
- Analytical studies of API's & Related substances

#### **Research Contribution**

- Research article published: **13** (Impact factor range: **0.1 to 1.5**)
- h index: **08**
- Invited talk: **04**
- Student perusing Ph.D: **01**
- Book Published: **01**

#### **Most Sited Articles**

- An Isocratic Method for Quantification of Valproic Acid and Its Related Impurities Using Ion Pair Reagent by Ultraperformance Liquid Chromatography, ISRN Chrom., 2012, 1-5, (2012)(USA).
- UPLC Method for Quantitative Analysis of Some Keto-analogues of Essential Amino Acid Calcium Salt Used in Severe Renal Failure, J. Liq. Chrom. Tech., 35, 2125-2133, (2012)(UK).
- Development and Validation of a Reversed-Phase UPLC Method for the Simultaneous Determination of Six Drugs Used for Combined Hypertension Therapy, Journal of AOAC Inter., 96, 295-300, (2013)(USA).



## **Dr. Jasmin Bhalodia**

### **Assistant Professor**

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- Ph. D., HNGU, 2013
- Principal (I/C), SKSC, Becharaji, 2015
- Assistant Professor, College of Computer Science and information technology, Junagadh, 2016-2018
- Assistant Professor, Department of Chemistry & Forensic Science, BKNMU, 2018 onward

### **Professional Skill**

#### **Teaching**

- Inorganic Chemistry
- Organometallic Chemistry
- Inorganic Materials & Methods
- Environmental Chemistry
- Spectroscopy

#### **Research Interests**

- Solution Chemistry
- Organometallics
- Nanoscience

#### **Research Contribution**

- Research article published: **17** (Impact factor range: **0.1 to 4.8**)
- h index: **07**
- Research Project: **01**
- Conferences: **14**
- Workshops: **06**

#### **Most Sited Articles**

- New Ternary Transition Metal Complexes of 2-[(2-aminophenyl) imino] methyl} Phenol and Metformin: Synthesis, Characterization and Antimicrobial Activity, Journal of Chemistry, 8, 361-367, (2008)(INDIA).
- Density, Excess Molar Volumes and Refractive indices of  $\beta$ -Pinene with o, m, p-Xylene and Toluene at 303.15, 308.15 and 313.15 K, Physics and Chemistry of liquids, 49, 765-776, (2011)(NETHERLAND).
- Volumetric and Viscometric study of Binary mixtures of 1, 8-Cineole with o-, m-and p-Cresol at 303.15, 308.15 and 313.15 K, Physics and Chemistry of Liquids, 54, 42-55, (2016)(UK).



**Dr. Rashmi Patel**

**Assistant Professor**

Email: [patelrash79@gmail.com](mailto:patelrash79@gmail.com)

- M. Phil., Gujarat University, 2012
- Ph. D., Gujarat University, 2016
- Assistant Professor at C. H. M Shah Science College, Mansa, Gandhinagar, 2016 to 2018
- Assistant Professor, Department of Chemistry & Forensic Science, BKNMU, 2018 onwards
- Member of Board of Governors

**Professional Skill**

**Teaching**

- Physical Chemistry
- Catalytic Chemistry
- Corrosion Chemistry
- Thermodynamic
- Polymer Chemistry

**Research Interests**

- Physical Chemistry
- Metal Complexes and Physical characterization
- Polymer Chemistry

**Research Contribution**

- Research article published: **03** (Impact factor range: **0.1 to 1.3**)
- Conferences: **09**
- Workshops: **03**

**Most Sited Articles**

- Pyrazolone Thiosemicarbazone Based Metal Complexes: Physicochemical Study, Synthesis and Biological Activity, Journal of Physical and Chemical Sciences, 3, 1-11, (2015) (UK).
- Synthesis of Metal Catalysts from Industrial Waste Effluents and its Catalytic Application in Biginelli Reaction, Current Organocatalysis, 3, 270-276, (2016) (INDIA).



**Ph.D. Students**

1. Rajesh Jadhav
2. Pritesh Gajjar
3. Sheetal Karmur
4. Rupal Joshi
5. Ninad Bhatt
6. Savan Chothani
7. Chirag Chamkhiya
8. Hardik Varu
9. Manisha Karmur