



Dr. Gunwanti Sinwal

Assistant Professor Stage 3

Department of Chemistry,

Royal College of Arts, Science and Commerce (Autonomous)

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Educational Qualifications:

- BSc (Chemistry) (V G Vaze College, Mulund, affiliated to University of Mumbai) -2009
- MSc (Analytical Chemistry), (UDC, University of Mumbai)-2011
- NET – December 2010
- PhD (Chemistry) (University of Mumbai)-2019

Professional Experience:

- Faculty at Department of Chemistry, Royal College of Arts, Science and Commerce (Autonomous), Affiliated to the University of Mumbai since June 2011.
- Attended several workshops, Conferences, Webinars, Short term courses, Orientation Programme and Refresher course programme for academic and professional growth.
- Published 12 research paper in peer reviewed National and International Journals.
- Presented 09 papers in national and international conferences.

Research Areas:

- Chemical analysis
- Green Chemistry
- Environmental analysis
- Ion – selective electrode
- Heterocyclic chemistry

Publications:

1. Vibha Bhagat, Gunwanti Sinwal, "Sustainable Effluent Treatment for Higher Education in Chemical Sciences: A Study on the Removal of Azo Dye Using Natural Adsorbents" *Vidyawarta Peer-Reviewed International Journal*, **2025**, 133 – 136.
2. Gunwanti Sinwal, Vibha Bhagat, "Fabrication of potentiometric sensor for determination of magnesium based on 2 Hydroxymethyl-15-crown-5" *Vidyawarta Peer-Reviewed International Journal*, **2025**, 140 – 146.
3. Jaywant Kolambe, Yogita Shinde, Kalpana Patankar Jain, Gunwanti Sinwal, "Review on Substituted Chalcones" *Iconic Research and Engineering Journal*, 7 (6), **2023**.
4. Dr. Kalpana Patankar Jain, Mr. Mahendra Utekar, Dr. Yogita Shinde, Dr. Gunwanti Sinwal, "A Review on Heterocyclic Compounds" *International Journal of Scientific Engineering and Science* 7(10), **2023**, pp. 21-26.
5. Gunwanti S, "Potentiometric Determination of Strontium in Clinical Samples using Graphite Coated Ion Selective Electrode", *International Journal of Science and Research*, 12 (10), Oct **2023**, pp. 1156 – 1157.
6. Mustaqeem Mohammed A, Gunwanti Sinwal "Synthesis of some novel azo dyes by coupling with 1-Phenylbutane-1,3-dione" *International journal of research*, 12(1), **2022**, 114-116.
7. Mustaqeem Mohammed A, Gunwanti N "Synthesis of some novel Heterocyclic Azo-Dye by using Meldrum's Acid" *Heterocyclic Letters*, 11(4), **2021**, 555-558.
8. Chitralkha K, Gunwanti Negi, "Heavy metal contamination of tea leaves and tea bag infusions consumed in Mumbai region", *International Journal of Basic and Applied Research*, 8(9), **2018**, 614 – 625.
9. Gunwanti Negi, Potentiometric Graphite Coated Electrode Based on Diterbutyl-cyclohexano18crown6 for Detection of Strontium (II) Ions, *Analytical Chemistry Letters*, 8(1), **2018**, 25-34.
10. Gunwanti Negi, Anita Goswami Giri, "Application of ion-selective electrode to the determination of barium in clinical samples", *Proceeding of Multidisciplinary International Conference on Green Earth: A panoramic view*, **2018**, 256-258.
11. Gunwanti Negi, Anita Goswami Giri, "Rapid determination of barium ions in water using ion selective electrode", *Asian Journal of Research in Chemistry*, 10 (4), **2017**, 517 – 519.
12. Gunwanti Negi, Anita Goswami Giri, "Graphite coated barium (II) selective membrane electrode based on dibenzo24-crown-8", *International Journal of Research in Engineering and Applied Sciences*, 5(12), **2015**, 85 – 92.

Patents:

- 1) "Electrosynthesis Reactor" – Registered on 21/02/2025 - No. 448381-001, Patent Office, Government of India.
- 2) "Carbon Extractor" – Registered on 22/02/2025 - No. 448896- 001, Patent Office, Government of India.

Paper Presentations

No.	Title	Conference details	Date
1	Optimisation of membrane composition of a graphite coated barium (II) selective electrode based on dibenzo24-crown-8	International conference on new horizons in synthetic and materials chemistry Mumbai University, Kalina	26 -28 th Nov 2015
2	Graphite coated barium (II) selective membrane electrode based on dibenzo24-crown-8	National Symposium on Frontiers in Applied Biological and Chemical Sciences CHM College, Ulhasnagar.	10 th and 11 th Feb 2017
3	Application of ion - selective electrode to the determination of barium in clinical samples	Best oral presentation Multidisciplinary International Conference on Green Earth: A panoramic view B N Bandodkar College of Science	12 th and 13 th Jan 2018
4	Graphite coated electrode based on 2-hydroxymethyl-15-crown-5 for the potentiometric detection of magnesium (II) ions	International Conference on Multifunctional Advanced Material, Kamala Nehru Mahavidyala Nagpur	5 th – 7 th October 2018
5	Development of novel membrane sensor for the selective determination of strontium ions	Best oral presentation National E – conference on advanced research in materials science Kamaraj College, Thoothukudi, Tamil Nadu	22 nd , 23 rd February 2021
6	Analytical application of ion selective electrode in the determination of strontium in clinical samples	International e- conference on emerging trends in medicinal and green chemistry St. Ann's College for women Mehdipatnam, Hyderabad	16 th & 17 th March 2021
7	Development of novel ion selective electrode for the determination of magnesium in clinical samples	10 th International Science Congress, Jotiram Godse College, Vaduj, Satara	8 th and 9 th December 2022
8	Fabrication of potentiometric sensor for determination of magnesium based on 2 –	Multidisciplinary International Hybrid Conference on Sustainable Development in Basic Sciences, Anandibai Pradhan Science College, Nagothane	11 th February 2025

	hydroxymethyl-15-crown-5		
9	Analytical application of ion selective electrode for the determination of magnesium in clinical samples	International Conference on Universal Developments in Chemistry, University of Mumbai	19 th and 20 th December 2025