

# Dr. Archana Gajendra Tanwar (M.Phil., Ph.D.)

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## Present position

- Assistant Professor

## Contact Details



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## Work Experience

- **Teaching:** 15 years
- **Research/Industrial:** 8 years

## Personal Profile

Dedicated college assistant professor who has taught different courses in analytical chemistry for the past fifteen years. An academic integrity-oriented faculty member who has a passion for ensuring the institution's academic integrity. I am primarily interested in the areas of polymers, biomaterials, hydrogels, and drug delivery in my research, writing, and presentations.

## Course(s) Taught

1. Extraction techniques and Metallurgy
2. Pharmaceutical chemistry
3. Analytical Chemistry Practical
4. Forensic science and Toxicology
5. Bioinorganic
6. Nanotechnology

## Field of Specialization/Areas of Interests

- **Specialization:** Analytical Chemistry
- **Area of Interest:** Polymers, Biomaterials, hydrogels, drug delivery and nanomaterials

## Education

- **Ph.D. - (Chemistry):** from 2016 to 2022  
**Title of the Thesis:** Synthesis, characterization and controlled drug delivery application of gelatin based biodegradable hydrogels

**Name of University:** Department of Chemistry, Savitribai Phule Pune University

**Year of Award-** July 2022

- **M. Phil. - (Chemistry):** from 2010 to 2013

**Title of the Thesis:** Catalytic effect of synthesized transition metal cobalt tartarate and cobaltites on thermal decomposition of Ammonium Perchlorate

**Name of University:** Department of Chemistry, Savitribai Phule Pune University

**Year of Award-** November 2013

- **Master of Science- (Analytical Chemistry):** 2005  
**University:** Department of Chemistry, University of Pune
- **Bachelor of Science- (Chemistry):** 2003  
Sir Parashurambhau College, Pune

### **Fellowship/Awards/ Certifications/Achievements/Recognitions**

- The International Conference on Emerging Trends in Chemical and Environmental Science (ETCES-2019), held 3–4 January, awarded best poster award.
- Completed an on-line certificate course on Forensic Science
- CSIR-National Chemical Laboratory fellowship recipient in 2003-2005.

### **Member of College Committees/ Professional Bodies and Others**

**College Level:** Member of Board of Studies

### **Research Projects**

<b>Title of the Project</b>	<b>Name of Funding Agency</b>	<b>Amount (Rs)</b>	<b>Duration (Year) (From To)</b>	<b>Type (Minor/Major)</b>	<b>Outcome</b>
Application of polymeric nanocomposite for drug delivery application.	Star Programme (CE)	25,000/-	2019-2020	Short Term research project	Completed
Drug-Inclusion complex synthesis and application in drug delivery	Life Programme "College of Excellence" (CE)	10,000/-	2019-2020	minor	Completed
Synthesis and characterization of biodegradable hydrogel nanoparticles and application in drug delivery.	Star Programme (CE)	25,000/-	2017-2018	Short Term research project	Completed

## Research Publications in National and International Journals

1. **Tanwar, A.,** Date, P., Ottoor, D., ZnO NPs incorporated gelatin grafted polyacrylamide hydrogel nanocomposite for controlled release of ciprofloxacin, *Colloid and Interface Science Communications* 42 (2021) 100413 <https://doi.org/10.1016/j.colcom.2021.100413>.
2. **Tanwar, A.,** Date, P., Ottoor, D., In Vitro investigation of controlled release of ciprofloxacin and its  $\beta$ -cyclodextrin inclusion complex from gelatin grafted poly(vinyl alcohol) (GPVA) nanoparticles. *Chemistry Select* -2019, 4, 11337– 11345. <https://doi.org/10.1002/slct.201901728>
3. Date, P., **Tanwar, A.,** Ladage, P., Kodam, K., Ottoor, D., Carbon dots-incorporated pH-responsive agarose-PVA hydrogel nanocomposites for the controlled release of norfloxacin drug. *Polymer Bulletin* -2019, <https://doi.org/10.1007/s00289-019-03015-3>
4. Date, P., **Tanwar, A.,** Ladage, P., Kodam, K., Ottoor, D., Biodegradable and biocompatible agarose-poly (vinyl alcohol) hydrogel for the in vitro investigation of ibuprofen release. *Chemical Papers*-2019, <https://doi.org/10.1007/s11696-019-01046-8>

## Participation in Conferences/Seminars/Symposia/Workshop:

### Participation in Conferences

1. Archana Tanwar, Suchita Gujar, Rashmi Nair and Divya Ottoor, National symposium on Trends, Research and innovation in science (TRI2020), **14<sup>th</sup>-15<sup>th</sup> Feb 2020 at S. P. College, Pune, Maharashtra (India).**
2. Archana Tanwar and Divya Ottoor, International conference on Functional Materials and Simulation Techniques (ICFMST- 2019), **7<sup>th</sup> - 8<sup>th</sup> June 2019, University Institute of Sciences, Chandigarh University, Punjab (India).**
3. Archana Tanwar, Himani Gondkar, Snehal Umredkar and Divya Ottoor, **International conference on Emerging trends in chemical and environmental science (ETCES-2019), 3<sup>rd</sup> -4<sup>th</sup> January 2019, Department of Chemistry, S. N. Arts, D. J. Malpani Commerce & B. N. Sarda Science College, Sangamner (India).**
4. Archana Tanwar and Divya Ottoor, International Conference on **Polymer Science and Technology (SPSI- MACRO-2018), 19<sup>th</sup>-22<sup>nd</sup> Dec 2018, at IISER, Pune (India).**
5. Archana Tanwar, Riya Gupta, Gauri Kadu, Shruti Chougule and Divya Ottoor, National Conference on **Recent Developments in Chemical Sciences (RDCS-2018), 8<sup>th</sup> -9<sup>th</sup> March 2018, Mumbai (India).**
6. Archana Rathod, National conference on Advances in Chemical Sciences with reference to Molecular Spectroscopy, **Material Sciences and Organic Electronics in 2014, held at Fergusson College, Pune (India).**
7. Archana Rathod and S. K. Pardeshi, National conference on **Frontiers in Physical, Chemical, and Biological Sciences in 2013, held at University of Pune, Pune (India).**
8. Archana Rathod and S. K. Pardeshi, **29<sup>th</sup> Indian Council of Chemist (ICC) Conference in 2010, held at Panjab University, Chandigarh (India).**

9. M. N. Raste, Archana Rathod, S. K. Pardeshi, **30<sup>th</sup> Indian Council of Chemist (ICC) Conference in 2011, held at Osmania University, Hyderabad (India).**

### **Workshops Attended:**

1. One day National level workshop on “Use of ICT in teaching and learning process” conducted by Christ College, Rajkot on 10<sup>th</sup> July 2021.
2. One day workshop on “New choice-based credit system for PG courses” held at Gholap College, Pune in June 2013.
3. One day workshop on “Syllabus restructuring workshop in chemistry” conducted by Department of Chemistry, University of Pune, in February 2013.

### **Seminar Attended:**

1. One day Research student seminar at Department of Chemistry, University of Pune (2011).

### **Faculty development programs Attended:**

1. One-week Pedagogical training for teachers on tools for online teaching learning and evaluation, 1-6th July 2020, organized by school of mathematical sciences, Swami Ramanand Teerth Marathwada University (SRTMU), Nanded.

### **Events Organized/Coordinated:**

<b>Sr. No</b>	<b>Name of the Event</b>	<b>Name of organizing Institute/ College/University</b>	<b>Nature of contribution</b>	<b>Dates</b>
<b>1</b>	Credit course on Forensic: A transdisciplinary approach	Under UGC STRIDE Component 1 at Fergusson College	Coordinator	25 <sup>th</sup> to 30 <sup>th</sup> July 2022
<b>2</b>	International conference SPSI- MACRO 2018	IISER and CSIR-NCL.	Member of organizing committee	19 <sup>th</sup> to 21 <sup>st</sup> Dec 2018
<b>3</b>	National conference on Advances in Chemical Sciences with reference to Molecular Spectroscopy, Material Sciences and Organic Electronics	Fergusson College	Member of organizing committee	2014

### **Additional skills/Activities**

Teacher coordinator SOEC 2021 onward