DR. DINESH KUMAR CHELIKE

Assistant Professor (Chemistry Department) and Central Research Committee (CRC), Rungta College of Engineering & Technology
Bhilai-490024 India, +91 7898724799,
dineshchemist92@gmail.com, dr.dinesh.kumar@rungta.ac.in

PROFILE:

- Development of isocyanate-free polyurethanes (NIPU) for drug delivery and solid electrolyte for Battery application.
- Development of fluorescent material for metal ion sensing from industrial waste water.
- Development of Hybrid inorganic-organic material (Macrocycle, Macromolecules) for optical/sensor applications.

EXPERIENCE

Assistant Professor in Chemistry **Dec 2022 to Current**

Rungta College of Engineering & Technology Bhilai, Chhattisgarh

- Continuously improved subject knowledge by conducting thorough research.
- Maintained extensive knowledge in current research, ensuring teaching met academic standards.

PGT Teacher **May 2021 to Dec 2022**

Guru Nanak English Senior Secondary School, Bhilai**,** Chhattisgarh

Senior Research Associate **Jun 2022 to Oct 2022**

Clearsynth R&D Lab Secunderabad, Telangana

- I used to synthesized labeled compound (Deuterated compound)

SKILLS

- MS Office (Word, Power point and Excel), NMR software, Origin software, Chemdraw
- I have experience to handle ATR-FTIR, Powder XRD, and UV-*Vis* Spectroscopy.

EDUCATION

Doctor of Philosophy, Chemistry (Supervisor: Dr. GT Senthil Andavan**)** **Awarded 2022**

SRM Institute of Science and Technology, Chennai, Kattankulathur Tamil Nadu

- Course work in (Polymer Science and Advance spectroscopy)
- Thesis title (Cyclophosphazenes based hybrid inorganic-organic molecules and non-isocyanate polyurethanes for sustainability)

Master of Science, Chemistry (Project Supervisor: Dr. K. Juliet Gnana Sundari) **2017**

Karunya Institute of Technology & Sciences, Coimbatore, Tamil Nadu

- Project title (Electrodeposition of Zinc-Nickel alloy on mild steel)

Bachelor of Science, Chemistry **2015**

Kalayan P.G. College Bhilai Nagar Chhattisgarh

PROFESSIONAL MEMBER

- Editorial Board Member of "Scientific Report" Springer Nature Journal (SCI 3.8)
- Reviewer of "Modern Chemistry" Journal.
- Reviewer of Advances in Science, Technology and Engineering System Journal (ASTESJ), ISSN: 2415-6698, Reviewer Code: AJR03397.
- Iterative International Publishers (IIP), Editor/Reviewer (IIP ID: **IIPER1655294744**).
- Institute of Scholar, Bangalore (Lifetime), **InSc ID: InSC2020AC1**
- Founder and Director of **Kanak Chemistry Tutorial** (*Online Learning Platform*) YouTube Channel (www.youtube.com/@Kanakchemistrytutorial)

ACADMIC AWARDS & ACHIEVEMENTS

- **"Keynote Speaker"** in the International Conference (INCON 25) held on 21st to 22nd February 2025 at Anjanaya University, Raipur, Chhattisgarh, India
- **RARE Award-2024** received by Central Research Committee at RCET Bhilai for outstanding research performance.
- **Gold Medal** received in Research Day 2020 at SRM IST Chennai, Tamil Nadu.
- **"Young Research Award"** 2020 by Institute of Scholar (InSc), Bangalore, Karnataka, India.

PATENT

- **Dinesh Kumar Chelike**, Senthil Andavan G.T. "Sustainable Hybrid Non-isocyanate Polyurethanes (NIPU) with Flame Retardant Properties" (Filed, Application Number: **202141056291)**
- **Dr. Dinesh Kumar Chelike**, Dr. Prachi and Shaesta Jabeen "Advanced Sensor Platform for Selective Heavy Metal Ion Detection using synthesized Fluorescence Nanomaterial" (Filed at 06/07/2024, Application Number: **202421051826**)

PUBLICATIONS

Orcid ID: 0000-0002-3128-6895**, Scopus ID:** 57207255306, **Researcher ID**: AHA-1590-2022

TO BE COMMUNICATED/UNDER REVIEW

[1] Kulvinder Kaur, Parag Jain, and **Dinesh Kumar Chelike**, Cutting-Edge Innovations in Heterocyclic Drug Development for the Treatment of Hepatocellular Carcinoma, submitted in *Inorganic Chemistry Communication* (Elsevier, **SCI, IF: 4.4**). **Under Review**

[2] **Dinesh Kumar Chelike,** Tamanna Pradhan, Agnivesh Kumar Sinha and Subrata Dolui, Progress in Polyurethane Based Solid Polymer Electrolyte: Recent Advances and Future Perspectives, to be submitted in *ACS Polymer Au* (American Chemical Society, **SCI, IF: 4.8**), **Under Review.**

[3] **Dinesh Kumar Chelike,** G. T. Senthil Andavan. Hybrid inorganic-organic nonisocyanate polyurethanes of cyclotriphosphazene and polycaprolactone with amines: synthesis, characterization, physicochemical and flame-retardant properties (Manuscript Under Preparation, Patent filled: **202141056291)**

[4] **Dinesh Kumar Chelike,** G. T. Senthil Andavan, Ananthanarayanan K., 28-membered [2+2] macrocycle assembly of cyclotriphosphazene and phenothiazine: synthesis, physicochemical and electrochemical studies. (To be Submitted)

[5] **Dinesh Kumar Chelike,** G. T. Senthil Andavan, and Ananthanarayanan Krishnamoorthy "Hybrid Inorganic-organic Materials Based on Aminobenzoate and Phenothiazine Array on Cyclotriphosphazene Core: Synthesis, Characterization, Photophysical and Electrochemical Studies". (To be submitted)

PUBLISHED ARTICLES

Science Citation Index (SCI) Papers

[1] Tamanna Pradhan, **Dinesh Kumar Chelike,** Debarshi Roy,Tanay Pramanik and Subrata Dolui, Stimuli-Responsive Multi-Acceptor Conjugated Polymers: Recent Trend and Future Direction, ***ACS Polymer Au,*** **2025** (American Chemical Society , **SCI, IF: 4.8**) https://doi.org/10.1021/acspolymersau.4c00082

[2] **Dinesh Kumar Chelike**, Mohammud Sadiq, Ananthan Alagumalai, Senthil A. Gurusamy Thangavelu and Koustav Sarkar, Cyclophosphazenes Founded Ortho Engaged Salicylic Hydrazone Array Schiff's Base Ligand and Metal Complexes for Cytotoxicity Studies. ***Applied Organometallic Chemistry***, **2025**, 39(1); 0:e7767 **,** Wiley, **SCI, IF: 3.7**) https://doi.org/10.1002/aoc.7767

[3] **Dinesh Kumar Chelike**, Prerna Mehta, Alok Kumar "A recent review of the synthesis of plant-derived iron oxide nanoparticles for metal ion removal. *"**Inorganic Chemistry Communication**"*. **2024**, 166, 112611 (Elsevier, **SCI, IF: 4.4**) https://doi.org/10.1016/j.inoche.2024.112611

[4] Prerna Mehta, **Dinesh Kumar Chelike,** Ram Krishna Rathore, "Adsorption-Based Approaches for Exploring Nanoparticle Effectiveness in Wastewater Treatment" ***ChemistrySelect***, **2024**, *9*, 25, e202400959, Wiley, **SCI, IF: 1.9**) https://doi.org/10.1002/slct.202400959

[5] Sulthana, Yasmin, **Dinesh Kumar Chelike** and GT Senthil Andavan "Biorenewable Vegetable Oil Based Nonisocyanate Polyurethanes and Nanocomposites; Formulation, Characterization, Biodegradation, Anticorrosion and Antifouling Coatings" ***New Journal of Chemistry,*****2024**,48, 5173-5185 (Royal Society of Chemistry, **SCI, IF: 2.7**) https://doi.org/10.1039/D3NJ05862J

[6] **Dinesh Kumar Chelike,** G. T. Senthil Andavan, "Catalyzed and non-catalyzed synthetic approaches to obtain isocyanate-free polyurethanes, ***ChemistrySelect***, **2023**, 8(26), p.e202300921. (Wiley, **SCI, IF: 1.9**) https://doi.org/10.1002/slct.202300921

[7] **Dinesh Kumar Chelike,** G. T. Senthil Andavan., Catalyst free synthesis of biodegradable nonisocyanate polyurethanes films from sustainable diamines and chemically modified polycaprolactone triol. ***RSC Advance***. **2023**, 13, 309-311. (RSC, **SCI, IF: 3.9**) https://doi.org/10.1039/D2RA05710G

[8] **Dinesh Kumar Chelike**, Ananthan Alagumalai, V. R. Muthukumar, Senthil A. Gurusamy Thangavelu, and Ananthanarayanan Krishnamoorthy. "Tunable yellow–green emitting cyclotriphosphazene appended phenothiazine hydrazone hybrid material: synthesis, characterisation, photophysical and electrochemical studies." ***New Journal of Chemistry***, **2020**, 44 (31), 13401-13414. (RSC, **SCI, IF: 2.7**) https://doi.org/10.1039/D0NJ02976A

[9] **Dinesh Kumar Chelike**, Ananthan Alagumalai, Joydev Acharya, Pawan Kumar, Koustav Sarkar, Senthil A. Gurusamy Thangavelu, and Vadapalli Chandrasekhar. "Functionalized iron oxide nanoparticles conjugate of

multi-anchored Schiff's base inorganic heterocyclic pendant groups: Cytotoxicity studies." ***Applied Surface Science*** **2020**, 501, 143963. **(**Elsevier, **SCI, IF: 6.3)** https://doi.org/10.1016/j.apsusc.2019.143963

[10] Mukherjee, Moumita, Senthil A. Gurusamy-Thangavelu, **Dinesh Kumar Chelike**, Ananthan Alagumalai, Bhabendra N. Das, Sellamuthu N. Jaisankar, and Asit Baran Mandal. "Biodegradable polyurethane foam as shoe insole to reduce footwear waste: Optimization by morphological physicochemical and mechanical properties." ***Applied Surface Science*****, 2020**, 499,143966. **(**Elsevier, **SCI, IF: 6.3)** https://doi.org/10.1016/j.apsusc.2019.143966

[11] Thangavelu, Senthil A. Gurusamy, Moumita Mukherjee, Kannan Layana, **Dinesh Kumar Chelike**, Yasmin R. Sulthana, Raman Rohith Kumar, Alagumalai Ananthan, Vairamuthu Muthulakshmi, and Asit Baran Mandal. "Biodegradable polyurethanes foam and foam fullerenes nanocomposite strips by one-shot moulding: Physicochemical and mechanical properties." ***Materials Science in Semiconductor Processing****,* **2020***,* 112, 105018. **(**Elsevier, **SCI, IF: 4.2)** https://doi.org/10.1016/j.mssp.2020.105018

Scopus Indexing Papers

[1] Prerna Mehta, **Dinesh Kumar Chelike**, "Utilizing Fungal Biodegradation for Valorisation of Lignocellulosic Waste Biomass and Its Diverse Applications", ***Applied Research***. **2024**; 3(4), e202300119 (Wiley, **Scopus**) https://doi.org/10.1002/appl.202300119

[2] **Dinesh Kumar Chelike** and K. Juliet Gnana Sundari, "Effect of Additives on Electrodeposition of Zinc-Nickel Alloy on Mild Steel" ***Asian Journal of Chemistry***, **2019**, 31 (4), 891-895. **(Scopus)** https://doi.org/10.14233/ajchem.2019.21823

BOOK CHAPTERS

[1] **Dinesh Kumar Chelike**, Ram Krishna Rathore, Ahmed Mohsin Alsayah, Nitish Kumar Singh, Rupak Kumar Deb, Avinash Kumar Namdeo, Agnivesh Kumar Sinha, "Biodegradable Nanocomposites for Organic Pollutant Removal" **Accepted (Scopus)**.

[2] **Dinesh Kumar Chelike,** Senthil A. Gurusamy Thangavelu, Ananthanarayanan Krishnamoorthy,"Hybrid Inorganic-Organic Cyclophosphazene-Phenothiazine based Material with Tunable Yellow-Green Emitting Properties", Futuristic Trends in Chemical Material Sciences & Nano Technology Volume 3 Book 22,IIP Series, Volume 3, May, **2024**, Page no.209-225, e-ISBN: 978-93-5747-708-6, DOI/Link: https://www.doi.org/10.58532/V3BECS22P2CH2

[3] Prerna Mehta, **Dinesh Kumar Chelike** and Ram Krishana Rathore, "Meta Minds: Intellectual Property Rights in Neuro-Enhanced Creations". (ISBN:978-81-19708-69-7, **2024**)

[4] "Futuristic Trends in Chemical, Material Science & Nano Technology" IIP Proceeding Volume 2, Book 12, Part 3. (ISBN: 978-93-95632-66-2, Publication Date: 1 November 2022, **Editor Role**).

Grants Submitted

Department of Science & Technology (DST)						
S No	**File No.**	**Project Title**	**Programme/Scheme**	**Submit Date**	**Project Status**	**Amount**
1	TPN / 125166	Fostering Atmanirbhar Bharat through Inclusive Innovation and Startup Ecosy....	DST-iTBI (NIDHI Inclusive Technology Business Incubator)	14/02/2025	Proposal Submitted	4.88 Crore
2	TPN / 115509	Green Synthesis of Solid Electrolyte Isocyanate-Free Polyurethane Films for....	DST-Call for Proposals on Advanced Materials	29/09/2024	Proposal Submitted	13.9 Lakh

CONFERENCES

- 9th International Conference "SHAASTRATH-2024 on "Emerging Technologies and Multidisciplinary Research for Sustainable Development" on 5th and 6th January 2024, organized by Rungta College of Engineering & Technology, Bhilai, Chhattisgarh.
- 8th International Conference "SHAASTRATH-2023" on "Advance and Application of Artificial Intelligence, Machine Learning and Data Science" on 23 & 24th June 2023, organized by Rungta College of Engineering & Technology, Bhilai, Chhattisgarh.
- 7th International Conference on Nanoscience and Nanotechnology (ICONN-2023)" organized by Department of Physics and Nanotechnology, SRM IST, Chennai, India, during 27-29th March 2023.
- International Conference on " Advanced Material and Mechanical Characterization (ICAMMA-2021)", organized by the Department of Physics and Nanotechnology & Mechanical Engineering, SRM Institute of Science and Technology (SRMIST) during 2-4 December 2021.
- "First International Conference on Frontiers in Chemical Sciences (ICFCS-2020)" organized by Department of Applied Chemistry, Karunya Institute of Technology and Sciences, Coimbatore, Tamil Nadu, India during 4th & 5th March 2020.
- "5th International Conference on Nanoscience and Nanotechnology (ICONN-2019)" organized by Department of Physics and Nanotechnology, SRM IST, Chennai, Indian during 28-30th January 2019.
- "2nd International Conference on Recent Advanced in Material Chemistry (ICRAMC-2018)" Department of Chemistry, SRM IST, Chennai, Indian during 14-16th February 2018.

WORKSHOPS AND SEMINARS

- "Innovation Approaches to Scientific Writing & Visualization" Conducted by Central Research Committee on 14-15th June 2024 at Rungta College of Engineering & Technology Bhilai, Chhattisgarh.

- Two Dyas workshop on “Role of Intellectual Property Right for Industry & Academia” organized by Central Research Committee in Association with Institution Innovation Council (IIC) on 5th and 6th Feb 2024 at Rungta College of Engineering & Technology Bhilai, Chhattisgarh
- One Day Workshop on “Outcome Based Education in Perspective of NEP-2020” organized by Department of Information Technology on 7th Feb 2024 at Rungta College of Engineering & Technology Bhilai, Chhattisgarh
- “National Workshop on Coating Technology for Industrial Application” held at Sathyabama Institute of Science and Technology, Chennai, Tamil Nadu during September 26-27, 2023.
- International Seminar on “MORERN RESEARCH AND INNOVATION IN SCIECNES” held at Shri Shankaracharya Professional University, Bhilai on February 28, 2023.
- Materials Characterization Workshop (MCW-2018) organized by Department of Chemistry, SRM IST during July 26-27, 2018.
- One day Workshop on “X-ray Photoelectron Spectroscopy” organized by Nanotechnology Research Center (NRC), SRM IST on 24th April, 2019.
- “How to write and Publish Scientific Article and Manuscript” on 12th April, 2018 organized by SRM IST, Chennai.
- International Workshop on “ Advanced Functional Materials and Devices (AFMD)” organized by Nanotechnology Research Center (NRC) and Department of Nanotechnology and Physics, SRM IST during Dec. 13 &14th , 2019.
- Participated in the 16th Annual Conference of RCI for TCI India.
- Inter-collegiate chemistry student meet (Chemfusion 16 at PSG College, Coimbatore)
- Participated in the Industry- Academia Workshop on ‘Opportunities for Science postgraduate.
- One day National seminar on Crystallography-an Outreach program by International Union of Crystallography 2017 (IUCr- 2017).

REFEREES

1. Dr. G.T. Senthil Andavan (PhD Supervisor) Associate Professor (Research) Department of Chemistry, SRM Institute of Science & Technology, Kattankullathur-603 203, Chennai, Tamil Nadu, India Contact: + 91 7667310410 Email: senthilt1@srmist.edu.in	**4. Dr. M. Priyadarshini** Environmental Scientist, Hazardous Waste Management Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai - 600 032, Tamil Nadu, India Contact: + 91 8778217594 Email: mpiryadarshinitnpcb@gmail.com
3. Dr. Ajazuddin Group Director R&D (Central Research Committee) Rungta College of Engineering and Technology, Bhilai-490024, Durg, Chhattisgarh, India Contact: +91 9827199441 Email: ajazuddin@rungta.ac.in	**4. Dr. K. Ananthanarayanan** Associate Professor (Research) Department of Chemistry, SRM Institute of Science & Technology, Kattankullathur-603 203, Chennai, Tamil Nadu, India Contact: + 91 9840154665 Email: ananthak@srmist.edu.in