Faculty Profile

Brief Profile (Few Paragraphs)

Dr. Divakara S. G., a distinguished researcher and an academician with over 21 years of experience. He holds a Ph.D. from the Colorado School of Mines, Golden, USA. Throughout his research journey, he has gained extensive research experience at Jacobs University, Germany (now Constructor University), and the Indian Institute of Science, Bangalore. His research interests lie at the intersection of nanomaterials, energy storage, environmental science, thin films, and biomaterials. His expertise encompasses the design and synthesis of nanomaterials with tailored properties, their comprehensive characterization using advanced techniques, and the exploration of innovative applications. His work particularly focuses on development and applying novel nanomaterials for supercapacitors, catalysis, sensors, wound healing, and water purification.

Dr. Divakara S. G.'s dedication to research has resulted in publications in highly regarded Scopus-indexed journals and conferences. His experience extends beyond nanomaterials research; he has also contributed to thin film transistors fabrication at the Centre of Excellence in Macro-electronics. RVCE, and worked at the National Centre for Flexible Devices (NcFlexe), IIT Kanpur, during his sabbatical. He has actively contributed to several Faculty Development Programs and has worked in various capacities in department and college-level accreditation initiatives involving statutory bodies such as NAAC, AICTE and NBA.

Personal Information

- **Name:** Divakara S G
- **Designation:** Associate Professor
- **Department:** Chemistry
- **Email:** divakarsg@rvce.edu.in
- **Phone:** 080-6818-8228

Google Scholar / ResearchGate / LinkedIn: [Link if applicable]/ **ORCID: [Link]**

Google Scholar: https://scholar.google.co.in/citations?user=dPch2foAAAAJ&hl=en

ResearchGate: https://www.researchgate.net/profile/Divakara-G?ev=hdr_xprf

ORCID: https://orcid.org/my-orcid?orcid=0000-0001-6311-4812

Domain of Expertise

Nanomaterials, Supercapacitors, Biomaterials

Research Focus

- **Primary Area:** Nanomaterial Applications
- **Allied Areas:**
    - Supercapacitors, Biomaterials
    - Nanomaterials in water purification, Thin Films for TFT

Academic Qualifications

- **Ph.D.**: Applied Chemistry, Colorado School of Mines, Golden, USA, 2010
- Thesis Title: "Polyoxometalates for Heterogeneous Catalysis: Exploring Various Supports and their Effects on Chemical Reactions"
- **M.Sc./M.Tech**: Industrial Chemistry, Kuvempu University, [2000]
- **B.E./B.Tech**: PCM, Kuvempu University, 1998
- **Postdoctoral Research:**

Professional Experience

Experience

S.No	Institute/College/Industry	Job Title	Duration (From- To)
1.	National Centre for Flexible Devices (NcFlexe), IIT Kanpur	Sabbatical	01-2-2017 to 31-08-2017
2.	Indian Institute of Science	Project Assistant	2004-2006
3.	CMR Institute of Management Studies, Bangalore.	Lecturer	2003-2004
4.	Bangalore College of Engineering and Technology, Bangalore.	Lecturer	2001-2003
5.	Sri J.C.B.M College, Sringeri.	Lecturer	2000-2001

Publications & Patents

Journal Publications

1. N.R. Kokila, B. Mahesh, Ramith Ramu, **S. G. Divakara**, K. Mruthunjaya, Neera Raghav, Thippeswamy B. Shivanandappa "Combined in vitro and in silico approach to define

alangimarckine from Thunbergia mysorensis leaves as a potential inhibitor of α-Glucosidase" *Journal of Biomolecular Structure & Dynamics*, pp. 1-20, 2025.

2. S. C. Asha, **S. G. Divakara**, B. Mahesh, C. R. Ravikumar, and H. C. Ananda Murthy, "Improved photocatalytic activity triggered by UV light, as well as electrochemical sensing characteristics of MgO nanoparticles" *International Journal of Environmental Analytical Chemistry,* pp. 1-20, 2024.

3. **Divakara. S. G.** and B. Mahesh, "A comprehensive review on current trends in greener and sustainable synthesis of ferrite nanoparticles and their promising applications" *Results in Engineering,* vol. 20, p. 101702, 2023.

4. S. K. Somashekarappa, Mahesh B., Chamaraja N. A, Roopa K.P., Kumaraswamy N., **S. G. Divakara** and Jayarame Gowda, "Rapid Electrochemical Investigation of Gemfibrozil Using NiO NPs/Multiwalled Carbon Nanotube Modified Carbon Paste Electrode: Analysis of Human Urine Sample and Antimicrobial Activity" *ChemistrySelect,* vol. 8, no. 48, p. e202302407, 2023.

5. K. P. Shwetha, **S. G. Divakara**, M. K. Sudha Kamat, and T. Gupta, "Synthesis and electrochemical characterization of mesoporous graphitic carbon nitride for super capacitor applications," *Material Today Proceedings*, vol. 76, pp. 219-226, 2023.

6. Ravishankar Holla, **Divakara S G,** Mukul, Tanuja M L, Virupakshi; Automated Flame-Assisted Spray Pyrolysis Unit: A Home-Made Solution for Thin Film Deposition. *RVJSTEAM,* 4(1), 2023, 77-88. http://rvjsteam.rvce.edu.in/rvjsteam-new.html.

7. Manjunatha Reddy, Nalina N, Rohit K C, Rangaswamy B E, **Divakara S G**, Sumathra Manokaran, "Biological Synthesis and Characterization of Silver Nanoparticles by Orthosyphan Rubicundas" *ECS Transactions*, vol. 107, no. 1, pp. 16843-16849, 2022.

8. A.H. Manjunatha Reddy, Nalina N, Nalina Dasappa, K.C. Rohit, B.E. Rangaswamy, **Divakara S. G.**, Sumathra Manokaran, "WETLAND INVENTORY, ASSESSMENT AND MONITORING," *PARIPEX - INDIAN JOURNAL OF RESEARCH*, vol. 11, no. 4, 2022.

9. **Divakara S. G.,** Ravishankar Holla, Meghanatha K L, Ranjith Kumar H N, "Fabrication of Flame Assisted Liquid Spray Pyrolysis Equipment for Various Applications; Synthesis of ZnO nanoparticles by Spray Pyrolysis," *RVJSTEAM*, vol. 1, no. 2, pp. 69-77, 2020.

10. Sateesh. B. G. S. R. Yadhuraj, B. V. Uma, **S. G. Divakara**, and T. K. Subramanyam, "Fabrication and Study of Amorphous Silicon Based MOS Capacitor," *Materials Today: Proceedings*, vol. 5, no. 10, pp. 21040-21046, 2018.

11. **Divakara. S. Gopala**, R. R. Bhattacharjee, and R. Richards, "Dispersion of TiO_2 on high-surface-area mesoporous silica: functionalization with tungstophosphoric acid and application in solvent-free, aerobic oxidation of n-hexadecane," *Applied Organometallic Chemistry*, vol. 27, no. 1, pp. 1-5, 2013.

12. **Divakara. S. Gopala**, R. R. Bhattacharjee, R. Haerr, B. Yeginoglu, O. D. Pavel, Bogdan Cojocaru, Vasile I. Parvulescu and Ryan Richards, "Synthesis and characterization of titanium dioxide phases in mesostructured silica matrices with photocatalytic activity," *ChemCatChem*, vol. 3, no. 2, pp. 408-416, 2011.

13. L. H. Bi, G. Al-Kadamany, E. V. Chubarova, M. H. Dickman, L. Chen, **Divakara. S. Gopala,** H. H. K. Thiele, and L. R. H. Richards, "Organo-ruthenium supported heteropolytungstates: synthesis, structure, electrochemistry, and oxidation catalysis," *Inorganic Chemistry*, vol. 48, no. 21, pp. 10068-10077, 2009.

Conference Papers

1. **Divakara S. G**, Gopal Krishna C. Pai, Abhinav Acharya, Kirankumar R., Afnan Ulla Khan, "Recent Advances in Green Synthesis of Ferrite Nanoparticles Using Plant Extracts and Their Application: A Review" International Conference on Advances in Chemical and Material Sciences (ACMS-2022). 14-16th April-2022 at HIT Kolkata.

2. Shwetha K P, **Divakara S G**, Sudha Kamath M K, Tribrikram Gupta, "Synthesis and Electrochemical Characterization of Mesoporous Graphitic Carbon Nitride for Supercapacitor Applications" International Conference on Advances in Chemical and Material Sciences (ACMS-2022), 14-16th April-2022 at HIT Kolkata. *Received Best Paper award.*

3. Roopashree B. Divakara S. G. Asha S. C., Mahesh B. "A Review on pH-sensitive Smart Food Packaging Materials Using the Blends of Synthetic Polymers and Natural Food Pigments" 6th International Conference on Recent Advances in Material Chemistry (ICRAMC 2022, Feb 17-19).

4. Roopa. J, **Divakara S G**, Lakshmi Prasad. S, Lakshmikanth A.M, Rajath. B. Das, K S Geetha, B.S. Satyanarayana, "Wireless Monitoring of NH_3 for Food Quality using WO3 Thin Film Sensor" 3rd International conference on Computer & Communication Technologies (IC3T), 5-6 November-2016, MIC College of Technology, Vijayawada.

Books/Book Chapters

3. Zhi Li, Soorly G Divakara, Ryan M Richards, K Geckeler, H Nishide, *Oxidation catalysis by nanoscale gold, silver, and copper, Advanced Nanomaterials, Wiley-VCH Verlag GmbH & Co., 2010*.

Patents [Filed / Published / Granted]

1. Nil.

R & Grants & Consultancy Projects

Ongoing & Completed Research Projects

TEQIP-Centre of Excellence -Centre for Macro Electronics sponsored, SEED money completed projects titles under 1.2.1

- "Development of diode and Amorphous Silicon based TFT" 2014, Role: PI
- "Growth and characterization studies of pure and doped ZnO thin film by CVD method and fabrication of TFT". 2014, Role: Co-PI

- "Development of transition metal oxide films for gas sensor applications", Co-PI.
- "Advanced Electrode Materials for Energy Storage Devices" Variety of nanocomposites were prepared for supercapacitor applications. Device fabrication is under development**.** 2020, Role: PI

Ongoing & Completed Consultancy Projects

Consultancy: "Study, testing and debugging of low-cost LTE base station design" on "Analysis, Testing and reporting". Total amount *Rs. 4.82 lakhs*. 2022 (completed).

Professional Memberships

- Life member: Institute of Smart structures and Systems

Awards & Recognitions

Nil

Student Supervision

- **Ph.D. Candidates:** 01,

  Dr. Nanjundaswamy completed his doctoral degree on "Synthesis, characterization and miscibility study of some selected peptides with other polymers". 2020 (Co-Guide), Graduated.

- **M.Tech/M.Sc. Students:** [Nil]
- **Undergraduate Research Mentees:** 10

Professional Roles

- **Editorial Board:** Nil
- **Chair/Committee Member:** Nil
- **Industry Advisor:** Nil

Teaching

Core Courses: [Current semester-2024-25]

- CM221IB, Chemistry of Functional Materials

Advanced/Lab Courses:

- *Engineering Chemistry Lab*

Professional Roles

Responsibilities

- **Academic:** IQAC Coordinator, AICTE, LIC, NBA, NAAC Coordinator (Department level)
- **Administrative:** Chief Time Table Officer- First Year (2023-2025).

External Connect

Nil