

Dr. Raghu G K

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Education

	Degree	Year	Institute	Specialization
1	BSc	2006	Bangalore University	PCM
2	MSc	2008	Bangalore University	INORGANIC CHEMISTRY
3	PhD.,	2014	Bangalore University	ELECTROCHEMISTRY

Professional Experience

	Date (from-to)	Designation	Organization
1	14-8-2013 to Till date	Assistant Professor	Dept. of Chemistry, SIT, Tumakuru.

(Please fill in reverse order. Current designation should be at the top)

Positions held

(Please give details of any administrative posts, co Ordinator roles/ responsibilities held)

Nil

Affiliations of Professional organizations

- Nil

Awards and Honors

Research article entitled “Mercury sniffing carbon nanotubes” has been highlighted in NATURE. Kempegowda, R. G. *et al.* Covalently modified multiwalled carbon nanotubes as a new voltammetric interface for the determination of mercury at picomolar level. *Electrochem. Comm.* 25, 83-86 (2012).



- Junior Research Fellow from DST: 2010
- Junior Research Fellow from CSIR: 2011
- Senior Research Fellow from CSIR: 2013
- **Secured position in** World Scientist and University Rankings 2021 list at SIT, Tumkur
- 01 surveyed by AD Scientific Index, 2021, AD ranking for Scientists.
- **Secured position in** World Scientist and University Rankings 2022 list at SIT, Tumkur
- 01 surveyed by AD Scientific Index, 2023, AD ranking for Scientists.
- **Secured position in** World Scientist and University Rankings 2024 list at SIT, Tumkur
- 01 surveyed by AD Scientific Index, 2021, AD ranking for Scientists.

Courses Taught

Undergraduate Courses:

1. Engineering chemistry for CSE, EEE, CV & ME streams for I/II Sem. Students.
2. Environmental Science & Engineering for VI Sem. Students.
3. Biology for Engineers for IV Sem. Students.
4. Physics lab for CSE, EEE, CV & ME streams for I/II Sem. Students.

Postgraduate Courses

- Nil

Research Guidance

Sl. no	Name of the Scholar	Title	Year of completion
	Nil		

Research Areas

- Electrochemistry
- Sensors
- Batteries & capacitors
- Hydrogen generation
- Identification & removal of water pollutants.

Sponsored Projects

Ongoing Projects: Nil

Publications

Journals:

- 1) Chemically functionalized glassy carbon spheres: A new covalent bulk modified composite electrode for the simultaneous determination of lead and cadmium. Raghu. G. K., S. Sampath and M. Pandurangappa. Journal of Solid-State Electrochemistry 16 (2012) 1953.
- 2) A Binderless, Covalent Bulk-Modified, Renewable Surface Electrochemical Sensor for Lead and Cadmium. Raghu. G.K. and M. Pandurangappa. Analytica Chimica Acta 728 (2012) 7.
- 3). Covalently modified multiwalled carbon nanotubes as a new voltammetric interface for the determination of mercury at picomolar level. Raghu. G.K. and M. Pandurangappa. Electrochemistry Communications 25 (2012) 25.
- 4) Diazonium functionalized exfoliated graphitic carbon as a binderless and covalently modified electrochemical interface for mercury sensing. Raghu. G.K. and M. Pandurangappa. Sensors and Actuators B: Chemical 186 (2013) 478.
- 5) Chemically modified carbon nanotubes: derivatization and their applications. M. Pandurangappa, G. K. Raghu. Carbon nanotubes applications on electron devices, IntechOpen 2011.
- 6) Chemically Modified Graphene and Its Applications in Electrochemical Sensing. Raghu G. K. and Pandurangappa M. Graphene Science Handbook 2012.
- 7) Graphene - Platinum nanocomposite as a sensitive and selective voltammetric sensor for trace level arsenic quantification. Raghu. G.K. and M. Pandurangappa . Journal of Smart and Nanomaterials 5 (2014) 17.

- 8) Covalent modification of Glassy carbon spheres through ball milling under solvent free conditions: A novel electrochemical interface for mercury (II) quantification. Raghu. G.K. and M. Pandurangappa. *Talanta* 126 (2014) 54.
- 9) Green, non-chemical route for the synthesis of ZnO superstructures, Evaluation of its applications towards Photocatalysis, Photoluminescence and Bio-sensing. Udayabhanu, G. Nagaraju, H. Nagabhushana, R. B. Basavaraj, G. K. Raghu, D. Suresh, H. Rajanaika, and S. C. Sharma *Crystal Growth & Design* 16 (2016) 6828.
- 10) Electrochemically Assisted Synthesis of Graphene - Anthraquinone Composite: Sensing Platform for Ascorbic Acid. Raghu G. K, Hanumantharaju M. T. and Siddappa N. *International journal of Innovative Research & Development* 5 (2016) 136.
- 11) Identification of Drought-Responsive Transcripts in Kodo Millet (*Paspalum scrobiculatum* L). Siddappa, N, Raghu G. K. & Varadahally R. *Devaraj* 5 (2016) 140.
- 12) Synergistic effect of MgO nanoparticles for electrochemical sensing, photocatalytic-dye degradation and antibacterial activity. L S Reddy Yadav, K Lingaraju, K Manjunath, G K Raghu, K H Sudheer Kumar and G. *Materials Research Express* 4 (2017) 2.
- 13) *Vitis labruska* skin extract assisted green synthesis of ZnO super structures for multifunctional applications Udayabhanu, G. Nagaraju, H. Nagabhushana, D. Suresh, C. Anupama, G.K. Raghu and S.C. Sharma. *Ceramics International* 43 (2017) 11656-11667.
- 14) *Citrus maxima* (Pomelo) juice mediated eco-friendly synthesis of ZnO nanoparticles: Applications to photocatalytic, electrochemical sensor and antibacterial activities. N.S. Pavithra, K. Lingaraju, G.K. Raghu and G. Nagaraju. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 185 (2017) 11.
- 15) Multiple applications of combustion derived nickel oxide nanoparticles of S. B. Patil, T. N. Ravishankar, K. Lingaraju, G. K. Raghu, G. Nagaraju oxide nanoparticles. *Journal*

of Materials Science: Materials in Electronics 29 (2018) 277.

16) MoO₃ nanostructures from EGCG assisted sonochemical route: Evaluation of its application towards forensic and photocatalysis. H.S.Yogananda,H. Nagabhushana,G.P. Darshan,B. Daruka Prasad,M.K. Sateesh,G.K. Raghu.Journal of Alloys and Compounds 745 (2018) 874.

17) Multiple Applications of combustion derived nickel oxide nanoparticles. Shivaraj B Patil, T. N. Ravishankar, K. Lingaraju, G K Raghu, G. Nagaraju. Journal of Material Science: Materials in Electronics 745 (2018) 874.

18) Photocatalytic Activities, Kinetics and Adsorption Isotherm Studies of CeO₂ Nanoparticles Synthesized via Low Temperature Combustion Method. S R Reddy, T Ramakrishanappa, S. Prathiba, G K Raghu, G. Current Nanomaterials 4 (2019) 223.

19) Novel synthesis of NiO Nanoparticles using Limoniaacidissima fruit extract: Applications to Antioxidant, Photo catalytic, anti-angiogenic activities and electrochemical sensors. M.S. Sunil Kumar, G.K. Raghu, G. Nagaraju, B. Nirmala. Inorganica Chimica Acta 215 (2021) 12009.

20) Designing of Au doped TiO₂ NPs as an electrocatalyst for nitrite sensor. G K Raghu, Sureshkumar, Ramakrishnappa. Results in Chemistry 5 (2023) 100964.

21) Electrochemical recovery of metals from industrial wastewaters. K. Sureshkumar, G K Raghu, T. Ramakrishnappa . Resource Recovery in Industrial Waste Waters 31 (2023) 639.

22) Polymer - Sn Composite: Development of Amperometric Hydrazine Sensor Research aquare (2023).

23) Chemically Modified Screen-Printed Electrodes: An Electrochemical Interface for Nitrite Ions. Raghu G. Kempegowda, R.Gokavi, K. R. Shadakhara Murthy and Craig E. Banks³. Journal of Mines, Metals and Fuels 71 (2023) 43.

24) Phyllantus acidus mediated combustion method synthesized yttria stabilized zirconia,

- its application as photocatalyst and antibacterial agent. H Gujjaramma, BS Krishna, K Gurushantha, S Meena, G Shobha, GK Raghu. *Desalination and Water Treatment* 317 (2024) 100301.
- 25) Electrochemical recovery of metals from industrial wastewaters. K.Sureshkumar, Raghu G. K, T. Ramakrishnappa. *Resource Recovery in Industrial Waste Waters*. Elsevier (2024) 639-654.
- 26) Comparative analysis of fluorescent carbon nanoparticles and fluorescent inorganic nanoparticles: synthesis, properties and applications. Suresh Kumar, GK Raghu, T Ramakrishnappa. *Fluorescent Carbon Nanoparticles* (2025) 723 – 765.
- 27) Ceramic Manganese Ferrite: Synthesis, Characterisation and its Applications as Photocatalyst and Electrochemical Studies. S. Shashidhar, Vidyavati A. Shastry, K. Gurushantha, K. V. Brungesh, S. Meena, K. S. Anantharaju and G. K. Raghu. *Rasayan J. of Chemistry* 18 (2025) 1- 6.
- 28) S - Scheme ZnO/gC₃N₅ visible light active photocatalyst for Rhodamine B dye degradation for dye degradation and Hg sensing. Gurushantha K, Raghu G K. *Applied Science & Technology Progress* 18 (2025) 7783.
- 29) Bi-Functional Ag₂O/CuO Composite Catalyst for Anticancer Activity and Glucose Sensing. Deepu H. Ramakrishnegowda, Raghu G Kempegowda, Shobith Rangappa. *ChemistrySelect* 1 - 11.

Conference Proceedings

- Nil

Book Chapters

- Chemically modified carbon nanotubes: derivatization and their applications. M. Pandurangappa, G. K. Raghu. *Carbon nanotubes applications on electron devices*, IntechOpen 2011.
- Chemically Modified Graphene and Its Applications in Electrochemical Sensing.

Raghu G. K. and Pandurangappa M. Graphene Science Handbook 2012.

- Comparative analysis of fluorescent carbon nanoparticles and fluorescent inorganic nanoparticles: synthesis, properties and applications. Suresh Kumar, GK Raghu, T Ramakrishnappa. Fluroscent Carbon Nanoparticles (2025) 723 – 765.
- Electrochemical recovery of metals from industrial wastewaters. K. Sureshkumar, Raghu G. K, T. Ramakrishnappa. Resource Recovery in Industrial Waste Waters. Elsevier 639-654.

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Books

- Nil

Editorial

- Nil

Reviewer of Journals

- Nil

Editor/ Reviewer of Journal

- Nil

Patents

- Nil

Invited Lectures, talks and workshops

- Nil