

CURRICULUM VITAE

Dr. Harish. K. N, M.Sc., Ph.D.

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Nationality : Indian



OBJECTIVE:

A dedicated person working as Research Scholar & Teacher with full potential & exploring myself with full commitment, working hard, meticulously and with highly result oriented attitude, seeking a challenging position, which provides an opportunity to grow and enhance my skills in a progressive & dynamic institute.

ACADEMIC QUALIFICATION

- **Post – Doctoral Fellow:** Fifteen months of Post-Doctoral Research Experience at Chemistry and Physics of Materials Unit, Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru-560 064, India. **Supervisor : Prof. G. U. Kulkarni**
- **Ph.D. in Chemistry (2014) (Specialization: Nanoscience and Nanotechnology):** Dept. of Industrial Chemistry, Kuvempu University, India
Thesis Title: “Studies on Synthesis, Characterization and Optical properties of Nanomaterials”.
Supervisor – Dr. H. S. Bhojya Naik
- **M. Sc. Industrial Chemistry (74%) :** June – 2008, Dept. of Industrial Chemistry, Kuvempu University, INDIA.
- **B. Sc (76%) :** June – 2006 [Physics + Chemistry + Mathematics], Kuvempu University, INDIA.

TEACHING EXPERIENCE: 9.5 YEARS

Duration	Organization	Position	Responsibility
From November 2022	BMS College of Engineering, Bengaluru.	Assistant Professor	Teaching/Research/Supervision/Consultancy
3.2 years	Dayananda Sagar College of Engineering, Bengaluru.	Assistant Professor	Teaching/Research/Supervision/Consultancy
2.2 years	Nagarjuna College of Engineering & Technology, Bengaluru.	Associate Professor	Teaching/Research/Supervision/Consultancy
2.5 years	Rajiv Gandhi Institute of Technology, Bengaluru.	Associate Professor	Teaching/Research/Supervision
1 year	Kuvempu University, Shivamogga	Lecturer	Teaching
1.6 years	Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru.	Post-Doctoral fellow	Research Associate

PATENTS:

1. One Patent Published entitled on “SEMICONDUCTOR JUNCTION FOR PHOTO – GENERATED ELECTRONS AND METHOD THEREOF”.
(Patent Number – TEMP/E-1/22575/2017-CHE,
(Application Number-IN201741022128) Publication Date: 25.01.2019).
2. Patent submitted entitled on “PEDOT-MoSx CNTs aerogel based electrochemical sensor for detection of dopamine” (Patent Number - TEMP/E-1/34873/2021-CHE)

R&D PROJECT DETAILS:

SI No	Title Of Project	Funding Agency	Status Of Project As On Now	Name Of Principal Investigator
1	Center for Research in Sun Light Based Composite Materials and Their Application in Hydrogen Fuel Production	VGST (K-FIST L1) 19 lac	Under Processing	Dr. Harish K N
2	Fluorescent Upconversion Nanomaterials for Hydrogen Fuel Production.	DST – CRG 26 Lac	Under Processing (File Number : CRG/2022/004626)	Dr. Harish K N

STUDENTS REGISTERED FOR Ph.D PROGRAM UNDER MY GUIDANCE:

- **MR. ARAVINDA P S** (ETR173263) working for Ph.D. under my guidance on the topic “synthesis, characterization of doped ferrite nanomaterials and evaluation of its catalytic properties for energy storage and generation application”

PROJECT HANDLED: DST Project on Nanoscience and Nanotechnology, Govt. of India.

CONFERENCE ORGANIZED:

- Organized an International Conference on “Advances in Materials, Ceramics and Engineering Sciences (AMCES - 2020)” held at Dayananda Sagar College of Engineering, Bengaluru, India in association with Indian Ceramic Society (InCerS, Karnataka Chapter), India and Visveswaraya Technological University (VTU), India during January 17-18, 2020.
- Organized an VIRTUAL INTERNATIONAL CONFERENCE ON, “Recent advances in Chemical and Biological Science”(ViRACBS-2020), Jointly with Electrochemical Society of India, IISc., Bangalore & Indian ceramic Society Karnataka Chapter.

- International Conference on Recent Advances in Science, Engineering And Technology (ICASET-2017).

SKILLS And RESEARCH EXPERTISE :

- Expert in Preparation, Characterization and analysis of Solar Light Active Nanomaterials and Nanocomposites for Environmental Applications.
- Design and development of UV, Visible, IR light active Nanomaterials, Composite photo catalysts, silicon photo detectors, etc.,.
- Preparation of Solar Light Active Nanomaterials for large area water treatment plants.
- Preparation of Metal Doped Ferrite Nanocatalysts for photocatalytic applications.
- Expert in Photocatalytic degradation of organic pollutants using natural Sun Light [Renewable Energy].
- Preparation of Nano metal thin films for solar cell application.
- Design and development of Thermochromic and Electrochromic devices for smart windows and energy saving applications.
- Hydrogen fuel production by metal oxide nanomaterials and its optical properties.

INSTRUMENTS KNOWN:

- Solar Simulator
- I-V Measurement by Keithley 2400 & 236
- Glove Box operation
- Optical Profiler & Optical Microscope
- X-Ray Diffractometer
- Scanning Electron Microscopy
- Transmission Electron Microscopy
- UV-visible Spectrophotometer (Shimadzu & ECIL)
- Atomic Force Microscopy
- Fourier Transform Infrared Spectroscopy
- Energy Dispersive Spectroscopy.

RESEARCH SKILLS:

- Good in Synthesis and optimization of reaction conditions for the synthesis of Nanomaterials.
- Strongly motivated team worker and quick learner.
- Social person and works with team and has good team building skills

PERSONAL DATA

- Name : Dr. HARISH K N
- Father's Name : Nagarajappa K H
- Date of birth : 19th March 1986
- Telephone : Mob: +91 – 9902334264
- E-mail : harishkn23@gmail.com
- Nationality : Indian
- Religion : Veerashaiva Lingayat (Panchamashali)
- Category : **III – B (Rural, Kannada Medium)**
- Permanent address : S/O Nagarajappa. K. H
Yalagondana Halli (Rural)
Yellambalase Post – 577548
Kadur Tq, Chikkamagalore Dist
Karnataka(S), INDIA.
- Languages known : Kannada, English and Hindi.
- Habits : Reading books, listening music and etc.,
- Computer Literacy : All Chemistry software's, MS Office–Operating System :
MS–DOS Windows 98, 2000 XP, Power point and etc.,

PUBLICATIONS:

1. KJ Abhishek, S Reddy, S Acharaya, B Lakshmi, K Deepak, CS Naveen, KN Harish, A review on nanomaterial based electrode for electrochemical detection of chloramphenicol and furazolidone antibiotics, Anal. Methods, 2022, 14, 3228-3249, Royal Society of Chemistry publisher. [**Impact Factor-3.532**]
2. Sathish Reddy, Gangadhara Reddy, B E Kumara swamy, Mohan Kumar, **Harish K.N** Electrochemical detection of uric acid by using NiO nanoparticles, Analytical and Bioanalytical Electrochemistry, 4, 432-443, 2022.
3. **K. N. Harish**, H. S. Bhojya Naik, P. N. Prashanth kumar and R. Viswanath, “Studies on preparation, characterization and solar photoactivity of $Mg_xCu_{1-x}Fe_2O_4$ catalysts”, *Environmental Pollution* 2022 [Under Review].

4. **K.N. Harish**, HS Bhojya Naik, KS Anantharaju, Sathish Reddy, T Aravinda, B Vinay Kumar, M Dinamani, Development of cost effective, solar light active $\text{Cu}_{1-x}\text{Ca}_x\text{Fe}_2\text{O}_4$ nanocomposite catalysts for water treatment, *Materials Today: Proceedings*, Volume 46, pp 6056-6063, 2021.
5. B. Vinay Kumar, H. C. H. S. Bhojya Naik, Ananda Murthy, T. Aravinda, **K.N. Harish**, Advancement in specific strand scission of DNA and evaluation of in-vitro biological assessment by pharmacologically significant tetraaza macrocyclic metal complexes constrained by triazole, *Nucleosides, Nucleotides & Nucleic Acids*, 40(9), pp 1-18, 2021. [**Impact Factor-1.167**]
6. L Renuka, Preeti Mishra, YS Vidya, G Banuprakash, KS Anantharaju, **K.N. Harish**, Facile surface modification of Nickel ferrite nanomaterial by different routes: Photoluminescence and photocatalytic activities, *Materials Today: Proceedings*, Volume 46, pp 6022-6027, 2021.
7. Bharath Bannur and **K.N. Harish**, K. D. M. Rao, Giridhar U. Kulkarni, Solution-Based Fast Fabrication of a High-Performance Unlimited Area Au Nanostructure/Si Heterojunction Photodetector, *ACS Appl. Electron. Mater.*, 1 (4), pp 577–584, 2019. [**Impact Factor-4.494**]
8. **K. N. Harish**, H. S. Bhojya Naik, sP. N. Prashanth kumar and R. Viswanath, “Synthesis, enhanced optical and photocatalytic study of Cd–Zn ferrites under sunlight”, *Catal. Sci. Technol.*, 2, 1033–1039, 2012. [**Impact Factor-6.117**]
9. **K. N. Harish**, H. S. Bhojya Naik, P. N. Prashanth kumar and R. Viswanath, “Remarkable Optical and Photocatalytic Properties of Solar Light Active Nd Substituted Ni Ferrite Catalysts: For Environment Protection”, *ACS Sustainable Chem. Eng.*, 1 (9), pp 1143–1153, 2013. [**Impact Factor-9.224**]
10. **K. N. Harish**, H. S. Bhojya Naik, P. N. Prashanth Kumar, R. Vishwanath and G. S. Yashvanth Kumar, Optical and photocatalytic properties of CdFe_2O_4 nanocatalysts: Potential application in water treatment under solar light irradiation, *Archives of Applied Science Research*, 5 (2):42-51, 2013.
11. **K. N. Harish**, H. S. Bhojya Naik, P. N. Prashanth kumar and R. Viswanath, “Solar light active $\text{ZnFe}_{2-x}\text{Al}_x\text{O}_4$ materials for optical and photocatalytic activity: an efficient photocatalyst”, *Int.J.of Sci. Vol 1, No 4, 301-07, 2012.*

12. R. Viswanath, H. S. Bhojya Naik, G.S. Yashavanth Kumar, P.N. Prashanth Kumar, **K.N. Harish**, M.C Prabhakara, R Praveen, Synthesis and photoluminescence enhancement of PVA capped Mn^{2+} doped ZnS nanoparticles and observation of tunable dual emission: A new approach. *Applied Surface Science*, 301, 126–133, 2014. [[Impact Factor-7.392](#)]
13. D Girija, HS Bhojya Naik, B Vinay Kumar, CN Sudhamani, KN Harish, Fe₃O₄ nanoparticle supported Ni (II) complexes: A magnetically recoverable catalyst for Biginelli reaction, *Arabian Journal of Chemistry*, 8, 27, 2014. [[Impact Factor-6.212](#)]
14. R. Viswanath, H.S. Bhojya Naik, G.S. Yashavanth Kumar, P.N. Prashanth Kumar, **K.N. Harish** and Prabhakara M.C. Luminescence properties of blue-red emitting multilayer coated single structure ZnS/MnS/ZnS nanocomposites, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 5; 125:222-7, 2014. [[Impact Factor-4.831](#)]
15. G.S. Yashavanth Kumar, H.S. Bhojya Naik, A.S. Roy, **K. N. Harish**, R. Viswanath, Synthesis, Optical and Electrical Properties of ZnFe₂O₄ Nanocomposites, *Nanomater. nanotechnol.*, 2012, Vol. 2, Art. 19:2012. [[Impact Factor-3.280](#)]
16. D. Girija, H.S. Bhojya Naik, B. Vinay Kumar, C.N. Sudhamani and **K.N. Harish**, New Green, Recyclable Magnetic Nanoparticles Supported Amino Acids as Simple Heterogeneous Catalysts for Knoevenagel Condensation, *Letters in Organic Chemistry*, 2013, 10. [[Impact Factor-0.797](#)]
17. R. Viswanath, H.S. Bhojya Naik, G.S. Yashavanth Kumar, P.N. Prashanth Kumar, **K.N. Harish** and Prabhakara M.C., Studies on Characterization, Optical Absorption and Photoluminescence of Yttrium doped ZnS Nanoparticles, *Journal of Nanotechnology*, Article ID 924797, 8, 2014.
18. P. N. Prashanth Kumar, H. S. Bhojya Naik, **K. N. Harish** and Viswanath. R, Effect of surfactant-assisted and pH dependent ZnO nanoparticle-catalyzed for the rapid synthesis of coumarin by Knoevenagel condensation under microwave irradiation, *Archives of Applied Science Research*, 2013, 5 (2):132-137.
19. P.N.Prashanth kumar, H.S.Bhojya Naik, **K. N. Harish**, R.Viswanath “Studies on Optical and photocatalytic properties of surfactant assisted silver deposition on TiO₂ thin films prepared by microwave irradiation technique” *Euro. J. Appl. Eng. Sci. Res.*, 2013, 2 (2):1-7. [[Impact Factor-3.09](#)]

20. P.N.Prashanth kumar, H.S.Bhojya Naik, K.Narasimharao, **K.N.Harish**, R.Viswanath “Effect of optical and photocatalytic properties by silver deposition on polymeric precursor sol-gel derived TiO₂ thin films” *Int.J.of Sci. Res.*2013,01, 04.314-16.

Training/ Workshops Courses Attended During Research:

1. UGC NRC-M “*Winter Workshop On X-Ray Diffraction Methods*” Dept.of materials Engineering, IISc, Banglore, **6 days** from 26th-31st December 2011.
2. Summer Workshop on “*Structural Characterization Techniques in Material Science*” Dept.of materials Engineering, IISc, Banglore, **19 days** from 27th June to 14th July 2011.
3. “*5th DST Advanced School on Nanoscience And Nanotechnology*” Organized by JNCASR & IISc, Banglore, **7 days** from 17th to 23rd January 2011.

List of Research Papers Presented At National / International Seminars / Symposia

1. **Paper presented** at International Conference on “Advances in Materials, Ceramics and Engineering Sciences (AMCES - 2020)” held at Dayananda Sagar College of Engineering, Bengaluru, India.
2. Paper Presented at National conference on “**Application of Nanotechnology for Environmental Remediation**” Tumkur University, Tumkur-2015
3. Participated at International Conference on “**Directions in Materials Science**” Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru-560 064, India-2014.
4. **Paper presented** at International Conference on “**Recent Advances in Materials Science**” Karnataka state higher education council in association with Mangalore, Gulbarga, Kuvempu & Tumkur university, Banglore on 6th-8th November-2012.
5. **Participated** at International Conference on “**4th Bangalore Nano, Nanoscience & Technology At The Cutting Edge**” 2011.
6. **Participated** at National Workshop on “**Usage Of Instruments For Nanotechnology Applications**” Kuvempu University, Shankaragatta, on 25th April 2011.
7. **Oral presented** at National Conference on “**Nanostrucered Materials and Nanocomposites**” NSS College, Ottapalm, Kerala On 17th&18th March, 2011.

8. **Participated** at National Seminar on “**Nuclear Chemistry-It’s Relavance To Present Scenario**” A.V.K.College For Women, Davangere On 5th march 2011.
9. **Participated** at National Conference On “**Resent Trends In Analytical Techniques**” D.R.M.Science College, Davanagere On 19th Feb-2011.
10. **Paper presented** at International Workshop on “**Application Of Nanotechnology To Energy, Environment & Biotechnology [NANO-EEB]**” St.Alosius College, Manglore on 14th-16th Dec.2010.
11. **Paper presented** at National Conference on “**Frontier Areas In Chemical Science And Nanotechnology**” Kuvempu University, Shankaraghatta On 1st& 2nd May-2010.

REFEREES:

[1] Prof. G. U. Kulkarni

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I solely declare that the information given above is true to my knowledge and belief.

[Dr. Harish K N]