Dr. M. R. JAGADEESH, M. Sc., M. Phil., Ph D.

**Associate Professor, Department of Physics** 

Bapuji Institute of Technology, Davanagere-577 004

**Contact Details** 

Mobile Number: 9740776111

E-mail : jmrshyagale@gmail.com

**Address for Communication** 

#5450/A-9, Banashankari Layout, behind Swamy Vivekananda School, Davangere-05

Permanent address

### Shyagale Village and Post, Davangere T & D-577002

| Caste/ Category: | Hindu Lingayath |  |
|------------------|-----------------|--|
| Date of Birth:   | 03 Jan 1984     |  |
| Age:             | 40              |  |
| Gender:          | Male            |  |
| Marital Status:  | Married         |  |

# **Academic Background**

| Sl. No. | Degree | Name of the Institution/ University                     | Year of<br>Passing |
|---------|--------|---|--------------------|
| 1       | Ph. D  | Visveswaraya Technological<br>University (VTU) Belagavi | 2016               |
| 2       | M. Sc. | Kuvempu University, Shivamogga                          | 2006               |
| 3       | B.Sc.  | D R M Science College, Davangere                        | 2004               |



# **Teaching Experience:16 Years**

| C1 | Name of the one minution / Institute | Designation | Duration     | E-m origina o o |
|----|--------------------------------------|-------------|--------------|-----------------|
| Sl | Name of the organization/Institute   | Designation | Duration     | Experience      |
| 1  | M M P U College                      | Lecturer    | 01-06-2006   | 1 Year          |
|    | Shivamogga                           |             | То           |                 |
|    |                                      |             | 28-06-2007   |                 |
| 1  | G M Institute of Technology          | Lecturer    | 13-08-2007   | 7 Years         |
|    | Davangere                            |             | То           |                 |
|    |                                      |             | 31-07-2014   |                 |
| 2  | G M Institute of Technology          | Assistant   | 01-08-2014   | 2 Years         |
|    | Davangere                            | Professor   | То           |                 |
|    |                                      |             | 31-05-2016   |                 |
| 3  | Jain Institute of Technology         | Associate   | 01-08-2016   | 6 Years         |
|    | Davangere                            | Professor   | То           |                 |
|    |                                      |             | 23-07-2022   |                 |
| 4  | Bapuji Institute of Engineering and  | Associate   | 01-08-2022   |                 |
|    | Technology, Davangere                | Professor   | To till date |                 |

# **Research Experience: 12 Years**

| SI<br>· | Name of the Degree   | Торіс   | Duration                  | Research<br>Experienc<br>e |
|---------|--|---|---------------------------|----------------------------|
| 1       | Current research<br>work<br>Research Centre,<br>Jain Institute of<br>Technology,<br>Davanagere | Crystal Physics, Nonlinear Optics,<br>Nano Composites   | Nov 2016- Till<br>to date | 6 Years                    |
| 2       | Ph. D Research   | GROWTH AND<br>CHARACTERIZATION OF SOME<br>ORGANIC CRYSTALS FOR NLO<br>APPLICATIONS<br>Guide:<br>Dr. Suresh Kumar H M and<br>Dr. Ananda Kumari R, SIT Tumkur.                            | Nov 2010-<br>Nov 2016     | 6 years                    |
| 3       | Research areas   | Spectroscopy, Crystal Growth,<br>Nano Composites, Non Linear Optics<br>Linear Optical Properties<br>Thermo-electric Properties<br>Evaluation of structural and<br>Mechanical properties |                           |                            |

# **Publications/Conferences/ Ph. D Guidance Statistics**

| S1. | Type of Publications                         | No of Publications               |
|-----|--|----------------------------------|
| 1   | Publications                                 | 22 Indexed                       |
| 2   | Papers Presented in<br>conferences/symposia  | 10 (Proceedings)                 |
| 3   | Number of conferences /workshops<br>attended | 15<br>National and International |
| 4   | No of Ph D Guidance                          | 3 (VTU)                          |

# List of Candidates working for their Ph. D

| Sl No | Name of the<br>Student | Mode<br>of Guidance | Course | University          | Year of<br>Registration<br>& Status |
|-------|------------------------|---------------------|--------|---------------------|-------------------------------------|
| 1     | Mr. Y A<br>Kulakarni   | Guide               | Ph D   | V. T. U<br>Belagavi | 2016<br>Pre Ph D<br>Colloquium      |
| 2     | Srivalli N G.          | Guide               | Ph D   | V. T. U<br>Belagavi | 2020<br>Course Work                 |
| 3     | Namitha R L            | Guide               | Ph D   | V. T. U<br>Belagavi | 2020<br>Course Work<br>Completed    |

## List of significant Papers Presented

| Sl. | Title of the Paper   | Organizer                                |  |
|-----|--|--|--|
| 1   | Optical and second harmonic generation (SHG) efficiency studies in NLO crystals                            | Dept. of Atomic Energy                   |  |
| 2   | Spectral and SHG studies in some NLO crystals  | M S University, Vadodara                 |  |
| 3   | Crystal growth and characterization of a semi organic<br>NLO material: L-Alanine Ammonium Bromide          | Anna university                          |  |
| 4   | Growth, Structural, Spectral, optical and dielectric studies<br>on L-alanine mixed barium nitrate crystals | Bhabha Atomic Research Centre,<br>Mumbai |  |
| 5   | Growth, spectral, optical, thermal, dielectric and<br>mechanical studies on Urea Potassium Iodide crystal  | GSSS Mysore                              |  |

| 6  | Growth and characterization of doped adp crystals for                           | G M Institute of Technology,          |  |
|----|---|---------------------------------------|--|
|    | optoelectronic applications   | Davangere                             |  |
| 7  | Structural characterization and Rietveld refinement of rare                     | G M Institute of Technology,          |  |
|    | earth substituted nano nickel ferrite synthesized by low-                       | Davangere                             |  |
|    | temperature citrate precursor method  |                                       |  |
| 8  | Growth and characterization of some semiorganic crystals                        | BIET Davangere                        |  |
|    | for optoelectronic applications   | C C                                   |  |
| 9  | Growth and characterization of doped L-alanine                                  | Srinivasa University Manglore         |  |
|    | nanocrystals  |                                       |  |
| 10 | AC conductivity and dielectric properties of $\alpha$ - and                     | KSTA National Level Conference,       |  |
| -  | gamma-MnO 2 nanostructures prepared at different                                | Bangalore                             |  |
|    | temperatures  |                                       |  |
| 11 | Growth and characterization of Zic suplhate doped L-                            | International Conference on Materials |  |
|    | alanine crystals for optoelectronic applications and manufacturing technology 2 |                                       |  |
|    |   | Coimbatore                            |  |
|    |   |                                       |  |
| 12 | Influence of Lead ion on the Growth and Characterization                        | International Conference on Advanced  |  |
| 12 | of L Alanine NLO Crystals   | Materials Science and Applications    |  |
|    | of L'Andrine 1020 Crystals  | (ICAMSA) MSRIT, Bengaluru             |  |
|    |   | (ICAMOA) MORT, Deligatulu             |  |

### **Invited Talks**

| Sl | Details   |
|----|---|
| 1  | Delivered a Key note address on <b>"Science and Scientific Research Methodology in Sample Preparation"</b> at Sharanabasveshwar College of Science, Kalburgi. |
| 2  | Delivered a Lecture on "Geo Physics and importance of Ground Water" Organized by Department of Ground water, Government of Karnataka.                         |
| 3  | Addressed the Jain Polytechnic Students on National Science Day and given a lecture on "Contributions of C V Raman to Mankind"                                |
| 4  | Delivered a lecture on "National Science Day" at Raghavendra Hi Tech P U College-Sharada Academy Davangere  |
| 5  | Delivered a lecture on "Scientific Temperament" at Siddalingeswara School Avaragere, Davangere  |
| 6  | Delivered a Key note address on "Use of Technology in Education" at BEMS arts and Science college Byadgi Haveri Dist.   |
| 7  | Delivered lecture on "Materials Characterization" at Bapuji Institute of Technology, Davangere  |
| 8  | Given a talk on "Characterization Techniques" for M. Sc Physics students of Davangere University.   |
| 9  | Delivered invited talk on Importance of Science in Daily life at Kabbala of Channagiri Taluk  |
| 10 | <b>"Crystal growth and characterization"</b> on 1 <sup>st</sup> Sept 2022 at Department of Physics, Siddaganga Institute of Technology, Tumakuru.             |
|    |   |

| 11 | "Importance of Digital Learning in higher education" at BESM arts and Commerce college Byadgi on 23 <sup>rd</sup> Jan 2023     |
|----|--|
| 12 | On Science Day program 2023 at Seetamma college Davangere, Organized by Zilla Panchayath-<br>NRDMS Davangere on 6th march 2023 |
| 13 | Talk on world environmental day 2023 at Nutana B.Ed college Davangere on 5th June 2023   |
| 14 | Career Guidance for PU Students at Winners Carrer Academy Davangere 9th April 2023   |
| 15 | What after P U C? at Raghavendra Hi Tech P U college Davangere 18th May 2023   |

#### **Patents Published:**

Indian Patent- "Principles of Green Sustainability and Physics as a basis for low-carbon Energy transition" during October 2022

#### **Training Course:**

One-month online Training course on quantum computing using "Indigenous quantum simulator Qsim" during May 2023 organized by IIT Roorkee and C-DAC Hyderabad, Sponsored by Government of India.

Completed Hands-On Training on One Day's Hands On Online Training Workshop On (10th August-2023) On Nanomaterial & Nanodevice Modeling Simulation Using Rescue Software From nano-academic Technologies

#### **Refresher Course:**

Completed online Two - week refresher course in "PHYSICS" from 30<sup>th</sup> August – 13<sup>th</sup> September, 2023 and obtained Grade A+ from Teaching Learning Centre Ramanujan College, University of Delhi in Collaboration with Bhaskaracharya College of Applied Sciences, University of Delhi under the aegis of Ministry Of Education Pandit Madan Mohan Malaviya National Mission On Teachers And Teaching.

#### **Science Magazine Editor**

Nominated as Editorial member for the bimonthly Popular Science magazine in Kannada Vignana Siri (RNI Number: KARKAN28241) in November 2023

#### **Online certification details**

1. Successfully completed "Digital 101 Journey" on 16/01/2023 sponsored by Ministry of Electronics and Information Technology, Govt. Of India in association with NASSCOM and AICTE. Certificate ID: FSP/2023/1/7520495

- **2.** Earned the digital badge on **Quantum Computing** 27/01/2023 sponsored by Ministry of Electronics and Information Technology, Govt. Of India in association with NASSCOM and AICTE.
- 3. Earned the digital badge on Practicing Innovation Design and Thinking 24/01/2023 sponsored by Ministry of Electronics and Information Technology.

### Journal/ Text book Editor/Reviewer

Text book editor for "Futuristic Trends in Physical Sciences" with Series Code IIPV3EBS07 from June 2023

Reviewer for the journal "Case Studies in Thermal Engineering" from June 2023 Series Q-1

### **Funded Seminar:**

Received the Seminar grant for the topic "Quantum Computation" form Indian National Academy of Sciences on 24<sup>th</sup> August 2023

### **Members of Professional Bodies**

- 1. Indian Association for Physics Teachers [Life member]
- 2. Karnataka Rajya Vignana Parishad (KRVP) [Life member]
- 3. ISTE-Life membership
- 4. Institution of Scholars Life member
- 5. Karnataka State Scientific Research Council
- 6. Karnataka Science and Technology Academy
- 7. Indian LASER Association
- 8. National Council for Teacher Scientist (NCTS)
- 9. Indian Association for Crystal Growth
- 10. Karnataka Association for Advancement in Science (KAAS)
- 11. Member of the Education Research and Development Association (ERDA)
- 12. Karnataka Physics Teachers Association

### **Text Book Written**

| Title:    Crystal    growth      and Characterization    Image: Characterization    Image: Characterization | Publisher: Lambert Academic<br>Publishing 2019 | Published<br>ISBN-978-613-8-32039-5 |
|---|--|-------------------------------------|
|---|--|-------------------------------------|

### Ph.D. Doctoral Committee: Subject external domain expert

- 1. UBDTCE, DVG
- 2. Sri Siddhartha Deemed to be University, Tumakurur
- 3. Acharya Institute of Technology, Banglore
- 4. PESITM, Shivamogga
- 5. SJBIT Banglore

6. Adichunchanagiri Institute of Technology, Chikkamagalur

### **Research Collaboration with other Institutes**

| INTERNATIONAL             |  |   |  |
|---------------------------|--|---|--|
| Dr. Mabkhoot A.           | Empty Quarter Research Unit,                     | Crystallography and NLO   |  |
| Alsaiari                  | Najran University, Saudi Arabia                  | Properties of materials   |  |
| Dr. Moustafa A.           | Suez Canal University, Ismailia,                 | Crystallography and NLO   |  |
| Rizk                      | Egypt  | Properties of materials   |  |
| Dr. A. Alhadhrami         | Taif University, Saudi Arabia.                   | Crystallography and NLO   |  |
|                           |  | Properties of materials   |  |
|                           | NATIONAL   |   |  |
| Dr. Suresh Kumar<br>H M   | Siddaganga Institute of<br>Technology            | Nano composites and Crystal<br>Physics                              |  |
| Dr. Arun M                | National Institute of Technology<br>Surathkal    | Synthesis and structural<br>Studies of Novel organic<br>derivatives |  |
| Dr. Nagaraj T M           | Sri Siddartha Deemed to be<br>University Tumkuru | Nano Composites and applications                                    |  |
| Dr. Shivakumara S         | <b>Reva University Banglore</b>                  | Polymer Nano structures and their applications                      |  |
| Dr. Vasantha Kumar<br>M S | Acharya Institute of Technology,<br>Banglore     | Low temperature Physics   |  |

### **List of Significant Publications**

- 1. Jagadeesh M. R, Suresh Kumar H. M. R. Ananda Kumari Crystal growth and haracterization of a new NLO crystal: Urea 2- furoic acid' Optik- International journal of Light and Electron Optics Elsevier Publication 126 (23), 4014-4018, 2015
- Jagadeesh M. R, Suresh Kumar H. M. R. Ananda Kumari Growth and Characterization of NLO crystal - L-Leucine Phthalic acid Potassium Iodide' Materials Science Poland-Springer Publications 33, 529-536, 2015
- **3.** Jagadeesh M. R, Suresh Kumar H. M. R. Ananda Kumari, Crystal growth and characterization of a semi organic NLO material: L-Phenylalanine Cadmium Chloride Canadian Journal of Physics 93(11): 1296-1301, 2015
- 4. Jagadeesh M.R, Suresh Kumar H. M. R. Ananda Kumari, Growth and characterization of mercuric chloride doped urea single crystals' Materials Research Innovations, Taylor and Francis Publications 21 (6), 391-395, 2017
- Jagadeesh M.R, Suresh Kumar H. M. R. Ananda Kumari Growth and characterization of an organic NLO crystal: L-alanine-2-furoic acid' Applied Science Research, 6 (4): 188-197, 2014
- 6. A Alhadhrami, M R Jagadeesh, B M Prasanna and M R Hareeshkumar, Growth and characterization of nonlinear optical crystal: Ammonium Iodate doped L-Alanine, Physica Scripta (Q2-IOP Science Publishers), 2021, 96. 125810. https://doi.org/10.1088/1402-4896/ac2187/meta
- 7. M R Hareeshkumar, M R Jagadeesh, G J Shankaramurthy and B M Prasanna, Growth, Nonlinear Optical, Electrical, Mechanical and Dielectric Properties of Zinc Sulphate Doped L-Alanine Single Crystal for Optoelectronic Applications, IOP Conference Series: Materials Science and Engineering, (IOP Science Publishers) 2021,1166, 012035.
- Suresh Kumar H.M., Jagadeesh M. R Growth, characterization and the effect of γ-irradiation on linear and nonlinear optical properties of L-Alanine Ammonium Bromide: a new semiorganic crystal Materials Research Innovations, Taylor and Francis Publications 1-9, 2017 http://dx.doi.org/10.1080/14328917.2017.1323990
- **9**. Arun M. Islor, **Jagadeesh M. R.**, H. M. Suresh Kumar "Structure Reports on N1-(4-Methylphenyl)piperidine-1,4- Dicarboxamide" Acta Crystallographica E68(12), 03452-03452
- 10. Kulakarni, Y.A., Jagadeesh M R "Frequency dependence of AC conductivity and dielectric properties evaluation in-situ prepared polyaniline/manganese dioxide composite" Mater Sci: Mater Electron 31 (1), 7226–7231
- 11. B. M. Praveen, B.M. Prasanna, N. M. Mallikarjuna, M. R. Jagadeesh, D. Rashmi, "Investigation of anticorrosive behavior of novel tert-butyl 4-[(4-methyl phenyl) carbonyl] piperazine-1-carboxylate for carbon steel in 1M HCl, Heliyon, (Q1-Elsevier), Volume 7, Issue 2, 2021, e06090, ISSN 2405-8440, https://doi.org/10.1016/j.heliyon.2021.e06090

- **12.** M. R. Hareeshkumar, G. J. Shankaramurthy, A. Alhadhrami **M. R. Jagadeesh**, B. M. Prasanna Growth, physiochemical and NLO properties study of novel L-alanine tri-sodium citrate single crystal. Physica Scripta (Q2-IOP Science Publishers)Vol 46, 2021.
- 13. B. Suresh Kumara, H. M. Suresh Kumar M. R. Jagadeesh Co-60 -irradiation effect on linear, nonlinear optical and electrical properties of a semiorganic L-alanine barium nitrate (LABN) crystal Materials Research Innovations, 2017 Taylor & Francis Grouphttp://dx.doi.org/10.1080/14328917.2017.1323990 2017
- 14. Yankappa A Kulakarni, M R Jagadeesh, Sahebagouda Jambaladinni, HM SureshKumar, MS Vasanthkumar, S Shivakumara, AC conductivity and dielectric properties of nanostructured amorphous manganese dioxide and polypyrrole/manganese dioxide composite, Journal of Materials Science: Materials in Electronics volume 32, pages3352–3360 (2021)
- **15.** B. M. Prasanna, Narayana Hebbar P. Shivakeshava Kumar **M. R. Jagadeesh** B. M. Praveen Experimental and theoretical studies on inhibition effect of the praziquantel on mild steel corrosion in 1M HCL, Journal of Bio- and Tribo-Corrosion https://doi.org/10.1007/s40735-018-0137-0
- 16. M. R. Hareeshkumar., G. J. Shankaramurthy, A. Alhadhrami, M R Jagadeesh, Growth, Characterization and NLO Property Study of Doped L-Alanine Crystal. Iran J Sci Technol Trans Sci (2021) (Q2 -Springer Nature), https://doi.org/10.1007/s40995-021-01160-x
- 17. B S Kumar, M R Jagadeesh, S Tilak, HMS Kumar L-Ornithine Monohydrochloride Doped Zinc Tris-Thiourea Sulphate SingleCrystals for NLO Applications Silicon, 1-11 <u>https://doi.org/10.1007/s12633-020-00681-1</u>
- M. M. Mohamed, B. M. Prasanna, Narayana Hebbar, Raiedahah Alsaiari, G. Banuprakash
  M. R. Jagadeesh, Moustafa A. Rizk Corrosion Inhibitive Action of Tenofovir Disproxil Fumarate (TDF) on Low Carbon Steel in 1M HCl,
- B S Kumar, M R Jagadeesh, HMS Kumar L-ornithine monohydrochloride and L- citrulline Doped Zinc Tris-Thiourea Sulphate Single Crystals for Photonic applications Indian Journal of Physics volume 96, pages2293–2301 (2022) <u>https://doi.org/10.1007/s12648-021-02145-7</u>
- 20. Yankappa A Kulakarni, Jagadeesh M. R, Suresh Kumar H M, Vasanthkumar M., S.Shivakumara AC conductivity and dielectric studies of amorphous manganese oxide and manganese oxide/polymer nancomposites, Journal of Materials Science: Materials in Electronics volume 34, Article number: 176 (2023)
- 21. B. S Sail, V Naik, B M Prasanna, Naushad Ahmad, Mohammad R K, M R Jagadeesh, Ravi C, Synthesis, Characterization And Pharmacological Studies Of Cobalt (II), Nickel (II) And Copper (II) Complexes Of Thiazole Schiff Bases, Journal of Molecular Structure, Volume 1288, September 2023, pp 135748, Elsevier publications.
- B. Suresh Kumar, M. R. Jagadeesh, and H. M. Suresh Kumar, Growth and characterization of L-ornithine monohydrochloride single crystal doped with Co<sup>2+</sup> and Mn<sup>2+</sup> ions for NLO applications, J Mater Sci: Mater Electron (2022) 33:26706–26716,

- **23.** B S Kumar, **M R Jagadeesh**, HMS Kumar L-Ornithine Monohydrochloride (LOMHC) doped Potassium Dihydrogen Phosphate (KDP) and Ammonium Dihydrogen Phosphate (ADP) Single Crystals for NLO Applications
- 24. Yankappa A Kulakarni, Jagadeesh M. R, Suresh Kumar H M , Vasanthkumar M., S.Shivakumara AC conductivity and dielectric properties of  $\alpha$  and gamma-MnO 2 nanostructures prepared at different temperatures (Communicated)

#### Name of training / workshop/Seminar **Organizers** Year 'Frontier Areas of Physics' 2005 Department of Physics, Kuvempu University, Funded by UGC 'Recent trends in Electronic Instrumentation' April 2006 Dept. of Electronics, Kuvempu University. 'Einstein Contributions to Mankind' 2007 SJM College, Chitradurga, Karnataka. DAE-BRNS Symposium on atomic, molecular 2009 Board of Research in Nuclear sciences, Dept. of Atomic Energy, Government and optical physics of India Nuclear Energy for 21<sup>st</sup> Century at 2010 SDMCET, Dharwad Research Methodologies and LATEX' 2011 VTU e-learning centre at Mysore Preparation, characterization of Crystalline 2012 DRDO/Anna University Materials and their Applications Optical Engineering', (IEEE approved) 2012 VTU, Belagavi Plagiarism Awareness Program VTU, Belagavi 2015 **Basic Rietveld Refinement** 2017 SIT Tumkur 10 Attended workshop on New Model Curriculum as 2018 SCEM, Mangaluru per Outcome based Education (OBE) on 19th may 12 International Conference on Nanotechnology 2019 Srinivas University Mangalore "International Webinar on Materials Science" 12 2020 National College, Jayanagar, Bangalore on 28-05-2020. 13 "SMART MATERIALS SENSOR AND 2020 SSN College of Engineering, Kalavakkam, Chennai. ENERGY DEVICES (SMSED – 2020)"

### **Major Conferences attended**

| 14 | "IPR and Patent Drafting"   | 2020 | St. Peter's Institute of Higher     |
|----|---|------|-------------------------------------|
|    |   |      | Education and Research              |
| 15 | Outcome based education Software  | 2020 | Vmedulife solutions banglore        |
| 16 | Two dimensional Materials   | 2021 | Cambridge Institute of Technology   |
| 17 | Recent Advances in Nanoscience and  | 2021 | KSTA Sponsored National Level       |
|    | Nanotechnology  |      | Conference                          |
| 18 | Trends of research to unravel science and   | 2020 | Acharya Intitute of Technology,     |
|    | technologt-2020   |      | Banglore                            |
| 19 | Attended 3 days FDP on Quantum Computing  | 2023 | Bangalore Institute of Technology   |
| 20 | Interface of IPR in academics and   | 2023 | Bapuji Institute of Engineering and |
|    | Entrepreneurship  |      | Technology, Davangere               |
| 21 | Best Practices of NEP-2020 in higher Education  | 2023 | Bapuji Institute of Engineering and |
|    | Institutions  |      | Technology, Davangere               |
| 22 | Completed one week FDP on "Outcome Based Education for Effective Learning and         |      |                                     |
|    | Teaching" organized by Association of Indian Universities from 19th – 27th July 2023. |      |                                     |

23 Attended 3 days FDP on Quantum Computing from 2nd Feb to 4th Feb 2023at Bangalore Institute of Technology

### **Researcher Profiles / Id's**

| Scopus author ID                                   | 57213259340   |  |  |
|--|---|--|--|
| ORCiD  | 0000-0002-8960-4067   |  |  |
| Web of Science Id                                  | AGE-3682-2022   |  |  |
| Google Scholar profile URL:                        | https://scholar.google.com/citations?user=PaJgEyoAAAAJ&hl=en&<br>authuser=1 |  |  |
| Research Gate Profile URL:<br>Research Gate Score: | https://www.researchgate.net/profile/Jagadeesh_Medikere<br>13.75            |  |  |
| Linkedin_id  | https://www.linkedin.com/in/dr-jagadeesh-m-r-06374115/                      |  |  |

Dr. Jagadeesh M R