



DR VINAY PAROL

Ph.D (NONLINEAR OPTICS AND CRYSTAL GROWTH)

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CONTACT

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SCIENTIFIC SKILLS / EXPERIMENTAL SKILLS

- Synthesis of Organic Molecules • Crystal Growth • Single Crystal XRD Analysis • XRD, • SEM, • AFM, • UV-VIS-NIR and PL Spectroscopy • TGA/DTA • SHG and Z-Scan Technique.

KNOWN LANGUAGES

- ★ English
- ★ Kannada
- ★ Hindi

Religion
Hindu

PROFESSIONAL SUMMARY

- ★ Research experience in laser, crystallography, material science, nonlinear optics, Magnetic materials, Nano materials, and Thin Films.
- ★ Published more than 12 research articles in peer reviewed international journals (Citations - 118 and H-index 6) and 4 conference presentations.
- ★ Experience in leading lab development / research unit and mentoring of 8 master student projects to date.
- ★ I look forward to provide innovative solutions to the research problems and have worked in interdisciplinary areas.
- ★ Innovative Assistant Professor bringing proven success in implementing technology-based curriculum delivery and assessment tools. Passionate about fostering academic development and success for every student

WORK HISTORY

1) Assistant Professor from May 2023 – Present

(Bapuji Institute of Engineering and technology-Davanagere)

- ★ Applied innovative teaching methods to encourage student-learning objectives.
- ★ Mentored students and communicated internship and employment opportunities.
- ★ Facilitated academic and community collaborations to increase number of community-engaged research proposal submissions to extramural funders.

2) Assistant Professor from November 2021- May 2023

(GM Institute of Technology- Davanagere)

- ★ Used variety of learning modalities and support materials to facilitate learning process and accentuate presentations.
- ★ Evaluated student progress through analysis of test scores and homework completion.

3) Guest Faculty from February 2021 to November 2021

(Sahyadri Science College, – Shimoga)

- ★ Evaluated and revised lesson plans and course content to facilitate and moderate classroom discussions and student-centered learning.

4) Research Scholar from July 2016 – January 2021

(Manipal Institute of Technology, MAHE- Manipal)

- ★ Conducted research, performing experiments, data analysis, results comparison, and provide innovative solution for modern problems.
- ★ Determined ways to strengthen combine or develop materials to use in products and applications.

SOFTWARE SKILLS

1. Mercury
2. Crystal Explorer
3. Expo2014
4. Chems sketch
5. Full Proof
6. Origin 09

COURSE DETAILS

Bachelor of science (BSc)
Majored in: Physics, Mathematics and Electronics
Master in science (MSc- Physics)
Majored in: Condensed Matter of Physics Dissertation: Growth and Characterization of CuO Thin Films for Solar Cell Applications
Doctor of philosophy (PhD)
Crystal growth and nonlinear optics ★ Received TMA Pai Scholarship during PhD program. ★ Coursework: Research Methodology, Experimental Physics, and Linear and Nonlinear Optics.

PERSONAL DETAIL

Vinay Parol S/O Parameshwarappa P. K, Agarabannihatti (Post), Channagiri (Tq) Davanagere (Dist), karnataka-577213

- ★ Conducted research on organic materials, to develop new products or enhance existing ones for NLO applications.

RESEARCH INTEREST

- ★ Organic Materials for higher harmonic generation applications.
- ★ Clean energy, nano technology, renewable energy, ceramics materials and Advanced materials.
- ★ Growth of Binary and ternary-based semiconductor single crystals for magnetic / thermoelectric applications.
- ★ Oxide materials for photocatalytic applications.
- ★ Nano materials/ thin films for detection of explosive materials.

EDUCATION QUALIFICATIONS

Course	Institution/University	Percentage / CGPA
BSc 2009-2012	Sahyadri Science College, Kuvempu University. Shimoga.	73%
MSc 2012-2014	Manipal Institute of Technology, Manipal Academy of Higher Education (Deemed University) - Manipal	8.15 CGPA
PhD 2016-2021	Manipal Institute of Technology, Manipal Academy of Higher Education (Deemed University) - Manipal	AWARDED (Jan 2021)

AWARDS

- Best poster presentation award for research entitles of “study of linear and nonlinear optical properties of tosyloxy chalcone single crystal for optical limiting applications” in the 6th national conference (CMPA-2018) at MIT Manipal during September-10-11, 2018.
- PRAISE (Publication and Research Award Incentive for Student to Excel) award at the annual event, MIT, MAHE, Manipal -2018/2019.

PUBLICATIONS

1. **Vinay Parol**, A.N. Prabhu, K. Subrahmanya Bhat, V.Upadhyaya, Design, Growth, and characterization of D- π -A- π -D based efficient nonlinear optical single crystal for optical device applications, *Journal of Physics and Chemistry of Solids*. 123 (2018) 300–310 [Elsevier] [Q1].
2. **Vinay Parol**, A.N. Prabhu, K. Subrahmanya Bhat, V.Upadhyaya, Synthesis, Growth and Characterization of a long-chain p-conjugation based methoxy chalcone derivative single crystal; a third-order nonlinear optical material for optical limiting applications, *Optical Materials*. 89 (2019) 419–429 [Elsevier] [Q1].
3. **Vinay Parol**, V. Upadhyaya, A.N. Prabhu, N. K. Lokanath, Sri Ram G Naraharisetty, Md Abu Taher, A long-chain based Bromo and methyl-substituted chalcone derivatives; experimental and theoretical approach on nonlinear optical single crystals, *Material Reseach Express* 7 (2020) 055101. [IOP] [Q2].
4. **Vinay Parol**, V. Upadhyaya, A.N. Prabhu, N. K. Lokanath, Sri Ram G Naraharisetty, Md Abu Taher, A third-order nonlinear optical single crystal of 3,4-dimethoxy substituted chalcone derivative with high laser damage threshold value; a potential material for optical power limiting, *J Mater Sci: Mater Electron*. 31 (2020) 9133–9150 [Springer] [Q2].
5. **Vinay Parol**, V.Upadhyaya, Ganesh Shridhar hedge, N.K. Lokanath, A.N. Prabhu, Structural and optical characterization of novel nitro substituted D- π -A- π -A type chalcone single crystal showing second-order and third-order nonlinear optical properties, *Physica B: Condensed Matter*. 580 (2020) 411830 [Elsevier] [Q2].
6. Pramoda Kumara Shetty, **Vinay Parol**, Raviraja Nakshatri, A.N. Prabhu, Effect of gamma and neutron irradiation on structural and optical properties of ammonium dihydrogen phosphate single crystals, *Optik* 156 (2018) 224–230 [Elsevier] [Q2].
7. Rajesh Kumar, T. Karthick, **Vinay Parol**, Poonam Rawat, Poonam Tandon, Archana Gupta, A.N. Prabhu, V. Upadhyaya, Spectroscopic characterization and structural insights of 4-[(1E)-3-(4-methoxyphenyl)-3-oxoprop-1-en-1-yl] phenyl 4-methylbenzene-1-sulfonate using vibrational, electronic spectra and quantum chemical calculations, *Journal of Molecular Structure*, (2020) 129144 [Elsevier] [Q2].
8. Shobha R Prabhu, **Vinay Parol**, V. Upadhyaya, A Jayarama, Shivaraj R. Maidur, Parutagouda Shankaragouda Patil, Novel nitro based chalcone derivative single crystals: characterization on structural, linear optical, thermal, and third-order nonlinear optical properties, *Applied physics A* 126 (2020) 855 [Springer] [Q2].
9. **Vinay Parol**, V.Upadhyaya, A.N. Prabhu, K. Subrahmanya Bhat, “A Chalcone Derivative Single Crystal for the Investigation of Linear and Nonlinear Optical Properties for Laser Assisted Applications, *American Institute of Physics (AIP) Conference Proceedings* (64th DAE Solid State Physics Symposium (DAE SSPS 2019) 2265 (2020) 030401
10. warnagowri Nayak, **Vinay Parol**, Gangadhar Hari, K. S. R. Pai, Rajeev K. Sinha, N. K. Lokanath, Sri Ram G Naraharisetty, Santosh L. Gaonkar, Synthesis, Crystal Structure, Biological Evaluation, DFT Calculations and Third Order Nonlinear Optical Studies of Novel Pyrazolines, *Journal of Molecular structure*, 1243 (2021)130780 [Elsevier] [Q2].
11. Ganesh Shridhar hedge, **Vinay Parol**, Ashok Rao, A.N. Prabhu, J.J.B Levinsky, G.R. Blake, Thermoelectric properties of co-doped (Bi_{0.98}In_{0.02})₂Te_{2.7}Se_{0.3} / reduced graphene oxide composites prepared by solid state reaction, *Materials Research Bulletin*, 145 (2021)111517 [Elsevier] [Q1].
12. Rajesh Kumar, T. Karthick , Anubha Srivastava, Debraj Gangopadhyay, **Vinay Parol**, Poonam Tandon, Archana Gupta, Amit Kumar, K Subrahmanya Bhat, Spectroscopic and quantum chemical study on a non-linear optical material 4-[(1E)-3-(5-chlorothiophen-2-yl)-3-oxoprop-1-en-1-yl] phenyl4-methylbenzene-1-sulfonate, *Journal of Molecular Structure* 1248 (2022) 131540 [Elsevier] [Q2].

13. Kezhia Thomas, **Vinay Parol**, P Karuppasamy, MuthuSenthil Pandian, P Ramsamy, AN Prabhu, Influence of ^{60}Co gamma irradiation on the structural and optical properties of 2-aminopyridinium 4-nitrophenolate 4-nitrophenol crystals, **Current applied Physics** 37(2022) 1-7[Elsevier] [Q2].

CONFERENCES / WORKSHOPS / FDP

- ★ Presented a research paper titled “Growth of efficient third-order nonlinear optical single crystal for optical limiting and photonics applications” in the international conference on fiber optics and photonics (Photonics-2018) at IIT Delhi, New Delhi in December-12-15, 2018.
- ★ Presented a research paper titled “A Chalcone Derivative Single Crystal for the Investigation of Linear and Nonlinear Optical Properties for Laser Assisted Applications” in the 64th DAE Solid State Physics Symposium at IIT Jodhpur in Dec 18-22 2019.
- ★ Participated in the “three day’s workshop on computational methods in physics and chemistry” organized by IISC Bangalore and MAHE Manipal from 6-8 august 2018.
- ★ Participated and presented a research paper titled “study of linear and nonlinear optical properties of tosyloxy chalcone single crystal for optical limiting applications” in the 6th national conference (CMPA-2018) at MIT Manipal in September 11-12, 2018.
- ★ Participated in the “Thematic workshop and call for CSR projects on material science research od social relevance,” jointly organized by e University and UGC DAE. Indore on May 25-26, 201.
- ★ Attended one week online certificate course on “Digital teaching techniques” Organized by ICT academy from December 27 – 31·2021.
- ★ Participated in the “three day’s workshop on “Quantum computation and animation of physics” organized by Bangalore Institute of Technology, Bangalore from 2-4 Feb 2023.

DECLARATION

I hereby declare that all the above-mentioned information are true to the best of my knowledge and will be willing to abide by the rules and regulations.

Dr Vinay Parol

