

# Dr. Thejas Gopal Krishne Urs, M.Sc, PhD

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## Education

2007 – 2010 **BSc** (Physics, Mathematics and Computer Science)  
**NIE Science College, University of Mysore**

Jun 2010 – May 2012 **MSc**, Condensed Matter Physics  
**Davangere University, Davangere, Karnataka,  
India**



## PhD

Jan 2015 – Sep 2018 **Mangalore University, Mangalagangothri, Mangalore, India**

## Thesis

*“Studies on Characterization of Polymer Composites and Analysis of the Data with different Mathematical Models”*

(Under the Supervision of: Prof. Y. Sangappa)

## Experience

April 2021- Present

**Assistant Professor**  
Department of Physics  
PES College of Engineering, Mandya

Oct 2019 – June 2020

**Assistant Professor**  
Department of Post Graduate Studies in Physics  
JSS College of Arts Commerce and Science, Ooty Road, Mysore

Nov 2014 – March 2019

**Senior Project Fellow** (Involved in teaching M.tech in Materials Science)  
University of Mysore, Center for Materials Science Mysore, India

Nov 2012 – Nov 2014

**Project Fellow** (Involved in teaching M.tech in Materials Science)  
University of Mysore, Department of Physics Mysore, India

## Awards & Grants

<i>Dec 2018</i>	Award: <b>2018 IUCr Young Scientist award</b> (AsCA 2018, Auckland)
<i>Dec 2016</i>	Award: <b>Karnataka State Eligibility Test for Lectureship (KSET)</b>
<i>May 2014</i>	Scholarship: <b>Scientific Exchange Scholar, Department of Physics and Astronomy, Wayne State University, Detroit - USA</b>

## Skills & Activities

<i>Skills</i>	Materials Characterization; Synthesis of Bio-degradable polymers and polymeric composites for packaging applications; X-ray Diffraction and analysis; Synthesis of Nanoparticles and characterization;
<i>Languages</i>	English, Hindi, Kannada
<i>Scientific Memberships</i>	<b>The Indian Science Congress Association, India - Life Member</b> <b>IUCr Associate. 2018 – 2021</b> (International Union for Crystallography)

## Publications

<i>Journal Articles</i>	<b>28</b>
<i>Chapters in Book</i>	<b>2</b>
<i>Books (Edited)</i>	<b>1</b>
<i>Conference Proceedings</i>	<b>6</b>

## Books (Edited)

### *Emergent Research on Polymeric and Composite Materials*

R Somashekar and **Thejas Urs G, 2017, IGI Global Publications, USA**

### *Structure Defines Properties*

R Somashekar and **Thejas Urs G, 2023**

*(Accepted for Publication, Cambridge Scholars publishing, UK)*

## Book Chapters

1. Thejas Gopal Krishne Urs, R Somashekar: *Crystal Structure of Wild and Domestic Silk Fibres Using Linked-Atom Least-Squares Method*. Handbook of Sustainable Polymers: Structure and Chemistry, Edited by Vijay Kumar Thakur, Manju Kumari Thakur, **05/2016**: pages 183. CRC Press.
2. Thejas Gopal Krishne Urs, R Somashekar: *Fibre Diffraction and Whole Powder Pattern Fitting in Polymers*. Emergent Research on Polymeric and Composite Materials, Edited by R Somashekar and Thejas Urs G, **09/2017**: pages 1-37, IGI Global Publications, USA

## Patents

1. Gowtham G K, Vinayakprasanna N Hegde, Manju V V, Hemaraju B C, Pradeep T M and **Thejas Urs G** (2022) *A Nanostructured Unidirectionally Conducting Polymer* (Indian patent No.202241064809 A) Intellectual Property India. (*Applicant: Dr. Thejas Urs G*)
2. Ananda H T, **Thejas Urs G**, Charan Kumar H C, Harsha. M, Sushma M, Gowtham G K (2022) *A Method of Electrochemical Deposition of Nanostructured Conducting Polymer Coating on Metallic Nanostructures* (Indian patent No. 202241067215 A) Intellectual Property India. (*Applicant: Dr. Gowtham G. K & Dr. Thejas Urs G*)

## Top five publications

1. Gowtham, G. K., **G. Thejas Urs**, S. Raghavendra, D. Mahadevaiah, H. Somashekarappa, and R. Somashekar. *Investigation on optical switching behaviour of regenerated and non-regenerated silk by nanosecond Z-scan technique. Physica Scripta*, **2021**, 96(12), 125873. (IF: 2.48)
2. **Thejas G. Urs**, G. K. Gowtham, M. B. Nandaprakash, D. Mahadevaiah, Y. Sangappa, R. Somashekar, *Determination of force constant and refractive index of a semiconducting polymer composite using UV/visible spectroscopy: a new approach, Indian Journal of Physics*, **2017**, 91(1) 53-56. (IF: 1.41)
3. **Thejas G Urs**, Karthik Bharath, Sangappa Yallappa, Somashekar Rudrappa, *Functional data analysis techniques for the study of structural parameters in polymer composites. Journal of Applied Crystallography*, **2016**, 49(2), 594-605. (IF: 3.42)
4. H. T. Ananda, **G.Thejas Urs**, R. Somashekar: *Preparation and characterization of conductive PVA/Gly:Na<sub>2</sub>SO<sub>4</sub> polymer composites. Polymer Bulletin*, **2015**, 73(4), 1151-1165. (IF:1.85)
5. **Thejas G Urs**, Radhika V. H, Basavaraj, R. V, M. Niranjana, A Manjunath, R. Somashekar, *Study of optical and conducting properties of FeCl<sub>3</sub> doped PVA polymers. Progress in Crystal Growth and Characterization of Materials*, **2014**, 60(3-4), 87-93.(IF: 6.0)

## Journal Articles (SCI indexed)

6. Gowtham G K, **Thejas Gopal Krishne Urs**, Manju V V, Nandaprakash M B, Mahadeviah, Somashekarappa H, Somashekar R. *Crystallite Shapes and Functional Data Analysis of Silk forms using X-ray Diffraction: Microwave Irradiation Effects*, *Biointerface Research in Applied Chemistry*, **2023**, 13(3), 241.
7. B. N. Anantha Kumar, J. Mahadeva, H. Somashekarappa, R Somashekar & Thejas Urs G. *3-D Representation of Young's, Shear and Linear Moduli of Six Sulfonamide based Compounds using GULP*, *Journal of Research in Physics and Applied Sciences*, **2021**, 4(2), 43-56.
8. G K Gowtham, **G Thejas Urs**, H Somashekarappa, R Somashekar, *Preparation and Crystal Structure of Carbon soot: A new approach*, *AIP Conference Proceedings*, **2020**, 2265, 030164.

9. Dinesha V Hegde, Mahesha C. B, Gowtham G. K, **Thejas G. Urs**, Nandaprakash M. B, Mahadevaiah D & Somashekar R, *Studies on physical properties of wine palm and Roselle natural fibers*, Journal of Natural Fibers, **2019**, 16(8), 1166-1176. (IF: 1.25)
10. S. R. Madhuri, N. S. Namitha, M. B. Kusuma Urs, G. K. Gowtham, **Thejas G. Urs**, R. Somashekar, *Modelling of X-ray patterns using Fourier transforms: application to nanomaterials*, Indian Journal of Physics, **2018**, 92(12), 1525-1532. (IF: 1.4)
11. H. T. Ananda, **G. Thejas Urs** and R. Somashekar, *Characterization and microstructure of HPMC/Gly: AgNO<sub>3</sub> polymer composites*, AIP Conference Proceedings, **2018**, 1942, 040002
12. K. Hemalatha, **G. Thejas Urs**, D. Mahadevaiah, H. Somashekarappa, K. Byrappa, R. Somashekar: *Effect of NiCuZnFe<sub>2</sub>O<sub>4</sub> on the microcrystalline properties of PVA/CMC polymer blends*. Materials Research Innovations, **2017**, 21(2), 122-128. (IF: 1.14)
13. **Thejas G. Urs**, Y. Sangappa, K. Byrappa, R. Somashekar: *Determination of crystallite shapes in polymer composites using X-ray diffraction results*. AIP Conference Proceedings, **2017**, 1832, 040012.
14. **G Thejas Urs**, Nanda Prakash, H T Ananda, R Somashekar: *Radial distribution function of natural fibres and synthetic water soluble polymers using X-ray diffraction*. Indian Journal of Fibre and Textile Research **2016**, 41(2), 9-12. (IF: 0.45)
15. **Thejas Urs G.**, Y. Sangappa, R. Somashekar: *Stochastic analysis of experimentally determined physical parameters of HPMC:NiCl<sub>2</sub> polymer composites*. AIP Conference Proceedings, **2016**, 1731, 040007.
16. K. Hemalatha, Mahadevaiah, G. K. Gowtham, **G. Thejas Urs**, H. Somashekarappa, R. Somashekar: *Microstructural and electrical properties of PVA/PVP polymer blend films doped with cupric sulphate*. AIP Conference Proceedings **2016**, 1731(1), 070007.
17. Mahadevaiah, **G. Thejas Urs**, K. Byrappa, R. Somashekar: *Effect of Microwave Irradiation on the Microstructural Properties of Bivoltine Silk Fibroin Films*. Procedia Engineering **2016**, 141, 53-58. (IF: 1.04)
18. **G Thejas Urs**, H T Ananda, Nanda Prakash, K Byrappa, R Somashekar: *Crystal and molecular structure of muga wild silk fibres based on [Ala-Gly] n sequence using LALS technique*. Indian Journal of Fibre and Textile Research **2015**, 40, 131-136. (IF: 0.45)
19. K. Hemalatha, Mahadevaiah, **Thejas Urs G**, H. Somashekarappa, R. Somashekar: *Spectroscopic analysis of PVA/CMC: NiCuZnFe<sub>2</sub>O<sub>4</sub> polymer nanocomposites*. AIP Conference Proceedings **2015**, 1665, 070032.
20. **Thejas Gopal Krishne Urs**, Ananda H. T, Mahadevaiah, R. Somashekar: *Spectroscopic studies of PVA/Gly:Na<sub>2</sub>SO<sub>4</sub> polymer composites*. AIP Conference Proceedings **2015**, 1665, 040026.
21. **Thejas Gopal Krishne Urs**, Mahadevaiah, Rudrappa Somashekar: *Studies on Structural and Conducting Properties of Goethite Nanoparticles Doped HPMC Polymer Films*. Journal of Polymers **2014**, 2014, 201464 (IF: 1.27)

22. M. B. Nanda Prakash, **G. Thejas Urs**, H. T. Anand, R. Somashekar: *Pair Correlation Studies of CdCl<sub>2</sub> Doped PVA Polymer Films Using X-ray Data*. AIP Conference Proceedings, **2014** 1591 (1), 816-818.
23. **G. Thejas Urs**, M. B. Nanda Prakash, H. T. Ananda, R. Somashekar: *Radial Distribution studies on water soluble polymers using XRD line profile data*. AIP Conference Proceedings, **2014**, 1591 (1), 170-171
24. H T Ananda, **Thejas Urs G**, M B Nanda Prakash, R Somashekar: *Characterization of HPMC/GLY: Na<sub>2</sub>SO<sub>4</sub> Polymer Composite Using X-Ray Technique*. Bull. Pure Appl. Sci. **2013**, 32 (2), 165-173 (IF: 4.89)

### Non-SCI Journals

25. H Ananda, **Thejas Urs G**, Y Prakash, K Hemalatha, H Somashekarappa, R Somashekar: *Microstructures and Electrical Properties of HPMC/PVP Polymer Blend Films Complex with Ferric Chloride (FeCl<sub>3</sub>)*. Material Science Research India **2014**, 11(2), 153-158.
26. M B Nanda Prakash, **G Thejas Urs**, H T Ananda, R Somashekar: *1-D Paracrystalline Model to Simulate a Bragg Reflection: Computation of Crystallite Size and Lattice Strain*. Crystal Structure Theory and Applications **2014**, 3(3), 48-55.
27. Mahadevaiah, **Thejas Urs G**, T Demappa, R Somashekar: *Characterization of Zinc Nanoferrite Doped HPMC Polymers Using X-Ray Diffraction*. Journal of Nuclear Physics, Material Sciences, Radiation and Applications, **2014**, 1(2), 201-205.
28. Mahadevaiah, **Thejas Urs G**, K Byrappa, R Somashekar: *Preparation and Characterization of Mulberry Silk Fibroin Films*. International Annals of advanced Scientific Research **2014**, 1(1), 001-007

### Conference Proceedings

1. Nagaraja, E., A. S. Jagadisha, **Thejas Urs G** and H. S. Jayanna. Effect of gamma irradiation on structural and dc electrical properties of CrFe<sub>2</sub>O<sub>4</sub> ferrite. *Recent Advances in Materials Science and Biophysics (2018)*: 386.
2. **Thejas Urs G**, Gowtham G K, H Somashekarappa and R Somashekar, *Structure-property relation in HPMC:CoCl<sub>2</sub> polymer composites using functional data analysis*, Acta Crystallographica Section A: Foundations and Advances, **2017**, 73 (a2), c939.
3. Gowtham G K, **Thejas Urs G**, Mahadevaiah D, K Byrappa, Somashekar R, *Imaging of crystallite shapes in various silk forms using PXRD*, Acta Crystallographica Section A: Foundations and Advances, **2017**, 73 (a2), c935.
4. Manju V V, **Thejas Urs G**, Divakara S and R Somashekar, *Imaging of crystalline regions in cotton fibers using powder XRD*, Acta Crystallographica Section A: Foundations and Advances, **2017**, 73 (a2), C564.

5. M B Nanda Prakash, **G Thejas Urs**, H T Ananda, R Somashekar: *Variation of Crystallite Ellipsoids for Varieties of Cotton Fibers Using Whole Powder Pattern Fitting Technique*. Polycon **2014**, Mysore; 04/2014.
6. Mahadevaiah, **G Thejas Urs**, K Byrappa, R Somashekar: *Microstructural Parameters of Bivoltine Silk Films using X-Ray Diffraction Studies*. Polycon, **2015**, Mysore; 04/2014.

## Reviewer

1. Results in Chemistry (Elsevier)
2. Polymer bulletin (Springer)
3. AIP conference proceedings – DAE SSPS conference (American Institute of Physics)

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