Dr. Kaushik P. Thummer

Assistant Professor
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Educational qualification

- **M.Sc. (Physics)** Solid State Physics
  Saurashtra University, Rajkot (1989)
- **M.Sc. (Physics)** Nuclear Physics
  Saurashtra University, Rajkot (1996)
- **Ph.D. (Physics)**
  Title: "Magnetic and Electrical Properties of Spinel Oxides"
  Saurashtra University, Rajkot (2001)

Experience

- Working as Assistant Professor in Electronics, Department of Electronics, Saurashtra University, Rajkot since June 16, 2014.
- Assistant Professor in Electronics, Department of Electronics, Saurashtra University, Rajkot from May 2004 to March 2007 (under UGC 10th Plan).

Research Projects:

- Completed a Seed Money Research Project titled "Study of Structural Properties and Infrared Spectroscopy of Spinel Oxides" amounting Rs. 100000 funded by Saurashtra University, Rajkot.

Research Guidance:

Sr. No.	Name of the Scholar	Title of the Thesis	Completion Month &Year
1	Mr. Amit N. Maheta Reg. No.16213 Reg. Date 1/1/2016	Structural, Magnetic and Electrical properties of Ferrite Material processed through High Energy ball milling process for different time duration	October 2023
2	Mr. Chetan P Boghara Reg. No.18192 Reg. Date 1/1/2018	Development of Low-Cost Advertising Broadcast System based on IoT	April 2024
3	Mr. Sagar G Jasani Reg. No.20053 Reg. Date 1/1/2020	IoT based Automation in Industries	Continued…

Administrative Work

- Member, Board of Studies, Electronics, Saurashtra University, Rajkot.
- Coordinator, IGNOU, LSC-42012, Department of Electronics, Saurashtra University, Rajkot.
- Member, Departmental IQAC, Department of Electronics, Saurashtra University, Rajkot.
- Member, Departmental Purchase Committee, Department of Electronics, Saurashtra University, Rajkot.

Research Papers (PUBLISHED RESEARCH PAPERS):

1. Hemaxi Vyas, Mahesh N Jivani, Harikrishna Parikh, **Kaushik Thummer**; IOT-ENABLED SEGMENTED CONTROL OF LED BATTEN FOR ENERGY EFFICIENT SMART LIGHTING APPLICATIONS, International Journal of Emerging Technologies and Innovative Research (www.jetir.org), Vol.12, Issue 5, May-2025, pp. j539-j546, ISSN:2349-5162, https://doi.org/10.56975/jetir.v12i5.563427
2. Rathod Sachin, Jivani Mahesh, Gajera Kalpesh, Parikh Harikrishna, **Thummer Kaushik**; Design and Implementation of an efficient Brushless DC Motor Drive System for Motor Control Applications, International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), Volume 14, Issue 5, May 2025, pp. 1670-1675, e-ISSN: 2278 – 8875, p-ISSN: 2320 – 3765, DOI:10.15662/IJAREEIE.2025.1405029
3. Amit N Maheta, Kunal B Modi, Drashti K Thummar, Nimish H Vasoya, Harikrishna N Parikh and **Kaushik P Thummer**. Influence of simultaneous substitution of Cr+3 and Al+3 ions and high energy ball milling on the structural and magnetic properties of magnesium ferrite. Int. J. Phys. Math. 2025;7(1):57-66. DOI: 10.33545/26648636.2025.v7.i1a.110
4. Chetan P. Boghara, **K.P. Thummer**, M. N. Jivani, Harikrishna Parikh; Water Quality Monitoring Using Physical Web Concept and Alert via Whatsapp Messenger, International Journal for Research in Applied Science and Engineering Technology, Volume 11 Issue VIII, Aug 2023 pp. 1070-1075, DOI: 10.22214/ijraset.2023.55272
5. Amit N Maheta, **K P Thummer**, Kunal B. Modi, Hiren H. Joshi; structural and elastic properties of nanocrystalline spinel ferrites prepared by high energy ball milling method, International Journal of Physics and Mathematical Sciences, 2023 Vol. 13, pp. 1-5
6. **K. P. Thummer**, Ashish R. Tanna, Hiren H. Joshi; Rietveld structure refinement and elastic properties of MgAlxCrxFe2−2xO4 spinel ferrites. AIP Conf. Proc. 1 May 2017; 1837 (1): 040058. https://doi.org/10.1063/1.4982142
7. **K. P. Thummer**, A. R. Tanna, H. H. Joshi; Comparison of structural and magnetic properties of ZnxMg1.5-xMn0.5FeO4 and MgAlxCrxFe2-2xO4 spinel oxides. AIP Conf. Proc. 23 May 2016; 1731 (1): 130038. https://doi.org/10.1063/1.4948144
8. A.R.Tanna, K.M.Sosa, **K.P.Thummer**,H.H.Joshi; Infrared Spectroscopy Study of Mn2+ doped CoFe2O4 nano-ferrites, Proceedings of RK University's First International Conference on Research & Entrepreneurship, Jan 2016, ISBN: 978-93-5254-061-7, https://www.fdsr.rku.ac.in/uploads/ICRE-2016-PROCEEDINGS.pdf, pp. 1052-1058
9. **Thummer K.P.**, Chhantbar M.C., Modi K.B., Joshi H.H.; Effect of Mn4+ substitution on magnetic behaviour of cobalt ferrite, Indian Journal of Physics, Volume 79, Issue 1, January 2005, pp. 41-45
10. THUMMER K.P., PANDYA M.P., JANI K.H. et al. Microscopic and macroscopic magnetic properties of MgAlxCrxFe2 − 2xO4 spinel ferrite system. J Mater Sci 40, 5215–5221 (2005). https://doi.org/10.1007/s10853-005-4415-0
11. **K.P Thummer**, M.C Chhantbar, K.B Modi, G.J Baldha, H.H Joshi; 57Fe Mössbauer studies on MgAlxCrxFe2-2xO4 spinel system, Materials Letters, Volume 58, Issues 17–18, 2004, pp. 2248-2251, ISSN 0167-577X, https://doi.org/10.1016/j.matlet.2004.01.039.
12. **K.P. Thummer**, M.C. Chhantbar, K.B. Modi, G.J. Baldha, H.H. Joshi; Localized canted spin behaviour in ZnxMg1.5−xMn0.5FeO4spinelferritesystem, Journal of Magnetism and Magnetic Materials, Volume 280, Issue 1, 2004, pp. 23-30, https://doi.org/10.1016/j.jmmm.2004.02.017.
13. **Thummer K.P.**, Pandya P.M., Jani K.H., Modi K.B., Joshi H.H; Microscopic and macroscopic magnetic properties of MgAlxCrxFe2-2xO4 spinel ferrite system, Fiziko-Khimicheskaya Mekhanika Materialov, Volume 40, Issue 1, 2004, Pages 86-95, ISSN: 04306252

14. **Thummer K.P.**, Pandya M.P., Jani K.H. et al. Microscopic and Macroscopic Magnetic Properties of the MgAl x Cr x Fe2 − 2x O4 Spinel Ferrite System. Materials Science 40, 102–112 (2004). https://doi.org/10.1023/B:MASC.0000042792.25335.14
15. **Thummer K.P.**, Joshi H.H. & Kulkarni R.G.: Electrical and dielectric properties of zinc substituted magnesium rich manganese ferrites. Journal of Materials Science Letters 18, 1529–1532 (1999). https://doi.org/10.1023/A:1006654720054

Expert Talk/Resource Person/Invited lecture/paper

1. **"Advancements in Semiconductor Technology and Embedded System Design"** at the Workshop organized by Centre for Skill Development, Saurashtra University, Rajkot on 03 February 2025.
2. **10 Sessions** for the One-week workshop on **"Arduino Basics and its Applications**", organized by Department of Electronics to celebrate "Shikshak Parv" during 5-9 September 2022.

Workshop/Training/Refresher/Orientation Programs attended:

1. UGC sponsored Orientation Programme at UGC: Academic Staff College, Saurashtra University, Rajkot during 20/09/2004 to 17/10/2004
2. Refresher Course in "Innovative Research Possibilities (New Dimension of Research)" at UGC: HRDC Saurashtra University, Rajkot during 29/02/2016 to 20/03/2016
3. Refresher Course in Core Values of Educational Policy Thrust Area: "The Concept of Indian Education: a Panoramic View" at UGC: HRDC Saurashtra University, Rajkot during 03/06/2019 to15/06/2019
4. Refresher Course in "Excellence in Higher Education (MD)" Thrust Area: "an Integrated Approach of Planning for Teaching and Learning" at UGC: HRDC Saurashtra University, Rajkot during 04/07/2022 to 16/07/2022
5. Refresher Course in "Bharatiyata" Thrust Area: "Indian Knowledge System" at UGC: HRDC Saurashtra University, Rajkot during 02/10/2023 to 14/10/2023
6. NEP 2020 Orientation and Sensitization Programme under Malviya Mission Teacher Training Program (MM-TTP) of UGC at UGC: Malaviya Mission Teacher Training Centre, Saurashtra University, Rajkot during 15-01-2024 to 25-01-2024

Conferences & Seminars

- Attended **52** International, National and State level Conferences