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(As on 01-09-2020)

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09423311932(M)
5. E-Mail : [jaisonjosephp@gmail.com](mailto:jaisonjosephp@gmail.com)
6. Educational qualification : B.Sc. in Physics  
(1984 Bach, 1<sup>st</sup> class)  
University of Kerala, Thiruvanthapuram, Kerala, India  
: M.Sc.in Physics (Materials Science)  
(1986 Bach, Distinction)  
M.G.University, kottayam, kerala.India.  
: Qualified Graduate Aptitude Test in Engineering  
(GATE-1986)  
: Ph. D in Physics  
(2016, Topic: Ferrite Thin Films)  
Dept. of Physics, Goa University, Goa, India
7. Professional training : One month training in NDT at VSSC,  
Thiruvananthapuram, Kerala, India.  
: 28 days training in remote sensing at NIO, Goa, India.  
: Two months Indian Academy of Science summer  
research fellowship at SSPD, BARC, Mumbai, India.  
: 6 days School on “Physics with Low Temperature and  
High Magnetic Field “at UGC-DAE CSR. Indore, India.
8. Teaching experience : 3 years as Teacher. Grade. I at Govt. Higher  
Secondary School, Valpoi, Goa.  
6 years as lecturer at Govt. College, Khandola. Goa

5 years as lecturer (senior scale) at Govt. College, Khandola.Goa

18 years as Associate Professor at Govt. College, Khandola.Goa

Served as HOD, Dept. of Physics, Govt. College, Khandola, Goa, on rotational basis

9. Technical experience

: Hands on experience in handling XRD, GIXRD, FT-IR Micro-Raman spectrometer, Mössbauer Spectrometer SEM, TEM, AFM, VSM, & SQUID VSM

Consultancy provided in Design, Development and fabrication of

1. Ac Susceptibility Measurement System
2. Thermo power Measurement System
3. Two Probe Resistance Measurement System
4. Four Probe Thin Film Resistance Measurement System
5. Pulse Field Hysteresis Loop Tracer

10. Area of interest

: Materials Science (Magnetic Materials, Spinal Ferrites, Ferrite Thin Films, Thermoelectric materials, Transport properties of conducting gels)

11. Current area of research

: Thermoelectric materials, Transport properties of conducting gels

12. Research projects undertaken

**1. Project title.**

**Synthesis, characterization and study of Electrical & Magnetic properties of Nanostructured Mixed ferrite materials**

1. Funding agency.UGC
2. Funds received .Rs.200000
3. Other Department involved .Dept. of Chemistry Govt.College, Khandola.
4. Project Ref. No. UGC/47-820/04 (WRO)
5. Duration of the project. August 2009-July 2012

## 2. Project title.

### **Surface and bulk studies of nano-particle spinel ferrite thin films.**

1. Funding agency. UGC-DAE-CSR, Indore
2. Funds received .Rs.2,29,800
3. Other organization involved. UGC-DAE-CSR, Indore
4. Project Ref. No. UGC-DAE-CSR Letter No. CSR-IC/CRS-84/2014-15/591/ Dt.18<sup>th</sup> Sept.2014
5. Duration of the project. September 2015-August 2017

## 3. Project title.

### **Investigation of desired properties for thermo power application in nano-sized ferrite materials**

1. Funding agency. DST Govt. of Goa
2. Funds received.Rs. 5,80,000
3. Other Department involved .Dept. of Chemistry, Govt. College, Khandola
4. Project Ref. No. 6-307-2018/S/T/DIR/820 Dt.1<sup>st</sup> January 2020
5. Duration of the project. January.2020- December. 2022

#### **Awards received**

1. Dewang Mehta National education awards, (Best professor in physics studies, 2019), instituted by Dewang Mehta foundation.
2. I<sup>st</sup> International Dissertation & Doctoral thesis Award instituted by Indian academicians and Researchers Association. (For the period 2000-2010)

### **Papers Published in International Journals**

1. Swelling and DC Conductivity Behaviour of Gelatin-Based Ferrogels. Mathias B. Lawrence, **Jaison Joseph**, Twinkle Usapkar, Firman Azavedo **Journal of Inorganic and Organometallic Polymers and Materials(Springer) (Impact Factor: 1.941)**  
Doi: <https://doi.org/10.1007/s10904-020-01682-8>
2. D.C. conductivity behaviour of poly(vinyl alcohol)-based ferrogels: role of borax and carbonyl iron Mathias B. Lawrence. **Jaison Joseph**, Karesh Phondekar, Kiran Moodi **Polymer Bulletin (Springer)(Impact Factor: 2.014)**  
Doi: <https://doi.org/10.1007/s00289-019-02719-w>

3. Synthesis, Structural and Morphological Property of BaSnO<sub>3</sub> Nanopowder Prepared by Solid State Ceramic Method. Jibi John, V.P Mahadevan Pillai, Anitta Rose Thomas, Reji Philip **Jaison Joseph**, S.Muthunatesan, V.Ragavendran, Radhakrishna Prabhu IOP Conf. Series: **Materials Science and Engineering (IOP Publishing)**  
DOI: [10.1088/1757-899X/195/1/012007](https://doi.org/10.1088/1757-899X/195/1/012007)
4. Resistivity-Thermo power Co-relation Derived Temperature Dependent Transport Behaviour of Mn<sub>x</sub>Zn<sub>1-x</sub>Fe<sub>2</sub>O<sub>4</sub> Nanoparticles. **Jaison Joseph**, R. B. Tangsali, S. M. Gurav **Journal of Taibah University for Science (Elsevier)**  
DOI: <http://dx.doi.org/10.1016/j.itusci.2016.09.005>
5. Microstructure and Magnetic Properties of Nano Crystalline Manganese Ferrite Thin Film Fabricated by Pulse Laser Deposition. **Jaison Joseph** R. B.Tangsali, V.P.Mahadevan Pillai, R.J.Choudhary, D.M.Phase & V. Ganeshan, **Advanced Science Letters**. [ Adv. Sci. Lett. 22, 825-829 (2016) ] <https://doi.org/10.1166/asl.2016.6936> (Research Gate Current impact factor: 1.25)
6. Structure and magnetic properties of highly textured nanocrystalline Mn–Zn ferrite thin film. **Jaison Joseph**, R.B.Tangsali, V.P.Mahadevan Pillai, R.J.Choudhary, D.M.Phase & V. Ganeshan, **PhysicaB** 456 (2015) 293–297 <http://dx.doi.org/10.1016/j.physb.2014.09.015> (Impact Factor:1.24)
7. Synthesis, characterization and Transport properties of Co<sub>x</sub>Zn<sub>1-x</sub>Fe<sub>2</sub>O<sub>4</sub> Nanoparticles. **Jaison Joseph**, R B Tangsali, S M Gurav **IOP Conf. Series: Materials Science and Engineering**73 (2015) 012098 [doi:10.1088/1757-899X/73/1/012098](https://doi.org/10.1088/1757-899X/73/1/012098)
8. Microstructure and magnetic properties of patterned nano crystalline zinc ferrite thin film fabricated by pulse laser deposition. **Jaison Joseph** , R. B. Tangsali V.P.Mahadevan Pillai, R.J.Choudhary, D.M.Phase & V.Ganeshan, **Materials Research Bulletin** 61 (2014) 475–480 <http://dx.doi.org/10.1016/j.materresbull.2014.10.061> (Impact Factor: 2.435)
9. Magnetic Properties of Textured Nanocrystalline Mn-Zn Ferrite Thin Films Fabricated by Pulsed Laser Deposition. **Jaison Joseph**, R.B.Tangsali, R.J.Choudhary, D.M.Phase & V.Ganeshan, **Int. J. Thin Fil. Sci. Tec.** 3, No. 3, 81-87 (2014) <http://dx.doi.org/10.12785/ijtfst/030302> (Google-based Impact Factor: 0.938)
10. Characterization and Mössbauer Study of Ni<sub>0.45</sub>Zn<sub>0.55</sub>Fe<sub>2</sub>O<sub>4</sub> Nanoparticles Prepared by Novel Precursor Method, M. M. Kothawale, R. B. Tangsali, **Jaison Joseph**, G. K. Naik, J. S.Budkuley, Sher Singh Meena, S. M. Yusuf and J. V. Yakhmi **AIP.Conf.Proc.**1349,1165-1166(2011) [doi.10.1063/1.3606278](https://doi.org/10.1063/1.3606278)

### **Papers published at National Level.**

1. Nanoparticle Spinel Ferrite Thin Films-Deposition and Characterization. *Jaison Joseph & R.B.Tangsali*, Paper presented at National Conference MAPC&PAMC 2010, held at S.H.K.College, Devgad, Maharashtra during 16-17 January 2010 and Published in book.

### **Books with ISBN/ISSN numbers. 1.**

#### **Authored a chapter in the book Mathematical Aspects of Physical concepts and Physical Aspects of Mathematical Concepts**

(ISBN:978-81-8356-798-5) by Tilak Wasan, Discovery Publishing House PVT.LTD, New Delhi.

### **Invited lectures delivered**

1. **Novel Nano structured Materials for Tailored Applications.** National Seminar on Advancements in Science and Technology,(NCAST2019) Government college of Arts, science and Commerce Khandola , Marcela , Goa held on 9-2-2020
2. **Nano grain ferrite thin films.** Prof. P.S.Chcrian Memorial Lecture. Post graduate and research department of physics, Newman College, Thodupuzha held on 26<sup>th</sup> august 2017
3. **Thin films with nano grains, an efficient way to tune in desirable physical properties** International meeting on highly correlated systems(IMHCS2017), School of pure and applied physics & IIUCNN, Mahatma Gandhi University, Kottayam, Kerala. 24-26<sup>th</sup> march 2017
4. **Nano Grain Ferrite thin films an effective way to tune in desirable magnetic and transport properties in space constrained miniature electronic gadget architecture** 7<sup>th</sup> International Conference on Emerging Areas in Materials Engineering (ICEAME2017) Amal Jyoti college of Engineering, Kanjarapalli,Kerala, 13-15<sup>th</sup> July 2017

### **Papers presented at International conferences:**

1. **A novel four probe thin film resistance system.** Dr. Jaison Joseph & Thiruprasad. G.Narvekarar,1st International conference on Materials and Environmental Science(ICMES2018), held at Kolhapur University, Kolhapur during 7-8 August -2018
2. **Resistivity Enhancement in C-Axis Grown Mn-Zn Nano Ferrite Thin Films Fabricated by RF Sputtering Technique.** *Jaison Joseph, R. B. Tangsali*,

*V.P.Mahadevan Pillai, & V.Ganeshan.* 4<sup>th</sup> International conference on nano science and technology (Cochin Nano 2016) held at Cochin University, Cochin, Kerala, India during 20-23 February 2016.

3. **Microstructure and Magnetic Properties of Nano Crystalline Manganese Ferrite Thin Film Fabricated by Pulse Laser Deposition.***Jaison Joseph, R. B. Tangsali, V.P.Mahadevan Pillai, R.J.Choudhary, D.M.Phase & V.Ganeshan* 3<sup>ed</sup> International Conference on Nanotechnology (NANOCON 014) held at Bharati Vidyapeeth University Pune, India during 14-15 October 2014.
4. **Surface Morphology Induced Magnetic Property Enhancement on textured Nano Crystalline Mn-Zn ferrite thin films.** *Jaison Joseph, R. B. Tangsali* 7<sup>th</sup>India-Singapore Symposium on Experimental condensed Matter Physics held at IIT Bombay,Powai,Mumbai India during February 24-26, 2014.
5. **Synthesis, characterization and Transport properties of  $\text{Co}_x\text{Zn}_{1-x}\text{Fe}_2\text{O}_4$  Nanoparticles** *Jaison Joseph, R. B. Tangsali, S. M. Gurav*International Conference on Materials Science and Technology (ICMST-2012) held at St.Thomas College Pala.Kerala,India during June 10-14, 2012.( abstract: p-192).
6. **Synthesis, characterization and Transport properties of  $\text{Mn}_x\text{Zn}_{1-x}\text{Fe}_2\text{O}_4$  Nanoparticles;** *Jaison Joseph, R. B. Tangsali, S. M. Gurav.*International Conference on Nano Science and Technology (ICONSAT-2012) held at ARCI Hyderabad,India during January 20-23, 2012.
7. **Characterization and Mössbauer Study of  $\text{Mn}_x\text{Zn}_{1-x}\text{Fe}_2\text{O}_4$  Nanoparticles** *Girish Kundaikar,Jaison Joseph, R. B. Tangsali, V.J. Pissurlekar, J. S. Budkuley, Sher Singh Meena S. M. Yusuf and J. V. Yakhmi*(International conference COCHIN- NANO held on 11-14 August 2011 at Cochin University,Kochi,)
8. **Mössbauer Study of  $\text{Zn}_{1-x}\text{Ni}_x\text{Fe}_2\text{O}_4$  Nanoparticles;** *Sher Singh Meena, M M Kothawale, Jaison Joseph, R B Tangsali, G.K.Naik, S M Yusuf, and J.V.Yakhmi* ,( DAE-BRNS 3<sup>rd</sup> International symposium on materials chemistry) (December7-11, 2010) at BARC Mumbai. F-29.

#### **Papers presented at National conferences:**

1. **Investigations into the Transport & Magnetic Properties of Nanoparticle Mixed Metal Oxide Thin Films Deposited by RF Sputtering and PLD Methods.** *Jaison Joseph*( 61<sup>st</sup> DAE-Solid State Physics Symposium (December 26-30, 2016) at KIIT University, Bhubaneswar.)( abstract: p-337)

2. **Physical Property Enhancements in Nano Ferrite Thin Films** *Jaison Joseph, R. B. Tangsali* (National Level Symposium on Materials characterization and manufacturing (MCM2016) (August 18-19 2016) at Goa University, Goa.
3. **Magnetic Property Enhancement on Textured Nanocrystalline Mn-Zn Ferrite Thin Films.** *Jaison Joseph, R. B. Tangsali* 83<sup>rd</sup> NASI Annual session and symposium held at Goa University, Goa, India during December 05-07,2013
4. **Characterization and Mössbauer Study of Ni<sub>0.45</sub>Zn<sub>0.55</sub>Fe<sub>2</sub>O<sub>4</sub> Nanoparticles Prepared by Novel Precursor Method;** *M. M. Kothawale, R. B. Tangsali, Jaison Joseph, G. K. Naik, J. S. Budkuley, Sher Singh Meena, S. M. Yusuf and J. V. Yakhmi.* (55<sup>th</sup> DAE-Solid State Physics Symposium (December26-30,2010) at Manipal University, Manipal.) ( abstract: p-176)
5. **Nanoparticle Spinel Ferrite Thin Films-Deposition and Characterisation.** *Jaison Joseph, R.B.Tangsali* (National Conference MAPC&PAMC 2010, 16-17 January2010, S.H.K.College, Devgad, Maharashtra)
6. **Nanostructured Mixed Ferrite Thin Films-Deposition and Characterisation.** *Jaison Joseph* (National Seminar on Nano technology And Its Impact On Society, 12th&13<sup>th</sup> Feb2010, St.Xaviers College Mapusa Goa)

#### **Contributions towards Skill Development, Community Service and Engagement**

1. Introduced the topic photography as one of the skill enhancement course subjects in Choice Based Credit System (CBCS)
2. Prepared the syllabus for photography course and was instrumental in getting it approved at board of studies.
3. Introduced it in curriculum from academic year 2018-19 at Govt.College, Khandola.
4. Add on programme in **DIGITAL SLR PHOTOGRAPHY** (The programme envisages providing professional training in production and post production techniques of digital photography at an individual level to general public)