

## **CURRICULAM VITAE**

### **Address for Correspondence**

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### **OBJECTIVE**

To carry out my research career in academic and involve myself fully in the current edge research work.

### **ACADEMIC**

Recently I have been appointed as a **Junior Research Fellow in UGC-BSR Fellowship** based on synthesis of nuclear fuel and magnetic materials, ongoing at Department of Physics, Faculty of Science, The M. S. University of Baroda, under the supervision of Prof. Prafulla K Jha.

| EXAMINATION    | UNIVERSITY/BOARD                      | YEAR       | PERCENTAGE | GRADE  |
|----------------|---------------------------------------|------------|------------|--------|
| Ph. D.         | M. S. University of Baroda, Vadodara  | 09/12/2014 | -----      | -----  |
| M. Phil        | Saurashtra University, Rajkot         | 2013       | 68%        | FIRST  |
| M. Sc. PHYSICS | S.P.University, Vallabh- Vidyanagar   | 2012       | 61.5%      | FIRST  |
| B. Sc.         | M. K. Bhavnagar University, Bhavnagar | 2010       | 50%        | SECOND |
| H. S. C        | G. S. E. B Gandhinagar                | 2007       | 63.20%     | FIRST  |
| S. S. C        | G. S. E. B Gandhinagar                | 2005       | 64.43%     | FIRST  |

### **COMPUTER SKILLS**

**OPERATING SYSTEM and LANGUAGES:** – Linux based Centos, Ubuntu and Fedora as well as Windows, Microsoft office, Fortran and ‘C’ Programming etc.

### **Current Position**

Junior Research Fellow (UGC-BSR Fellowship, New Delhi)  
Department of Physics, Faculty of Science,  
The M. S. University of Baroda, Vadodara

### **Research Interests:**

**Condensed Matter Physics and Nanomaterials:** Current research interests include computational studies (first principles quantum mechanical studies) of, ceramic manganite material (Colossal Magnetoresistance, CMR), Complex oxides, nuclear materials, and transition metal alloys using plane wave pseudopotential methods. Electronic Structure and Low frequency Raman Spectroscopic study and include experimental work, synthesis of CMR materials by different preparation techniques.

### **Workshop/Seminar/Conference/School attended**

- Presented poster in the International Winter School-2018, “Frontiers in Materials Science” at JNCASR Bangalore on 3<sup>rd</sup> - 7<sup>th</sup> December, 2018.
- Presented poster in the International Crystallographic Computing school, at IISc Bangalore on 15<sup>th</sup> -20<sup>th</sup> August, 2017.
- Actively participated in the National Workshop on Characterization Techniques for materials (NWCTM-2017), at Department of Material Science, Sardar Patel University, Vallabh Vidyanagar, Anand on 6<sup>th</sup> – 7<sup>th</sup> March, 2017.
- Actively attended the Workshop on Material Characterizations: Experimental Techniques at Department of Physics, Mohanlal Sukhadia University, Udaipur, Rajasthan, India on 26<sup>th</sup> -28<sup>th</sup> March, 2015.
- Attended the pre-conference school on “Neutrons as Probes of Condensed Matter at Bhabha Atomic Research Centre (BARC) on 27<sup>th</sup> – 31<sup>st</sup> Jan., 2015.
- Attended DST-SERC school on “Density Functional Theory and Beyond: Computational Material and Materials Design”, at The M. S. University of Baroda, Vadodara during 13<sup>th</sup> Nov. to 23<sup>rd</sup> Dec. 2014.

- Actively attended the lecture series module 2 held by UGC-DAE Consortium for Scientific Research, at Indore during 15<sup>th</sup> to 26<sup>th</sup> Sept. 2014.
- Attended Seminar on Physics in Medical Sciences at The M. S. University of Baroda, Vadodara (2014).
- Actively attended the One day seminar on Opportunities in Physics at Saurashtra University, Rajkot (2013).
- Actively participated in Current Trends in Research and Application of Physical science in Gujarat at Sardar Patel University, Vallabh Vidhyanagar, Anand (CTRAPSG-2012).
- Actively participated in One day ACQUAINTANCE PROGRAMME at Saurashtra University, Rajkot (2012).
- Actively participated in the Astronomy Astrophysics and Planetary –space sciences introductory seminar at Sardar Patel University, Vallabh Vidhyanagar, Anand in (2011).
- Actively participated in the State Level Seminar on Condensed Matter Physics – with Nano-science Flavours at department of Physics, Sardar Patel University, Vallabh Vidyanagar, Anand (SCMP -2011).
- Actively participated in 3 day's workshop on astronomy at Bhavnagar, (2009).

### **Conference presentation**

- ☞ National Conference on Recent Trends in Material Science (RTMS-2018), at M. S. University of Baroda, Vadodara (24<sup>th</sup> -25<sup>th</sup> March, 2018)  
**Poster Presentation on Experimental and Density Functional Studies on Vibrational Properties of  $\text{La}_{0.67}\text{Sr}_{0.33}\text{Mn}_{1-x}\text{Fe}_x\text{O}_3$  ( $x=0.15, 0.25$  and  $0.35$ )**
- ☞ International conference on Perspectives in Vibrational Spectroscopy at University of Lucknow, Lucknow (5<sup>th</sup> -8<sup>th</sup> Nov. 2016)  
**Poster Presentation on Influence of Fe Substitution on Raman Spectra of  $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$**
- ☞ National conference on Recent Materials Characterization (NCMC-16)'' at M. S. University of Baroda, Vadodara (18-19 March 2016)  
**Poster Presentation on Investigation of Structural and Morphological Properties of Fe doped at Mn site in  $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$  Manganite System''**
- ☞ National conference on Recent Trends in Science of Materials, 2015 (NCSM-2K15)'' at M. S. University of Baroda, Vadodara (28-30 Dec. 2015)  
**Poster Presentation on Effect of Fe doping on a thermal properties of  $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$  Manganite''**
- ☞ "International Conference on Condensed Matter Physics and Applied Physics (ICC-15)" at Govt. Engg. College, Bikaner, Rajasthan (30-31 October 2015)  
**Poster Presentation on "Synthesis and Characteristic of Nanocrystalline  $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$  Manganites by Solid State Reaction Route"**
- ☞ "International Conference on Condensed Matter Physics (ICCM-14)" at H. P. University, Shimla (4 -6 November 2014)  
**Poster Presentation on "Investigation of Structural, Electrical and Magnetic Properties of Mixed Ferrite System"**
- ☞ National conference on "New Trends in Physics and Materials Science" at C.S.A. Govt. P. G. College, Sehore (25-26 Sep 2013)  
**Oral Presentation on "Investigation on Structural, Electrical and Magnetic Properties of Mixed Ferrite System"**

### **List of Publications**

- ✍ Nidhi M Astik, Prafulla K. Jha and Vasant Sathe, "Temperature effect on Raman Spectroscopic Study of the Fe doped  $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$  Prepared Using Ball Milling Method", Physics of the Solid State, 61, 1-8 (2019) .
- ✍ Nidhi M Astik, H. Soni, P. K. Jha and Vasant Sathe, "Influence of Fe Substitution on Structure and Raman Spectra of  $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ : Experimental and density functional studies, Physica B: Condensed Matter, 541, 103-110 (2018).
- ✍ Nidhi Astik, Prafulla K. Jha and Arun Pratap, "Structural, Morphological and Thermal Properties of Ball Milled Fe Doped Nanoscale  $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ ", J. of Electronic Materials 47 (3), 1937-1943 (2018).
- ✍ Nidhi Astik, Swapnil kumar Patil, Parag Bhargava and Prafulla K Jha, "Synthesis and Characteristic of Nanocrystalline  $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$  Manganites by Solid State Reaction Route"

AIP Conference Proceedings **1728**, 020467 (2016).

- ✍ Nidhi Astik and Prafulla K. Jha, “Investigation of Electrical and Magnetic Properties of Mixed Ferrite System”, AIP Conference Proceedings **1661**, 070001 (2015).
- ✍ Investigation on Structural, Electrical and Magnetic Properties of Mixed Ferrite System, Nidhi M. Astik and G. J. Balda Adv. Mater. Res. Conf. Proc. **1047** (2014).