Vinesh. Attatappa

PERSONAL INFORMATION

- Date of Birth: 14th April 1985
- Nationality: Indian
- Gender/Marital status: Male/Married.

CURRENT AFFILIATION AND CONTACT INFORMATION

- Dr.Vinesh.Attatappa
  Department of Physics
  Avvaiyar Govt. College for Women
  Affiliated to Central University Pondicherry
  Karaikal, Puducherry U T 609 602
  e-mail: *attatappa85@gmail.com*
  Phone: +91-9958953039

AREAS OF RESEARCH INTEREST

- Synthesis and characterization of metallic, intermetallic, Heusler alloy, both in bulk and nanostructured form and thin films
- Magnetic oxides, Magnetic Nanomaterials.

EDUCATION

Name of Examination passed	University	Subjects Studied	Percentage	Year of Passing
Ph.D	Mohanlal Sukhadia University, Udaipur	Title of thesis: "Study of Hyperfine Fields and Magnetic Properties of Iron and Cobalt based Heusler Alloys"		2012
M.Sc Physics	Kannur University, Kerala	Specialization: Microprocessor and Instrumentation	76.7	2007

RESEARCH WORK

My research work involves preparation of intermetallic compounds both in bulk and nanostructured form. Bulk alloys have been prepared by me using argon arc melting followed by annealing and nanostructured

materials by mechanical milling or mechanical alloying and finally in film form by pulsed laser deposition. These alloys are currently the topic of great interest due to their various scientific and technological applications. I have very good experience in methods of characterization like X-ray diffraction for structural analysis; high and low temperature Mössbauer spectroscopy for microscopic magnetic properties (hyperfine interactions) and vibrating sample magnetometer for bulk magnetization studies etc. I can design, execute and interpret experiments based on these instruments. Additionally I have experience using various data fitting programs like GSAS (for Rietveld fitting of XRD data), Meerwal and NORMOS programs for Mössbauer data fitting. The project which I completed was in collaboration with UGC-DAE Consortium for Scientific Research (UGC-DAE CSR), Indore and so have both access and familiarity with other sophisticated instruments like SEM/EDAX, TEM, pulsed laser deposition etc.

FELLOWSHIPS/AWARDS

- Project Fellow, University Grant Commission Major research Project. 2007-2010
- Council of Scientific and Industrial research (CSIR) foreign Travel grant to Sibiu, Romania, 2009
- **Best Oral Presentation award for research paper, 2011**
- Department of Science and Technology foreign Travel grant to Paris, France under young scientist Scheme, 2012
- Council of Scientific and Industrial research (CSIR) foreign Travel grant, 2012

VISITS ABROAD

Name and place	Year
University of Lucian Blaga, Sibiu, Romania.	2009
University of Paris, France	2012

MEMBER SHIP OF PROFESSIONAL BODIES

- Life member, Indian Physics Association. Membership No. GEN/LM/12742
- Life member, Youth Hostel Association of India. Membership No.027-KER01-L0104685

SKILLS AND ABILITIES

- Hardworking, willing to learn, firm belief in planning and time management**.** Can work as an individual as well as in a team, ability to adjust to any situation
- Ability to coordinate and oversee the work of a team.
- The analytical skills to perform needs assessments, evaluate current programs, and initiate changes or adjustments to current systems and improve operations.
- Problem-solving and decision-making abilities.

- Significant experience giving presentations, speaking persuasively, and interacting successfully with diverse individuals.

COMPUTER SKILLS

- Operating Systems: Windows - 98, 2007, XP, Home basic, Linux-Obuntu
- Languages: C and C++
- Packages: Origin, MS Office, Parratt 32, GSAS, WINNORMOS, MATLAB
- Graphic Design Tools: Adobe Photoshop, Corel Draw

INSTRUMENTS FABRICATED

- Constructed a four probe contact for low temperature resistivity set up.
- Assembled and tested vacuum part in argon arc melting unit.

TEACHING EXPERIENCE

- Asst. Professor, Avvaiyar Govt. College for Women, Karaikal Puducherry, Janurary 2018 to till date
- Asst. Professor, Amity University Gurgaon, February 2012- Janurary 2018

  Subjects Taught:

  Classical Mechanics for MSc Students (2012, 2013, 2014, 2015,2016, 2017)

  Statistical Mechanics for MSc Students (2012, 2013, 2014, 2015,2016, 2017)

  Nuclear and Particle Physics for MSc Students (2012, 2014, 2015)

  Modern Physics for B.Tech Students (2012, 2013, 2015)

  Classical Mechanics for BSc Physics (Honors) students (2013)

  Statistical Mechanics for BSc Physics (Honors) (2015,2016,2017) and M.Tech Nanotechnology students (2014)

  Geometrical Optics for B.Optometry students (2013)

  Applied Physics lab for B.Tech students (2012, 2013, 2015)

  Physics lab-III for BSc Physics (Honors) students (2014)

  Solid State Physics lab for MSc Students (2012, 2013, 2014)

  Optics lab for MSc Students (2012, 2013, 2015,2016,2017)

PRACTICAL EXPERIENCE

- Mössbauer Spectrometer (low and high temperature).
- Conversion electron Mössbauer spectrometer (CEMS)
- High energy ball milling
- XRD
- Vibrating Sample Magnetometer (VSM)
- Experience of working with ultra high vacuum components.
- Argon arc melting

- Four and two probe resistivity measurement

MISCELLANEOUS PURSUITS

- Programme Coordinator, MSc Physics (2016-2018) Amity School of Applied Sciences, Amity University Manesar
- Member: Directorate of Research and Publications (DRP) (2013-2017), Amity University Manesar
- Coordinator, Amizone (2015 onwards) (Amity Intranet site), Amity School of Applied Sciences, Amity University Manesar
- Coordinator, Placement Cell, (2016-2017) Amity School of Applied Sciences, Amity University Manesar
- Coordinator, Examination Cell, (2013-2015) Amity School of Applied Sciences, Amity University Manesar
- Member: Organising committee of Inspire 2015, held on Dec 24-28, 2015, Amity University Manesar
- Member: Organising committee of Inspire 2013, held on Jan 14-18, 2013, Amity University Manesar
- Member: Organising committee of Inspire 2013, held on Nov 26-30, 2013, Amity University Manesar
- Member: Organising committee of National Conference on Trends and Applications in Laser Technology & Optoelectronics held on April 04 2013, Amity University Manesar
- Member: Organising committee of 82nd Collaborative National Workshop On Radiochemistry and Applications of Radioisotopes, 12-20 March, 2013, Amity University Manesar
- Lab Coordinator, BSc, B.Tech and MSc Applied Physics, Amity University Manesar
- Member, Interview Board in Admission, Amity University Manesar
- Member, Amigreen Club, Amity University Manesar
- Co Guided M.Sc Students for their Projects [2008-2010], M.L.S University, Udaipur
- Guided M.Sc Students for their Projects [2013-2015, 2014-2016], Amity University Manesar
- Secretary, Physics Association, M.G. College, Iritty [2003-2004]

DECLARATION:

I hereby declare that the above mentioned information is correct to best of my knowledge.

Dr. Vinesh Attatappa

Research papers published in refereed international journals

1. Investigations of electrical and optical properties of low energy ion irradiated α-Fe_2O_3 (hematite) thin films
   I Sulania, J Kaswan, V Attatappa, RK Karn, DC Agarwal, D Kanjilal
   AIP Conference Proceedings 1731 (1), 120021, 2016

2. Structural and magnetic stability of high energy ball milled Co_2MnSi
   A.Vinesh, V.D.Sudheesh, V. Sebastian, N.Lakshmi and K. Venugopalan
   Journal of Magnetism and Magnetic Materials, 386 (2015), 129-133 **Impact Factor: 2.002**

3. B_2+$L2_1$ Ordering in Co_2MnAl Heusler alloy
   A.Vinesh, V.D.Sudheesh, N.Lakshmi and K. Venugopalan
   American Institute of physics Conf. Proc., 1591, 1521, 2014

4. Investigation of structural and magnetic properties of $Ni_{0.5}Zn_{0.5}Fe_2O_4$ nano powders prepared by self combustion method
   V. D. Sudheesh, J. Nehra, **A. Vinesh**, N. Lakshmi, V. R. Reddy, K. Venugopalan, Ajay Gupta
   Materials Research Bulletin, 48, 698-704, 2013 **Impact Factor: 2.288**

5. Mossbauer and Magnetization studies of the quaternary Heusler alloy $Fe_{2-x}Co_xMnAl$
   A.Vinesh, V.D.Sudheesh, N.Lakshmi and K. Venugopalan
   American Institute of physics Conf. Proc., 1447, 1107-1108, 2012

6. Inter Particle Interaction in $Ni_{0.5}Zn_{0.5}Fe_2O_4$ Prepared by Self Combustion Method
   V.D.Sudheesh, **A.Vinesh**, N.Lakshmi and K. Venugopalan
   American Institute of physics Conf. Proc., 1447, 1103-1104, 2012

7. Temperature and field dependent magnetic Compton scattering study of Heusler alloy Co_2MnSi
   Alpa Dashora, B.L.Ahuja, **A.Vinesh**, N.Lakshmi, M.Itou and Y.Sakurai
   Journal of Applied Physics, 110, 013920, 2011 **Impact Factor: 2.183**

8. Magnetic anisotropy induced by high energy ball milling of Fe_2MnAl
   A. Vinesh, Hina Bhargava, N. Lakshmi and K. Venugopalan
   Journal of Applied Physics, 105, 07A309, 2009 **Impact Factor: 2.183**

9. Magnetic Properties of nano-sized Co_2FeSi
K. Venugopalan, Kuntal Kabra, **A.Vinesh** , N. Lakshmi
Int. J. Nanotechnology, Vol. 8, Nos, 10/11/12, 2011 **Impact Factor: 1.144**

10. TEM and Mössbauer study of nano sized Fe_2MnAl flakes
A. Vinesh, V.D. Sudheesh, N. Lakshmi and K.Venugopalan
American Institute of physics Conf. Proc. **1349**, 1163-1164, 2011

11. Study of Ni-Zn ferrite prepared from citrate precursor
V.D. Sudheesh, **A. Vinesh,** N. Lakshmi and K.Venugopalan
American Institute of physics Conf. Proc. **1349**, 365-366, 2011

INVITED TALK

- Introduction to Spintronics, National Seminar on " Frontiers of Research in Physics" Dec 13-14, 2018, Govt. College Madappally, Kerala
- Magnetic Nanomaterials-Applications to Spintronics, National Seminar on recent trends in condensed matter physics, Jan 25, 2013, Govt: Brennen College, Dharmadam, Kerala

WORKSHOP/REFRESHER COURSE ATTENDED

1. Invited as a resource person for UG Practical workshop, 8-9 Sept.2018, MG College Iritty, Kannur, Kerala
2. Three day national workshop on "Formulation and approximation methods of quantum mechanics" 22-24 th Oct, 2018, Govt. Brennen College, Thalassery, Kerala
3. AICTE recognized short term course on "Lasers: Developments and Applications organized by National Institute of Technical teachers training and research, Chandigarh and Applied Science Department, Amity University Haryana, July 13-17, 2015.
4. Workshop on "winning competitive research projects", March 4-5, 2014, Amity University Haryana
5. Science Academies' sponsored "Refresher Course in Quantum Mechanics", May 5 - 18, 2014, Bishop Moore College, Mavelikkara, Kerala
6. Science Academies' sponsored "Refresher Course in Statistical Mechanics", Nov. 6 - 19th, 2013, Homi Bhabha Centre for Science Education (TIFR), Mumbai.

7. Joint ICTP-IAEA work shop on Recent Trends in Nanoscience: Theory, Experiment, Technology, Aug. 23-30, 2009, Sibiu, Romania
8. Workshop on Nanostructured Materials (WNM-09), Oct. 24, 2009, Department of Physics, Mohanlal Sukhadia University, Udaipur, India
9. Acquaintance programme on accelerator based research, Oct. 23, 2009, Organized by Inter University Accelerator Centre, New Delhi and Department of Physics, Mohanlal Sukahdia University, Udaipur, India
10. Second International Conference on Frontiers in Nano Science and Technology, Cochin Nano-2009 Pre-Conference Workshop, Jan-3, 2009, Department of Physics, Cochin University of Science and Technology, Cochin, Kerala, India

CONFERENCE PRESENTATIONS

1. Green Synthesis of Silver Nanoparticles using *Calendula Officinalis* and its Anti - bacterial Studies
   Vinesh A, Sakshi R and Nidhin M
   National Conference on nanomaterials, Oct 19-20, 2018, NIT Puducherry

2. B_2+$L2_1$ Ordering in Co_2MnAl Heusler alloy
   A.Vinesh, V.D.Sudheesh, N.Lakshmi and K. Venugopalan
   58th DAE Solid State Physics Symposium, Dec. 17-21, 2013, Thapar University, Patiala, India

2. Low temperature magnetization studies of X_2MnAl (X=Fe, Co)
   A.Vinesh, V.D Sudheesh, N. Lakshmi and K.Venugopalan
   Macrotheme conference on Science and Technology, October 16-17, 2012, Paris, France

3. $Cu_{0.25}Co_{0.25}Zn_{0.5}Fe_2O_4$ prepared by self combustion method
   V.D. Sudheesh, **A. Vinesh**, N. Lakshmi, K. Venugopalan
   National Symposium for Materials Research Scholars and Workshop on Advanced Characterization Techniques, 3rd to 5th May, 2012, IIT Bombay
4. A dc magnetization study on the inter particle interaction with temperature in $Ni_{0.5}Zn_{0.5}Fe_2O_4$ prepared by solution combustion method
   V.D. Sudheesh, **A. Vinesh,** N. Lakshmi, K. Venugopalan
   5th IEEE Magnetics Society Summer School 2012, July 23 to July 26, 2012, SRM University, Kattankulathur, Chennai.

5. Mossbauer and Magnetization studies of the quaternary Heusler alloy $Fe_{2-x}Co_xMnAl$

A.Vinesh, V.D.Sudheesh, N.Lakshmi and K. Venugopalan

56th DAE Solid State Physics Symposium, Dec. 19-23, 2011, SRM University, Chennai, India

6. Inter Particle Interaction in $Ni_{0.5}Zn_{0.5}Fe_2O_4$ Prepared by Self Combustion Method

V.D.Sudheesh, **A.Vinesh**, N.Lakshmi and K. Venugopalan

56th DAE Solid State Physics Symposium, Dec. 19-23, 2011, SRM University, Chennai, India

7. Magnetic properties of B2 ordered Co_2MnAl Heusler alloy

A. Vinesh, V.D. Sudheesh, Jagdish Nehra, N. Lakshmi and K.Venugopalan

National Conference on Recent trends in material sciences-2011, Oct. 8-10, 2011 Jaypee University of Information Technology, Waknaghat, Solan, India

8. Influence of Magnetic Field on the Preparation of Co and Cu Substituted $ZnFe_2O_4$ by Self Combustion Method

V.D. Sudheesh, **A. Vinesh**, V.Sebastian, N. Lakshmi and K.Venugopalan

National Conference on Recent trends in material sciences-2011, Oct. 8-10, 2011, Jaypee University of Information Technology, Waknaghat, Solan, India

9. Magnetic properties of nanosized Heusler alloy Co_2MnSi synthesized by high energy ball milling

Vinesh A, Sudheesh V. D, Lakshmi N. and Venugopalan K.

National Conference on "Advancements in Convergence of Technologies, Sept. 8-9, 2011, Amity University, Haryana, India

10. Stability against disorder in Co_2MnSi after high energy ball milling

Vinesh A, Sudheesh V. D, Lakshmi N. and Venugopalan K.

National conference on "PHYSICS FOR TOMORROW", Advancement in Energy, Environmental Sciences, Material Science and Biophysics, March 3-4, 2011, St.Xaviers College, Ahmedabad, India **[Best oral paper award]**

11. TEM and Mossbaur study of nano sized Fe_2MnAl flakes

A. Vinesh, V.D. Sudheesh, N. Lakshmi and K.Venugopalan

55th DAE Solid State Physics Symposium, Dec. 26-30, 2010, Manipal, India

12. Study of Ni-Zn ferrite prepared from citrate precursor

V.D. Sudheesh , **A. Vinesh**, N. Lakshmi and K.Venugopalan

55th DAE Solid State Physics Symposium, Dec. 26-30, 2010, Manipal, India

13. Magnetic properties of $Al/^{57}Fe/Cr$ multilayers and Fe_2CrAl Heusler alloy thin films

S. Jani, N. Lakshmi, **A. Vinesh**, V.D. Sudheesh, K. Venugopalan, V.R.Reddy, ajay Gupta.

International Conference on Advanced Nanomaterials and Nanotechnology, Dec. 9-11, 2009, IIT Guwahati,Assam, India

14. Magnetic properties of Iron and Cobalt based Heusler alloys

Vinesh Attatappa, Snehal Jani, Sudheesh V. D, N.Lakshmi and K. Venugopalan

Winter School on Chemistry and Physics of Materials. Nov. 30- Dec.5, 2009. Organised by University of Cambridge and Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR) Bangalore, India

15. Temperature dependent Mössbauer Study of Fe_2MnAl Heusler alloy

A. Vinesh, V.D. Sudheesh, R. brajpuriya, S. Jani, N. Lakshmi, and K. Venugopalan

18^{th} National Symposium on Radiation Physics (NSRP-18), Nov. 19-21, 2009, Department of Physics, Mohanlal Sukhadia University, Udaipur, India.

16. Magnetic properties of nanosized Ni-Zn ferrite prepared by self combustion and conventional precursor method.

Sudheesh V.D, **A. Vinesh**, Varkey. Sebastian, N. Lakshmi, and K. Venugopalan

Recent Advances in Nano Science and Technology (NS NANO-2009). Oct. 7-9, 2009, department of physics, Sree Narayana College, Kollam, Kerala, India

17. Low temperature Mössbauer study of ball milled Fe_2MnAl.

A. Vinesh, N. Lakshmi, Snehal Jani, V.D. Sudheesh, V.R.Reddy, K. Venugopalan and Ajay Gupta.

International Conference on the Applications of the Mossbauer Effect (ICAME-2009), July 19-24, Vienna, Austria.

18. Hyperfine interactions and magnetic properties of textured nano-sized Fe_2MnAl Heusler alloy

A. Vinesh, V.D. Sudheesh, N. Lakshmi, K. Venugopalan and V. Sebastian

Second International Conference on Frontiers in Nanoscience and Technology,

Cochin, January 3-6, 2009, India.

19. Structural and magnetic properties of Al/^{57}Fe/Cr multilayers and Fe_2CrAl Heusler alloy thin film

Snehal Jani, N. Lakshmi, **A. Vinesh**, V.R. Reddy, Ajay Gupta and K. Venugopalan Second International Conference on Frontiers in Nanoscience and Technology, Cochin, January 3-6, 2009, India

20. Magnetic anisotropy induced by high energy ball milling of Fe_2MnAl

A. Vinesh, Hina Bhargava, N. Lakshmi and K. Venugopalan

53^{rd} Annual Conference on Magnetism and Magnetic Materials, November 10-14, Austin, Texas, USA

21. In-plane magnetization induced in Fe_2MnAl Heusler alloy

A. Vinesh, N. Lakshmi and K. Venugopalan

Solid State Physics 53 (2008) 1153

53rd DAE Solid State Physics Symposium, Dec 16-20, 2008, BARC & TIFR, Mumbai, India

22. Hyperfine fields and magnetic properties of nanostructured and bulk Co_2FeSi

Kuntal Kabra, **A.Vinesh** and N. Lakshmi and K. Venugopalan

Solid State Physics 53 (2008) 1187

53rd DAE Solid State Physics Symposium, Dec 16-20, 2008, BARC & TIFR, Mumbai, India

23. Magnetic properties of nano-sized Co_2FeSi.

K.Venugopalan, Kuntal Kabra, **A.Vinesh** and N. Lakshmi

International Conference on Advanced Materials, February 18-21, 2008, School of Chemical sciences, M.G University, Kottayam, India.

24. International Conference on the Applications of the Mössbauer Effect, October 14- 19,2007, IIT Kanpur, India (attended)