

## Dr. VIVEKANANDHAN PORSELVAN

**Project Scientist - II,**

Centre for Automotive Energy Materials,

**International Advanced Research Centre for Powder Metallurgy and Advanced Materials,**

IIT Madras Research Park Chennai, Tamil Nadu – 600 113, INDIA.

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### EDUCATIONAL BACKGROUND

<b>Doctor of Philosophy (Ph.D),</b> (Metallurgical and Materials Engg.) <b>National Institute of Technology, Tiruchirappalli, India.</b>	Aug 2014-July 2020
<b>Master of Engineering (M.E)</b> (Computer Integrated Manufacturing) <b>College of Engineering Guindy, Anna University, Chennai, India.</b>	<b>First Class</b> Jul 2008- Apr 2010
<b>Bachelor of Engineering (B.E)</b> (Mechanical Engineering) <b>Anna University, Chennai, Tamil Nadu, India.</b>	<b>First Class</b> Aug 2004- Apr 2008

### PROFESSIONAL EXPERIENCE

<b>Project Scientist,</b> Centre for Automotive Energy Materials. <b>International Advanced Research Centre for Powder Metallurgy and New Materias (ARCI), IIT Madras Research Park, Chennai.</b>	<b>Sep 2022- Till date</b>
<b>Ad-hoc Faculty,</b> Dept. of Mechanical Engg. <b>National Institute of Technology, Calicut, India</b>	<b>August 2022-Sep 2022</b>
<b>Ad-hoc Faculty,</b> Dept. of Metallurgical and Materials Engg. <b>National Institute of Technology, Tiruchirappalli, India</b>	<b>August 2021-July 2022</b>
<b>Guest Faculty,</b> Dept. of Metallurgical and Materials Engg. <b>National Institute of Technology, Tiruchirappalli, India</b>	<b>July 2019- May 2021</b>
<b>Teaching Assistant,</b> Dept. of Metallurgical and Materials Engg. <b>National Institute of Technology, Tiruchirappalli, India.</b>	<b>Aug 2014-June 2019</b>
<b>Assistant Professor,</b> Department of Mechanical Engineering <b>Easwari Engineering College (SRM Group), Chennai, India.</b>	<b>July 2011-May 2014</b>
<b>Lecturer,</b> Department of Mechanical Engineering <b>Anand Institute of Higher Technology, Chennai, India.</b>	<b>June 2010- June 2011</b>

### RESEARCH INTERESTS

- Rare Earth Permanent Magnetic Materials : Compositional design, Structure and Properties Relationship
- Powder processing and Nano material synthesis for functional applications
- Materials for Energy Conversion Applications- Thermoelectric and Magnetic Materials
- Advanced Materials Processing (Additive Manufacturing, SPS etc.,)
- Computer Intelligence in Materials Science and Manufacturing Systems

### HONORS

- **National Doctoral Fellowship** (May 2015 to June 2019), **MHRD**, Govt. of India.
- **Junior Research Fellowship**, (May 2014 to May 2015), **MHRD**, Govt. of India.
- **National Post Graduate Scholarship and Contingency** (2008-10, Two years), **University Grants Commission (UGC)**, Govt. of India.

## SPONSORED FUNDED PROJECTS AND CONSULTANCY

- **Role** : *Co-Principal Investigator*  
**Project Name** : Modernization and Removal of Obsolescence (MODROBS)  
**Funding Agency**: All India Council for Technical Education, New Delhi, New Delhi,  
Govt. of India. (Ref.: 8024/RIFD/MOD-179 PVP/Policy iii/2011-12)  
**Total Cost** : INR 13,00,000 (Rupees Thirteen Lakhs )  
**Period / Status** : 2011 – 2012 / Completed
  - **Role** : *Technical Consultant*  
**Nature of work** : Design and Processing of CFRP Composite for Automobiles  
**Name of the Industry** : M/s. Mind Resources (For Mind Composites), Italy (Chennai Division)  
**Total Cost** : INR 15,000 (Rupees Fifteen thousand)  
**Period / Status** : 2017 / Completed
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## R&D PROJECTS INVOLVEMENT

- **Project Scientist**, Development of Advanced Processing Technology of Rare Earth based magnetic materials for EV and Automotive Technology, sponsored by Science and Engineering Research Board (SERB), Govt. of India, 2022- 2027.
  - **Group lead research member**, Development of Nanostructured Magnesium Silicide based thermoelectric material by high energy ball milling and Spark Plasma Sintering, sponsored by Council for Scientific and Industrial Research (CSIR), Govt. of India, 2014- 2018.
  - **Group lead research member**, Development of Nanostructured Magnesium Silicide based thermoelectric material for Energy harvesting from thermal systems, sponsored by Department of Science and Technology (DST), Govt. of India, 2014- 2017.
  - **Group lead research member**, Development of Nanostructured SiGe thermo-electric materials, sponsored by Indian Space Research Organization (ISRO), Department of Space, Govt. of India, 2014-2017.
  - **Junior Research Fellow**, Synthesis and characterization of SiGe thermo-electric materials by high energy ball milling and Spark Plasma Sintering, sponsored by Ministry of Human Resource and Development (MHRD), Govt. of India, 2014-2015.
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## PROFESSIONAL AFFILIATION

Life Member in Powder Metallurgy Association of India (PMAI), India  
Life Member in Material Research Society of India (MRSI), India.  
Member in American Society for Testing and Materials (ASME), USA (2017-2019)  
Member in American Society for Mechanical Engineers (ASME), USA (2008-2009)  
Student Member in American Society for Mechanical Engineers (ASME), USA (2007-2008)

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## PUBLICATIONS

### BOOK CHAPTERS

4. Vivekanandhan P, Arun Raphel, Murugasami R, and Kumaran. “Spark plasma sintering of advanced nanostructured materials for functional applications”, for the upcoming book, **Powder Metallurgy: Characterization and Optimization Techniques**, Elsevier, 1st Edition, 2024 (*Proposal approved and under processing*).

3. Arun Raphel, **Vivekanandhan P\*\*** and Kumaran. “Green energy harvesting using high entropy thermoelectric alloys”, for the upcoming book, **Computational Intelligence based Optimization of Manufacturing Process for Sustainable Materials**, CRC Press, Taylor and Francis. UK (2023). ISBN 9781003257714, 1st Edition.
2. **Vivekanandhan P\***, Murugasami.R and Kumaran. “Spark plasma-assisted combustion synthesis and characterisation of nanostructured Magnesium silicide for mid-temperature energy conversion energy harvesting application”, in the book, **Computational Intelligence in Materials Science**, CRC Press, Taylor and Francis. UK (2021). ISBN 9780367640576 , 1st Edition.
1. **Vivekanandhan P\***, Development of Decentralized Supply Chain Management System” in the book titled **Supply Chain Management for Competitive Advantage**, Published by **Macmillan Publishers, India**, pages 248-260, 2010. ISBN: 023-032-938-1.

## INTERNATIONAL JOURNALS

19. G. Vijayaragavan, S. Paulraj , **P. Vivekanandhan**, M. Sadhashivam, K. G. Pradeep, D. Prabhu and R. Gopalan, Enhanced Coercivity in Nd-Fe-B Magnets by Grain Boundary Engineering using DyF<sub>3</sub> :Insights from Microstructural Investigation, *Scripta Materialia.. (To be communicated )*
18. Arun Raphel, **Vivekanandhan.P\*\***, Arun Kumar. R and Kumaran.S” Tuning p-type semiconduction with ultra-low thermal conductivity in nanocrystalline n-type BiSbTe<sub>1.5</sub>Se<sub>1.5</sub> high entropy via Ag doping”, *Applied Physics A*, (2024) 130:389, 1-8.
17. Arun Raphel, **Vivekanandhan.P\*\***, Kumaran.S” Tuning thermoelectric figure of merit in Ag doped nanostructured PbSnTeSe alloy by entropy and band engineering phenomena”, *Materials Today Communications*, 35, (2023) 105880.
16. Arun Raphel, **Vivekanandhan.P\*\***, Arun Kumar R, Kumaran.S” Tuning figure of merit in Na doped nanocrystalline PbSnTeSe high entropy alloy via band engineering, *Materials Science in Semiconductor Processing*, 138 (2022) 106270.
15. Arun Raphel, **Vivekanandhan.P\*\***, Kumaran.S” High entropy stabilization and band engineering driven high figure of merit in nanostructured PbSn<sub>0.875</sub>TeSeBi<sub>0.125</sub> alloy, *Journal of Solid State Chemistry*, 303 (2021) 122531.
14. Arun Raphel, **Vivekanandhan.P\*\***, Kumaran.S” Thermoelectric properties of nanostructured PbSnTeSe high entropy thermoelectric alloy fabricated by Spark plasma sintering, *Physica B – Physics of Condensed Matter*, 622 (2021) 413319.
13. **Ananthakumar.K**, **Vivekanandhan.P\*\***, and Kumaran.S” Spark plasma assisted diffusion bonding of titanium and stainless steel: Role of pulse current in diffusion kinetics and microstructural evolution” *Vacuum*, 177 (2020) 109394.
12. Arun Raphel, **Vivekanandhan.P\*\***, Kumaran.S” High entropy phenomena induced low thermal conductivity in BiSbTe<sub>1.5</sub>Se<sub>1.5</sub> thermoelectric alloy through mechanical alloying and spark plasma sintering, *Materials Letters*, 269, (2020) 127672.
11. **Vivekanandhan.P\***, Murugasami.R, Appu Kumar Singh, Kumaran.S” Structural features and thermoelectric properties of spark plasma assisted combustion synthesised Magnesium silicide doped with Aluminium, *Materials Chemistry and Physics* ,241 (2020) 122407.
10. Murugasami.R, **Vivekanandhan.P\*\*** , Kumaran.S, Suresh Kumar, John Tharagan, Synergetic enhancement in thermoelectric and mechanical properties of n-type SiGe alloys prepared by solid state synthesis and spark plasma sintering, *Materials Research Bulletin*, 118 (2019) 110483.
9. **Vivekanandhan.P\***, Murugasami.R, Kumaran.S” Microstructure and mechanical properties of nanocrystalline magnesium silicide thermoelectric compound prepared via Spark plasma assisted combustion synthesis, *Materials Letters*, 231 (2019), 109–113.
8. Murugasami.R, **Vivekanandhan.P\*\*** , Kumaran.S, Suresh Kumar, John Tharagan, Simultaneous enhancement in thermoelectric performance and mechanical stability of p-type SiGe alloy doped with Boron

prepared by mechanical alloying and spark plasma sintering, *Journal of Alloys and Compounds*, 773 (2019), 752-761.

7. **Vivekanandhan.P\***, Murugasami.R, Kumaran.S” Spark plasma assisted *in-situ* phase evolution and densification of nanocrystalline Mg<sub>2</sub>Si-SiGe thermoelectric composite: Pulse current effects and densification mechanisms, *Scripta Materialia*, 146 (2018) 344-348.
6. Murugasami.R, **Vivekanandhan.P\*\***, Kumaran.S, Suresh Kumar, John Tharagan Thermoelectric power factor performance of Si<sub>80</sub>Ge<sub>20</sub> doped with Phosphorous by spark plasma assisted transient liquid Phase sintering, *Scripta Materialia*, 143 (2018) 35-39.
5. **Vivekanandhan.P\***, Murugasami.R, Sairam.KVRS, Kumaran.S” Densification and Mechanical properties of nanostructured Mg<sub>2</sub>Si Thermoelectric material by Spark Plasma Sintering, *Powder Technology*, 319 (2017) 129-138.
4. **Vivekanandhan.P\***, Murugasami.R, Kumaran.S” Rapid in-situ synthesis of nanocrystalline magnesium silicide thermo-electric compound by spark plasma sintering, *Materials Letters*, 197 (2017), 106-110.
3. Murugasami.R, **Vivekanandhan.P\*\***, Kumaran.S” Densification and alloying of ball milled Silicon-Germanium powder mixture during Spark Plasma Sintering, *Advanced Powder Technology*, 28 (2017), 506-513.
2. Murugasami.R, **Vivekanandhan.P\*\***, Kumaran.S” Rapid Alloying and Nanostructuring of Silicon-Germanium Powder Mixture by Spark Plasma Sintering, *Transactions of Indian Institute of Metals*, 70 (3) (2017), 855-860. (Impact Factor : 1.101)
1. **Vivekanandhan.P\***, Anand.S, Paramasivam.A., ” Routing Optimization of Third Party Logistics Operations using Greedy Search Approach”, *Journal of Logistics Management*, Vol.2,(1),2013,pp.1-8.

(\*First and primary author / Corresponding author and \*\*Equally contributed with First author)

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## INTERNATIONAL CONFERENCES

28. **P. Vivekanandhan**, S. Paulraj, and G. Vijayaragavan, M. Sadhasivam, H. Kumar, K.G. Pradeep, S.K. Makineni, D. Prabhu and R. Gopalan, Coercivity enhancement by the grain boundary diffusion in sintered Nd-Fe-B magnet using Dy-Cu and Dy-Al-Cu, *International Conference on Magnetic Materials and Applications (ICMAGMA-2023)*, organized by Organised by **Magnetics Society of India in association with Defence Metallurgical Research Laboratory And Mishra Dhatu Nigam Limited (MIDHANI)**, 04 - 06 Dec. 2023, Hyderabad.
27. G. Vijayaragavan, S. Paulraj, **P. Vivekanandhan**, M. Sadhasivam, K.G. Pradeep, D. Prabhu and R. Gopalan, Coercivity enhancement through Dy-diffusion in sintered Nd-Fe-B magnet by grain boundary diffusion process, *27th International Workshop on Rare Earth and Future Permanent Magnets and their Applications (REPM 2023)*, be held at the **University of Birmingham, United Kingdom**, 3rd-7th September 2023
26. Sathish Sudhandra Bharathi T, **Vivekanandhan.P**, Kumaran.S, Influence of Nano-CuO in Magnesium Silicide thermoelectric behavior processed by combustion assisted spark plasma sintering, *International Conference on Recent Trends in Metallurgy, Materials Science and Manufacturing*, organized by **National Institute of Technology, Tiruchirappalli**, 27-28 Dec 2019, Tamil Nadu, India.
25. Sathish Sudhandra Bharathi T, **Vivekanandhan.P**, Kumaran.S, Combustion Synthesis of nano oxide included Magnesium Silicide thermoelectric compound by spark plasma sintering, Two days Symposium on Thermoelectric materials, Devices and Systems organized by **PSG College of Technology, Coimbatore, In association with Nanotech Research Innovation & Incubation Centre ,PSG Science and Technology Entrepreneurial Park, Coimbatore**, 10<sup>th</sup> – 11<sup>th</sup> Dec 2018.
24. **Vivekanandhan.P**, Murugasami.R, Kumaran.S, Densification Kinetics and Mechanical Properties of Aluminium Doped Mg<sub>2</sub>Si Thermoelectric compound processed by Spark Plasma Sintering, *First Research Colloquium on Emerging Trends in Engineering, Science and Management*, organized by **National Institute of Technology, Tiruchirappalli**, 23-25<sup>th</sup> March 2018, Tiruchirappalli, India.

23. **Vivekanandhan.P**, Murugasami.R, Kumaran.S, Densification Kinetics and Mechanical Properties of Aluminium Doped Mg<sub>2</sub>Si Thermoelectric compound processed by Spark Plasma Sintering, *School on Clean and Renewable Energy Technologies via Chemical Route*, organized by **The International Institute for Complex Adaptive Matter (I2CAM) at University of California, Davis, United States and Jawaharlal Nehru Centre for Centre for Advanced Scientific Research, Bangalore**, 27<sup>th</sup> Nov – 2<sup>nd</sup> Dec, **2017**, Bangalore, India.
22. **Vivekanandhan.P**, Murugasami.R, Kumaran.S, Synthesis of Aluminium Doped Mg<sub>2</sub>Si Thermoelectric compound processed by Spark Plasma Sintering, *55<sup>th</sup> National Metallurgists' Day and 69<sup>th</sup> Annual Technical Meeting (NMD ATM 2017)*, organized by **The Indian Institute of Metals in association with Birla Institute of Technology and Science Pilani (BITS, Pilani),Goa Campus**, 11 November **2017**, Goa, India.
21. Murugasami.R, **Vivekanandhan.P**, Kumaran.S, Rapid Alloying and Nanostructuring of Silicon-Germanium Powder Mixture by Spark Plasma Sintering, *International Conference on Emerging Trends in Materials and Manufacturing Engineering*, **National Institute of Technology, Tiruchirappalli**, 10 -12<sup>th</sup> March **2017**, Tamil Nadu, India
20. **Vivekanandhan.P**, Murugasami.R, Kumaran.S, Synthesis, Characterization and Thermoelectric properties of Mg<sub>2</sub>Si doped with Bi Thermoelectric compound by Spark Plasma Sintering, *International Symposium for Research Scholars (ISRS 2016) organized Department of Metallurgical and Materials Engineering*, **Indian Institute of Technology, Madras**, 21<sup>th</sup> – 23<sup>th</sup> December **2016**, Tamil Nadu, India.
19. Murugasami.R, **Vivekanandhan.P**, Kumaran.S, **Rapid Alloying of nanostructured Silicon-Germanium Thermoelectric alloy doped with Phosphorous using Spark Plasma Sintering**, the *International Conference of Young Researchers on Advanced Materials (IUMRS-ICYRAM 2016)* organized by International Union of Materials Research Society in association with Materials Research Society of India at **Indian Institute of Science, Bangalore**, 11<sup>th</sup> – 15<sup>th</sup> December **2016**, Tamil Nadu, India.
18. **Vivekanandhan.P**, Murugasami.R, Kumaran.S, Synthesis of Bi doped Mg<sub>2</sub>Si Thermoelectric compound by Spark Plasma Sintering, *53<sup>rd</sup> National Metallurgists' Day and 69<sup>th</sup> Annual Technical Meeting (NMD ATM 2015)*, organized by **The Indian Institute of Metals, Kolkata in association with PSG College of Technology, Coimbatore and R&D Centre for Iron and Steel, Steel Authority of India, Ranchi**, 13<sup>th</sup> – 16<sup>th</sup> November **2015**, Coimbatore, India.
17. Ashwin Vijayakumar, Gopinath Bharathi, **Vivekanandhan Porselvan**, Perceptions Of Indian Manufacturing Industries In Adopting Green Supply Chain Practices –An Empirica” **INFORMS Annual Meeting, Philadelphia, U.S.A**, November 1-4, **2015**.
16. Cyril Prakash.M, Boopathy, **Vivekanandhan.P**, “Application of Superconducting Fault Current Limiters in Power Systems”, International Conference on Technological Convergence for Information, Health, Food and Energy Security, **CSIR- Central Leather Research Institute, (TCIFES 2015), Chennai, India**, 01st – 02nd, May **2015**.
15. Dinesh Kumar.R, Periyasami.N, **Vivekanandhan.P**, Preparation and Characterization of Myristic Acid-Palmitic Acid-Stearic Acid Phase Change Material, In the proceedings of International Conference on Advances in Materials, Manufacturing and Applications (AMMA-2015), **National Institute of Technology, Tiruchirappalli, India**, 09th – 11 ,April 2015.
14. **Vivekanandhan.P**, Karthik.S and Ashwin.V “Adoption of Third Party Logistics in Manufacturing Industries in South India –An Empirical Study” **TIKM's Ist Annual World Conference on Supply Chain Management-2015, Colombo, Srilanka.**, 17 – 18th, February **2015**.
13. Sathish Kumar.G.K , **Vivekanandhan.P** and Umopathy.M.J “Thermal Stability of Natural Fibers (Jute, Kenaf,Sisal and Banana) and Lignite fly ash reinforced Geopolymeric Composites, Annual Edition of 6th International Conference on Advancements in Polymeric Materials (APM-2015), organized by **Central Institute of Plastics Engineering and Technology, Chennai in association with Indian Institute of Science (IISc),Bangalore**, and **Central Power Research Institute(CPRI), Bangalore,India** on February 20 to 22 , **2015**.
12. Sathish Kumar.G.K , Umopathy.M.J and **Vivekanandhan.P**, “Synthesis and Charaterisation Studies on Synthesis, Characterization in Natural Fibres/LFA reinforced Geo Polymer Composites”, 23rd International Conference on Processing and Fabrication of Advanced Materials (PFAM XXIII), Mechanical and Industrial Engineering Department, **Indian Institute of Technology, Roorkee, Uttarkhand, India.**, 5 – 7th, December **2014**.

11. **Vivekanandhan.P.**, Karthik.S and Ashwin.V “Perspectives of Manufacturing Industries in adopting Third Party Logistics Services”, 5th International & 26th All India Manufacturing Technology, Design and Research Conference AIMTDR 2014, organized by Department of Mechanical Engineering, **Indian Institute of Technology, Guwhati, Assam, India** in association with **National Institute of Technology, Mehalaya, India**, 14 – 16th, December **2014**.
10. **Vivekanandhan.P.**, Viswanth Kanna, Prasanth and Vasanthavanan “Effects of Reinforcement Concentrations on Wear Behavior of Aluminium/Lignite Fly Ash/Graphite Nano Composites”, International Conference on Modeling Optimization and Computing., Organized by Department of Mechanical Engineering, by Department of Mechanical Engineering, **Noorul Islam University, Kanyakumari, India**, 10 & 11th April **2014**.
9. **Vivekanandhan.P.**, Vasanthavanan, Viswanth Kanna, Pughaloli “Influence of composition and Microstructure properties in the Tribological behavior of Aluminium/Lignite Fly Ash/Graphite Nano Composites” International Conference on Advances in Tribology , organize by **National Institute of Technology, Calicut, India**. February 21 – 24, **2014**.
8. **Vivekanandhan.P.**, Anand.S, ”Greedy Search and Genetic Algorithm - Combined approach in 3PL Optimization – A Simulation approach for real Industrial Scenario”, In the abstracts of 3rd IIMA International Conference on Advanced Data Analysis, Business Analytics and Intelligence, organized by **Indian Institute of Management, Ahmedabad, India**. April 13 – 14, **2013**.
7. **Vivekanandhan.P.**, Anand.S, Shobana Swarna Rathna.P.R., Thanikaselam.A.,”Investigation on Synthesis, Characterization and Mechanical properties of Lignite Flyash Reinforced Aluminum Alloy 6063 of different volume fractions ”, In the abstracts of 4th International & 25th All India Manufacturing Technology, Design and Research Conference AIMTDR 2012, organized by **Production Engineering Department, Jadavpur University, Kolkata, India.**, 14 – 16th, December **2012**.
6. Subash Srinivasan.S, **Vivekanandhan.P.** .,”The Genetic Algorithm approach for Vehicle Routing Problem In Supply Chain Management”, In the Proceedings of International Conference on Modelling, Optimization and Computing., organized by **Noorul Islam University, Kanyakumari**, in Collaboration with **The University of Sheffield, United Kingdom and Elsevier** 10&11th April 2012.
5. **Vivekanandhan.P.**, Devi.P., Mohan Kumara Magalam.S and Thanikaselam.A, “A Comparative Study on the Mechanical Properties of Natural Fiber Reinforced Polymer Matrix Composites”, In the Proceedings of COPEN 7: 2011- International Conference on Precession, Meso, Micro and Nano Engineering, organized by **College of Engineering Pune, Maharastra, India**, 10th-11th December **2011**.
4. Devi.P., **Vivekanandhan.P.**, Mohan Kumara Magalam.S and Somurajan.V, “Synthesis and Analysis of Natural Fiber Reinforced Polymer Matrix Composite” In the Proceedings of Frontiers of Polymers and Advanced Materials”, International Conference Jointly organized by **Indian Institute of Technology, Delhi and The Society of Polymer Science, India**, 15th-17th December **2010**.
3. **Vivekanandhan.P.**, Mohan Kumara Magalam.S., P.,Devi.P and Somurajan.V “Optimization of Operating Parameters in Flux Cored Arc Welding Process by Simulated Annealing technique through a Weighted Approach Method”. In the Proceedings of 43rd Annual Convention of Operational Research Society of India & International Conference on Operational Research for Urban and Rural Development , **Thiagarajar College of Engineering, Madurai, Tamil Nadu, India** on 15-17th December **2010**.
2. Mohan Kumara Magalam.S.,**Vivekanandhan.P** and Devi.P., “A Experimental Study Of Jet Compressor Characteristics In Engine Exhaust”, In the Proceedings of 43rd Annual Convention of Operational Research Society of India & International Conference on Operational Research for Urban and Rural Development, **Thiagarajar College of Engineering, Madurai, Tamil Nadu, India** on 15th-17th December 2010.
1. **Vivekanandhan.P.**, Omkumar.M and Yuvaraja.R “A simulation of optimize Supply Chain Logistics Management System using Ant Colony Algorithm”, In the Proceedings of Second annual Global Business Summit Conference., Organized by Global Strategic Management Inc., USA at **Karunya University., India.**, June 23-25 2010.

## NATIONAL CONFERENCES

5. Vignesh.A.K, Manikandan.S, J.Subash Chandrabose, , **Vivekanandhan.P.**,”**The Process Enhancement in Cylinder Head Assembly Line by FMEA- A Glimpse of Indian Original Equipment Manufacturer**”, In the proceedings *Second National Conference on Manufacturing Innovation Strategies and Appealing Advancements MISAA 2012*, PSG College of Technology, Coimbatore, 12<sup>th</sup> April 2012.
4. Ramachandran.M, Azad.A, **Vivekanandhan.P .,**” **Simulation based Optimization of WIP Inventory in a production line using Genetic Algorithm**”, In the proceedings of *National Conference on Emerging Technologies.*, Anna University of Technology Tirunelveli, 06<sup>th</sup> May 2011.
3. Subash Srinivasan.S, Senthil Kumaran.S, **Vivekanandhan.P .,**”**The Greedy Search Algorithm Approach For Vehicle Routing Problem In Supply Chain Management**”, In the Proceedings of *National Level Conference on Recent Trends in Civil & Mechanical Engineering.*, Anna University of Technology Tiruchirappalli, 08&09th April 2011.
2. **Vivekanandhan.P.**, Omkumar.M and Yuvaraja.R., “**Optimization of Distributed Supply Chain Logistics operations Using Ant Colony Optimization (ACO)**”, In the Proceedings of *National Conference on Recent Innovations in Production Engineering.*, Madras Institute of Technology Campus., Anna University Chennai., 16<sup>th</sup> & 17<sup>th</sup> April 2010.
1. **Vivekanandhan.P** and Omkumar.M., ”**Development of optimized Supply Chain Logistics Management System**”, In the Proceedings of *National Conference on Supply Chain Management.*, Institute of Management Education., Sahibabad, Uttar Pradhash .,26<sup>th</sup> March 2010. India. (**Best paper of the Conference and High quality paper of the Session**)

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## INVITED / GUEST TALKS DELIVERED

- 16/12/2023** Delivered a guest talk on “**Rare Earth Permanent Magnets for Electric Vehicle Applications**” in the **National Conference on Recent Trends in Mechanical Sciences**, Rajalakshmi Engineering College (Autonomous), Chennai, Tamil Nadu, India.
- 18/11/2021** Delivered an invited talk on “**Multi component alloys as a thermoelectric Materials**” in **Fabrication, characterization and strengthening mechanism of composites**, AMET University, Chennai, Tamil Nadu, India.
- 17/11/2021** Delivered an invited talk on “**Thermoelectric Materials – An overview**” in **Fabrication, characterization and strengthening mechanism of composites**, AMET University, Chennai, Tamil Nadu, India.
- 27/11/2020** Delivered an invited talk on “**Advanced nanomaterials and processing for energy conversion applications**” in the Phase – III AICTE Sponsored STTP (Virtual Mode) On "Composite Materials: Micro to Nano- Fabrication, Characterization and Modelling Including Additive Manufacturing, Rajalakshmi College of Engineering (Autonomous), Chennai, Tamil Nadu, India.
- 28/07/2020** Delivered an invited talk on “**Research into successful publishing**” in the Phase – II AICTE Sponsored STTP (Virtual Mode) On "Composite Materials: Micro to Nano- Fabrication, Characterization and Modelling Including Additive Manufacturing, Rajalakshmi College of Engineering (Autonomous), Chennai, Tamil Nadu, India.
- 18/07/2020** Delivered an invited talk on “**Insights on manuscript preparation for scholarly Journals and peer review process**” in the Phase – I AICTE Sponsored STTP (Virtual Mode) On "Composite Materials: Micro to Nano- Fabrication, Characterization and Modelling Including Additive Manufacturing, Rajalakshmi College of Engineering (Autonomous), Chennai, Tamil Nadu, India.
- 27/03/2020** Delivered a **Guest Webinar Workshop** on “**Research into Successful Publishing**” hosted by Karpagam College of Engineering (Autonomous), Coimbatore, Tamil Nadu. India.
- 07/03/2019** Delivered a **Guest Lecture** on “**Effective Paper Writing and Preparation**” in the Second Research Colloquium conducted by Research Scholars Forum of NIT, Tiruchirappalli, Tamil Nadu.
- 19/02/2018** Delivered an **invited talk** on “**Mastering the art of Scientific Publication**” in the Workshop conducted by Research Scholars Forum of NIT, Tiruchirappalli, Tamil Nadu, Tamil Nadu.
- 10/03/2015** Delivered an **invited talk and hands on training** on “**An Introduction to Spark Plasma Sintering: An advanced processing Technology for the developments of Novel and Functional Materials**”

**Systems”** in the Workshop on “Spark Plasma Sintering” during METTLE-2017, Annual National technical Symposium, conducted by Dept. of Metallurgical and Materials Engg, NIT, Tiruchirappalli, Tamil Nadu, Tamil Nadu, India.

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## **EXPERTISE IN SCIENTIFIC EQUIPMENTS**

### **Materials Synthesis and processing systems**

- High Energy Ball Mills (Fritsch Retsch, Germany).
- Glove Boxes
- Rolling and extrusion systems
- Ultra High Vacuum Systems
- Sintering Furnaces (Resistance, Micro Wave, Vacuum)
- Arc melting unit

### **Materials Testing / evaluation systems**

- Vickers Hardness Tester
- Seebeck co-efficient with Electrical measuring system (LINSIES, Germany).
- Lash Flash Apparatus (Netzch, Germany)
- Physical property measurement system (Dyna Cool, USA)

### **Materials characterization systems**

- Simultaneous Thermal Analyzer (Perkin Elmer, U.S.A.)
- Simultaneous Thermal Analyzer (Sitaram Instruments, UK)
- Scanning Electron Microscopes (Carl Zeiss, Germany)
- X Ray Diffractometer (Rigaku, Japan)
- Atomic Absorption Spectroscopy (Thermo Fisher, USA)
- X-ray photoelectron spectroscopy, Thermofisher Scientifics, USA.
- Particle Size Analyser, Malvern, UK.

### **Declaration:**

I hereby declare that the above-mentioned information is correct up to my knowledge and I bear the responsibility for the correctness of the above-mentioned particulars.

Trichy,  
May 2024

Yours Sincerely,

Vivekanandhan P