

NAME: ANOOJA J BABU

DESIGNATION: ASSISTANT PROFESSOR

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EDUCATIONAL QUALIFICATION: Ph.D., PDF

AREA OF INTEREST: Material Science

SPECIALISATION: Superconductivity, EMI Shielding

TEACHING EXPERIENCE:

Designation	Institution	Period
Assistant Professor	SN College, Punalur	1 year 11 months

ADMINISTRATIVE POSITIONS HELD:

Member : Department level monitoring committee

Member : Sree Narayana Study centre

Member : Counselling cell

Member : Red ribbon

Member : Tourism club

UGC MAJOR/ MINOR PROJECT: Nil

PUBLICATIONS

Peer-Reviewed Journal Articles

2019 - J.B. Anooja, K.S. Dijith, K.P. Surendran, G. Subodh. A simple strategy for flexible electromagnetic interference shielding: Hybrid rGO@CB-Reinforced polydimethylsiloxane. *Journal of Alloys and Compounds*. 807. 151678.

2015 - **J. B. Anooja**, P. M. Aswathy, Neson Varghese, C. K. Chandrakanth, N. Devendra Kumar, A. Sundaresan and U. Syamaprasad. Influence of rare earth doping on the structural and electro-magnetic properties of SmFeAsO_{0.7}F_{0.3} iron pnictide. *Inorg. Chem. Front.*. 2. 731-740.

2015 - **J. B. Anooja**, P. M. Aswathy, Neson Varghese, Manoj Raama Varma and U. Syamaprasad. Structural and superconducting properties of BaF₂ Doped SmFeAsO. *Materials Science Forum-Trans Tech Publications*. 830. 595-599.

2014 - **J. B. Anooja**, P. M. Aswathy, Neson Varghese, R. P. Aloysius and U. Syamaprasad. SmFeAsO superconductor with preferred crystallographic orientation and enhanced critical current density. *J. Am. Ceram. Soc.* 97. 2099-2104.

2014 - **J. B. Anooja**, P. M. Aswathy, Neson Varghese, R. P. Aloysius, and U. Syamaprasad. Microstructure refinement and enhanced critical current density in binary doped SmFeAsO superconductor. *AIP Conference Proceedings*. 1591. 1536-1538.

2013 - **J. B. Anooja**, P. M. Aswathy, Neson Varghese, K. Vinod, A. Bharati and U. Syamaprasad. Transport and magnetic properties of yttrium doped NdFeAs(O,F) superconductor. *J. Alloys and Compd.* 566. 43-49.

2012 - **J. B. Anooja**, P. M. Aswathy, P. M. Sarun, U. Syamaprasad. A novel low temperature synthesis route for SmFeAsO_{1-x}F_x bulk superconductor with improved transport properties. *J. Alloys and Compd.* 514. 1-5.

2015 - P. M. Aswathy, **J. B. Anooja**, Neson Varghese, C. K. Chandrakanth, N. Devendra Kumar, A. Sundaresan and U. Syamaprasad. Rare earth (RE - Ce, Gd) modified Nd_{1-x}RE_xFeAsO_{0.7}F_{0.3} superconductor with enhanced magneto-transport properties. *RSC Adv.* 5. 41484.

2015 - P. M. Aswathy, **J. B. Anooja**, Neson Varghese and U. Syamaprasad. The role of yttrium doping on the structural and superconducting properties of Sm1111 and its comparison with other (RE, Y)1111 (RE - La, Ce, and Nd) iron oxypnictides. *J. Low Temp. Phys.* 178. 285-294.

2015 - P. M. Aswathy, **J. B. Anooja**, Neson Varghese, and U. Syamaprasad. Influence of reactivity of sheath metals on the superconducting properties of NdFeAsO_{0.6}F_{0.4} wires. *Materials Science Forum-Trans Tech Publications* 830. 557-560.

2015 - P. M. Aswathy, **J. B. Anooja**, Neson Varghese, and U. Syamaprasad. Enhanced transport and magnetic properties in gadolinium doped NdFeAsO_{0.7}F_{0.3} superconductors. *AIP Conference Proceedings*. 1665. 130047.

2014 - P. M. Aswathy, **J. B. Anooja**, Neson Varghese and U. Syamaprasad. Microstructural refinement and enhanced transport properties in binary doped NdFeAsO superconductor. *J. Appl. Phys.* 115. 053903.

2013 - P. M. Aswathy, **J. B. Anooja**, Neson Varghese and U. Syamaprasad. NdFeAsO_{1-x}F_x superconductor - impact of fluorine variation on microstructure and transport properties. *J. Am. Ceram. Soc.* 96. 1176-1180.

2010 - P. M. Aswathy, **J. B. Anooja**, P. M. Sarun and U. Syamaprasad. An overview on iron based superconductors. *Supercond. Sci. Technol.* 23.073001.

2015 - Neson Varghese, Devadas K. M., P. M. Aswathy, **J. B. Anooja**, Manoj Raama Varma and U. Syamaprasad. Enhanced transport current in MgB₂ superconducting wire through metallic Fe addition. *Materials Science Forum-Trans Tech Publications*. 830. 509-512.

2011 - K. M. Devadas, Neson Varghese, K. Vinod, S. Rahul, Syju Thomas, **J. B. Anooja**, A. Sundaresan, S. B. Roy, and U. Syamaprasad. Enhanced superconducting properties of MgB₂ by carbon substitution using carbon containing nano additives. *AIP Conf. Proc.* 1349. 913-914.

2010 - P. M. Sarun, S. Vinu, R. Shabna, **J. B. Anooja**, P. M. Aswathy, and U. Syamaprasad. Structural and transport properties of (Bi_{1.6}Pb_{0.5})(Sr_{2-x}Lu_x)Ca_{1.1}Cu_{2.1}O_{8+δ} superconductor. *IEEE transactions on applied superconductivity*. 20. 61-65.

2010 - S. Vinu, P. M. Sarun, R. Shabna, P. M. Aswathy, **J. B. Anooja**, U. Syamaprasad. Suppression of flux-creep in (Bi,Pb)-2212 superconductor by holmium doping. *Physica B*. 405. 4355-4359.

Book Chapters

2018 - "Flexible rGO-CB@Fe₃O₄/polydimethylsiloxane Composites for Electromagnetic Interference Shielding", Proceedings of 29th Annual General Meeting of Materials Research Society of India And National Symposium on Advances in Functional and Exotic Materials, eI Conference Proceedings, Tiruchirappalli, pp. 318 (ISBN: 978-93-87526-16-7)

Review Articles

2010 - P. M. Aswathy, **J. B. Anooja**, P. M. Sarun and U. Syamaprasad. An overview on iron based superconductors. *Supercond. Sci. Technol.* 23.073001 [Topical Review, selected for Highlights of 2010]

GRANTS AND FELLOWSHIPS

2017 - National Post-Doctoral fellowship, SERB (Science and Engineering Research Board, Department of Science and Technology, Government of India).

2013 - CSIR- Senior Research Fellowship.

2008 - KSCSTE Research Fellowship in Physical Science by the Kerala State Council for Science, Technology and Environment, Government of Kerala.

CONFERENCES

Poster Presentations

2018 - **J. B. Anooja**, G. Subodh, “Reduced Graphene Oxide/Carbon Black Reinforced Flexible Silicon Rubber Composite with Improved Electromagnetic Absorption Properties”, International Conference on Advanced Materials and Manufacturing Processes for Strategic Sectors (ICAMPS 2018), Trivandrum, October 25-27.

2018 - **J. B. Anooja**, Aswini Thampi S. L., G. Subodh, “Carbonyl Iron/Carbon Black Reinforced Silicone Rubber Composites for EMI Shielding Applications”, International Conference on Recent Trends in Materials Science and Technology 2018 (ICMST 2018), Trivandrum, October 10-13.

2018 - **J. B. Anooja**, G. Subodh, “Hybrid rGO-Carbon Black/nano-Fe₃O₄ Polymer Nanocomposite for Flexible Electromagnetic Shielding Application”, International conference on Nano-science and Technology (ICONSAT 2018), Bengaluru, March 21-23. (Best Poster Award)

2018 - **J. B. Anooja**, G. Subodh, “Flexible rGO-CB@Fe₃O₄/polydimethylsiloxane Composites for Electromagnetic Interference Shielding”, MRSI National Symposium on "Advances in Functional and Exotic Materials" (AFEM-2018), Tiruchirappalli, February 14-16.

2015 - **J. B. Anooja**, P. M. Aswathy, Neson Varghese, Manoj Raama Varma and U. Syamaprasad, “Structural and Superconducting Properties of BaF₂ Doped SmFeAsO,” International Conference on Advanced Materials and Manufacturing Process for Strategic Sectors (ICAMPS 2015), Trivandrum, Kerala, May 13-15. (Published in Trans. Tech Publications)

2015 - **J. B. Anooja**, P. M. Aswathy, Neson Varghese and U. Syamaprasad, “Magneto-Transport Properties of SmFeAsO_{0.7}F_{0.3} Superconductor upon Gd Doping at Sm Site,” International Conference on Science, Technology and Applications of Rare Earths (STAR 2015), Trivandrum, Kerala, April 23-25.

2013 - **J. B. Anooja**, P. M. Aswathy, Neson Varghese and U. Syamaprasad, “Microstructure Refinement and Enhanced Critical Current Density in Binary Doped SmFeAsO Superconductor”, 58th DAE Solid State Physics Symposium (DAE SSPS 2013),

Thapar University, Patiala, Punjab, December 17-21. (Published in AIP Conf. Proc.) (Best Poster Prize)

2013 - **J. B. Anooja**, P. M. Aswathy, Neson Varghese and U. Syamaprasad, “Enhanced Superconducting Properties in NdFeAs(O,F) Superconductor by Yttrium Doping” 25th Kerala Science Congress, Technopark, Trivandrum, January 30.

2015 - P. M. Aswathy, **J. B. Anooja**, Neson Varghese, Manoj Raama Varma and U. Syamaprasad, “Influence of Reactivity of Sheath Metals on the Superconducting Properties of NdFeAsO_{0.6}F_{0.4} Wires,” International Conference on Advanced Materials and Manufacturing Process for Strategic Sectors (ICAMPS 2015), Trivandrum, Kerala, May 13-15. (Published in Trans. Tech Publications) (Best Poster Prize)

2014 - P. M. Aswathy, **J. B. Anooja**, Neson Varghese and U. Syamaprasad, “Enhanced Transport and Magnetic Properties in Gadolinium Doped NdFeAsO_{0.7}F_{0.3} Superconductors” 59th DAE Solid State Physics Symposium (DAE SSPS 2014), Vellore Institute of Technology, Tamil Nadu, December 16-20. (Published in AIP Conf. Proc.)

2014 - P. M. Aswathy, **J. B. Anooja**, Neson Varghese and U. Syamaprasad “Enhanced Transport Properties in NdFeAsO Superconductor through Microstructural Refinement by CaF₂ Doping,” 2nd International Conference on Advanced Functional Materials (ICAFM), NIIST, Thiruvananthapuram, February 19-21.

2013 - P. M. Aswathy, **J. B. Anooja**, Neson Varghese and U. Syamaprasad, “Impact of Fluorine Variation on the Structural and Superconducting Properties of SmFeAsO_{1-x}F_x,” 25th Kerala Science Congress, Technopark, Trivandrum, January 30.

2011 - P. M. Aswathy, **J. B. Anooja**, P. M. Sarun and U. Syamaprasad, “Effect of Pre-Processing Technique on Phase Formation, Sintering Temperature and Superconducting Properties of SmFeAsO_{1-x}F_x,” Asian Conference on Applied Superconductivity and Cryogenics (ACASC), IUAC, New Delhi, November 16-18.

2015 - Neson Varghese, K. M. Devadas, **J. B. Anooja**, P. M. Aswathy, Manoj Raama Varma and U. Syamaprasad, “Enhanced Transport Current in MgB₂ Superconducting Wire through Metallic Fe Addition,” International Conference on Advanced Materials and Manufacturing Process for Strategic Sectors (ICAMPS 2015), Trivandrum, Kerala, May 13-15. (Published in Trans. Tech Publications)

2010 - K. M. Devadas, Neson Varghese, K. Vinod, S. Rahul, Syju Thomas, **J. B. Anooja**, A. Sundaresan, S. B. Roy and U. Syamaprasad, "Enhanced Superconducting Properties of MgB₂ by Carbon Substitution Using Carbon Containing Nano Additives," 55th DAE Solid State Physics Symposium (DAE SSPS 2010), Manipal, December 26-30. (Published in AIP Conf. Proc.)

2009 - Neson Varghese, **J. B. Anooja**, P. M. Aswathy, K. Vinod, S. B. Roy and U. Syamaprasad, "Effect of Combined Addition of Nano SiC and TiC on Structural and Superconducting Properties of MgB₂," International Conference on Advanced Functional Materials (ICAFM), NIIST, Thiruvananthapuram, December 9-10.