Ph.D. Invitational programs

TOP GLOBAL UNIVERSITY JAPAN

- **This program has been carried out at SIT since recent few (3) years beginning from 2016 and has been increasing diversity at SIT.**

- **Students from different countries stay upto 3 months and learn in detail the sophisticated technology and cutting edge research carried out at SIT.**

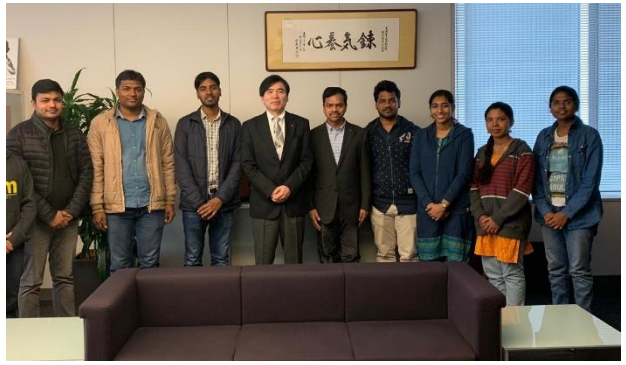
- **This program has been very successful and effective in increasing the number of international peer reviewed articles.**

Ph.D. Invitational Program's Departmental Tracking

Batch -1 : FY 2016-2017

Batch -2 : FY 2017-2018

Batch -3 : FY 2018-2019



Batch 1

9 students, IITM

- Department of Physics
- Low Temp. Physics
- Nano-Sciences

Batch 2

8 students, IITM

- Department of Physics
- Low Temp. Physics
- Nano-Sciences
- Mechanical Engineering
- Design Engineering

Batch 3

7 students, IITM

- Department of Physics
- Low Temp. Physics
- Nano-Sciences
- Materials Science & Engineering

Results and Outcomes from the program.

Papers published at International Journals: FY 2017-FY2019 SIT and IITM Collaborative Research Program

1. Raman spectroscopy of carbon doped MgB_2 prepared using carbon encapsulated boron as precursor.
   Dinesh Kumar et al., *Journal of Alloys and Compounds* 723 (2017) 751-756, ***(Impact Factor: 4.35)***
2. Effect of Ag addition on Microstructure and Raman vibrational modes of bulk FeSe
   K. Fabitha et al., *J Supercond Nov Mag* Vol 30 (2017) 3117-3122, ***(Impact Factor: 1.24)***
3. Top seeded infiltration growth of (Y, Gd)$Ba_2Cu_3O_y$ bulk superconductors with high critical current densities
   Dhruba Das et al., *Supercond. Sci. Technol.,* Vol 30 (2017) 105015 (13pp), ***(Impact Factor: 3.07)***
4. Band gap reduction and red shift in lattice vibrations by Niobium and Iron co-doping in PLZT
   Shibnath Samanta et al., *J Mater Sci.* Vol. 52 (2017) pp.13012-13022 ***(Impact Factor: 3.442)***
5. Stabilization heat treatment and functional response of 0.65[Pb(Mg1/3Nb2/3)O3]-0.35[PbTiO3] ceramics
   Pius et al., *Materials Research Bulletin* Vol 95 (2017) pp.47-55, ***(Impact Factor: 3.37)***
6. Enhanced electron-phonon coupling and critical current density in rapid thermally quenched MgB_2 bulk samples
   T.S Suraj, et al., *AIP Advances* Vol.7 (2017) 085014, ***(Impact Factor: 1.579)***
7. Effect of Ag addition on the surface topography and the vibrational dynamics of MgB_2
   Dinesh Kumar et al., *J Supercond Nov Mag* (2017) doi.org/10.1007/s10948-017-4481-y, ***(Impact Factor: 1.24)***
8. Modulations in relaxor nature exhibited by Sr^{2+} doped 0.68PMN-0.32PT ceramic
   Pius et al., ***Journal of the Ceramic International*** Vol. 46 (2020) 5658.
   (Impact Factor: 3.64)
9. Controlled piezotronic properties on recoverable energy storage density in rare-earth doped epitaxial PZT thin films
   Martando Rath et al., *Journal of Physics D: Applied Physics* Vol. 52 (2019) 304001. ***(IF: : 2.89)***
10. Amphotericity-spectroscopy correlations in Eu doped sodium bismuth titanate ($Na_{0.5}Bi_{0.5}TiO_3$)
    B. Santosh, B et al., *Journal of Materialia*, Vol. **7**, (2019) pp.100426, **(Impact Factor: 7.293)**
11. The composition and poling dependent photovoltaic studies in ferroelectric $(Bi_{1-x}Sr_x)(Fe_{1-x}Ti_x)O_3$ thin films,
    Pranab Biswas et al., *Journal of Materials Science: Materials in Electronics* (2019). **(Impact factor: 2.195)**
13. Structural and Morphological Transformations in Aqueous Graphite-Based Lubricant Subjected to Extreme Tribological Interactions of Low-Speed Intermittent Machining, **Wazeem Nishad** et al., *Tribology Letters* (2019)
    DOI https://doi.org/10.1007/s11249-018-1132-9 **(IF: 2.235)**
14. Pulsed laser-based hybrid micro-scribing of Cu and Al in salt solution, Sooraj shidy et al. *Journal of Micro-and Nano-Manufacturing* Vol. 8 (2020) pp.031002. (***Impact Factor: 1.07***).
15. Nitrogen Incorporated Photoactive Brownmillerite $Ca_2Fe_2O_5$ for Energy and Environmental Applications
    Durga Sankar, et al., ***Nature Scientific Reports*** 10 (2020) 2713 (***Impact Factor: 3.99***).
16. Femtosecond Pulse Ablation Assisted Mg-ZnO Nanoparticules for UV-only Emission
    Sahoo, et al., *Journal of Nanomaterials*, 10 (2020) 1326 pp.11, doi : 10.3390/nanoxx010005. (***Impact Factor: 4.1***).
17. Nanoscale Probing of Magnetic and Electrical Properties of YIG/SI (100) Thin Films Grown by Pulsed Laser Deposition.
    Anju Saroha et al.,
    IEEE Magnetics Letters Vol. 11 (2020) 7102305.
    (Impact Factor: 1.240)
18. Control of defectes in pristine ZnO nanoparticles by femtosecond laser pulse ablation and cathodoluminiscence
    Anubhab Sahoo et al., *Materials letters*, **at Press** (2020) (IF: 3.019)
19. Large Electrocaloric Effect and Energy Storage Performance of Site-Engineered Lead-Free $Ba_{1-x}(Bi_{0.5}Li_{0.5})_xTiO_3$ Ferroelectric Oxides
    Pal Subhajit et al., *Journal of Physics D: Applied Physics*, **at Press** (2020) (IF: 3.019)
20. The composition and poling-dependent photovoltaic studies in ferroelectric (Bi1−*x*Sr*x*)(Fe1−*x*Ti*x*)O3 thin films **P. P. Biswas**, et al.,
    Journal of Materials Science: Materials in Electronics (2020) https://doi.org/10.1007/s10854-019-02667-1.
21. Effect of low temperature thermal stabilization followed by rapid thermal quenching on the growth of micrometer sized superconducting β-FeSe crystallites in bulk
    Sreejith et al.,*Journal of Physics D: Applied Physics*, (2020) (IF: 3.019)
22. Phase transformations and residual stress probed in ductile brittle and brittle ductile scratching of silicon
    Chiraj et al., *Applied Physical Letters* (2021)
23. Microstructure and Critical Current Density of Top Seeded Infiltration Grown $Y_{1-x}Ho_xBa_2Cu_3O_{7-y}$ (x = 0, 0.1, 0.2, 0.3)
    G.R. Haripriya et al.,*J Supercond Nov Mag* (2021)