Prof. Miryala Muralidhar

Laboratory name

Superconductivity Research Laboratory☒

Keyword

Superconductors, MgB_2, REBCO, Coated Condutors, Sustainability, Supermagnets for Day to Life Applications

Tasks in the laboratory

1) Development of superconductors for magnet technology in medical and energy applications 2) Enhancement of superconducting properties in bulk MgB_2 materials 3) Improovement of critical current properties in REBCO coated conductors 4) Exploring new ternary bulk REBCO superconductors 5) Superconductors as sustainable technology for solving climate change Successfull applicants will be working on one of these areas to fabricate, study, analyze and optimize the superconductors and elucidate their importance in applcations for sustinability.

Eligibility-school year

- ☐ Third year undergraduate
- ☑ Fourth year or higher undergraduate
- ☑ First year master degree
- ☑ Second year or higher master degree
- ☑ First year doctoral degree
- ☑ Second year doctoral degree
- ☑ Third year or higher doctoral degree

Eligibility-student's major/fields

- ☑ Mechanical
- ☐ Chemistry
- ☑ Material
- ☑ Electrial
- ☐ Electronic
- ☐ Computer Science
- ☐ Lifescience
- ☐ Mathematical
- ☐ Civil Engineering
- ☐ Architecutre
- ☐ Engineering and design

Required skills

English Proficiency, Materials synthesis, Materials characterization (XRD, SEM etc.), Magnetometry, Process optimization, Critical thinking, Interest in sustainable energy

Desired skills（Preferred skills）

Scientific writing, Structure-property correlations, Experience with diffraction techniques or electron microscopy, Novel synthesis, Quenching studies, Annealing studies, Experience with glove box

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