Open call for research project

Indo-Korea Science and Technology Center, Korea Institute of Science and Technology (KIST)

Control number: IKST/Research/2024-10/08102024

Indo-Korea Science and Technology (IKST), Bengaluru calls **proposals for commissioned research project** as below.

1. Classification: Research & Development (Development of Advanced Spintronics and Electromagnetic Modules for 2D-AMMCR)

No.	Field	Title of project	Budget	Period	Note
1	Research	Development and Testing of Advanced Spintonics and Electromagnetic Modules for 2D-AMMCR	Rs. 6,00,000	15/11/2024 ~14/11/2025	

2. Qualification and application

A. Qualification for application

① Ph.D. degree holder in related area

B. Period of tender: 08. 10. 2024 (Tues) ~ 21.10. 2024 (Mon)

C. Required documents

① Official letter (one copy, English)

② Project proposal (original two copies, English)

※ Email submission of above documents is mandatory to Brunda (91 9901202787, hr@ikst.res.in), parallel with direct or postal submission

D. Application

- Deadline: 17:30, 21. 10. 2024 (Mon)
- Submission (Direct or Post)

- Address: 3rd Floor, NCC Urban Windsor, Opposite Jakkur Aerodrome, New International Airport Road, Yelahanka, Bangalore, Bangalore North, Karnataka, India 560 064

※ Please contact Brunda B V (+91 9901202787, hr@ikst.res.in) for any inquiry

Attachments: 1. Selection and operation plan for research project
2. Request for proposal
3. Project proposal (format)
4. Project result report (format). End.

Selection and operation plan for research project

1. Selection procedure and criteria

☐ Selection procedure

Application receipt	▶	Evaluation & Selection	▶	Modification & Action plan	▶	Contracting & Payment
Official letter, Project proposal (08/10~21/10)		Selection committee (~25/10)		Proposal modification and building action plan (~04/11)		Contract signing/Payment of project budget (~15/11)

※ Selection procedure timeline is subject to changes depending on internal schedules

☐ Evaluation & Selection

○ Method: Written and presentation evaluation

○ Criteria

- Fundamental qualification of institute and P.I.
- Clarity of objectives, differentiation of performance strategy, feasibility of research contents against the budget
- Creativity and innovativeness of objectives and contents, application availability of research results

☐ Modification & Action plan

○ Modification and improvement of project proposal of final candidate

○ Building an action plan such as interim review, regular meetings etc.

☐ Contracting & Payment

○ Signing a commissioned survey research contract

○ Major conditions/terms of contract

- Objectives/Contents In final project proposal
- Contract period: 15.11. 2024. ~ 14. 11. 2025 (1 year)
- Payment: Advance (Inclusive tax, 100% of contracted amount, payment after contracting)

2. Result report

□ Result reports (original two copies) submission within two months from the last date of research period.

3. Notice

□ Selection result will be announced through email to individual(s)

□ Duration for presentation evaluation is for 30 minutes (20 minutes for presentation and 10 minutes for Q&A)

□ No documents will be returned after submission

Request for Proposal (RFP)

Title: Development and Testing of Advanced Spintronics and Electromagnetic Modules for 2D- AMMCR

We invite proposals for a collaborative project to enhance the 2D-AMMCR computational package with advanced modules for spintronics and electromagnetic applications in 2D materials. The project focuses on two key areas: (a) Addressing spintronics related problems by developing atomistic DFT-tight-binding approaches for materials like WTe_2 and $TaIrTe_3$ to calculate spin-textures,spin-orbit torques, and switching possibilities, thereby pushing the state-of-the-art in SOT technologies; and (b) expanding theoretical modeling of electromagnetic interference (EMI) shielding in metallic MXenes through a DFT-semi-classical approach using the semi-classical Boltzmann transport Equation for ac-transport calculations, including absorption coefficients and frequency- dependent complex dielectric constants. Proposals should aim to bridge existing gaps in theoretical predictions and enhance the 2D-AMMCR package to meet pressing technological demands.

Project Proposal (Arial, Bold, 18 pt)

(Paragraph spacing 1.15)

1. Overview of project (Arial, Bold, 12pt)

- Title (Arial, 12pt)
- Period
- Budget

2. Information of P.I.

- Name:
- Affiliation: Position, Dept., Name of Institute
- Educational qualification:
- Contact
  - · Tel.:
  - · Mobile:
  - · Email:

3. Necessity and objectives (Max. 1 page)

4. Details (Max. 3 pages)

5. Strategies, methods and system

6. Expected achievements and application plan

7. Deliverables

8. Timeline

9. List of participants and budget plan

Project Result Report (Arial, Bold, 18 pt)

(Paragraph spacing 1.15)

1. Overview of project (Arial, Bold, 12pt)

- Title (Arial, 12pt)
- Period
- Budget

2. Information of P.I.

- Name:
- Affiliation: Position, Dept., Name of Institute
- Educational qualification:
- Contact
  · Tel.:
  · Mobile:
  · Email:

3. Objectives (Max. 1 page)

4. Details (No limit of pages)

4.1 Introduction

4.2 Methods

4.3 Results

4.4 Conclusion

5. Deliverables

6. Expenses