

# 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 Spintronics 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

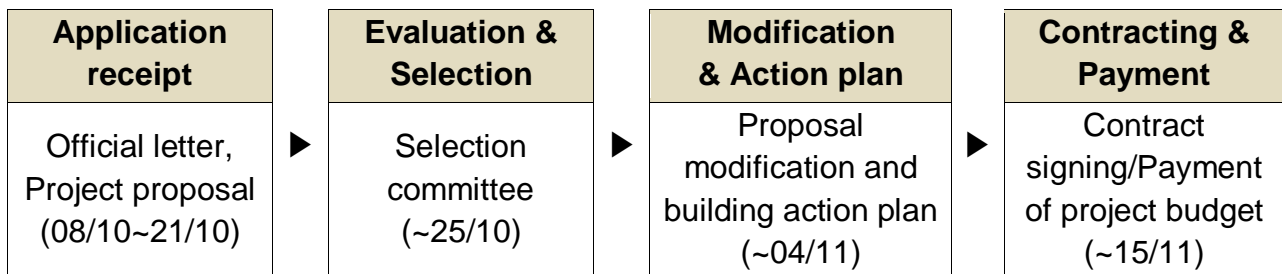
※ Please contact Brunda B V (+91 9901202787, hr@ikst.res.in) for any inquiry

- 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



※ 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**