**Application Guide for 2020 Key Projects of Guangdong-Foshan Collaborative Fund**

**I. Application Requirements**

(I) The leading host application institution must a provincial fund host institution within Guangdong Province, and the key projects of Guangdong-Foshan Collaborative Fund must be led by the host institutions in Foshan or the host institutions in Foshan must participate in the cooperative application.

(II) The applicant should be a current employed and in-service staff of the host institution or staff employed by two organizations (at least one of the following certificates must be uploaded, including the certificate of employment at the supporting institution, employment contract, social security proof in recent three months and payment certificate of individual income tax).

(III) The applicant is the principle investigator in charge of the project and must have the doctorate or the associate senior job title and above. In addition, the applicant should have presided over national or provincial science and technology programs (including National Natural Science Foundation of China and Provincial Fund Projects) or city-level key research projects (the diploma or certificate of job title, project contract, assignment brief or conclusion reply letter must be uploaded on the system).

(IV) The applicant should meet the application requirements in the text of the Notification.

**II. Award Size and Implementation Period**

The project award size is **RMB 1,000,000/project**, and the implementation period is generally **3 years**. The project fund is appropriated at a time.

**III. Requirements for expected results**

(1) The ability of project team members to undertake national-level science and technology plans and funds in their disciplinary fields has been greatly enhanced to promote regional cooperation in science and technology in the Guangdong-Hong Kong-Macao Greater Bay Area.

(2) Achieve breakthroughs in the research of key scientific problems to support the development of key core technologies.

(2) At least two high-quality papers or patent results published in national science and technology journals with international impact, international top-level or important science and technology journals recognized by the industry, as well as papers presented at top-level academic conferences at home and abroad (referred to as "three types of high-quality papers") (to be acknowledged as supported by this provincial-municipal collaborative fund projects), or apply for at least two relevant invention patents. No less than one scientific and technical report shall be submitted.

(3) Encourage the formation of diversified research results in monograph publication, standards and norms, personnel training and application of results.

**IV. Supported Fields and Directions**

**Table 1: Application Guide and Direction List of Key Projects of Guangdong-Foshan Collaborative Fund**

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| **(II) New energy**  |
| FS0201 | 1. Basic Theoretical Research on Efficient Solid-State Hydrogen Storage Materials and Static Hydrogen Compression Process Design (discipline code: E06)  |  |
| FS0202 | 2. Research & Development of Key Materials for Large-Scale Water-Electrolytic Hydrogen Production Equipment with Low Energy Consumption and Demonstration of Integrated System (discipline code: B03)  |  |
| FS0203 | 3. Fundamental Research on Key Technology of Inorganic Ceramic All-Solid-State Lithium Ion Battery (discipline code: E02)  |  |
| **(III) New materials**  |
| FS0305 | 5. Study on Toughening Lamellar Alumina Ceramic Sheet (discipline code: E02)  |  |
| FS0306 | 6. Study on Manufacturing High-Performance Aluminums Alloy for Data-Driven Automobiles (discipline code: E01)  |  |
| FS0307 | 7. Study on Microcontact Nano Printing Technology with Large-Area Electrical Structure (discipline code: B06)  |  |
| FS0308 | 8. Study on Construction of Injectable Self-Healing Hydrogel and Spinal Fusion Promotion (discipline code: H06)  |  |
| **(IV) Biological medicine**  |
| FS0403 | 3. Analysis of Molecular Genetic Mechanism of Sexual Dysplasia in Pigs (discipline code: C17)  |  |
| FS0404 | 4. Study on Construction of β Thalassemia Pig Model Mediated by Gene Editing and Gene Restorative Treatment (discipline code: H08)  |  |
| **(V) Population health**  |
| FS0502 | 2. Study on Mechanism of Light Health Technology in Treating Insomnia and Clinical Technology (discipline code: H09)  |  |
| FS0503 | 3. Study on Early Diagnosis Mechanism of Infrared Thermal Imaging of Diabetic Foot and Key Technology (discipline code: H07)  |  |
| FS0504 | 4. Biological Materials and Instruments of Digital Integrated Fiber Post Core Restoration (discipline code: H14)  |  |
| **(VI) Intelligent manufacturing**  |
| FS0603 | 3. Study on Assembly Process Stability for Vibration Control of Mechanical Equipment (discipline code: E05)  |  |
| FS0604 | 4. Stereoscopic Vision Positioning and Control Mechanism of Lightweight Picking Robot Oriented to Fruits in South of Five Ridges (discipline code: E05)  |  |