

Application Guide for 2022 Key Projects of Guangdong-Dongguan Collaborative Fund

I. Application Requirements

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

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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-Dongguan Collaborative Fund

Application Code	Supported Field	Subject Code
(I) Mathematical and Physical Sciences and Cross-frontier Fields (4)		
DGB0101	Neutron measurement and evaluation technologies for boron neutron capture therapy device	A05
DGB0102	Research on particle accelerator physics and key technologies	A05
DGB0103	Research on the application basis of advanced functional materials based on the neutron scattering technology	A04
DGB0104	Research on new efficient neutron detector and its electronics	A05
(II) Next-Generation Electronic Information Fields (2)		
DGB0201	Research on key technologies for inspection and encapsulation of semiconductor components and integrated circuits	F04
DGB0202	Research on monitoring and forecasting methods based on AI algorithms	F03
(III) New Materials and Energy & Chemical Fields (8)		
DGB0301	Research on mechanisms and properties of electrochemical materials based on the neutron characterization technology	B03

DGB0302	Research on frontier new material design and neutron scattering characterization	E02
DGB0303	Research on preparation and performance of new storage materials	B01
DGB0304	Research on design, preparation and performance regulation of green high-strength alloy materials	E01
DGB0305	Research on new ultra-low-power, high-density memory devices	E01
DGB0306	Research on the construction and key issues of efficient and stable energy conversion materials	E02
DGB0307	Research on design, preparation and performance of structural-functional-integrated polymer materials	E03
DGB0308	Research on the preparation of new optoelectronic materials and key technologies for new optoelectronic devices	E0207
(IV) High-end Equipment and Intelligent Manufacturing Fields (2)		
DGB0401	Research on core functional components of intelligent equipment and robots and key technologies	E05
DGB0402	Research on key technologies for materials, processes and equipment of metal laser additive manufacturing	E05
(V) Population Health Fields (6)		
DGB0501	Research on cardiovascular and cerebrovascular regeneration and repair based on biomimetic materials and stem cell regulation	H18
DGB0502	Research on precise treatment of malignant tumor based on boron neutron capture therapy and other medical devices	H16
DGB0503	Research on the molecular application basis of precision medicine in sepsis	H1005

DGB0504	Research on the application basis of IoT technology in active health and functional disability rehabilitation	H1701
DGB0505	Research on recipes of kidney-reinforcing and blood circulation-activating hospital preparations for the prevention and treatment of heterotopic ossification/osteoporosis	H2710
DGB0506	Research on the proved/classic recipes based on the same treatment of different functional gastrointestinal diseases	H2708