

Guangdong-Hong Kong Technology Cooperation Funding Scheme 2011

Textiles and Clothing (Energy-saving and Environmental-friendly Production System and Material – Environmental-friendly Textile Dyestuff and Chemical)

Topic/Theme

Environmental-friendly Textile Dyestuff and Chemical (ETDC). To develop enabling technology for ETDC that can be applied in the textiles and clothing industry.

Background

2. Due to the rapid industrial development in the Great Pearl River Delta Region (the Region), pollution in the region, which affects air, water and environment, is a major issue that both Hong Kong and Guangdong provincial government are dealing with. The price for remedial action for pollution results would be costly if the root of pollution can not be solved. Textile industry has long been considered to be a highly polluted industry, especially bleaching, dyeing, printing and finishing (BDPF) processes.

3. BDPF sector involves a large number of factories in the Region which consume tonnes of dyestuffs and chemicals which may pollute the Region unless exhausted gas and effluent have been properly treated. As a result, production cost is increased to cover the costly treatment expenses.

4. To achieve this end, applied researches in reduction, reuse and recycling of environmental-friendly dyestuff & chemical and minimal polluted processes have emerged to cope with this. The integration and convergence of the many diverse environmental materials and processes, would benefits to the industrialists of these areas. In particular, the swift adaptation of the new technology would give the textiles and clothing industry in the Region an early mover advantage to spawn new business and facilitate the technological upgrading of the industry.

Scope

5. The proposed ETDC is to facilitate the reduction, reutilization and recycling of chemicals, including dyestuff and chemical for textile bleaching, dyeing, printing and finishing. As a result, the degree of pollution and the disposal of harmful chemicals would be reduced and enable the environment to be less polluted.

6. The ETDC should be developed in a prototype form and reasonably demonstrated in Hong Kong or their major cities in the Guangdong Province to prove its viability.

7. In order to spearhead and support research and development of ETDC, the ITF is seeking proposals on the following:

(a) Environmental-friendly Chemicals for Pre-treatment Process

To develop green chemicals that are environmental-friendly and other harmless materials (for example: available organic halogen, etc.) which can be applied to yarn/fabric pre-treatment processes such as scouring, bleaching, mercerization with the condition that:

- (i) Low temperature and short processing time should be involved to save energy consumption; and
- (ii) Optimized utilization, reutilization and recycling of chemicals would be advantage.

(b) Environmental-friendly Dyestuff for Dyeing/Printing Process

To develop green dyestuffs that are environmental-friendly and other harmless chemicals (for example: azo-free, etc.) which can be applied to yarn/fabric dyeing and printing processes with the condition that:

- (i) Low temperature and short processing time would be involved to save energy consumption; and
- (ii) High dye exhaustion, less hydrolysis, etc. would be involved to minimize water consumption and less effluent treatment.

(c) Environmental-friendly Chemicals for Finishing Process

To develop green chemicals that are environmental-friendly and other harmless chemicals (for example: formaldehyde-free, etc.) which can be applied to yarn/fabric finishing processes with the condition that:

- (i) Low temperature and short processing time should be involved to save energy consumption; and
- (ii) Optimized utilization, reutilization and recycling of chemicals would be advantage.

Objectives

8. This invitation aims to solicit applied research and development proposals for the textiles and clothing industry to sustain and enhance its competitive edge in global marketplace, in the development of the fore front “ETDC” to demonstrate Hong Kong’s research and development capability.

Target Beneficiaries and Benefits

9. The beneficiaries of the project results are textiles and clothing companies and also the industrialists showing interest in ETDC. It is envisaged that the results could enhance the competitiveness of manufacturers through the development of new product,

technologies, process and design, in enhancing ETDC's viability, performance, durability and quality.

Extra Merit

10. Extra merit will be given to those applications, which could leverage on Guangdong's R&D capability in the implementation of the project proposals. We encourage collaboration among tertiary institutions and support organizations in both Guangdong and Hong Kong, so that their existing R&D facilities, resources and knowledge may be leveraged for maximum benefit.

Project Duration

11. The project shall start in the fourth quarter of 2011 for a maximum duration of two years.

Submission of Applications (Application Form)

12. To minimize unnecessary work and save time, the following two-step approach should be followed:

- (a) applicants should first brief HKRITA on the proposed application by way of a powerpoint presentation which identifies the key features of the project proposal – this will facilitate an initial assessment as to whether the proposal can be supported; and, if so
- (b) a formal application for funding, fine-tuned on the basis of earlier discussions, can then be formally submitted.

13. Please note that the application proposal for the funding has to be submitted by filling in the new application form downloaded from (<https://www.itf.gov.hk>). Three hardcopies with two of the original of the application should be stamped by your own Research Institution before submitted to HKRITA. We may require additional hardcopies of your application later.

14. For assessment of your application, ratings will be given to the following components:

1. Innovation and Technology Component;
2. Technical Capacity;
3. Financial Considerations;
4. Plan for Realization / Commercialization in future;
5. Relevance with Government Policies or in Overall Interest of the Community;
6. IP Rights; and
7. Management Capacity.

Deadline for Application

15. The deadline for application is on 16th September 2011.

Contact Person

16. Dr. Kai-chiu HO, tel: 2627 8188, fax: 2364 2727, e-mail: kcho@hkrita.com .