



Call for Joint Proposals

Call Fiche

Cooperative R&D Projects

between Austria, FFG and China, SHANGHAI University

The Austrian-Chinese Cooperative Research and Development (R&D) Projects are jointly supported with funding from the Austrian Smart Production Initiative, Production of the Future, managed by the Austrian Research Promotion Agency (FFG) on behalf of the Austrian Federal Ministry of Transport, Innovation and Technology and the International Cooperation with SHANGHAI University.

Deadline for submission via FFG eCall and to SHANGHAI University:

SHANGHAI University:

12. January 2015, 18:00 o'clock at China Standard Time (C.S.T.)

FFG eCall:

12. January 2015, 12:00 o'clock at Central European Time (C.E.T.)

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1 Aim of the funding measure

The aim of this call for Austrian-Chinese Cooperative R&D Projects is to support the jointly identified research topic nanotechnology with mutual interests and scientific excellence based on the existing cooperation agreement between the Austrian Research Promotion Agency (FFG) and the SHANGHAI University. It is purposed that this call will foster the connections between Austria and China and improve the visibility of the successful collaboration between the two parties. Furthermore it is expected that the Austrian-Chinese call for Joint Proposals will lead to further bilateral or multilateral cooperations at various levels.

The Austrian-Chinese joint Cooperative R&D Projects funded in the framework of this call are intended to intensify scientific and applied research cooperations between Austrian and Chinese research organisations and companies in order to set new impulses for excellent research between the two countries.

The special focus of the projects lies in the expected scientific and applied research achievements, know-how transfer, as well as in the promotion of excellent young scientists, post-docs and PhD students in the framework of the Cooperative R&D Projects. The participation of women scientists is particularly welcome.

2 Subject of funding

- This call shall bring together research capacities from **one or more SHANGHAI University research groups and one or more Austrian company** thus creating excellency with international standing and attractiveness to researchers in a key area of research. The **Austrian consortium can involve also research organisations** in addition to the obligatory Austrian company partner.
- **The thematic focus of the Cooperative R&D Project has to refer to at least one of the following topics:**
 1. **Nanowires and Devices:**
Special focus on nanoscale materials, nanowires, devices and nanoparticles and morphology-dependent properties
The topic focuses on the synthesis of nanowires and nanoparticles by employing rational design and technical experiments aiming to understand formation mechanisms and pursue morphology-dependent physical chemical properties.

2. Nanomaterial: In situ characterization and calculations

The topic focuses on the heterogeneous catalysis at the molecular-level by employing both in situ characterization and calculation approaches aiming to pursue the structure-property relationships and reaction mechanisms. The calculation approach can also include simulation.

3. Nanoimprintlithographie / Graphene / Sensors/ Roll-to-Roll / Additive manufacturing / 3 D Printing:

Special focus on micro/nano-imprint lithography, functional micro contact- and inkjet printing and 3D printing

The topic focuses on new or functional materials and processes for micro/nano-imprint lithography, functional micro contact and inkjet printing and 3D printing, unconventional imprint lithographies for larger-area or residual-layer-free micro/nano-structures fabrication and applications in optical, electronic, biological, electrochemical biosensors or devices.

4. Multifunctional nanofibrillated cellulose film for flexible electronics and sensors

The topic focuses on the fast assembly of transparent hybrid nanofibrillated cellulose (NFC) film by incorporating multifunctional nanomaterials and bioactive recognition elements aiming to build space-ordered heterogeneous network architectures with high uniformity and mechanical flexibility for flexible electronics or sensors.

5. Nano Composite Polymers:

Special focus on thermally-functional polymer and nanocomposites

The topic focuses on developing new combinations of thermally-functional mechanisms or techniques for polymer composites with enhanced thermal-related functions, such as high thermal stability, thermal conductivity, and/or flame retardancy by nanomaterials and nanotechnologies.

6. Nanoscience and Nanotechnology:

It is of interest to attract also proposers with highly innovative ideas in the field of nanoscience and nanotechnology in general to strengthen and intensify future cooperations in a broader sense of meaning. It is a requirement that proposals submitted in this topic are of interest to both sides of the parties, that they are within the scope of the call and that they meet the goals and the individual requirements of SHANGHAI University and of the austrian funding organisation FFG.

- In general, researchers of both countries should contribute equally to the competence of the partnership. In the partnership researchers of the participating institutions work on a defined research project which is divided into coordinated work packages designed to reach a common research goal. The joint proposal provides

sufficient level of skill, equipment and manpower capabilities necessary to work on the defined research project.

- The joint project shall be managed jointly by an Austrian and a SHANGHAI University Applicant (A-AT, A-SHA). These two leading scientists shall be announced as the spokespersons responsible for the joint external representation of the project.
- Additional partners from China can participate in the consortium only by full acceptance of SHANGHAI University. This has to be clarified in the stage of proposal preparation between the parties. Otherwise this could lead to the rejection of the proposal.
- The results of the research shall be shared by the participating Austrian and Chinese researchers. All Austrian and Chinese partners involved in the project have to conclude a consortium agreement on issues such as intellectual property rights, liability and confidentiality. This consortium agreement has to be provided to FFG via eCall and to the headquarter of SHANGHAI University before the respective national funding contract is signed.

3 Scope of funding

- FFG is prepared to provide each selected Cooperative R&D Project with financial support for a maximum of 3 years.
The total call budget for the Austrian project partners is 0,5 Million EURO (equivalent to around 4,5 Million CNY). Funding applied for an individual project has to lie between 100.000.- EUR and 500.000.- EURO (equivalent to around 4,5 Million CNY) for Austrian partners within the joint project.
The budget provided by FFG can only be used to cover costs linked to the implementation of the project parts executed by the Austrian project partners. Rules for funding of the Austrian project partners are laid down in the respective call documents¹.
- SHANGHAI University is prepared to provide each selected Cooperative R&D Project with an annual support, for a total of 3 years.
Each selected project is supported by SHANGHAI University with up to 300,000 CNY (equivalent to around 35,000 EURO) per year for a total of 3 years. This part of SHANGHAI University budget is from the university international fund and also from the municipality city and cannot be spent for personnel costs but just for one or more of the following cost categories:
 1. to cover travel cost for Chinese project partners.
 2. to purchase consumables necessary for the performance of the CRDP.
 3. to cover the other spending in accordance with the SHANGHAI University.

¹ The call documents include the call fiche, national call announcements, Austrian-Chinese joint proposal template and further national submission documents.

- 10% of the eligible total project costs have to be carried by research organisations (no matter if Austrian and/or Chinese research organisations)
- The Austrian and Chinese research organisations must have the right to publish the results of their work that has been conducted in the course of the project.

4 Conditions for funding

- For each CRDP a joint proposal in English language has to be submitted to FFG and the SHANGHAI University. The proposal must indicate all Austrian and all Chinese project partners and clearly lay down the division of work between the partners as laid down in the call documents. The submitted versions of the Joint Proposal have to be identical. Non identical versions are not eligible.
- The Austrian project partners have to submit an Austrian Annex and a cost plan in addition to the Joint Proposal via FFG eCall in due time.
- The Chinese project partners should also prepare and submit in parallel an additional SHANGHAI University application form in Chinese language to the SHANGHAI University (see also below, “Submission of applications”).
- The joint proposals must meet the following goals and criteria:

The goals of this call are to:

1. Strengthen the innovation potential of national real assets manufacturing by improving the industry’s access to research competences at universities and research organisations.
2. Built up research competences in at least one of the relevant topics in the thematic area of nanotechnology stated in section 2 of this document.
3. Increase European and international collaborations and networks and foster cooperations to solve interdisciplinary challenges in research.

The Criteria of this call are:

Funding criteria & explanations	marks	threshold
1. Relevance to the call	20	12
The project's relevance to the call	<ul style="list-style-type: none"> • To what extent does the project address one or more of the call topics and contribute to reaching the goals of the call? 	
Incentive effect of the funding* (additionality)		
Shorter project completion time	<ul style="list-style-type: none"> • Can the project be completed in a shorter period of time? 	
Larger project size	<ul style="list-style-type: none"> • Can the size of the project be expanded? 	
Wider project scope	<ul style="list-style-type: none"> • Does the funding allow the project to be set up in a more ambitious manner? e.g. by <ul style="list-style-type: none"> ○ focusing on more radical leaps in innovation ○ following a more long-term (non-market oriented) and research-intensive approach - as opposed to market oriented and development intensive ○ involving a higher technical risk ○ involving a higher market risk ○ leading to new or more extensive collaborations 	
Higher R&D investment	<ul style="list-style-type: none"> • Does the funding stimulate higher R&D investment on the part of the project partners beyond the project at hand? e.g. by <ul style="list-style-type: none"> ○ creating additional R&D jobs ○ leading to investment in additional R&D infrastructure ○ stimulating additional R&D projects 	
The project's contribution to gender aspects	<ul style="list-style-type: none"> • Have gender aspects been taken into account in the research design and project planning? Can positive consequences be expected? (see page 22) 	
The project's contribution to societal/ethical and environmental considerations	<ul style="list-style-type: none"> • Have societal/ethical and environmental considerations been taken into account in the project planning and can positive consequences be expected? [This point includes in particular consequences on the occupation, quality of work, working conditions and the environment, as well as the ethical and societal implications of the projects. These aspects should be considered as and when they arise.] 	
2. Quality of the project	40	24
Presentation of the state of the art	<ul style="list-style-type: none"> • Is the state of the art (level of knowledge/technology) presented sufficiently and understandably? 	
Technical and scientific quality	<ul style="list-style-type: none"> • How high is the level of innovation/invention in relation to the state of the art? 	

	<ul style="list-style-type: none"> • How risky is the development? [Development risk is to be viewed positively in this context. Nevertheless, it is a precondition that the project is at the cutting edge of knowledge in the field and that the methods are sound. Projects that are risky because they have been poorly conceived should not be rewarded.] • Are the planned methods and/or the scientific and technical approach appropriate to reach the goals and to produce the desired results? 		
Quality of the planning	<ul style="list-style-type: none"> • Are the time plan and the working programme well structured, transparent and realistic? • Are the project partners well integrated with regard to their capacity and their expertise? • Is/are the financial planning and/or the planned costs transparent and appropriate? 		
3. Suitability of the applicant/ project partners		20	10
Scientific/ technical ability	<ul style="list-style-type: none"> • Does the consortium include the scientific, technical and organizational expertise required for the project? 		
Potential of the consortium and/or the applicant to realize the project	<ul style="list-style-type: none"> • How can the consortium's (economic) potential to realize the project and to achieve the project's goals be assessed? • Is the composition of the consortium appropriate with a view to achieving the project's goals? 		
Management ability and capacity	<ul style="list-style-type: none"> • Does the consortium have the required managerial ability, capacity and structure to perform the project? 		
Composition of the project team in terms of gender mainstreaming	<ul style="list-style-type: none"> • Is the composition of the project team balanced in terms of gender mainstreaming? • Are there improvements to the gender ratios normal for the field? [The gender-specific balance should be taken into account equally for men and for women.] 		
4. Economic potential and exploitation		20	10
Client orientation/ client benefit and unique selling proposition/ leadership in the area	<ul style="list-style-type: none"> • Is the description of the client orientation, the client benefit and/or unique selling proposition/ leadership in the area reasonable and realistic? • If appropriate, have gender aspects been taken into account with regard to client orientation and/or client use of the expected results? 		
Knowledge of the market (target markets, market potential and competitors)	<ul style="list-style-type: none"> • Does the application make clear that the consortium and/or the applicant have appropriate knowledge of the market? • Is the description of the target markets and the market potential sufficient and reasonable? • Are the competitors and their market positions known? 		

	<ul style="list-style-type: none"> • Is there sufficient market potential? 		
Marketing strategy (incl. IPR)	<ul style="list-style-type: none"> • Is the description of the marketing strategy reasonable and realistic? • Is the planned protection strategy (IPR) sufficiently presented, reasonable and adequate? • Which economic advantages would result for the project participants (cost-effectiveness, synergies with other products etc.)? 		
Total		100	60

- A consortium agreement between all involved Austrian and Chinese partners has to be provided to FFG via eCall and to the SHANGHAI University before the respective national funding contract is signed.
- Funding contracts will be concluded between the FFG and Austrian project partners for the Austrian side and by SHANGHAI University and the Chinese Institutions for the Chinese side.

5 Submission of Joint Proposal applications

- **Application in Austria at FFG:**

Joint Proposal Template - Austrian-Chinese Cooperative R&D Projects must be submitted electronically via FFG eCall (<https://eCall.ffg.at>)

Deadline: 12. January 2015, 12:00 o'clock at Central European Time (C.E.T.)

- **Application in China at SHANGHAI University:**

Joint Proposal Template - Austrian-Chinese Cooperative R&D Project must be submitted **electronically as email attachment to:**

Mrs. Wu Hongmin,
Email: whm_hermione@shu.edu.cn

In addition it must be submitted as hard copy (4 versions) to SHANGHAI University:

No.111 Mailbox, NanoScience and Technology Research Center, Shanghai University, No.99 Shangda Road, Shanghai, 200444, China

Deadline: 12. January 2015, 18:00 o'clock at China Standard Time (C.S.T.)

- The Joint Proposal must be **written in English language**.
- In addition applications must **fulfil all the respective national and /or general formal conditions** for funding in order to be admitted to the evaluation procedure (amendments are not possible).
- The final decision of the selected proposals will be announced not later than April 2015.

6 Contact Information

For further Information please contact FFG or SHANGHAI University.

Austria – FFG:

FFG website related to the call:

<https://www.ffg.at/10-ausschreibung-produktion-der-zukunft>

eCall submission of application: <https://ecall.ffg.at>

FFG contact persons:

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E: margit.haas@ffg.at, T: +43(0)57755-5080

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China – SHANGHAI University:

SHANGHAI University website related to the call: www.nano.shu.edu.cn

Submission of application at SHANGHAI University:

No.111 Mailbox, NanoScience and Technology Research Center, Shanghai University, No.99 Shangda Road, Shanghai, 200444, China.

SHANGHAI University contact person:

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