

An Overview of the Nano-Science and Technology Education in China

---- The Shanghai Approach

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Nano-science and technology is a multi-disciplinary research field, which has tight relation with basic science such as physics, chemistry, and biology, and has very wide and important applications in electric engineering, information technology, new energy resources, and biomedical engineering. During the past decade, China has put tremendous effort into the education of the high-end nanotech professionals. Take the city of Shanghai for example. In order to improve the research and innovative capability in both academic institutions and industrial corporations, and to elevate the educational level of the nano-science and nanotechnology of the entire society, a variety approaches of nanotech education and popularization, from the higher education, to the basic education, and to the scientific popularization education, have been employed in Shanghai.

At the high-end education of nano-science and nanotechnology has been embedded into both the graduate and undergraduate teaching in universities and colleges. Currently, the education related to nano-science has been launched in 7 universities in Shanghai, including Fudan University, Shanghai Jiaotong University, Tongji University, East China Normal University, East China University of Science and Technology, Shanghai University as well as Donghua University. There are in total 108 master's research directions, and 63 doctoral research directions among 66 related disciplines including science, engineering, and medicine. The systematical trainings received by the students make them capable of doing innovative research and making remarkable inventions.

At the basic education level, different kinds of education are provided to the high-school students. Activities such as summer camp and science and technology exhibition educate and inspire students by illustrating the knowledge of the nano-science and demonstrating the latest nanotech products. According to these activities, students are able to understand basic nano-phenomenon and characteristics. More importantly, the exhibition of fancy nanotech products has evidently inspired their interest in learning nano-science and technology.

In order to enhance the public understanding of the nano-science and technology, the scientific popularization education has been provided to the common citizens. By holding science-popularization forums, the high-end science and technology are introduced to the ordinary people. Professors and experts are invited to give presentations in the communities. The discussions in publicly concerned topics, such as new energy resources, health, sustainable development, have enriched the knowledge and enhanced the comprehension of the nano-science and technology in the entire society.