



Address at the Opening Ceremony of the TWAS 12th General Conference & 23rd General Meeting by Chinese President HU Jintao in Tianjin on Sept. 18, 2012*



HU Jintao
Chinese President

Honorable President Palis,
Distinguished Fellows and Guests,
Ladies and Gentlemen,

The 14th General Meeting of TWAS was held in Beijing nine years ago. Today, we are celebrating the 23rd General Meeting of TWAS here in Tianjin, which is indeed a grand gathering of the international scientific community. First of all, on behalf of the Chinese people and government, I would like to extend our hearty congratulations on the convening of this meeting and our warm welcome to all TWAS Fellows, scientists and delegates from around the world.

S&T is the pinnacle of human wisdom and a great invention. It is an important driving force behind economic

prosperity, social development and human civilization. Look at the history of human development, and we find that S&T has permeated the whole process of the birth, growth and prosperity of civilization. The scientific achievements made by developing countries in the long history of civilization laid a solid foundation for the sprouting of modern science and technology, thereby making substantial contributions to the development of global science and technology.

Every major step forward in human civilization has been closely correlated with revolutionary breakthroughs in S&T. Continual innovation and development of S&T has advanced humankind from barbarism to civilization, from poverty to prosperity, and from the Realm of Inevitability

* This is an unofficial translation of Mr. Hu's speech.

to the Realm of Freedom. It is endless progress and innovation of scientific knowledge that has been changing and transforming the modes of our thinking, production and living, expanding the space of human cognition, deepening our knowledge of the universe, nature and ourselves, and enhancing our capability to create a better life.

Ladies and Gentlemen!

Embracing the great trend of global-scale modernization, the developing countries have been working hard for a better future and higher quality of life. The world is witnessing a historic change, from a modernization of the minority of the world's population to that of the majority. This unprecedented change has created both great opportunities and numerous severe challenges. The contradiction between development, resources and the ecological environment has become increasingly prominent. All nations of the world must join hands and work together to address major global issues, such as energy security, food security, the ecological environment, health and infectious diseases, natural disasters and climate change. We must take greater advantage of the supporting and leading role of science & technology in addressing these issues.

Global science and technology is at the dawn of a new round of revolution. The unprecedentedly strong demands of economic and social development, the endogenous drive from within the knowledge and technology systems, and the deep integration of S&T with economy, society, culture and education, have joined forces to synergistically boost a dynamic reality of S&T development with multiple-point breakthroughs and multi-disciplinary convergence. We have never before seen such profound impacts of science and technology on the progress of human civilization, and we have never seen science and technology so closely related to human development and welfare.

For the developing world in particular, S&T is great power to be counted on for changing destinies, creating a better future and quality of life. Although remarkable achievements have been made in developing countries, there are still large gaps between the developing and developed countries in terms of economic and social development, and S&T development. To reduce these gaps, the developing countries must strive to focus on innovation, attach great importance to the role of S&T, and invest intensively in R&D.

We must build on our own national conditions and S&T basis. We must follow the road of development

with our own characteristics, which will adapt to the international trends of S&T, learn from S&T successes in developed and developing countries, and create a new model of development that respects the laws of science, technology and innovation while meeting national development needs.

We must focus on strengthening the building of our innovation capacity, formulating national S&T development strategies, setting strategic priorities for S&T development, vigorously promoting innovation, and enhancing breakthroughs in key technologies. We must pay great attention to importing, digesting and absorbing advanced technologies, expanding S&T resources, and the construction of S&T infrastructure and platforms. We must try every means to enhance the close integration of S&T with economy, and expedite the transfer of R&D outcomes to economic production.

We must attach great importance to cultivating scientific talents, especially outstanding young people with great potential. We must build an environment that provides opportunities and platforms for all kinds of people to stand out, grow up and realize their potential. We must bring up a team of high-caliber scientific talents.

We must strengthen openness and international collaboration in order to catch up with the rapid global flow of scientific resources and take advantage of these resources with open minds in the effort to improve our scientific and innovation capacity, engage talents and experts, and introduce advanced technology and management. We must strengthen exchanges and collaboration in S&T among the developing countries to achieve a shared development based on complementary resources, strengths and expertise.

Ladies and gentlemen!

China attaches great importance to the cause of science and technology. We have formulated mid- to long-term S&T development outlines, increased R&D investments and implemented a series of major scientific programs, as a result of which, some major achievements in key disciplines have entered the frontiers of world science and technology, such as manned space exploration, manned deep sea submersibles, supercomputing, quantum communications, neutrino transformation and super-hybrid rice. The rapid development of science and technology in China has provided strong support to Chinese economic and social development. At the same time, China faces a series of pressing issues and challenges, which include



but are not limited to imbalanced, uncoordinated and unsustainable development, lack of indigenous innovation capability, poorly structured industrial development and growth constraints from resources and the environment. The solution of these issues requires an urgent transition of economic development, where innovation should become the driving force.

China has set itself the goal of becoming an innovation-driven economy by 2020. We stick to the philosophy of science-based development, making science and technology a strategic priority, and implementing national strategies of revitalizing economy through science and education and based on talents. We adhere to our established S&T policies of cultivating and substantially upgrading our own innovation capability, striving for especially rapid development in key areas of strategic priority, supporting economic and social development and leading the future through science and technology.

China has identified and is actively advancing the main directions and strategic priorities of S&T innovation. In order to make original breakthroughs, we will strengthen the forward-looking layout in frontier areas that may lead to revolutionary breakthroughs, such as the physical sciences, life sciences, space and ocean science, geoscience and nano-science and technology. In order to drive revolutionary innovations, we will strengthen pioneering technology research in some key areas related to long-term development, such as information technology, biotechnology and energy technology. In order to make breakthroughs in key techniques and high-end products R&D by supporting industrial structure adjustment, transformation and upgrading, we will strengthen systematic and integrative innovation, and promote the combination of informationization and industrialization. We will foster the combination of emerging S&T and emerging industries, as well as cultivate and develop strategic emerging industries in the areas of energy saving, environmental protection, next generation information technology, biotechnology, high-end equipment manufacturing, new energy, new materials and new energy vehicles. We will focus on developing high-production, high-quality, high-efficiency green agriculture, extending the agricultural industry chain, and enhancing comprehensive agricultural productivity to meet the demands of our 1.3 billion people for food quantity, quality, safety and diversity and agricultural multi-functionality.

We will put great emphasis on promoting the adjustment of energy structure, enhance the efficient, clean and safe utilization of traditional fossil fuels, facilitate the industrialization of new energy, increase the exploration, development and comprehensive utilization of oil and gas resources, important mineral resources and water resources, and ensure the efficient supply of energy resources. Great attention will be paid to S&T innovation relevant to improving daily life, including the solution of scientific and technological issues concerning food safety, drinking water safety and air quality. To make the lives of our people healthier and happier, we will develop diagnostic techniques and drugs for frequently occurring diseases, common diseases and acute infectious diseases. We will focus on environmental protection, governance and restoration technologies in urban-rural development to conquer the emerging issues of environmental pollution and waste disposal, and enhance our capability in the warning, monitoring and prevention of natural disasters.

A series of measures have been taken to achieve the goals set above. China will accelerate the construction of a national innovation system, consistently increase inputs to science and technology, deepen the reform of the S&T system, enhance coordinated innovation, promote the close linkage between S&T and economic development, establish a technological innovation system with enterprises as the mainstay and the market as the guide. This will also require the close integration of industry, education and research, developing several first-class research institutions and high-level research oriented universities, cultivating dominant disciplinary and innovative talents, and ensuring the reasonable allocation, highly efficient utilization and open sharing of innovation resources.

Ladies and Gentlemen,

As a member of the developing world, China has always stressed the importance of S&T cooperation with other developing countries. A series of joint research programs have been initiated and a number of international S&T initiatives have been implemented. Facing the future, China will actively promote S&T cooperation with other developing countries in a spirit of equity, mutual trust, mutual benefit, shared development and common prosperity that benefits all, in the following areas.

Firstly, China will mobilize its accumulated science and technology resources, targeting the socioeconomic

development needs of developing countries. To this end, it will foster advanced appropriate technology aid and transfer for desertification control, water saving and arid land agriculture, crop breeding and cultivation, prevention and treatment of infectious diseases, low-cost medical care, information communication and new energy. According to the different advantages of different developing countries, China will promote cooperative research on food security, the eco-environment, disaster prevention and mitigation, and jointly seek solutions to common key S&T issues concerning socioeconomic development and public welfare improvement.

Secondly, China will further expand its government fellowship program and help Chinese R&D institutions and universities establish their talent training programs for developing countries, organize S&T training courses and focus on the cultivation of excellent youngsters and specialized talents. China welcomes even more S&T personnel from developing countries to conduct their research in China, and welcomes even more young students from developing countries to study in China.

Thirdly, China will further support the S&T capacity

building of developing countries, increase the number of high-tech projects in its development assistance program and help developing countries build S&T infrastructure facilities and technology demonstration platforms. This will include helping Chinese research institutions and enterprises establish joint R&D centers with their counterparts in developing countries in fields of mutual interest, and supporting joint research by Chinese scientists and scientists in developing countries on key S&T issues.

TWAS is an international scientific organization with wide influence, consistently devoted to the promotion of scientific excellence and innovation capacity in developing countries, and contributes greatly to S&T development in developing countries. The Chinese government has decided to donate 1.5 million US Dollars to TWAS to support its playing an even more active role in promoting S&T exchanges and cooperation and assisting developing countries in innovation capacity building and talent cultivation.

Finally, I wish the conference a full success.

Thank you all.