The International Inventors' Day (IID) Virtural Celebration 2014 June 13. Hangary

China: China Association of Inventions





1. First Patented Invention:

Invention: Variable optical filter real-time pseudocolor display device



Inventor: Mr. Hu Guohua, "the First Chinese Patent Man", was born in 1943 in Jiangsu, China, a scientist. He sponsored and completed 8 major research projects during 1979 – 1984. He submitted in April 1985 the first patent application for the invention - Variable optical filter real-time pseudocolor display device - an optical device for analysis of the satellite images that was granted the Chinese first patent No.85100001.0 in December 1985 after the implementation of the first & Patent Law of the People's Republic of China & which was issued on March 12, 1984 and implemented on April 1, 1985.

2. Top 3 Chinese patented inventions in 20th century

2.1 Invention: hybrid rice



Inventor: Yuan Longping, born September 7, 1930, a <u>Chinese agricultural scientist</u> and educator, known for developing the first hybrid rice varieties in the 1970s.

In 1964, Yuan created his theory of using the probably-existing naturally-mutated male-<u>sterile</u> rice individuals for the creation of reproductive hybrid rice species, and in two years he managed to find a few individuals of such male-sterile rice that he predicted could be used for his research. Subsequent experiments proved his theory feasible, which was his most important contribution on hybrid rice.

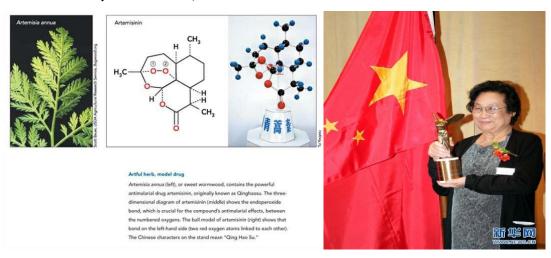
In 1973, a type of hybrid rice species which had great advantages was successfully cultivated. It yielded 20 percent more per unit than that of common ones, putting China in the lead worldwide in rice production. For this achievement, he was dubbed the "Father of Hybrid Rice." At present, as many as 50 percent of China's total rice fields grow Yuan Longping's hybrid rice species and yield 60 percent of the rice production in China.

Hybrid rice has since been grown in dozens of countries in Africa, America, and Asia—providing a robust food source in high famine risk areas.

In 1979, his technique for hybrid rice was introduced into the United States, the first case of intellectual property rights transfer in the history of the People's Republic of China.

The <u>United Nations Food and Agriculture Organization</u> 1991 statistics show that 20 percent of the world's rice output came from 10 percent of the world's rice fields that grow hybrid rice.

2.2 Invention: Dihydroartemisinin, used to treat malaria



Inventor: Dr. Tu Youyou, born 30 December 1930 in Ningbo, China, is a Chinese medical scientist, pharmaceutical chemist, and educator. She won the 2011 Lasker Award in Clinical Medicine for discovering artemisinin (also known as Qinghaosu) and dihydroartemisinin, used to treat malaria, which saved millions of lives. The discovery of artemisinin and its treatment of malaria is regarded as a significant breakthrough of tropical medicine in 20th Century and health improvement for people of tropical developing countries in South Asia, Africa, and South America.

2.3 Invention: Wubi input method for entering Chinese characters by Latin keyboard.





Inventor: Mr.Wang Yongmin , born in 1943, a Chinese programmer, who developed $\underline{\text{Wubi}}$, a very fast input method for entering Chinese characters using a standard Latin keyboard. Currently he is the president of $\underline{\text{Wangma}}$, a $\underline{\text{Beijing}}$ -based software development company and a member of the directors of CAI. The research on a system for decomposing Chinese characters into their constituent parts with minimal ambiguity was started In 1978. This research ultimately resulted in Wubi, an input method patented in China and internationally. Wang Yongmin assigned several character components to each key relying on the inherent redundancy of Chinese characters. For example, the U key can generate 13 different shapes (such as $\underline{\hat{x}}$, $\dot{\hat{x}}$, $\dot{\hat{x}}$ or $\dot{\hat{y}}$), but a sequence of at most four keys always disambiguates individual shapes, for example, pressing UEMC produces $\underline{\hat{x}}$, mapping U to $\underline{\hat{x}}$ for this character. The first PC version of Wubi appeared in 1984, and soon became the most popular method of entering Chinese characters in the PRC, becoming known as "China's first software".

3. Three Chinese Patented Inventions in the 21st Century recommended by CAI

3.1 Invention: Soybean Protein Fiber



Inventor: Mr. Li Guanqi, born in March 1946 in Henan, China, founded a grain and oil machinery factory in 1980 and started to attack the key problems of soybean protein spinning technology in 1990. During 1990-2001 after more than 800 experiments in more than ten years, he researched and developed successfully the man-made fiber - soybean protein fiber. In 2002 he invented the soybean protein fiber technology which was recognized by the China Textile Industry Association to become the world's first artificial plant protein fiber. The soybean protein fiber was identified as the world's eighth largest man-made fibers, recorded in the world history of the man-made fibers.

3.2 Invention: HVDM (High Vacuum Densification Methods) Series of New Technology





Inventor: Xu Shilong

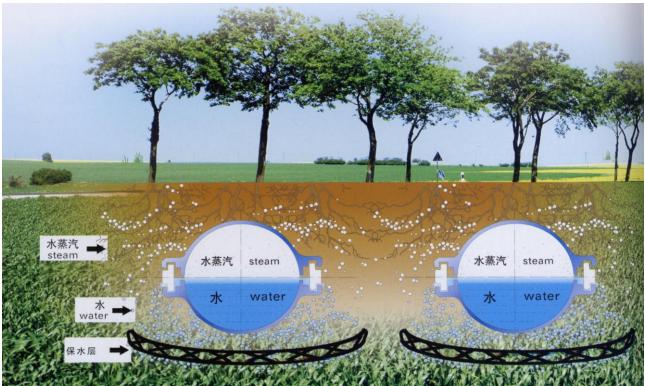
This technology is to turn mud flat into the land good for highway and buildings, which can be used for land reclamation in

the coastal areas and construction projects near rivers. His first patent was applied in July, 2001. Compared with conventional methods, the patent of high vacuum densification method series has such advantages as 30% cost saving, 50% time saving, controlled quality and green environmental protection. The patent has been registered and exported to more than 20 countries including the United States, Indonesia, Vietnam, Malaysia, the Middle East. The saving cost has reached nearly one hundred million Yuan and over ten million tons of carbon dioxide emission has been reduced.

Over the past 10 years, the total area of soil treatment has been over 10,000 hectare, involving a variety of job sites, infrastructures and facilities, inclusive of roadways, airport runways, port stack yards, petrochemical facilities, ground reclamation, power plants and factory buildings etc.

3.3 Invention: Root Irrigation Pipe and Root Irrigation System





Inventor: Rongwu Ding, born in Dec.1943.

He made the summary of the previous water saving irrigation technologies. Using the mathematical principle to compare the aim of ecological restoration with many other irrigation technologies and the present situation of ecological geography, taking the underground irrigation as the breakthrough point, the irrigation, fertilization and gas supply are directly applied to the root of plants. That is root irrigation, which minimizes evaporation of the water. The irrigation pipes make the water well-distributed and the water outlet won't be blocked by sand and mud. This technology was granted the patent of invention on March, 2007. Root irrigation technology is good and suitable for arid areas with features of sand fixing, soil maintaining and fertility retaining, water / energy saving, etc. In Fujian, Xinjiang and other areas , lands using this technology have reduced the costs and increased the income by 460 RMB per mu (0.0667 acre). In land management and ecological restoration it has significant social and economic benefits