

China completes construction of steady high magnetic field facility

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Magnets. Credit: SUN Ce

China has completed construction of the Steady High Magnetic Field Facility, a project of China's National 11th Five-Year Major Science and Technology Infrastructure constructed by High Magnetic Field Laboratory, Chinese Academy of Sciences (CHMFL). The project passed China's national acceptance on Sep. 27th, 2017 in Hefei, Anhui.

The completion takes China's [high magnetic field](#) technology to a new level. The country now has the means for scientists to carry out frontier research on [condensed matter physics](#), [magnetism](#), material science, chemistry, life [science](#) and medicine.

"The successful testing of the Hefei Hybrid Magnet has placed China on the world map of international research in very high magnetic fields," said Hans Schneider Muntau, high [field](#) magnet expert and former chief engineer of the Grenoble High Magnetic Field Laboratory of France and the National High Magnetic Field Laboratory of the U.S.

The project was jointly proposed by Chinese Academy of Sciences and Ministry of Education in 2005 and approved by the National Development and Reform Commission in 2008. After years of effort, CHMFL now has 10 magnets, six measurement systems and extreme low-temperature and high-pressure experimental systems.

It's the world's second 40-tesla-level hybrid magnet, with three water-cooled magnets that set world records and the world's first three-in-one microscope SMA (scanning tunneling microscope/magnetic force microscope/atomic force microscope), and establishes an advanced scientific experiment system, achieving a major breakthrough of China's steady high magnetic technology.

"CHMFL summarizes 10 years of enormous and exemplary efforts under the groundbreaking leadership, which were necessary to create know-how and competence in the generation and exploitation of very high magnetic fields," Hans Schneider Muntau said.

Provided by Chinese Academy of Sciences

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