Research Group of the Steady High Magnetic Field Facility
Hefei Institutes of Physical Science, Chinese Academy of Sciences

磁体技术和综合性能国际领先的稳态强磁场实验装置

The Steady High Magnetic Field Facility, of which the magnet technology and the overall performance is world-leading.

国内首套28MW高稳定度直流电源

The first high-stability DC power supply of 28 MW in China.

国际独创的STM－MFM－AFM组合显微系统

The unique STM-MFM-AFM combo system.

The research group has broken the international technical barriers and achieved a major breakthrough in the design, manufacturing, and key technology of steady high magnetic field facility through independent self-reliance. It builds three water-cooled magnets that set world records, the world's second hybrid magnet at 40-telsa level, and a series of state-of-art scientific experiment systems including the world's only scanning tunneling microscope usable in water-cooled magnets, the unique STM-MFM-AFM combo system, and the world-leading integrated extreme experimental conditions (high magnetic field, ultra high pressure and low temperature), which makes China now own the world's first-class scientific research condition of steady high magnetic field. The successful construction of the Steady High Magnetic Field Facility has strongly supported China's frontier scientific exploration, including physics, material science, chemistry, life sciences etc. It has produced a number of scientific achievements that have significant international influences. The facility not only becomes a core foundation of Hefei Science Center, Chinese Academy of Sciences, but also a key foundation for the construction of Hefei National Science Center.

Outstanding contributors of this research group

Kuang Guangli

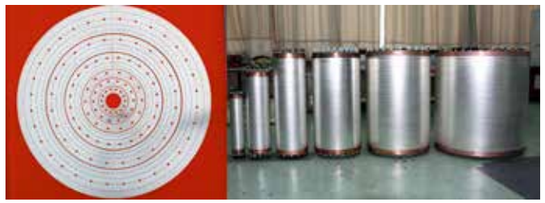
As the project manager, he determined the overall design of research plans and technical roadmaps. He presided over the design and manufacture of the large bore Nb3Sn superconducting magnet of CICC type.

Gao Bingjun

As the chief engineer, he guided the design and construction of different types of magnets. He proposed a new design scheme of water-cooled magnets, based on which a series of world record setting water-cooled magnets were built.

Zhang Yuheng

As the chief scientist, he determined the scientific goal and research direction of the Steady High Magnetic Field Facility. He also led the team to complete the construction of the experimental measurement system.



水冷磁体比特片和线圈

The Bitter plates and coils of the Tesla water-cooled magnet.

依托稳态强磁场实验装置产出的部分亮点成果

Parts of highlighted work performed on the Steady High Magnetic Field Facility.

Major contributors

Ye Chaohui
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稳态强磁场实验装置研究集体

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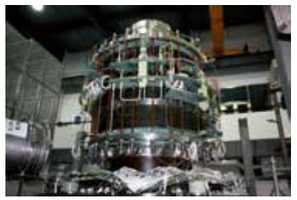
40T 混合磁体

The 40 Tesla hybrid magnet.



国内首台大口径CICC型Nb3Sn超导磁体

The first large bore Nb3Sn superconducting magnet of CICC type in China.

国际唯一的水冷磁体扫描隧道显微镜

The world's only scanning tunnel microscope usable in water-cooled magnets.

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国际领先的强磁场－超高压－低温综合极端实验条件

The world-leading integrated extreme experimental conditions (high magnetic field, ultra high pressure and low temperature).