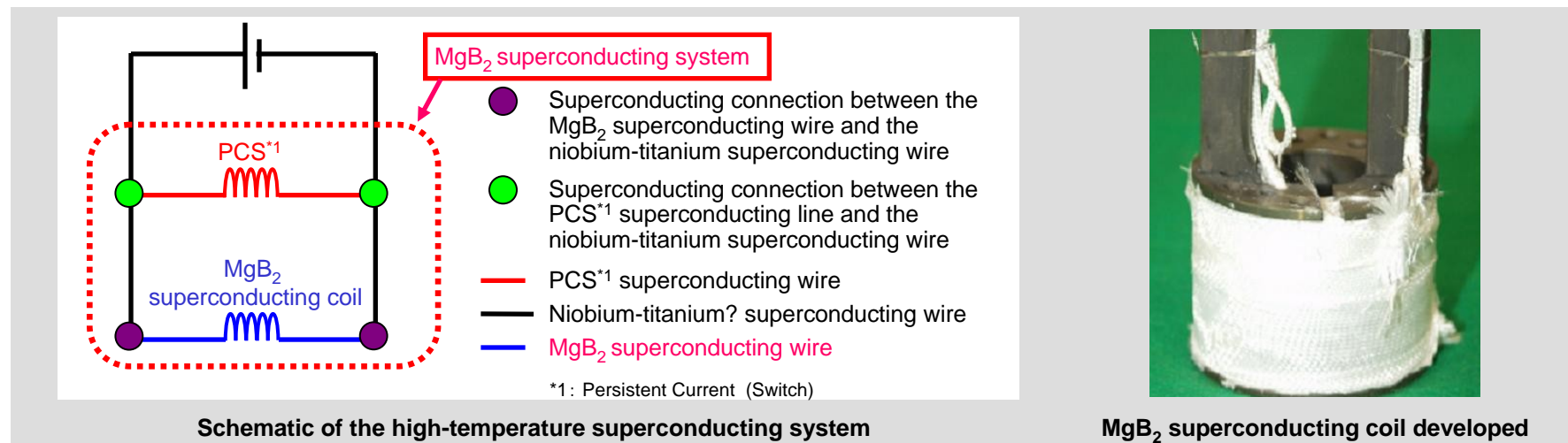


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MgB₂ material used to achieve persistent current operation in a high T_c system

Attaining a high magnetic field of 1.5 tesla, and leading the way for a compact, light and low cost superconducting system



The Hitachi Research Laboratory of Hitachi, Ltd. (HRL; General Manager: Dr. Shigeru AZUHATA) and the National Institute for Materials Science (NIMS; President: Prof. Teruo KISHI) have succeeded in persistent current operation using a superconducting system made from magnesium boride, a superconducting material at a critical temperature of -234°C, discovered by Aoyama Gakuin University. This technology provides a uniform and stable high magnetic field of 1.5 tesla in a superconducting system without the use of liquid helium, a cooling agent. In the future, equipment size, weight and cost are expected to be reduced by introducing this system into various equipment, such as medical MRI, NMR systems for protein analysis, high-speed superconducting linear motor cars, etc., which are based superconducting magnets.

MRI: Magnetic Resonance Imaging NMR: Nuclear Magnetic Resonance