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## Development Progress of a 9.4 T 100 mm Metal-Clad No-Insulation All-REBCO High-Resolution NMR Magnet Cooled by Conduction

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Since 2014, the Korea Basic Science Institute (KBSI), the Korea Institute of Machinery and Materials, the National High Magnetic Field Laboratory, and the SuNAM Co., Ltd. have been on international collaboration to develop a 9.4 T (400 MHz  $^1\text{H}$  frequency) 100 mm winding-diameter metal-clad no-insulation all-REBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-x</sub> (REBCO, RE = Rare Earth) high-resolution NMR magnet cooled by conduction. Once successfully completed in 2019, the magnet will be installed at the KBSI to serve as a new 400 MHz solid-state NMR user magnet. Prior to completion of the 400-MHz NMR magnet, a 3 T 100-mm metal-clad no-insulation all-REBCO "Demo" magnet was fabricated and tested, demonstrating that the approach of "metallic cladding" enables significant reduction in charging delay of a no-insulation magnet without losing its self-protecting feature and thus faster field shaking that is efficient for mitigation of screening current induced field. This paper presents the recent progress in development of the 9.4 T NMR magnet.

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