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CNR-SPIN: Development of Emerging Superconductors for High Field Applications

Monday, 5 March 2018 14:30 (20 minutes)

In this talk we will report on the development at CNR-SPIN laboratory of two of the most promising superconductors for high field application: MgB₂ and Bi-2212: both of them have indeed the advantage to be processed as round conductor in very long lengths by P.I.T. process. In particular, about MgB₂ we will present the work performed on the superconducting powder precursors aimed to enhance their properties at high magnetic field adopting an original method to introduce doping and pinning centres. About Bi-2212 we will focus on the optimization of the mechanical and thermal processes of the wire with the aim to obtain the performances required for high field application even in long lengths through a scalable process.

This work is within a collaboration with CERN within the Addendum FCC-GOV-CC-0086 of the Memorandum of Understanding FCC-GOV-CC-0004 for the FCC study.

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