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## Recent progress on iron-based superconductors: potentials for high-field applications

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Iron-based superconductors (IBS) since their discovery appeared very promising for applications at 4.2K and high fields. Two technologies are advancing towards realistic applications, namely Powder-In-Tube (PIT) and Coated Conductors (CCs). PIT tapes of the 122 family attained critical current densities  $J_c$  of 105A/cm<sup>2</sup> at 15T with hot pressing, while CCs on commercially available IBAD and RABiTS templates showed  $J_c$  up to 105A/cm<sup>2</sup> at 30T for both 122 and 11 families. Current efforts are focused on the development of scalable techniques for PIT conductors and the identification of simpler substrate architectures for CC. On the other hand, IBS continue to attract research interest because of their rich structural variety. In particular, the recently discovered CaAF<sub>4</sub>As<sub>4</sub> phase (1144) could be a promising candidate for superconducting wires and tapes.

In this talk, the state of the art of IBS will be reviewed.

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