

Advancements in Nb₃Sn growth for SRF technology

Monday 26 August 2024 16:00 (2 hours)

Nb₃Sn is the most promising alternative material for the future of superconducting radio-frequency (SRF) technology, steadily advancing towards practical applications. Having a critical temperature twice that of niobium, Nb₃Sn offers the potential for developing smaller, more powerful, and more efficient accelerators. We have designed a comprehensive study to synthesize and characterize substrate treatments at nucleation temperatures following the thermal vapor diffusion growth process to improve the uniformity of Nb₃Sn coatings, pushing its performance closer to fundamental limits.

Footnotes

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