

11th International Workshop on Thin Films and New Ideas for Pushing the  
Limits of RF Superconductivity - TFSRF2024



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## Development of Nb<sub>3</sub>Sn films for single and multilayer structures

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This work describes recent developments for Nb<sub>3</sub>Sn films from sintered and stoichiometric 2-inch niobium tin targets by PVD. The final objective is to develop high quality thick Nb<sub>3</sub>Sn films (on Nb and on Cu), and SIS multilayers on SRF cavities. The effects of the target power, coating thickness, annealing temperature, and annealing time on the superconducting properties of films (RRR/Tc) were evaluated. In addition to the superconducting properties, the film morphology (AFM), chemical composition (EDS), and crystalline phases (XRD-GXRD) measurements are presented.

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**Session Classification:** Beyond Nb: Alternate materials and mulilayer structures

**Track Classification:** Beyond Nb: Alternate materials and multilayer structures