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## V3Si Thin Films for SRF Applications

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The relatively high transition temperature of A15 superconducting materials makes them a potential alternative to Nb for radio-frequency applications. We present PVD deposition of one A15 material,  $V_3$ Si, on Cu and sapphire substrates. The surface structure and composition of the films were characterised via SEM and EDX. The superconducting properties were investigated using a field penetration facilty, four point probe and SQUID magnetrometry. Analysis showed that the composition was slightly Si rich by a few percent with a granular suface structure. Despite this superconductivity was observed on both Cu and sapphire substrates with critical temperatures of 12.8\,K and 14\,K. Field penetration measurements were conducted through two different facilities.

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## Footnotes

## I have read and accept the Privacy Policy Statement

Yes

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