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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<sub>3</sub>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 facility, four point probe and SQUID magnetometry. Analysis showed that the composition was slightly Si rich by a few percent with a granular surface 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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