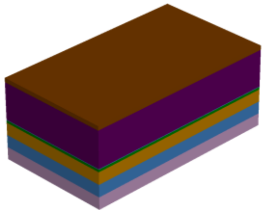
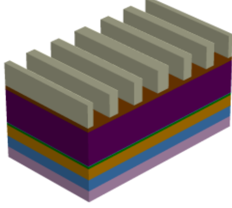
AVS 69 abstract - Illustrations

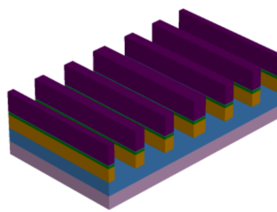
1. M1 stack deposition



2. M1 litho



3. M1 etch



4. Mask stripping

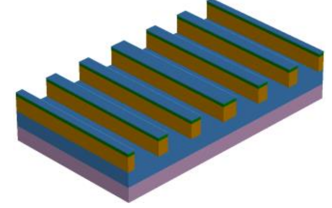
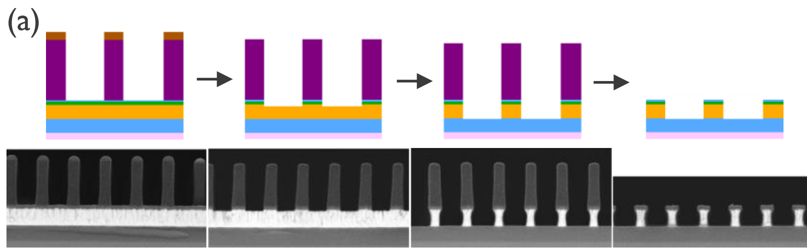
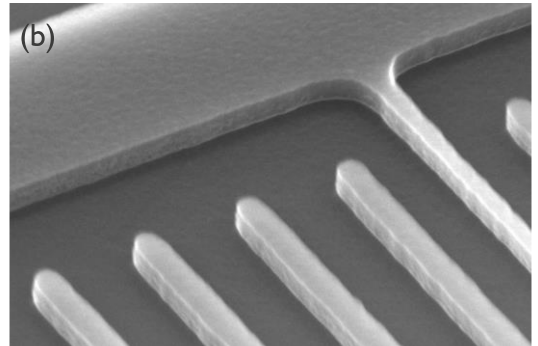
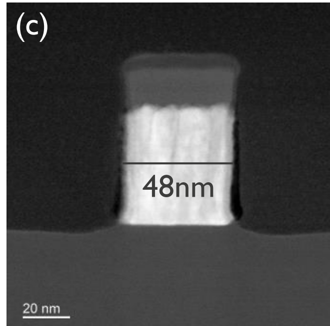


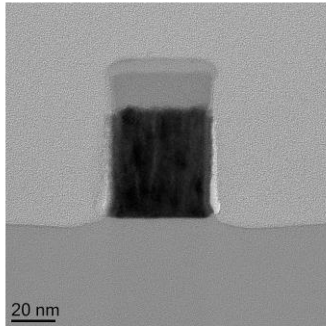
Figure 1 : Level-1 metal (M1) BEOL integration scheme.

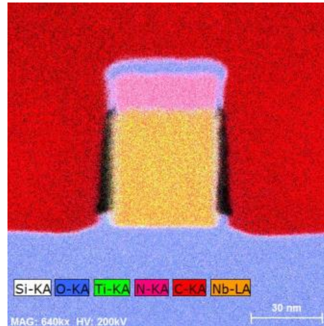
Figure 2 : Examples of inspections for M1 etch development : (a)XSEM, (b) FIB-SEM and (c)TEM-EDS pictures.

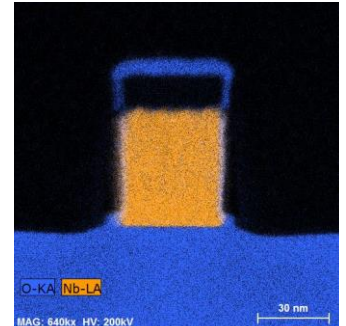












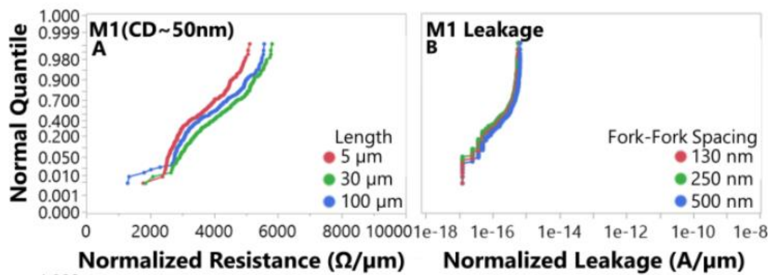


Figure 3 : (a) Normalized room temp resistance of M1 $Nb_xTi_{(1-x)}N$ lines with 50nm CD. (b) Leakage measurement of M1 Fork-Fork structures with 130, 250 and 500nm Fork-Fork spacing.

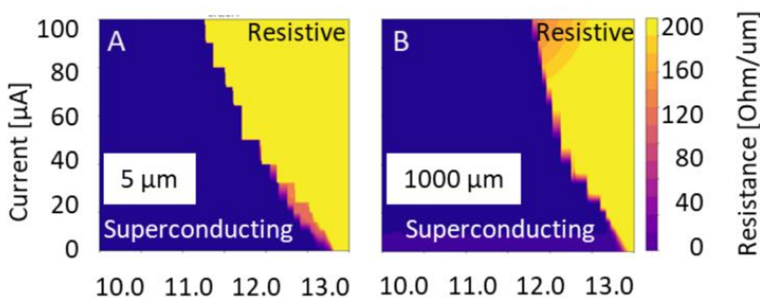


Figure 4 : Shmoo plots showing Tc and critical current for $Nb_xTi_{(1-x)}N$ lines with 50nm CD and (a) 5 and (b) 1000 µm in length.