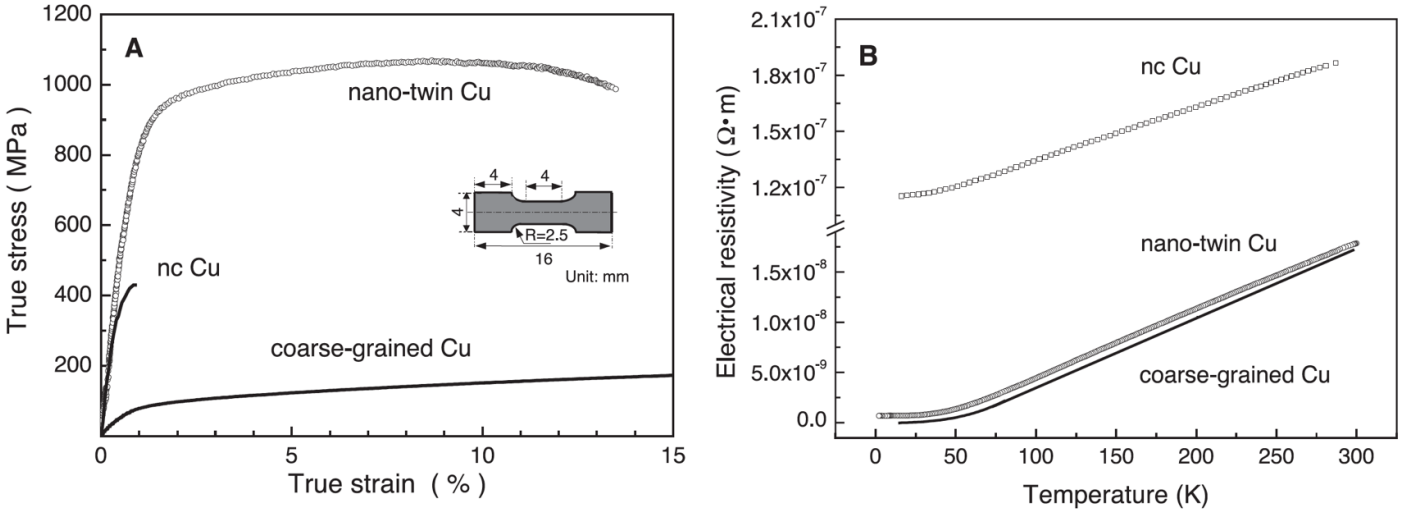

Fig. 1 (A) typical tensile stress-strain curve for the as-deposited nano-twin Cu sample in comparison with that for a coarse-grained polycrystalline Cu sample (average grain size > 100 μm) and a nanocrystalline (nc) Cu sample (average grain size ~ 30 nm); (B) The measured temperature dependence of electrical resistivity () for the as-deposited nano-twin Cu sample and the coarsegrained sample in a temperature range from 2 to 296 K. For comparison, electrical resistivity measurement results in a nanocrystalline Cu sample with a mean grain size of 15 nm are also included. ***Ref:*** Lu, L., et al., *Ultrahigh strength and high electrical conductivity in copper*. Science, 2004. **304**(5669): p. 422-426

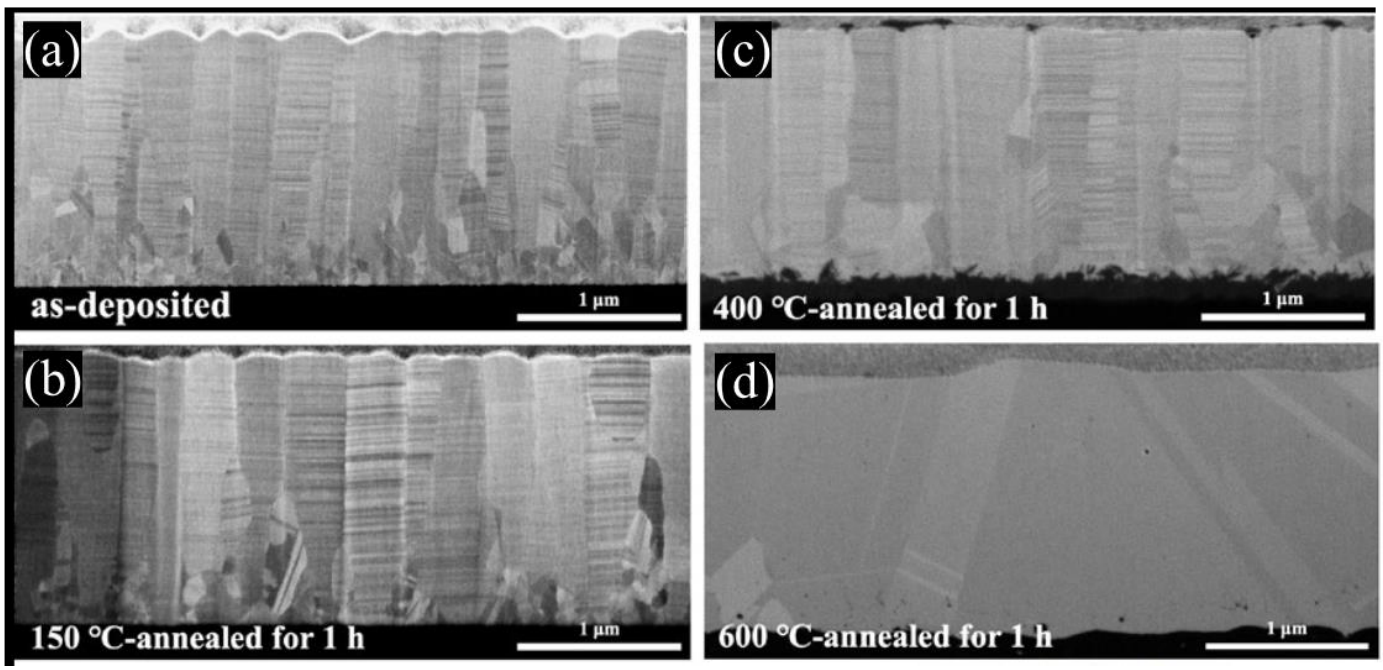

Fig. 2 (a-d) Cross-sectional microstructure of the nt-Ag films at different annealing temperatures.

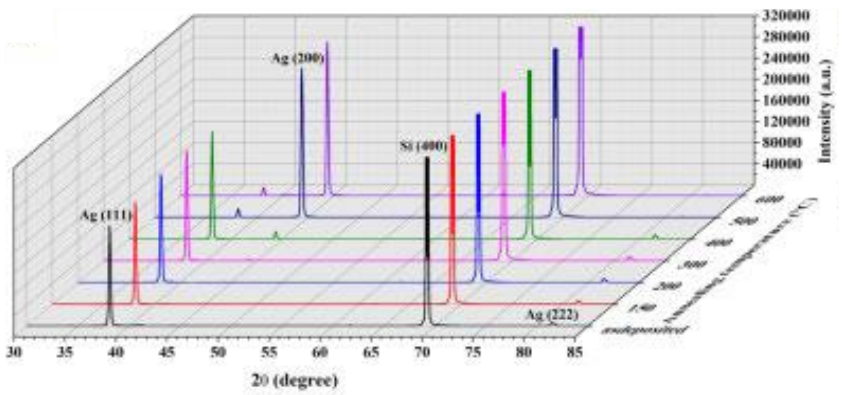

Fig. 3 XRD θ-2θ scans of the nt-Ag thin films at different annealing temperatures.