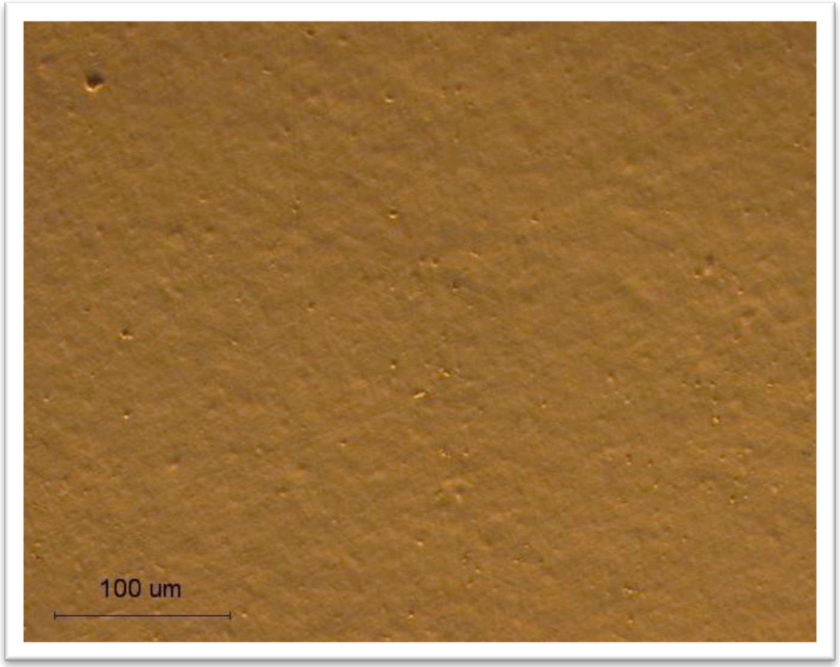
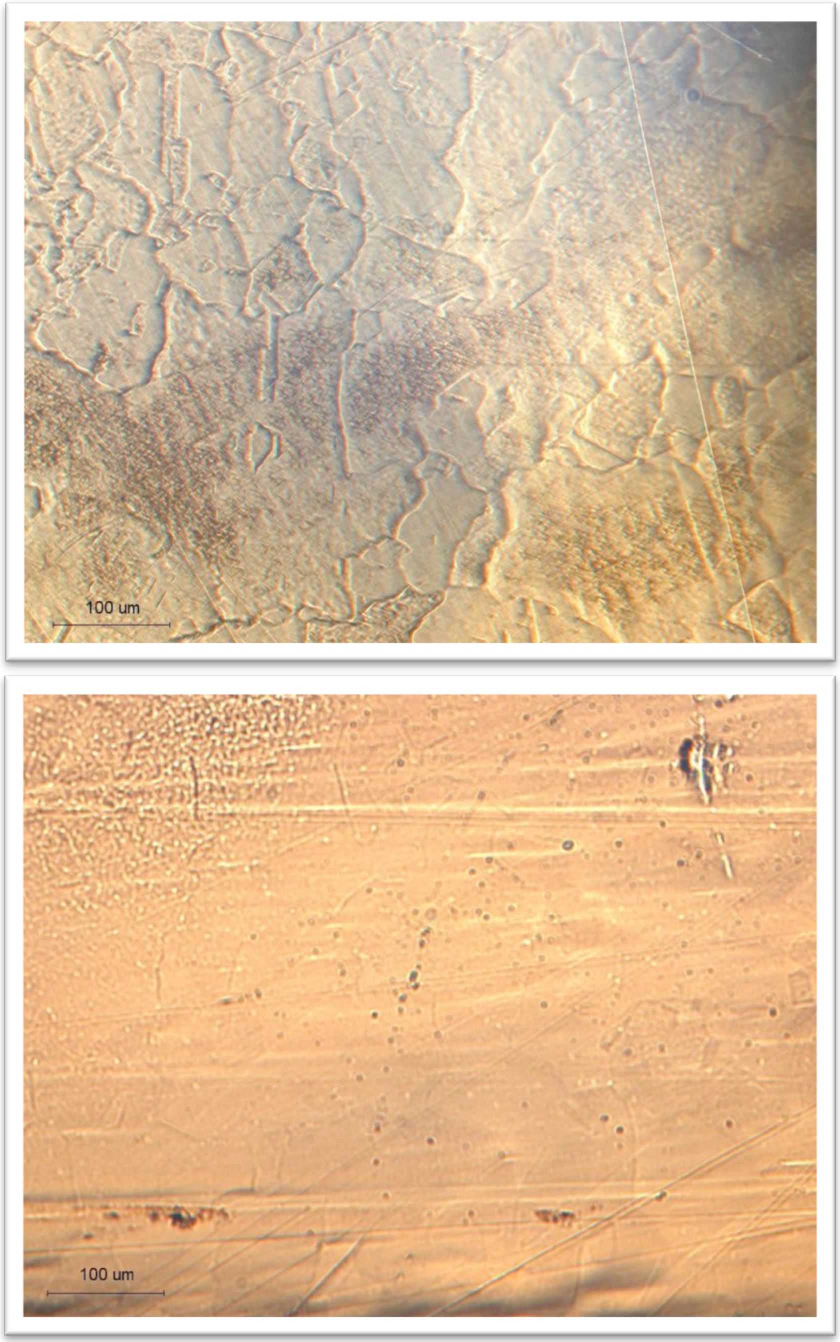
Optical Microscope Images Before Diffusion Annealing

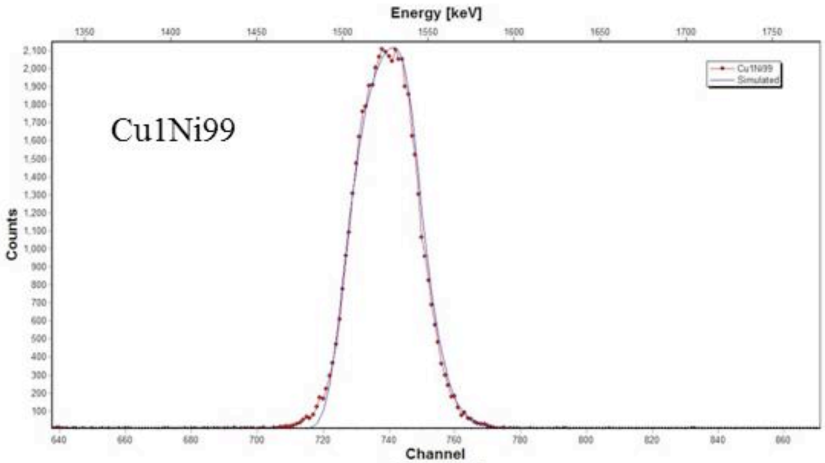


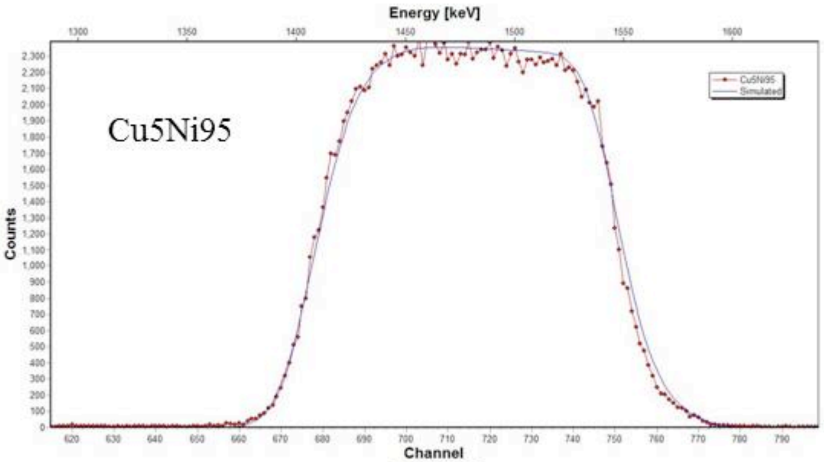
Ni-Bi alloy before polishing

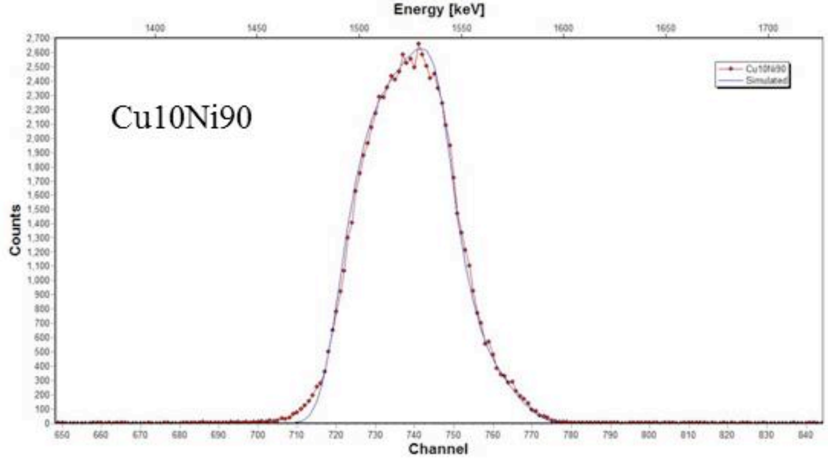


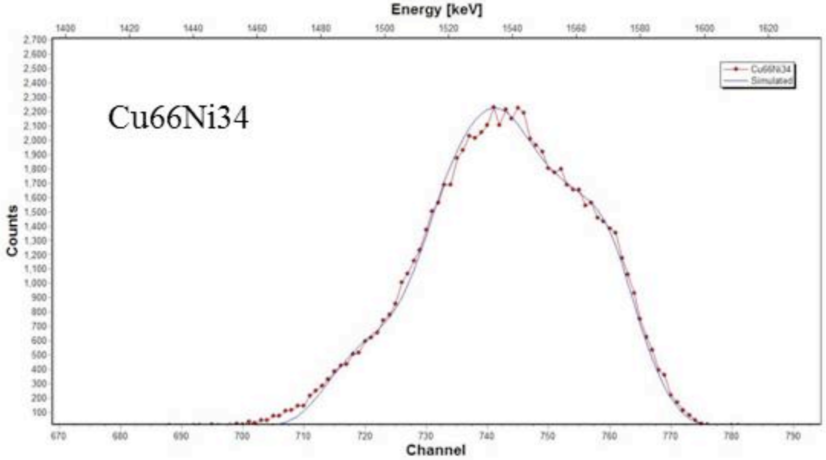
Ni (top) and Ni-Bi alloy after polishing

Cu-Ni Calibration Samples Determined by RBS

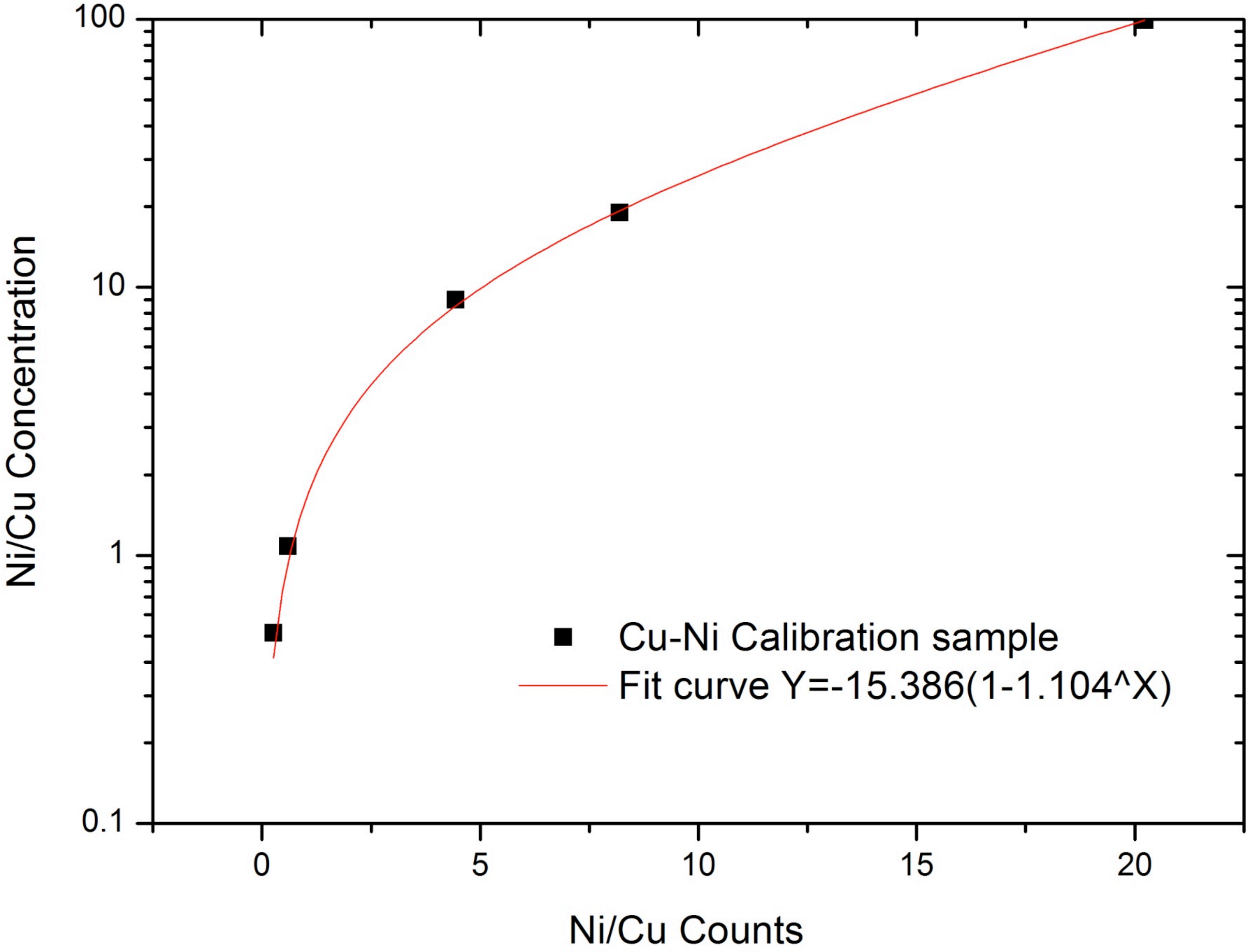




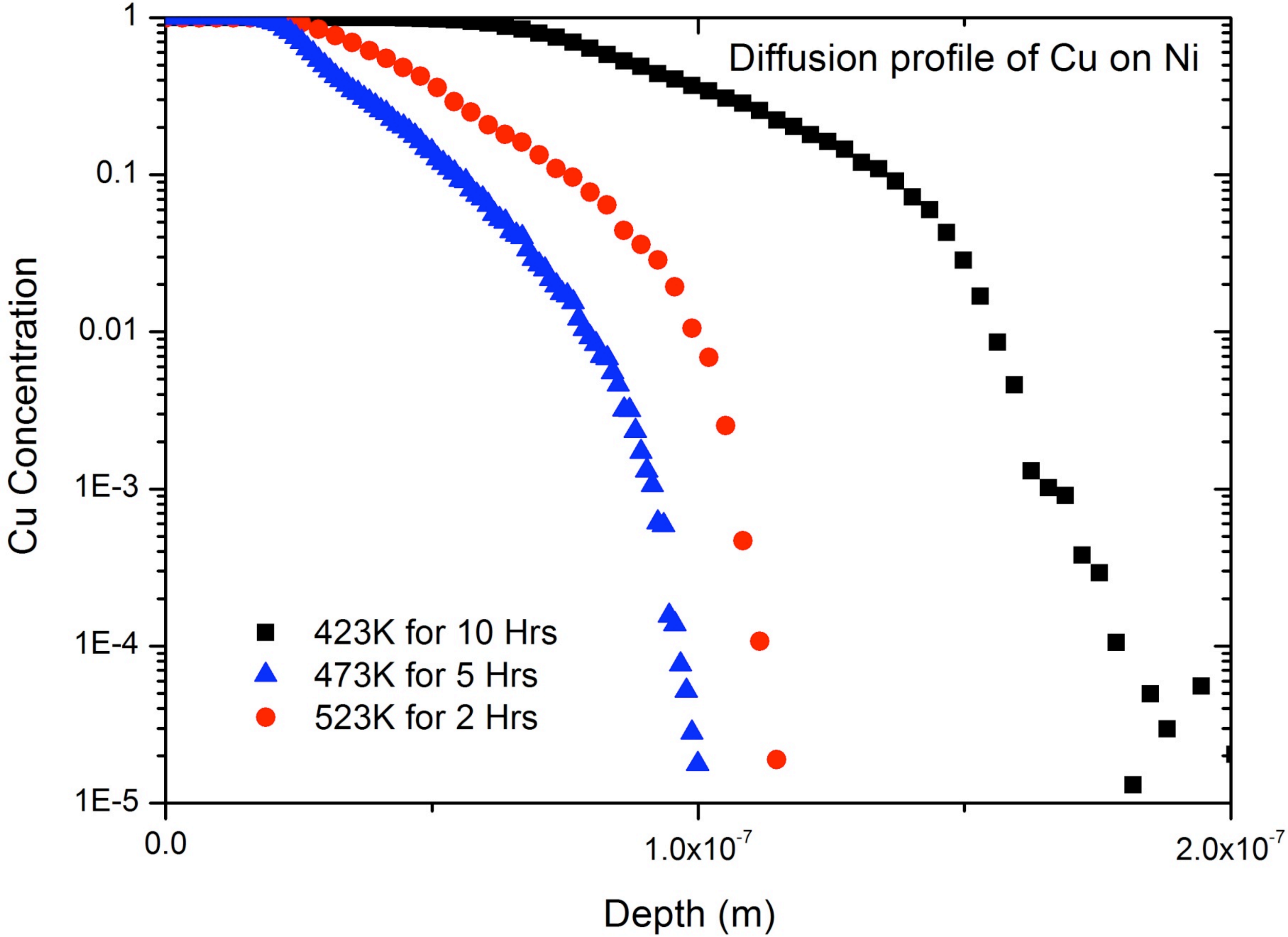


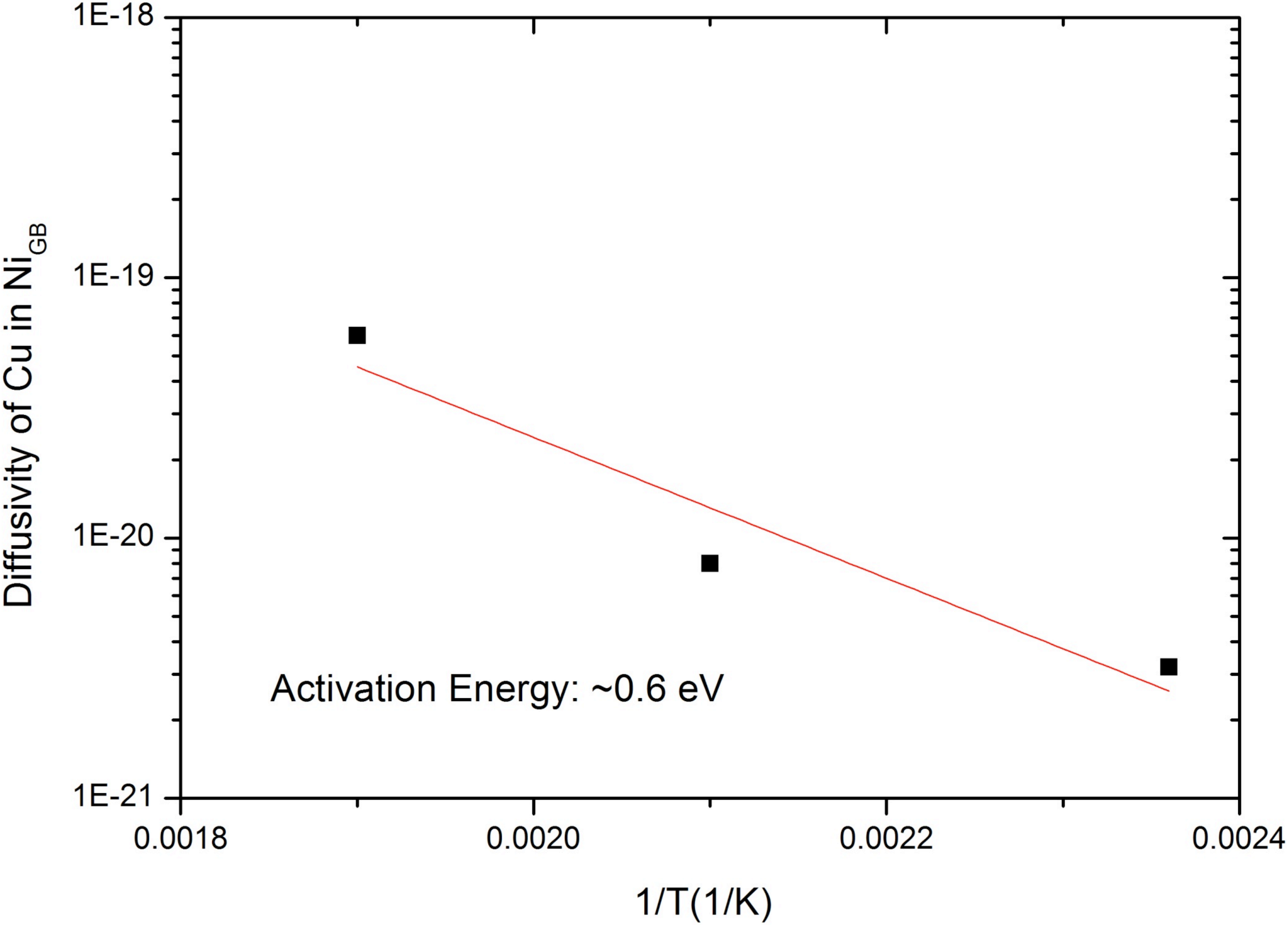


Cu- Ni Calibration Curve

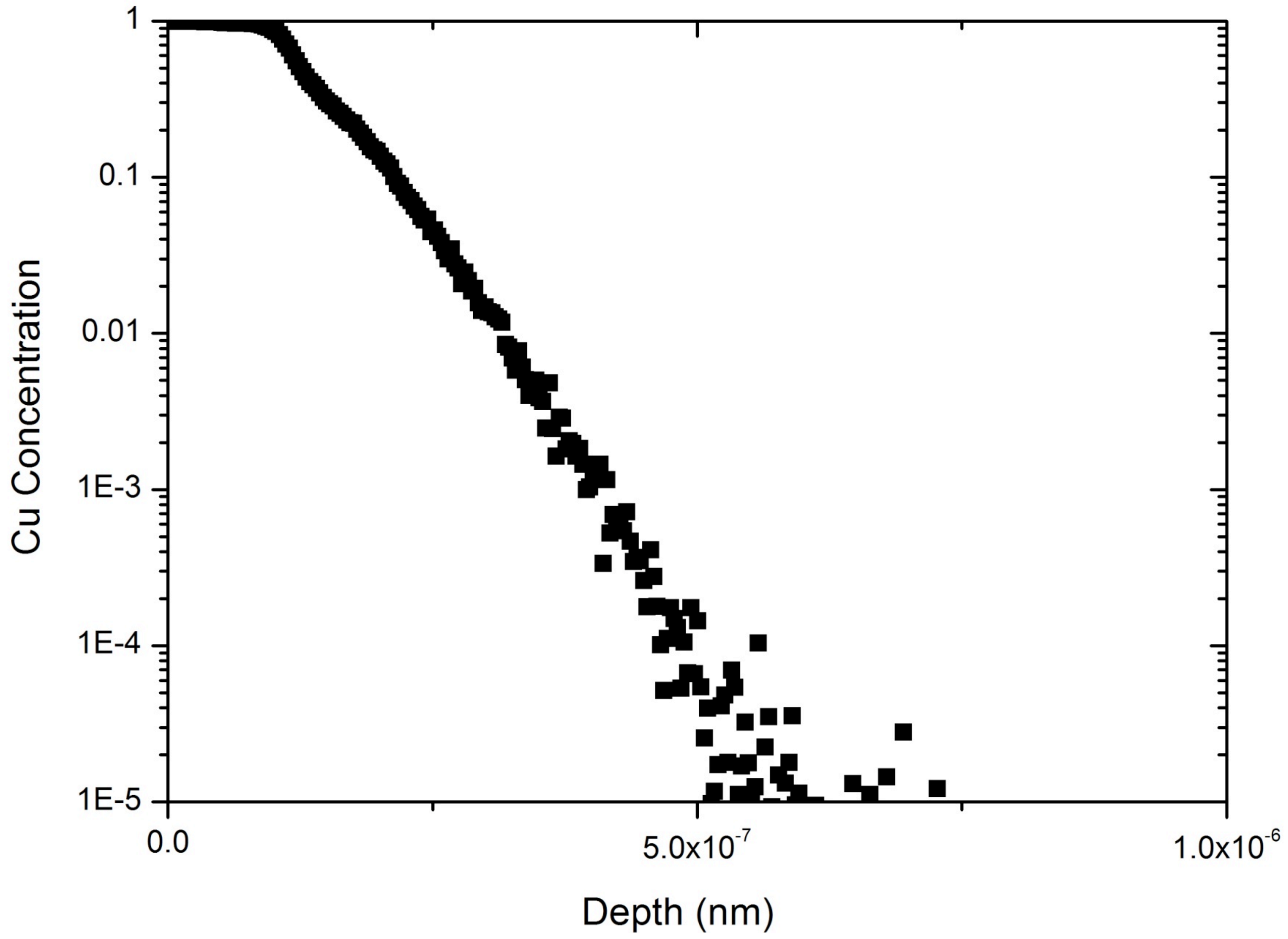


Penetration profile obtained by SIMS for copper diffusion in pure Ni at different anneal conditions

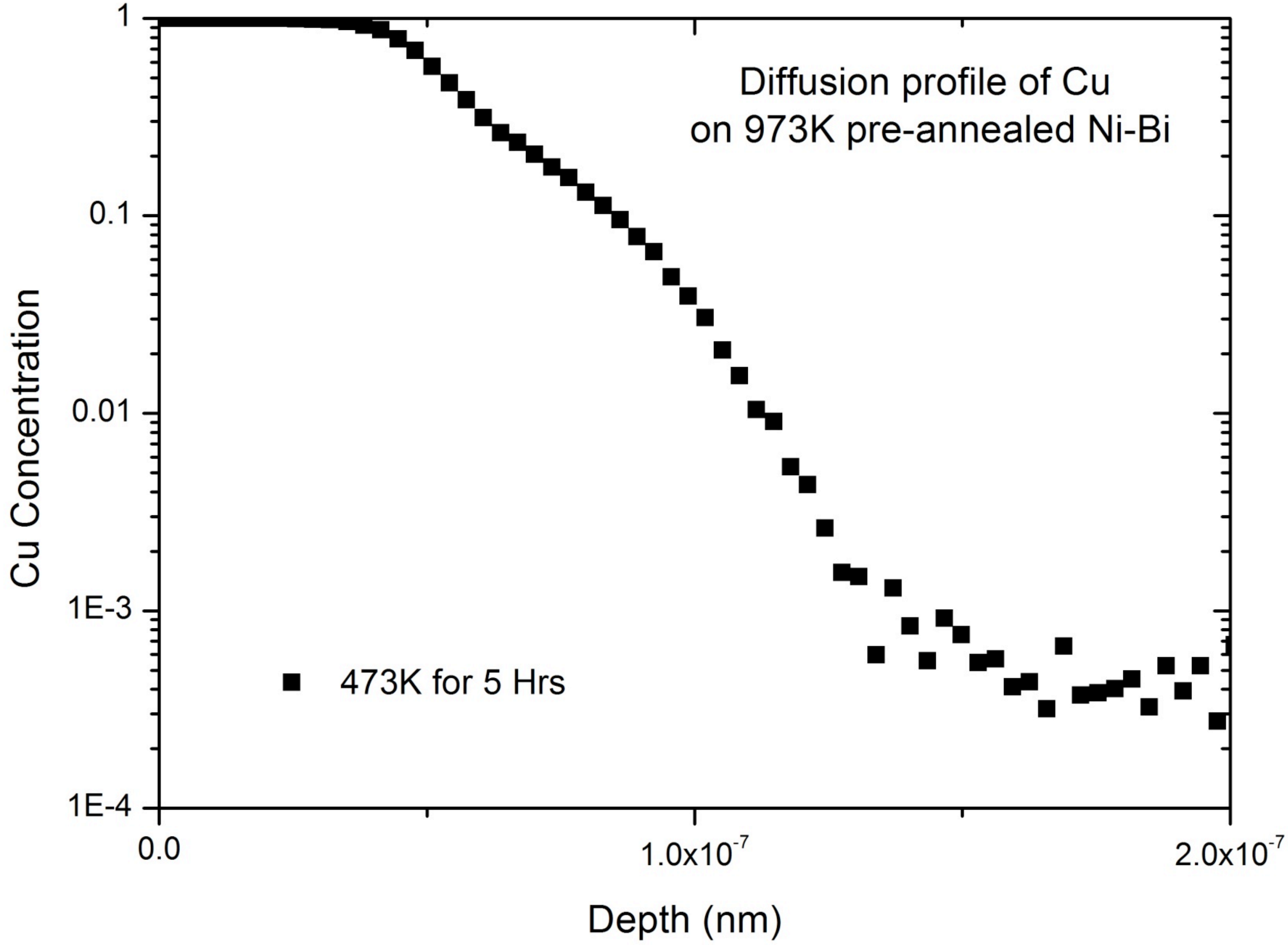



1E-18
1E-19
1E-20
1E-21
0.0018
0.0020
0.0022
0.0024
Diffusivity of Cu in Ni_{GB}
1/T(1/K)
Activation Energy: ~0.6 eV

Penetration profile obtained by SIMS for copper diffusion in Ni- Bi annealed under 423K for 10 Hrs



Penetration profile obtained by SIMS for copper diffusion in Ni- Bi annealed under 473K for 5 Hrs



Penetration profile obtained by SIMS for copper diffusion in Ni- Bi annealed at 523K for 2 Hrs