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Thermal conductivity degradation and recovery in ion beam damaged tungsten at different temperature

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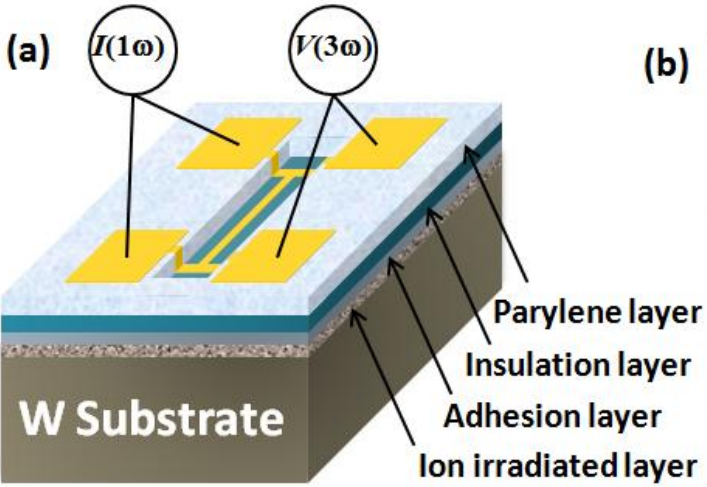
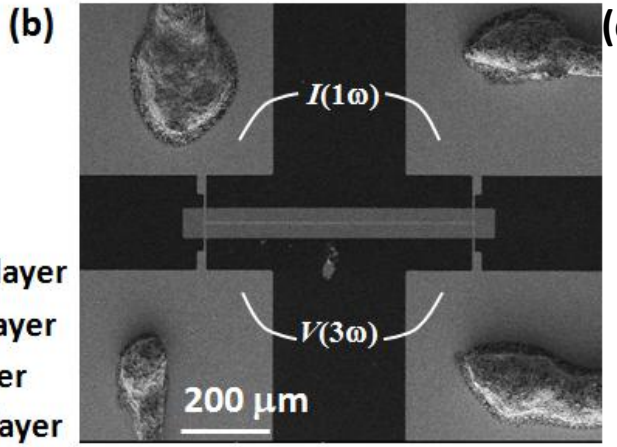
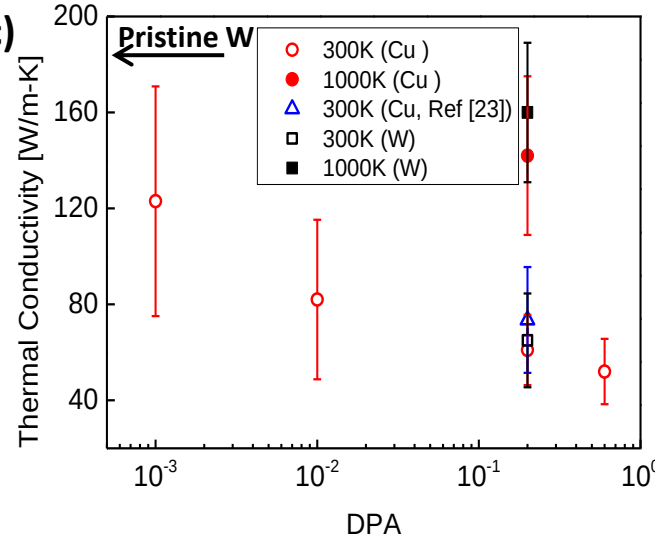

(a)
I(1ω)
V(3ω)
Parylene layer
Insulation layer
Adhesion layer
Ion irradiated layer
W Substrate


(b)
I(1ω)
V(3ω)
200 µm


(c)
Pristine W
300K (Cu )
1000K (Cu )
300K (Cu, Ref [23])
300K (W)
1000K (W)
Thermal Conductivity [W/m-K]
200
160
120
80
40
10-3
10-2
10-1
DPA