Zeiss TEM manual

Getting started

1. The microscope is set and cooled for you by the core facility staff

Loading the sample

1. stop the Filament and wait until 0
2. stop HT and wait til 0
3. close VALVE V3
4. open the sample=> extract sample in front=> rotate to the left and take the sample holder out
5. put the grid in, put the sample back and rotate to the right until the end (the sample side should face down, normally it is the dull side)
6. press Airlock on the control panel and immediately rotate/turn the RED KNOB on the sample holder to position "3 h and 20 min"
7. wait for Airlock blinking stops
8. 2 cluck sounds-it should tell Move green, two valves open
9. insert SAMPLE HOLDER further to the end
10. wait a bit for vacuum, Airlock should become off and Move should disappear
11. open VALVE V3 and start HT
12. then start Filament (sample current should be about 14-16μA)
13. adjust beam, aperture (condenser aperture 1 is always in), brightness, focus on the sample (check live FFT)
14. insert the camera and image (camera counts should be between 3000 and 5000)
15. Save images when done

Switch off the TEM

1. spread brightness over the fluorescent screen at Magnification 3000x
2. turn off the Filament
3. turn off the HT
4. wait until 0
5. close the VALVE V3
6. center Goniometer
7. withdraw the sample
8. bring the SAMPLE HOLDER back in
9. Save images and copy them to the data server
10. turn off the *Image SP software*
11. turn off the CAMERA CONTROLLER
12. CONDENSER APERTURE 1, OBJECTIVE APERTURE out
13. remove the NITROGEN from the cooling trap
14. wait 1 hour; the COPPER WIRE should have reached room temperature
15. press the Power button in *TEM-control software* (OFF)
16. close the *TEM control software*
17. turn off the PC and the MONITOR
18. close the COOLING WATER
19. close the WINDOW
20. close the room after switching off the light