JEOL 2100 TEM/STEM

Diffraction

Selected Area Diffraction (SAD)

1. Follow TEM routine alignment in **SAMAG** mode with the **alpha 3**
2. Center area of interest to center of screen. Spread beam with **Brightness knob**.
3. Insert a **diffraction aperture** and select the appropriate size.
4. Focus the diffraction aperture with the **DIFF Focus** knob.
5. Focus the sample (area of interest) with the **OBJ Focus** knob.
6. Press **SA DIFF** knob and spread the beam to the smallest transmitted spot.
7. Use the **MAG/CAM L** knob to adjust camera length.
8. Press PLA and **Def/Stig X, Y** knob to center the transmitted spot.

Nano-Beam-Selected-Area Diffraction

9. Follow TEM routine alignment in **MAG** mode with the **#4 (10 um) CL** aperture, spot size at 1 nm and alpha 1.
10. Press the **NBD** mode and find a beam (Brightness and Shift).
11. Go back and forth between from **TEM/MAG** and **NBD** modes and align the beam with the HT center and Bright Tilt and Shift alignments.
12. Press the **NBD** mode.
13. Press **SA DIFF** mode and select the **camera length**.
14. Adjust the **DIFF FOCUS**.