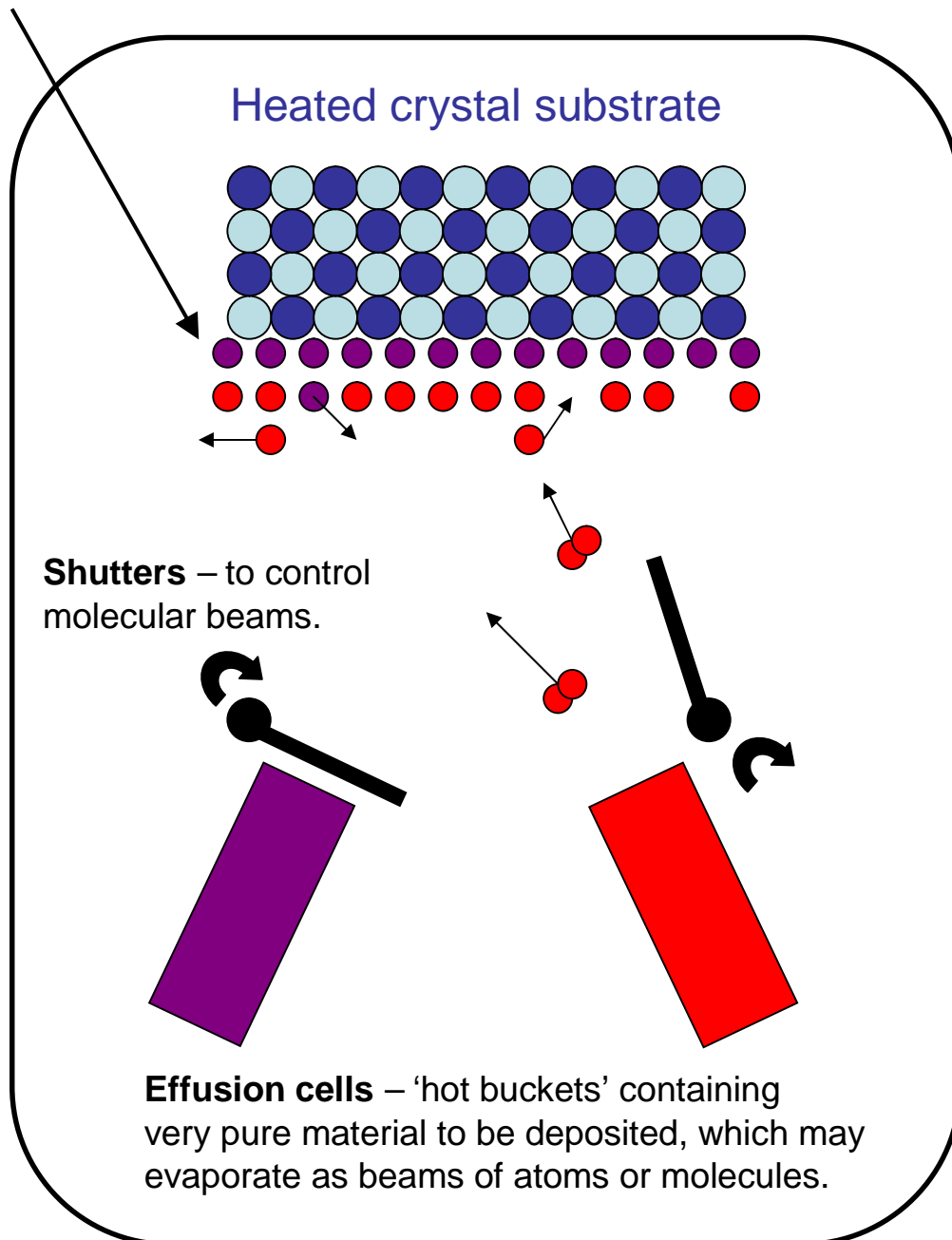


Molecular Beam Epitaxy

When the atoms 'land' at the surface they can stick and migrate until finding a stable position in the growing crystal layer. Molecules have to break apart first. Under the correct conditions, highly perfect crystal layers can be produced with single atomic layer precision.



Ultra high vacuum (UHV) vessel – very clean environment to avoid contamination of grown material. UHV pressure means that molecules or atoms from effusion cells never interact except at the surface and the beams can be stopped quickly by the shutters.