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ABSTRACT OF THE DISCLOSURE

A device for converting a scanning electron microscope (SEM) to a scanning transmission electron microscope (STEM) is adapted to be mounted on a conventional SEM. The device has a casing mountable on the SEM and provides support for a specimen to be scanned by a beam of primary electrons exiting the objective lens of the SEM. The casing defines a pathway allowing transmission electrons that have passed through the specimen to be detected. The device may have a magnet mountable on the casing for generating a transverse magnetic field to deflect the transmission electrons within the casing. A magnetic lens may be mounted within the casing for focusing the beam of primary electrons onto the specimen. The secondary electron detector of the SEM may be used to detect secondary electrons emitted from a target excited by the transmitted electrons. Alternatively, an electron detector may be mounted within the casing for detecting the transmitted electrons.