DEBEN

Impact of CMOS Sensors in Diffraction and High Mag TEM Imaging

Recent advances in CMOS technology have resulted in sensors with extremely low noise relative to both previous generations of CMOS devices and current CCD sensors. This low noise combined with CMOS's inherent non-blooming make CMOS attractive for TEM cameras, especially when very high dynamic range or fast response is required. Specific applications include diffraction, drift correction, and auto-tuning. Lens coupling eliminates life-limiting radiation damage concerns, thereby allowing CMOS to be the primary imaging camera. High performance lens coupling improves image definition, while retaining high sensitivity.