**ZEISS Gemini Optics**

**High Resolution Images On Real World Samples**

- **Mesoporous silica.** Imaged with Inlens SE detector at 500 V.
- **Nanometer spaced FeO(OH) crystals.** Imaged with Inlens SE detector at 1 kV.
- **Platinum nanostructures sputtered on nickel dendrites.** Imaged with Inlens SE at 1.5 kV.
- **Gold nanoparticles on polystyrol sphere.** Imaged simultaneously at 3 kV. Left: Inlens SE image, surface topography. Right: EsB image, material contrast.
- **Moth wing.** Inlens SE detector, at 50 V, in high vacuum. No charging effect if ultra-low voltage like 50 V is applied.
- **FinFET transistor.** Top view, 22 nm technology, pure BSE imaging using EsB, at 3 kV with high material contrast.

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**45 nm semiconductor device imaged with annular-STEM.** The diffraction contrast in brightfield (BF) and darkfield (DF) images reveal damaged crystal lattice at ion implanted Si regions. High-angle annular darkfield (HAADF) captures mass scattering effect to give highest contrast of the silicide.

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