扫描电镜（SEM）是介于透射电镜和光学显微镜之间的一种微观形貌观察手段，可直接利用样品表面材料的物质性能进行微观成像。其优点是：放大倍数大，几十至几十万倍之间连续可调；景深大，视野大，成像富有立体感，可直接观察各种试样凹凸表面的细微结构。Zeiss Sigma500 扫描电镜：放大倍率 10-100 万倍，加速电压 0.02-30kv，具有 SE 和 BSE 信号功能，配有牛津 80m2 能谱仪，分析元素范围：Be4-Cf98。

Scanning electron microscopy (SEM) is a microscopic morphology observation method between transmission electron microscopy (TEM) and optical microscopy (OM), which can directly use the material properties of the sample surface for microscopic imaging.

The utility instrument has the advantages that the magnification is large and continuously adjustable between tens and hundreds of thousands of times; large field depth, large field of vision, rich stereoscopic image, can directly observe the micro-structure of the concave and convex surface of various samples.

Zeiss Sigma 500 Scanning Electron Microscope: Amplification rate of 10 to 1 million times, acceleration voltage of 0.02 to 30 kv, with SE and BSE signal function, equipped with Oxford 80m2 energy spectrometer, which analysis elements range from Be4 to Cf98.