

Application of energy-filtering transmission electron microscopy for biology and medicine

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Energy-filtering transmission electron microscopy (EF-TEM) evaluates the elements in biological and medical specimens as different electron spectrum image (ESI).

We were able to analyze the stores of specific elements in microbial mats with the micro ecosystems and to elucidate the identification of viruses in the infected materials by using EF-TEM.

EF-TEM showed that two patients with interstitial pneumonia worked in the environment of much dust and metal powder and that calcium ions of heart muscle were observed in rabbits.

The results showed that EF-TEM was a useful and powerful tool to analyze the identification and distribution of elements in the specimens.