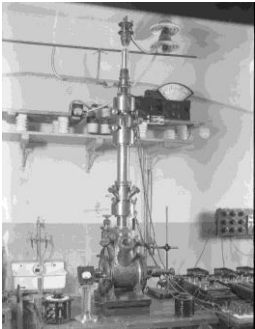
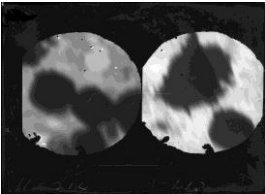


Registration No.	Number 00092		
Registration Date	September 27, 2011	Registration Category	Category 2

Name (Model, etc.)	Reformed Mark I "Super" Electron Microscope
Location	Toyonaka City, Osaka Pref
	Machikaneyama Museum of Osaka University
Owner (Custodian)	The Museum of Osaka University
Manufacturer (Company)	Eizi Sugata
Year Manufactured	1939
Reason For Selection	This is a transmission type electron microscope using a magnetic field lens. This device is the first of its type created in Japan. Its acceleration voltage is 25kV, and its imaging lens has two stages. The electron microscope was first created in 1931 by Max Knoll and Ernst Ruska in Germany. Sugata Eizi, Assistant Professor at Osaka University at the time, learned of this discovery. In 1934, he began research on this device, and in 1939, he succeeded in producing Japan's first magnetic type electron microscope using a magnetic lens. This exhibit is Japan's first electron microscope, but following its development, design changes including improvement of the insulation material of the electron gun were added for better performance. Taking with the microscope, Sugata presented photographs of the 'wings of an ant lion,' in 1941 and the 'suppuration virus of silkworm' in 1943 respectively, and attracted attention. There are two types of electron lenses, an electrostatic one and a magnetic one. At Osaka University, from the beginning, the magnetic type which is general today has been adopted. Sugata also developed a unique technology in this field, and he got high reputation as a pioneer of this field in Japan. Many materials related to the creation and production of an electron microscope, such as design blueprints and glass dry plates have been also preserved, and they are an important collection for studying the history of the electron microscope in Japan.
Registration Standard	1 - A

Open/Closed to Public	Open to Public		
Photo	   ↑suppuration virus of silkworm (electron microscope photograph: related data) ↑ The original machine before modification (photograph: related data) ←The first magnetic type electron microscope (main unit)		
Other useful information			