

設備名稱 Equipment	多功能掃描式探針顯微鏡探針控制 (Scanning Probe Microscope;SPM)
設備廠商/型號 Vendor/Type	富智科技股份有限公司/ SPA-300HV
規格	Specifications
1. 真空度: 10^{-7} Torr(10^{-5} Pa) 2. 試片大小: 25mmΦ *5mm 3. 掃描面積: 0.6nm-20um 4. X-Y 載台移動: ±6mm 5. 量測形式: AFM; DFM 6. 解析度: AFM---1nm DFM----1~2nm	1. Vacuum: 10^{-7} Torr(10^{-5} Pa) 2. Sample Size: 25mmΦ *5mm 3. Scan area : 0.6nm-20um 4. X, Y axis adjustment range: ±6mm 5. Measurement type: AFM; DFM 6. Resolution : AFM---1nm DFM----1~2nm
功能	
<p>由於掃描探針顯微鏡具備多種不同的量測功能，因此，在不同環境(溫度、壓力)下的量測能力也是用以評估掃描探針顯微鏡性能的重要指標。SPA300HV 具有廣泛的擴充性，並且可以控制樣品所處環境的溫度與壓力，也因此可以得到較多不同量測條件下關於樣品的有效資訊。在分子渦輪幫浦抽氣下，可以輕易達到 10^{-5} 帕的高真空範圍。SPA300HV 的環境控制能力可運用在不同的用途上，例如真空環境下的高靈敏度量測；樣品表面在不同溫度下的性質量測以及樣品在不同的導入氣體環境中表面不同的性質量測。在精工所設計的光學系統輔助之下，真空下量測的操作仍相當簡便。</p> <p>SPA300HV 提供了下列四種基本的操作模組，包括</p> <ol style="list-style-type: none"> 1. 接觸式原子力顯微鏡(contact Atomic Force Microscope) 2. 磨擦力顯微鏡(Friction Force Microscope) 3. 掃描穿隧顯微鏡(Scanning Tunneling Microscope) 4. 磁力顯微鏡(Magnetic Force Microscope) <p>以上模組為標準的量測功能，若還需要其他的量測模組，另有數種的選配功能可以擴充。</p>	
Functions	
<p>Since SPM has many functions, it has been important to measure the sample under various environment and temperature. SPA300HV can keep expandability to the multi functions, and te environment around the sample can be controlled. Then you could get the more effective information of the sample. You can reach easily down to 10^{-5}Pa vacuum using turbo molecular pump. It cab be applied to various measurement purpose such as the high sensitivity measurement under the vacuum, cooling and heating the sample temperature and the observation under the introduced gas atmosphere. With the help of the SEIKO' s original optical design, very easy operation is achieved even though the vacuum type SPM unit.</p> <p>This SPM unit provides the following measurement modes :</p> <ol style="list-style-type: none"> 1. Contact AFM 	

2. FFM(Friction Force Microscope)
3. STM(Scanning Tunneling Microscope)
4. MFM(Magnetic Force Microscope)

The above operation modes are the standard functions of this SPM unit. Several optional measurement modes are available in this unit if more functions are needed.

圖片

