

# Tuesday Afternoon Poster Sessions

## Manufacturing Science and Technology

Room: Hall B - Session MS-TuP

### Aspects of Manufacturing Science and Technology Poster Session

**MS-TuP2 Investigation on Environment Concerns of Scanning Electron Microscopy (SEM) for Nanomanufacturing Application.** *F.C. Hsieh, P.H. Lin, C.Y. Huang, N. Chu, J.S. Kao*, National Applied Research Laboratories, Tawain, Republic of China

Scanning electron microscopy (SEM) is used for surface morphology measurement of thin films in nanomanufacturing such as: atomic layer deposition (ALD), nanosphere lithography, and nanoimprint et al. For those nanomanufacturing applications, the surface morphology of thin films could affect the desired properties. As a result, the quality of the image of surface morphology must be evaluated. In this study, the effects of microwave intensity and vibration frequency are investigated. For accelerating voltage of 15kV at magnification of 150,000, the microwave intensity of alternative current (ac) of electric equipment must below 90nT. However, at 15kV accelerating voltage and 50,000 magnifications, the microwave intensity of ac must below 70nT. Besides, the allowable amplitude increases with vibration frequency between 2Hz and 5Hz. The maximum amplitude was 6.0 $\mu$ m (peak to peak) at 5Hz of vibration frequency. The proposed investigation can provide a suggestion to ensure the accuracy and stability of measurement for SEM.

# Authors Index

**Bold page numbers indicate the presenter**

— **C** —

Chu, N.: MS-TuP2, 1

— **H** —

Hsieh, F.C.: MS-TuP2, 1

Huang, C.Y.: MS-TuP2, 1

— **K** —

Kao, J.S.: MS-TuP2, 1

— **L** —

Lin, P.H.: MS-TuP2, **1**