Introductory

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Among various techniques for surface and interface analysis, AES and XPS are considered as the most reliable techniques for surface quantitative analysis. In fact accurate quantitative analysis (within a few % error) was possible by AES, for example, in some ideal cases. Huge amount of efforts have been devoted to improve the reliability of the techniques, especially after the start of the VAMAS-SCA activities which mainly aims at the pre-standard research. Many subjects are still actively studied as international collaboration in the frame of VAMAS-SCA.

In ideal situation, the results obtained by proving surface and interface should not depend on a person who gets the results, nor on an equipment which is used to get them. To realize such requirement, a new technical committee (TC-201) of the International Standard Organization (ISO) has been established from 1992 with Japan as the secretariat. The aim of the ISO TC-201 is the "standardization" of surface chemical analysis, and now 28 countries (12 P-member and 16 O-member; as of Sept. 27, 1994) are taking part in it.

What do we expect, then, and what do we have to do for future surface analysis by AES/XPS?

The main objective of the present symposium is to discuss the future direction in surface analysis by AES and XPS. In this symposium, at first, recent works in depth profiling, one of the major application fields of AES/XPS, are presented with attention to the "standardization". Then, present status of quantitative surface analysis are surveyed and discussed with some view for the creation of the database of electron scattering in solids. Finally, the necessity and the utility of standard spectra database in surface analysis are discussed with demonstration of up-to-date spectra obtained with finely calibrated spectrometer.

The presentation of the invited speakers having a record of outstanding activities in AES/XPS together with the stimulating discussion with the attendants will help us, I hope, to have some image for future direction in surface analysis. I also hope that several research subjects will come up to be studied as international collaboration to let AES/XPS reach at the level of completion.