

Preface

“Takumi” of Auger Electron Spectroscopy

“Takumi” means a master craftsman in Japanese. In Japan, ceramic wares, lacquer wares, clothes and so on are often produced as fine arts. And even arms such as swords and armors are considered fine arts. These fine arts have special status in Japanese culture, and the craftsman who can produce excellent fine arts is looked up to as a “Takumi”

Professor Keisuke Goto devoted his academic life to get “absolute” Auger electron spectra. He constructed his original Auger electron spectrometer which could measure Auger electron quantity in [nA]. He started with the designing of his idea, prepared prototype machines, stuck to details, checked the performance of his machines for years and years, and finally has completed his “absolute” Auger electron spectrometer, and now he is publishing many absolute Auger electron spectra which are used for both theoretical and practical works of many surface analysts. These absolute spectra are now compiled in a database. His absolute Auger electron spectrometer is of course the result of scientific work. But, it is not only a simple output of scientific work, but also the masterpiece of fine art. If you have a chance to look at his machine, you will realize it is the fine art of science, and if you ask him how to produce this wonderful masterpiece, he may answer “I have simply dug out this machine which existed already in science”, that is the same word as that of the great Japanese sculptor, Unkei, who lived about 850 years ago and produced many famous Buddha statues. Therefore, I call him “Takumi” of Auger Electron Spectroscopy.

Professor Goto also has educated many students in Nagoya Institute of Technology. I believe those students who learned his way of thinking will be leading engineers in many industrial fields.

Professor Goto has given us highly suggestive and important lectures many times. In his lecture, he always showed that the best way to reach the truth is to stick to details. The members of the Surface Analysis Society of Japan were always very much impressed by his nice lectures. At society meetings, he often stood at the corner of a lecture hall, and gently pressed the shutter of his beloved Leica camera. The photographs taken by his Leica are precious records of the society activities.

Professor Goto has joined National Institute of Advanced Industrial Science and Technology after the retirement from Nagoya Institute of Technology, and continues to publish absolute Auger spectra. A number of original research articles and scientific review papers have been contributed to this special issue, which commemorates the work of “Takumi”.

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The truth in the future science will be in the 6th digit after the decimal point.

Albert Michelson, 1894