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### Database for Surface Analysis

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Recently, the role of the surface analysis on the development of advanced materials has become larger and larger as the surface compositions of these materials is the key of their performances. Especially three techniques, Auger electron spectroscopy, X-ray photoelectron spectroscopy and secondary ion mass spectroscopy are widely used in technology fields. However, because of the relatively short history of these techniques(thirty years or so), there has been no accumulation of data commonly available, physical parameters for analysis have not been established and there has been no standard data. With these background, the VAMAS projects which aims to standardize the manner in the field of these techniques has started in 1982 at Versailles Summit. Along the projects, we have conducted the international collaborating study on the sharing of spectral data. In 1994, the Science and Technology Agency of Japan began the project on computer network, on which our fruits from the study on spectral data sharing is boarded.

Auger and X-ray photo-electron spectra have been obtained by the members of the Surface Analysis Society of Japan(SASJ). People from more than 100 institutes who work on surface analysis are voluntarily participating the SASJ to discuss and solve the problems on surface analysis. Spectral data obtained by many types of instruments are transferred from a data acquisition computer to a DOS/V or NEC-98 PC and the data format is converted to the Standard Data Transfer Format and sent to the server computer which is settled at the National Research Institute for Metals. The database has been designed to be accessible by the Internet and the retrieval system to find right spectra from the database is under development in cooperation with NTT. The home page appears by "<http://sekimori.nrim.go.jp/>", if your computer is connected to the Internet. Spectral database and physical database are available. Spectral data can be retrieved by element name or chemical name, and physical data by element name. The database is still under trial stage, however, it is expected that the database will supply the common platform for sharing surface analysis data with many researchers and engineers in the world.

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