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# ASTM International Technical Committee E42 on Surface Analysis

## SCOPE

Review and coordination of the development of standards for all methods of surface analysis by photon, electron, and ion emission or reflection methods. Typical methods include: Auger electron spectroscopy (AES); X-ray photoelectron spectroscopy (XPS or ESCA); ion-scattering spectroscopy (ISS); secondary ion mass spectroscopy (SIMS); Rutherford backscattering spectroscopy (RBS); and the use of ion bombardment and other methods to obtain composition versus depth information. Preparation of standard practices for the methods included in Article 2.1.1. Establishment of standard definitions of terms relating to methods included in Article 2.1.1. Cooperation with agencies concerned with preparation and distribution of standard reference materials. Advancement of the field of surface analysis by promoting the collection of exchange of information through surveys, cooperative programs, publication of suggested methods and practices, meeting, and symposia. The formulation and evaluation of standard surface analysis methods shall be confined to those methods not included in the scope of other ASTM Committees, except by mutual agreement. Maintenance of a current appraisal of new and developing surface analysis techniques, as to their principles, applicability, and limitations.

These activities will be coordinated with other ASTM Committees and other organizations having mutual interests.

## TECHNICAL SUBCOMMITTEES

- **E42.03** Auger Electron Spectroscopy and X-Ray Photoelectron Spectroscopy
- **E42.06** SIMS
- **E42.08** Ion Beam Sputtering
- **E42.13** Vacuum Technology
- **E42.14** STM/AFM
- **E42.15** Electron Probe Microanalysis/Electron Microscopy

## KEY DOCUMENTS

- **E996** Practice for Reporting Data in Auger Electron Spectroscopy and X-ray Photoelectron Spectroscopy
- **E1127** Guide for Depth Profiling in Auger Electron Spectroscopy
- **E1523** Guide to Charge Control and Charge Referencing Techniques in X-Ray Photoelectron Spectroscopy
- **E2108** Practice for Calibration of the Electron Binding-Energy Scale of an X-Ray Photoelectron Spectrometer
- **E2734** Specification for Dimensions of Knife-Edge Flanges
- **E2735** Guide for Selection of Calibrations Needed for X-ray Photoelectron Spectroscopy (XPS) Experiments



## QUICK FACTS

**Established** 1976

**Number of Members** 58

**Number of Standards** 22

**Global Participation** 5 Countries  
Represented

**The standards are available in**  
Volume 03.06 in the  
*Annual Book of ASTM Standards*

**Meetings** D19 meets twice each year  
in June and December

## STAFF MANAGER

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