INTERNATIONAL ISO

Third edition
2019-02

Surface chemical analysis — Auger electron spectroscopy and X-ray photoelectron spectroscopy — Methods used to determine peak intensities and information required when reporting results

Analyse chimique des surfaces — Spectroscopie des électrons Auger et spectroscopie de photoélectrons par rayons X — Méthodes utilisées pour la détermination de l'intensité des pics et informations requises pour l'expression des résultats

Reference number
ISO 20903:2019(E)

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Published in Switzerland

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Foreword

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This document was prepared by Technical Committee ISO/TC 201, *Surface chemical analysis*, Subcommittee SC 7, *Electron spectroscopies*.

This third edition cancels and replaces the second edition (ISO 20903:2011), which has been technically revised. The main changes compared to the previous edition are as follows:

— subclause 6.3 has been replaced to include modern methods for dealing with co-existing chemical states;

— minor editorial changes have been introduced for clarity.

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Introduction

An important feature of Auger electron spectroscopy (AES) and X-ray photoelectron spectroscopy (XPS) is the ability to obtain a quantitative analysis of the surface region (≈1 nm to 10 nm) of a solid sample. Such an analysis requires the determination of the intensities of spectral components.

There are several methods of peak-intensity measurement that are applicable to AES and XPS. In practice, the choice of method will depend upon the type of sample being analysed, the capabilities of the instrumentation used, and the methods of data acquisition and treatment available.