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**Surface chemical analysis -- Recording and reporting data in
X-ray photoelectron spectroscopy (XPS)**

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the translation method equivalent to ISO 16243..2011 "Surface Chemistry Analysis X-ray Photoelectron Spectroscopy (XPS) data recording

With the specification of the report ".

This standard is proposed by the National Microparraph Analysis Standardization Technical Committee (SAC/TC38).

This standard is responsible for drafting units. Xiamen love Lauder Optoelectronics Co., Ltd., Department of Chemistry, Tsinghua University.

Introduction

X-ray photoelectron spectroscopy (XPS) is widely used in surface analysis of materials. The elements in the sample (except hydrogen and helium) are measured by photoelectron spectroscopy

The core level combination can be compared to the list of elements of these energies. The chemical information of these elements can be measured by the optoelectronics chemistry

Displacement and/or linear comparison of the reference state.

This standard specifies the range of sample and experimental parameter information to be included in the analysis record. The results of the analysis should be recorded in standard format

The style should be sufficiently detailed to make the experiment repeatable. The format is

required to meet the reporting requirements.

The report should include experimental conditions and data acquisition parameters to assess the quality of the data.

Surface Chemistry Analysis X-ray Photoelectron Spectroscopy (XPS)

Data recording and reporting requirements

1 Scope

This standard specifies the minimum requirements for analysts to report information after using X-ray photoelectron spectroscopy (XPS) to analyze the sample. Including the original Record and analyze the recorded information.

2 normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article

Pieces. For undated references, the latest edition (including all modifications) applies to this document.

ISO 18115-1 Glossary of surface chemistry - Part 1. General terms and terminology (SurfaceChemical

analysis-Vocabulary-Part 1. General terms and terms used in spectroscopy)

3 terms and definitions

ISO 18115-1 and the following terms and definitions apply to this document.

3.1

Outside system exsitu

Analyze the outside of the system.

3.2

Internal system insitu

Analyze the interior of the system.

4.1 Overview

This standard specifies the minimum requirements for analysts to record and report information when using XPS to analyze samples. The record and the report

Divided into six main areas.

- a) an analyst's record or electronic document (such as a computer data storage system);
- b) Spectrum;
- c) Quantitative analysis of samples;
- d) component depth analysis;
- e) surface scanning;
- f) chemical shift data.

4.2.1 Sample labeling and preparation

For each sample, the record or electronic document should contain the following information (sufficient information should be recorded to make the measurements repeatable in the future).