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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 2900.105-2022

**Electrotechnical terminology - Nano-enabled electrotechnical
products and systems**

Issued on: July 11, 2022

Implemented on: February 1, 2023

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules of Standardization Documents" drafted.

This document is part 105 of GB/T 2900 "Electrical Terms". GB/T 2900 has released more than 100 parts.

This document is equivalent to IEC 60050-511.2018 "International Electrotechnical Vocabulary Part 511. Nanotechnology Electronic Products and Systems".

The following minimal editorial changes have been made to this document.

--- In order to harmonize with existing standards, change the standard name to "Electrotechnical Terminology Nanotechnology Electronic Products and Systems";

--- Added references and indexes.

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

The Electrotechnical Terminology Standard aims to provide assistance for the formulation and revision of technical standards and technical exchanges in various fields. It is roughly divided into 9 categories. 1) basic concepts; 2) electrical

engineering materials; 3) instrumentation; 4) electrical equipment; 5) electronic equipment; 6) power generation, transmission and distribution; 7) telecommunications technology; 8) special applications; 9) standards

change. Among them, the electrical terminology standards for electronic equipment include.

---GB/T 2900.33-2004 "Electrical Terminology Power Electronics Technology". The purpose

is to define the general, basic and
basic terminology.

---GB/T 2900.66-2004 "Electrical terminology for semiconductor devices and integrated circuits". The purpose is to define semiconductor devices and sets

It is a common and basic terminology in the field of circuits.

---GB/T 2900.104-2021 "Electrical terminology for microelectromechanical devices". The purpose is to define the general, basic

the term.

Generic, basic terminology.

---GB/T 4210-2015 "Electrical terminology electromechanical components for electronic equipment". The purpose is to define the field of electromechanical components for electronic equipment

Domain common, basic terminology.

Electrotechnical Terminology Nanotechnology Electronic Products and Systems

1 Scope

This document defines general terms for electronic products and systems that rely on nanomaterials for their essential functions.

This document applies to communication within and among related fields of industry, as well as to relevant standardization documents and other publications.

prepared by.

As a basic document, the terminology defined in this document is consistent with the terminology of electrotechnics in other professional fields.

2 Normative references

There are no normative references in this document.

3 Terms and Definitions

511-01 Generic Terminology for Nanotechnology Electronic Products and Systems

511-01-01

device

device

A physical element or combination of such elements to achieve the desired function.

NOTE. A device can be part of a larger device.

[Source. GB/T 2900.83-2008, 151-11-20]

511-01-02

molecular electronics

The field of science and technology that uses molecules as components to develop and manufacture electronic devices.

Note. Some molecules need to be functionalized before they can be used as components of electronic devices.

[Source. IEC TS80004-9.2017, 3.1.2, with modifications]

511-01-03

nanoscale

in the size range between about 1 nm and 100 nm.

NOTE. Properties presented in this size range often cannot be extrapolated from larger sizes.

[Source. ISO TS80004-1.2015, 2.1]

511-01-04

nanomaterial

Any material whose external dimension, internal or surface structure is on the nanoscale.

Note 1. This generic term includes nano-objects and nano-structured materials.

Note 2. Engineered nanomaterials and man-made nanomaterials belong to different types of nanomaterials.