Tohoku Univ. Technology

Metal Nanowire and its manufacturing method

Ag nanowires with large aspect ratio can be easily and inexpensively produced without using additives!

Overview

As an alternative to ITO widely used as a transparent conductive material, Ag nanowires have attracted attention because of their high flexibility, optical transparency, conductivity, and durability.

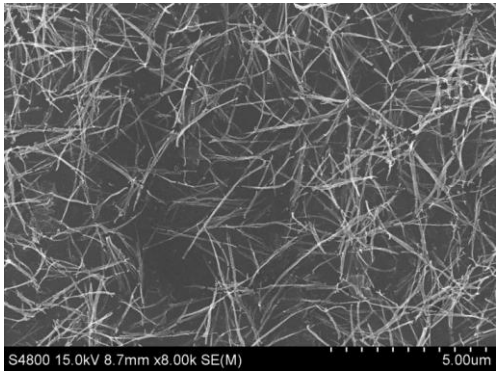
As a conventional manufacturing method of Ag nanowires, a method using a protective agent such as a polyol method is typical.

However, in order to remove the protective agent which is an additive, there are problems such as manufacturing process, increase in manufacturing cost, and waste treatment. On the other hand, the present invention can suppress the extra manufacturing cost because no additive is used, and it is possible to fabricate Ag nanowires with large aspect ratio with good yield and low cost.

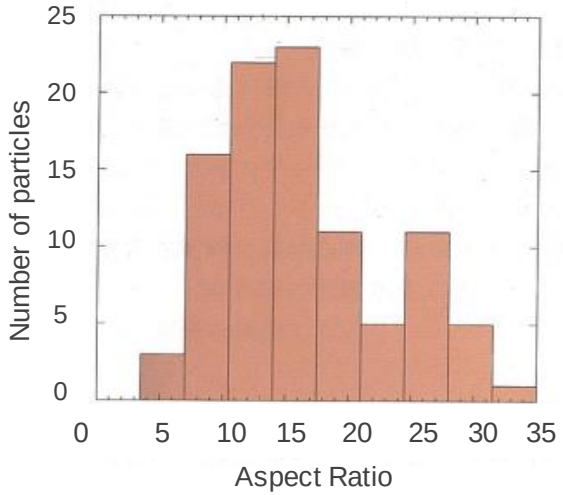
Product Application

- transparent conductive film

Silver nanowire



Aspect ratio



Related Works

[1] Synthesis of Silver Nanowire Precursors Using Ultrasonic Reaction Fields and Their Application to Transparent Conductive Films
https://www.jstage.jst.go.jp/article/pamjss/25/0/25_65/_pdf/-char/ja

IP Data

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