Tohoku Univ. Technology

Layered nanosheet

High-quality layered MoS_2 and Layered graphite at a lower cost than conventional technologies

Overview

MoS_2 is attracting attention as the material for next-generation nanodevices with low power consumption and new functionality. Current fabrication methods include intercalation, which is a method of inserting ions to widen the interlayer distance and exfoliate, and chemical vapor deposition (CVD), which is a method of depositing a film on the surface of a substrate by supplying a source gas containing thin film components, but the former is of low quality and the latter is expensive and less productive.

This invention relates to a method for producing novel layered nanosheets of high quality, such as low cost, low interlayer residue and high orientation, which solve the above problems. Examples of producing layered nanosheets are MoS_2 and graphite, but other layered nanosheets can also be produced.

Features･Outstandings

Because it is unpublished status, we need contracts including a confidentiality clause. After “Agreement” for technology transfer * will be entered, then technology information will be disclosed.

*Option Agreement, Academic Consulting Agreement, Joint Research Agreement, Sponsored Research Agreement etc.

Product Application

- Next generation semiconductor materials with extremely high on/off ratio of current.
- Lubricants
- Battery electrode materials, etc.

IP Data

IP No.	:	PCT/JP2022/032879
Inventor	:	HAYASHI Yamato, TAKIZAWA Hirotsugu, ISHII Daigo, EBATO Yusuke, SAWAGUCHI Kyosuke
Admin No.	:	T20-3099

Contact

Tohoku Techno Arch Co., Ltd.
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