



(12) **CORRECTED EUROPEAN PATENT APPLICATION**

(15) Correction information:
Corrected version no 1 (W1 A1)
Corrections, see
Bibliography INID code(s) 71

(48) Corrigendum issued on:
13.12.2023 Bulletin 2023/50

(43) Date of publication:
25.10.2023 Bulletin 2023/43

(21) Application number: **22204092.5**

(22) Date of filing: **27.10.2022**

(51) International Patent Classification (IPC):
C01B 21/064 ^(2006.01) **C04B 35/565** ^(2006.01)
C04B 35/58 ^(2006.01) **C04B 35/581** ^(2006.01)
C04B 35/584 ^(2006.01) **C01G 1/12** ^(2006.01)
C09C 1/28 ^(2006.01) **C09C 1/36** ^(2006.01)
C09C 1/40 ^(2006.01) **C09C 3/00** ^(2006.01)
C09C 3/06 ^(2006.01) **C09C 3/08** ^(2006.01)
B01J 3/00 ^(2006.01)

(52) Cooperative Patent Classification (CPC):
C01G 1/12; B01J 3/042; C01B 21/0648;
C01B 21/0728; C09C 1/28; C09C 1/36; C09C 1/40;
C09C 3/006; C09C 3/063; C09C 3/08;
C01P 2002/72; C01P 2002/82; C01P 2002/85;
C01P 2004/03; C01P 2004/61; (Cont.)

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL
NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA
Designated Validation States:
KH MA MD TN

(30) Priority: **21.04.2022 JP 2022070422**

(71) Applicant: **Super Nano Design Co.,Ltd.**
Sendai-shi Miyagi, 980-8579 (JP)

(72) Inventors:
• **Ajiri, Tadafumi**
Sendai-shi, Miyagi, 980-8577 (JP)
• **Noguchi, Takio**
Sendai-shi, 980-8579 (JP)

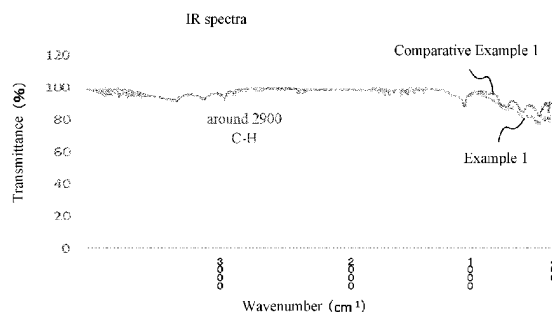
(74) Representative: **Hoffmann Eitle**
Patent- und Rechtsanwälte PartmbB
Arabellastraße 30
81925 München (DE)

(54) **METHOD FOR PRODUCING ORGANICALLY MODIFIED INORGANIC FINE PARTICLE AND ORGANICALLY MODIFIED INORGANIC FINE PARTICLE**

(57) The present invention enables organically modifying a starting particle with a variety of molecular structures, such as AlN, TiN, Si₃N₄, or SiC, uniformly on the entire surface of the starting particle using a common method to easily provide an organically modified inorganic fine particle with further improved dispersibility in a solvent.

The present invention is a method for producing an organically modified inorganic fine particle. The method includes: forming an oxide layer, an oxyhydroxide layer, and/or a hydroxide layer on a surface of at least one or more kinds of starting particle selected from inorganic nitrides, inorganic carbides, inorganic sulfides, and insoluble salts; and organically modifying the starting particle, on which the oxide layer, the oxyhydroxide layer, and/or the hydroxide layer is formed, in a reaction field of a supercritical, subcritical, or gas phase aqueous solvent to obtain an organically modified inorganic fine particle.

FIG. 5



IR spectra of fine particles obtained by organic modification

(52) Cooperative Patent Classification (CPC): (Cont.)
C01P 2004/62; C01P 2004/64; C01P 2006/11;
C01P 2006/12; C04B 2237/341; C04B 2237/343;
C04B 2237/366; C04B 2237/70; Y02P 20/54