

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/JP2019/047292

**A. CLASSIFICATION OF SUBJECT MATTER**

B01J 35/04(2006.01)i; B01J 29/46(2006.01)i  
 FI: B01J35/04 301C; B01J35/04 301F; B01J29/46 M; B01J35/04 301A

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

B01J35/04; B01J29/46

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Published examined utility model applications of Japan	1922-1996
Published unexamined utility model applications of Japan	1971-2020
Registered utility model specifications of Japan	1996-2020
Published registered utility model applications of Japan	1994-2020

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

JSTPlus/JST7580/JSTChina (JDreamIII)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	JP 2017-128480 A (JGC CATALYSTS AND CHEMICALS LTD.) 27.07.2017 (2017-07-27) claims, paragraphs [0020]-[0065], [0071], fig. 1, 3	1-8, 10-15 9
X A	JP 2016-529190 A (DANMARKS TEKNISKE UNIVERSITET) 23.09.2016 (2016-09-23) claims, paragraphs [0042]-[0068], [0074]-[0081], [0103]-[0111]	1-7, 9-15 8
X	WO 2007/023558 A1 (SUMINOE TEXTILE CO., LTD.) 01.03.2007 (2007-03-01) paragraphs [0002], [0041]-[0066], examples, claims	1-15
X A	LAPRUNE, David, et al., "Highly Dispersed Nickel Particles Encapsulated in Multi-hollow Silicalite-1 Single Crystal Nanoboxes", ChemCatChem, 22 June 2017, vol. 9, no. 12, pp. 2297-2307, columns "abstract", "results and discussion", "experimental section", fig. 2, 3, 6-8, tables 1, 2	1-8, 10-15 9

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance  
 "E" earlier application or patent but published on or after the international filing date  
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  
 "O" document referring to an oral disclosure, use, exhibition or other means  
 "P" document published prior to the international filing date but later than the priority date claimed

"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art  
 "&" document member of the same patent family

Date of the actual completion of the international search  
 19 February 2020 (19.02.2020)

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Name and mailing address of the ISA/  
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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2010/097108 A1 (HALDOR TOPSOE A/S) 02.09.2010 (2010-09-02) claims 1-15, page 1, lines 15-24, page 4, lines 18-25, page 5, lines 24-28, page 7, lines 14-24, page 11, lines 1-5, page 13, lines 21-26, page 18, lines 9-19, page 24, lines 6-10, examples, fig. 1-8	1-15
X A	JP 2017-515785 A (DANMARKS TEKNISKE UNIVERSITET) 15.06.2017 (2017-06-15) claims, paragraphs [0026], [0027], [0072]-[0074], [0077]-[0079], [0081], [0097], [0110], [0113]-[0115], [0133], fig. 1, 2a-2e, 10a	1-7, 10-15 8, 9

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.

PCT/JP2019/047292

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
JP 2017-128480 A	27 Jul. 2017	(Family: none)	
JP 2016-529190 A	23 Sep. 2016	US 2016/0137516 A1 claims, paragraphs [0077]-[0103], [0110]-[0117], [0138]-[0145] WO 2015/001123 A1 EP 3016741 A1 CN 105358251 A	
WO 2007/023558 A1	01 Mar. 2007	(Family: none)	
WO 2010/097108 A1	02 Sep. 2010	(Family: none)	
JP 2017-515785 A	15 Jun. 2017	US 2017/0036197 A1 claims, paragraphs [0028], [0029], [0085]-[0097], [0090]-[0092], [0094], [0110], [0123], [0126]-[0128], [0145], fig. 1, 2a-2e, 10a WO 2015/155216 A1 EP 3129138 A1 CA 2945409 A1 CN 106457229 A	