

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/ES2019/070823

## A. CLASSIFICATION OF SUBJECT MATTER

**See extra sheet**

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)

B01J, B82Y, C07D

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

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

EPODOC, INVENES, WPI, XPS, COMPENDEX

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KOVALENKO, G.A., et al., Synthesis of catalytic filamentous Carbon by the pyrolysis of alkanes on alumina-silica foam supporting nickel nanoparticles, CARBON, 01/02/2009, Vol. 47, pp. 428-435, ISSN 0008-6223, <DOI: doi:10.1016/j.carbon.2008.10.015>. Abstract, paragraphs: "Introduction", "Experimental".	1-4
Y		5-7
Y	WANG, T., et al., Adsorption phase synthesis: Preparation of nanoparticles and the effects of reactant distribution, Journal of Colloid and Interface Science, 01/10/2010, Vol. 350, pp. 69-74, ISSN 0021-9797. Paragraph: "Experimental (Sistem I)".	5-7

Further documents are listed in the continuation of Box C.

See patent family annex.

<p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance.</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"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)</p> <p>"O" document referring to an oral disclosure use, exhibition, or other means.</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"T" 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</p> <p>"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</p> <p>"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 documents, such combination being obvious to a person skilled in the art</p> <p>"&amp;" document member of the same patent family</p>
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Date of the actual completion of the international search  
21/02/2020

Date of mailing of the international search report  
(21/02/2020)

Name and mailing address of the ISA/

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C (continuation).		DOCUMENTS CONSIDERED TO BE RELEVANT
Category *	Citation of documents, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MOURHLY, A., et al, A New Low-Cost Mesoporous Silica as a Promising Support of Ni-Catalysts for High-Hydrogen Generation via Dry Reforming of Methane, 2017 International Renewable and Sustainable Energy Conference (IRSEC), 04/12/2017, pp. 1-7, <DOI: doi:10.1109/IRSEC.2017.8477271>. Abstract; paragraph: "Experimental" y fig.3.	1, 3, 4
X	KARAM, L., et al., Tuning the properties of nickel nanoparticles inside SBA-15 mesopores for enhanced stability in methane reforming, Journal of CO2 Utilization, 01/01/2017, Vol. 17, pp. 119-124, ISSN 2212-9820, <DOI: doi:10.1016/j.jcou.2016.12.002>. Abstract, paragraph: "Experimental" y fig.4.	1, 3, 4
X	GARCIA-AGUILAR, J. et al., One step-synthesis of highly dispersed iron species into silica for propylene epoxidation with dioxygen, Journal of Catalysis, 30/11/2015, Vol. 338, pp. 154-167, ISSN 0021-9517 (print) ISSN 1090-2694 (electronic), <DOI: doi:10.1016/j.jcat.2016.03.004>. paragraph: "Experimental".	8-10
A	GARCIA-AGUILAR, J. et al., Enhanced ammonia-borane decomposition by synergistic catalysis using CoPd nanoparticles supported on titano-silicates, RSC Advances, 2016, Vol. 6, pp. 91768-91772, <DOI: 10.1039/c6ra21302b>. Abstract.	1-11
A	BIN, Y., et al., Enhanced propylene oxide selectivity for gas phase direct propylene epoxidation by lattice expansion of silver atoms on nickel nanoparticles, Applied Catalysis B: Environmental, 28/10/2018, Vol. 243, pp. 304-312, ISSN 0926-3373, <DOI: doi:10.1016/j.apcatb.2018.10.061>. Abstract, table 1.	1-11

**CLASSIFICATION OF SUBJECT MATTER**

*B01J23/755* (2006.01)

*B01J37/02* (2006.01)

*B82Y30/00* (2011.01)

*B82Y40/00* (2011.01)

*C07D301/08* (2006.01)