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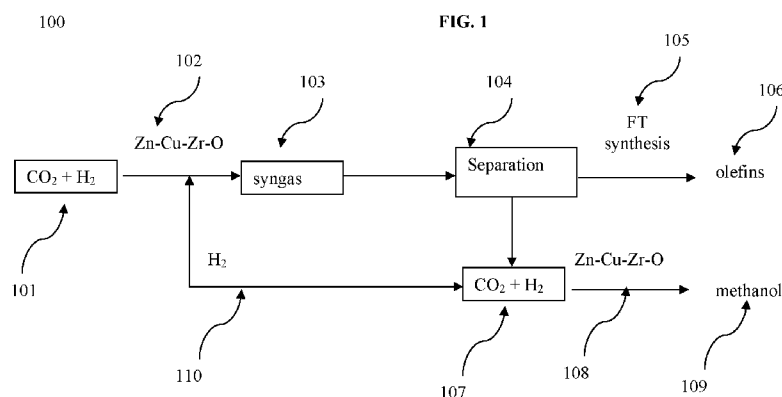
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(54) Title: PROCESS AND CATALYST FOR CONVERSION OF CO₂ TO SYNGAS FOR A SIMULTANEOUS PRODUCTION OF OLEFINS AND METHANOL



(57) Abstract: Methods of preparing olefins and methanol from syngas are provided. Methods include hydrogenation of carbon dioxide (CO₂) via a reverse water gas shift (RWGS) reaction, separation of unreacted CO₂, followed by simultaneous Fischer-Tropsch synthesis (FT) and methanol synthesis. Catalysts include Zn-Cu-Zr-O.

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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC - B01J 21/06, 23/06, 23/70; C01B 3/12, 3/16, 3/38 (2017.01)

CPC - B01J 21/06; B01J 21/066, 23/06, 23/70, 23/72; C01B 3/12, 3/16, 3/38, 3/382

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)

See Search History document

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

See Search History document

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

See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 8,961,829 B2 (MAMEDOV, AMK et al.) 24 February 2015; abstract; tables 1-2; column 4, lines 60-67; column 5, lines 1-45, 60-65; column 6, lines 4-64; column 7, lines 5-55; column 8, lines 20-30; claim 15	1-12
Y	US 2007/0244348 A1 (MOLINIER, M et al.) 18 October 2007; paragraphs [0067], [0078]-[0079], [0107]; claims 4-5	1-12
Y	US 4,393,144 A (CHIKAWA, M) 12 July 1983; abstract; table 3; claim 1	9
Y	US 6,486,219 B1 (JANDA, GF et al.) 26 November 2002; abstract; figure 3; column 2, lines 34-60; column 3, lines 30-45; column 10, lines 1-15, 37-40	10
A	US 4,663,305 A (MAULDIN, CH et al.) 5 May 1987; entire document	1-12
A	US 8,591,861 B2 (LOMAX, FD et al.) 26 November 2013; entire document	1-12
A	US 7,364,650 B2 (FONT FREIDE, JJHM) 29 April 2008; entire document	1-12

 Further documents are listed in the continuation of Box C. See patent family annex.

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