

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
10 January 2002 (10.01.2002)

PCT

(10) International Publication Number
WO 02/02229 A2

(51) International Patent Classification⁷: **B01J 23/00**

(21) International Application Number: PCT/US01/21169

(22) International Filing Date: 3 July 2001 (03.07.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/215,718 3 July 2000 (03.07.2000) US

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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,
IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished
upon receipt of that report

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: FISCHER-TROPSCH PROCESSES AND CATALYSTS USING ALUMINUM BORATE SUPPORTS

(57) Abstract: A process is disclosed for the hydrogenation of carbon monoxide. The process involves contacting a feed stream comprising hydrogen and carbon monoxide with a catalyst system in a reaction zone maintained at conversion-promoting conditions effective to produce an effluent stream, preferably comprising hydrocarbons. In accordance with this invention the catalyst system used in the process includes at least one catalytic material for Fischer-Tropsch reactions (e.g., iron, cobalt, nickel and/or ruthenium), preferably comprising cobalt, and a support comprising aluminum borate. The catalyst system can be prepared by impregnating alumina with a boron-containing composition to form an aluminum borate support and applying a Fischer-Tropsch catalytically active material to the aluminum borate to form a supported catalyst system.