12-09-1998 U.S. Department of Commerce **FORM PTO-1594** RECORI Patent and Trademark Office 1-31-92 Attorney Docket No. 05823.0126 To the Honorable Commissioner of Patents and Trader 100918015 Please record the attached original documents or copy will be a copy with the copy will be a copy will be a copy with the copy will be a copy with the copy will be a copy will be a copy will be a copy will be a copy with the copy will be a _ JSIGNMENTS Name of conveying party(ies): MLD 12-4-98 1. 2. Name and address of receiving party(ies): Sang-Eon PARK, Jong-San CHANG, Yong Ki PARK, Min Seok PARK, Chul Wee LEE and Jermim NOH KOREA RESEARCH INSTITUTE OF CHEMICAL Name: **TECHNOLOGY** Additional name(s) of conveying party(ies) attached? □ Yes ☑ No Internal Address: 3. Nature of conveyance: Street Address: 100, Jang-dong, Yusung-ku, Daejeon 305-343, Republic of Korea X Assignment Zip Code: State: Security Agreement Change of Name Other Additional name(s) & Address(es) attached? **Execution Date:** November 13, 1998 □ Yes

No Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application: A. Patent Application Number(s): B. Patent Number(s): 09/163,350 Additional numbers attached? □ Yes

No 5 Name and address of party to whom correspondence 6. Total number of applications and registrations involved: concerning document should be mailed: 7. Total fee (37 CFR 3.41): \$40 Name: Mr. Ernest F. Chapman FINNEGAN, HENDERSON, FARABOW, GARRETT Enclosed (Please charge deficiency to deposit account) Internal Address & DUNNER, L.L.P. (2/04/1998 JSHABAZZ 00000189 09163350 Authorized to be charged to deposit account 01 FC:581 40.00 OP Street Address: 1300 I Street, N.W. City: Washington 8. Deposit account number: 06-0916 State: DC 20005-3315 Zip: 9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document

Dennis P. O'Reilley

PATENT REEL: 9618 FRAME: 0927

Date

December 4, 1998

ERNEST F. CHAPMAN

Total number of pages including cover sheet, attachments and documents:

JOINT INVENTION (U.S. Rights Only)

ASSIGNMENT

WHEREAS, We, the below named inventors, (hereinafter referred to as Assignors, have made an invention entitled:

A CATALYST FOR DEHYDROGENATING AROMATIC HYDROCARBONS WITH CARBON DIOXIDE

for which v	we executed an	application fo	r United	States I	_etters	Patent	concurr	ently
herewith o	r on	or	filed an	applicat	tion for	United	States	Letters
Patent on	September 30) <u>, 1998</u> (S	Serial No); a	and		

WHEREAS, KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY, a corporation of Korea whose post office address is 100, Jang-dong, Yusung-ku, Daejeon 305-343, Republic of Korea (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention, the application for United States Letters Patent on this invention and the Letters Patent to be issued upon this application;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from assignee is hereby acknowledged, we, as assignors, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the assignee, its lawful successors and assigns, our entire right, title, and interest in and to this invention and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof; and we hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue all Letters Patent for this invention to assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, WE HEREBY further covenant and agree that we will, without further consideration, communicate with assignee, its successors and assigns, any facts known to us respecting this invention and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver all papers that may be necessary or desirable to perfect the title to this invention in said assignee, its successors and assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States, it being understood that any expense incident to the execution of such papers shall be borne by the assignee, its successors and assigns.

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.

PATENT REEL: 9618 FRAME: 0928

AND, WE HEREBY authorize and request the attorneys we have empowered in the Declaration and Power of Attorney in this application, to insert here in parentheses (Application No. 09/163,350, filed September 30, 1998) the filing date and application number of said application when known.

IN TESTIMONY WHEREOF, we have hereunto set our hands.

First Assignor

Sang-Eon PARK

Hanbit Apt. 133-201, 99, Uheun-dong, Yusung-Ku, Daejeon, Republic of Korea

Citizenship: Republic of Korea

Signature:

Date: November 13, 1998

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Date:

November 13, 1/998

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Date:

November 13, 1998

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Signature:

v/ila

Date:

November 13, 1998

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Date: November 13, 1998

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RECORDED: 12/04/1998

Citizenship: Republic of Korea

Signature:

Date: November 13, 1998

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.

PATENT REEL: 9618 FRAME: 0931