502022422 08/13/2012

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------------|----------------|
| Mr. Daniel Travis Shay | 12/15/2009 |

RECEIVING PARTY DATA

| Name: | Lyondell Chemical Technology, L.P. | |
|-------------------|------------------------------------|--|
| Street Address: | 1221 McKinney | |
| Internal Address: | Rm. 10-134 | |
| City: | Houston | |
| State/Country: | TEXAS | |
| Postal Code: | 77010 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13469545 |

CORRESPONDENCE DATA

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 713-309-4369

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Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via

US Mail.

Correspondent Name: Diane L. Kilpatrick-Lee
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Address Line 4: Houston, TEXAS 77010

| ATTORNEY DOCKET NUMBER: | 01-2768AUSD1 |
|-------------------------|-------------------------|
| NAME OF SUBMITTER: | Diane L. Kilpatrick-Lee |

Total Attachments: 2

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PATENT REEL: 028773 FRAME: 0298 \$40.00 13469545

ASSIGNMENT OF APPLICATION FOR PATENT

WHEREAS:

Name and Address of Inventor:

Daniel Travis Shay, 38 Wharton Drive, Glen Mills, Pennsylvania 19342, U.S.A.

(hereinafter referred to as ASSIGNOR), has invented and owns a

certain invention entitled:

Title of Invention: PREPARATION OF PALLADIUM-GOLD CATALYST

for which application for Letters Patent of the United States has been filed

on

Particulars of Application

under Serial No.

and

WHEREAS: Lyondell Chemical Technology, L.P.

Two Greenville Crossing 4001 Kennett Pike, Suite 220 Greenville, Delaware 19807

(hereinafter referred to as ASSIGNEE), is desirous of acquiring the entire interest in, to and under said invention and in, to and under Letters Patent or similar legal protection to be obtained therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that in consideration of the payment by ASSIGNEE to ASSIGNOR of the sum of One Dollar (\$1.00), the receipt of which is hereby acknowledged, and for other good and valuable consideration, ASSIGNOR hereby sells, assigns and transfers to ASSIGNEE the full and exclusive right, title and interest to said invention in the United States and its territorial possessions and in all foreign countries and to all Letters Patent or similar legal protection in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any continuation, division, renewal, substitute or reissue thereof or any legal equivalent thereof in a foreign country for the full term or terms for which the same may be granted.

PATENT REEL: 028773 FRAME: 0299 ASSIGNOR hereby covenants that no assignment, sale, agreement, or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.

ASSIGNOR further covenants that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent as may be known and accessible to ASSIGNOR and will testify as to the same in any interference or litigation related thereto and will promptly execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain and enforce said application, said invention and said Letters Patent which may be necessary or desirable to carry out the purposes hereof.

Full Name of Inventor:

DATE

12-15-2000

PATENT REEL: 028773 FRAME: 0300

RECORDED: 08/13/2012