

## PATENT ASSIGNMENT

Electronic Version v1.1  
 Stylesheet Version v1.1

| SUBMISSION TYPE:   | NEW ASSIGNMENT           |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
|--|--------------------------|---------------|-------------------|---------------------|---------------|-------------------|-----------------|-----------|------------|----------------|------------|---------------------|------------|-----------------------------|------------|--|------------|
| NATURE OF CONVEYANCE:  | ASSIGNMENT               |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| CONVEYING PARTY DATA   |                          |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| <table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Zhichang LIU</td> <td>02/24/2012</td> </tr> <tr> <td>Chunming XU</td> <td>02/24/2012</td> </tr> <tr> <td>Rui ZHANG</td> <td>02/24/2012</td> </tr> <tr> <td>Xianghai MENG</td> <td>02/24/2012</td> </tr> <tr> <td>Ana Cecilia PATRONI</td> <td>02/03/2012</td> </tr> <tr> <td>Peter Anton August KLUSENER</td> <td>02/03/2012</td> </tr> <tr> <td>Albertus Vincentius Petrus VAN DEN BOSCH</td> <td>03/05/2012</td> </tr> </tbody> </table> |                          | Name          | Execution Date    | Zhichang LIU        | 02/24/2012    | Chunming XU       | 02/24/2012      | Rui ZHANG | 02/24/2012 | Xianghai MENG  | 02/24/2012 | Ana Cecilia PATRONI | 02/03/2012 | Peter Anton August KLUSENER | 02/03/2012 | Albertus Vincentius Petrus VAN DEN BOSCH | 03/05/2012 |
| Name   | Execution Date           |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Zhichang LIU   | 02/24/2012               |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Chunming XU  | 02/24/2012               |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Rui ZHANG  | 02/24/2012               |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Xianghai MENG  | 02/24/2012               |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Ana Cecilia PATRONI  | 02/03/2012               |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Peter Anton August KLUSENER  | 02/03/2012               |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Albertus Vincentius Petrus VAN DEN BOSCH   | 03/05/2012               |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| RECEIVING PARTY DATA   |                          |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| <table border="1"> <tr> <td>Name:</td> <td>SHELL OIL COMPANY</td> </tr> <tr> <td>Street Address:</td> <td>P.O. BOX 2463</td> </tr> <tr> <td>Internal Address:</td> <td>ONE SHELL PLAZA</td> </tr> <tr> <td>City:</td> <td>Houston</td> </tr> <tr> <td>State/Country:</td> <td>TEXAS</td> </tr> <tr> <td>Postal Code:</td> <td>772522463</td> </tr> </table>  |                          | Name:         | SHELL OIL COMPANY | Street Address:     | P.O. BOX 2463 | Internal Address: | ONE SHELL PLAZA | City:     | Houston    | State/Country: | TEXAS      | Postal Code:        | 772522463  |                             |            |  |            |
| Name:  | SHELL OIL COMPANY        |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Street Address:  | P.O. BOX 2463            |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Internal Address:  | ONE SHELL PLAZA          |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| City:  | Houston                  |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| State/Country:   | TEXAS                    |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Postal Code:   | 772522463                |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| PROPERTY NUMBERS Total: 1  |                          |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| <table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13388491</td> </tr> </tbody> </table>  |                          | Property Type | Number            | Application Number: | 13388491      |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Property Type  | Number                   |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Application Number:  | 13388491                 |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| CORRESPONDENCE DATA  |                          |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Fax Number:  | (713)241-6617            |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Phone:   | 7132415581               |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Email:   | cathy.callen@shell.com   |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>  |                          |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Correspondent Name:  | SHELL OIL COMPANY        |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Address Line 1:  | P O BOX 2463             |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Address Line 2:  | ONE SHELL PLAZA          |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |
| Address Line 4:  | HOUSTON, TEXAS 772522463 |               |                   |                     |               |                   |                 |           |            |                |            |                     |            |                             |            |  |            |

CH \$40.00 13388491

PATENT

|   |                    |
|---|--------------------|
| ATTORNEY DOCKET NUMBER:   | TS2322USAP         |
| NAME OF SUBMITTER:  | Charles W. Stewart |
| <b>Total Attachments: 3</b><br>source=TS2322-assignment#page1.tif<br>source=TS2322-assignment#page2.tif<br>source=TS2322-assignment#page3.tif |                    |

ASSIGNMENT

WHEREAS I/we,

LIU, Zhichang  
 XU, Chunming  
 ZHANG, Rui  
 MENG, Xianghai  
 PATRONI, Ana, Cecilia  
 KLUSENER, Peter, Anton, August  
 VAN DEN BOSCH, Albertus, Vincentius, Petrus

have invented a certain improvement in

PROCESS FOR PREPARING AN ALKYLATE

WHEREAS I/we have executed an application for Letters Patent in the United States in connection with this invention.

WHEREAS, SHELL OIL COMPANY and CHINA UNIVERSITY OF PETROLEUM (hereinafter called "ASSIGNEES") are desirous of acquiring all rights to this invention in the United States:

NOW THEREFORE for valuable consideration received, I/we hereby assign to the ASSIGNEES, their successors and assigns, all rights to this invention in the United States of America, including all rights in the above-mentioned application and any patent which may be issued thereon in the United States and any other application which may be filed or patent which may be issued in the United States.

AND I/we hereby agree that I/we will upon request execute any instrument which the ASSIGNEES desire to carry this assignment into effect and perfect the title transferred hereby to prosecute the above-mentioned application.

AND the Commissioner of Patents of the United States is hereby authorized to issue Letters Patent of said application to the Assignee.

Dated this

24th day of February 2012

LIU

>

Zhichang, Liu

2 witnesses:

Liangwei

Zhentao Chen

XU

>

Chunming Xu

2 witnesses:

Liangwei

Zhentao Chen

ZHANG,

>

Rui Zhang

2 witnesses:

Liangwei

Zhentao Chen

MENG

>

Xianghai Meng

2 witnesses:

Liangwei

Zhentao Chen

PATRONI

>

.....

2 witnesses:

KLUSENER

>

.....

2 witnesses:

VAN DEN BOSCH

>

.....

2 witnesses:

PATENT

REEL: 027850 FRAME: 0111

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Dated this

3rd day of February 2012

LIU > ..... 2 witnesses:

XU > ..... 2 witnesses:

ZHANG, > ..... 2 witnesses:

MENG > ..... 2 witnesses:

PATRONI > ..... 2 witnesses:

KLUSENER > ..... 2 witnesses:

VAN DEN BOSCH > ..... 2 witnesses:

*C. Patroni*  
*P. Klusener*

*Michael*  
*Wang*

*Patroni*  
*Wang*

ASSIGNMENT

WHEREAS I/we,

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Dated this

5th day of March 2012

LIU > ..... 2 witnesses:

XU > ..... 2 witnesses:

ZHANG, > ..... 2 witnesses:

MENG > ..... 2 witnesses:

PATRONI > ..... 2 witnesses:

KLUSENER > ..... 2 witnesses:

VAN DEN BOSCH > ..... 2 witnesses:

*Handwritten signature: A. W. Bosch*

*Handwritten signatures: A. W. Bosch, J. D. Dorn*