503856612 06/06/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3903261

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

CONVEYING PARTY DATA

| Name | Execution Date |
|--|-----------------------|
| DOW INTERNATIONAL TECHNOLOGY CORPORATION | 10/20/2010 |

RECEIVING PARTY DATA

| Name: | THE DOW CHEMICAL COMPANY |
|-----------------|--------------------------|
| Street Address: | 2030 DOW CENTER |
| City: | MIDLAND |
| State/Country: | MICHIGAN |
| Postal Code: | 48674 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13639105 |

CORRESPONDENCE DATA

Fax Number: (612)659-9344

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

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 6126599340

Email: Dow.Docketing@bipl.net

BROOKS, CAMERON & HUEBSCH, PLLC **Correspondent Name:** Address Line 1: 1201 MARQUETTE AVENUE SOUTH

Address Line 2: SUITE 400

Address Line 4: MINNEAPOLIS, MINNESOTA 55403

| ATTORNEY DOCKET NUMBER: | 68680-US-PCT |
|-------------------------|-----------------------|
| NAME OF SUBMITTER: | ALEXANDER MARQUARDT |
| SIGNATURE: | /Alexander Marquardt/ |
| DATE SIGNED: | 06/06/2016 |

Total Attachments: 2

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> **PATENT** REEL: 038813 FRAME: 0505 503856612

This Assignment 440 is in the ENGLISH language and has the same meaning in other languages with the same 440 number.

This Assignment 440 is in the ENGLISH language and has the same meaning in other languages with the same 440 number. FORM 440

ASSIGNMENT

(with Priority Rights) and

INVENTORSHIP DECLARATION

We, ASSIGNOR, of:

DOW INTERNATIONAL TECHNOLOGY CORPORATION

2030 Dow Center

Midland, Michigan 48674 United States of America

a corporation organized and existing under the laws of the State of Delaware, United States of

America do hereby claim and declare that we hold the invention and all patent and other rights and powers obtainable or exercisable in respect thereof from the sole, true and first inventor(s):

Palanichamy Manikandan, B2-401, Lunkad Amazon, Viman Nagar, Pune-411014, India, Citizen of India

by an Assignment dated: August 30, 2010; with an effective date as of April 9, 2010 of an invention relating to and entitled:

CATALYST COMPOSITIONS FOR PRODUCING MIXED ALCOHOLS

We do hereby declare, for good and valuable consideration, received, sell, assign, and transfer unto:

WE, the ASSIGNEE:

THE DOW CHEMICAL COMPANY

2030 Dow Center

Midland, Michigan 48674 United States of America

a corporation organized and existing under the laws of the State of Delaware, United States of America our entire right, title and interest throughout the world, in and to the invention and all rights and powers to make application for Letters Patent in its own name, or in the name of its nominee; and all rights and powers to file any reissue, divisional, continuing or substitute application and any corresponding applications in any and all countries, including all rights to claim priority under all International Conventions and Treaties in the name of said Assignee, and do hereby authorize said Assignee to insert here the Priority Number, Filing Date, and Filing Country

| ſ | Priority Number | Filing Date | Filing Country |
|---|-----------------|---------------|--------------------------|
| ſ | 61/322,650 | April 9, 2010 | United States of America |

of the application on which the priority will be based; and in and to any Letters Patent that may be issued for said invention in any and all countries; and we do hereby agree to assist said Assignee in the prosecution of the said applications and in any interference, conflict, opposition or litigation which may arise involving said invention or the patent or patents thereon, and to execute any reissue, divisional, continuing or substitute application and assent to their making any applications in other countries corresponding to the above and below specifically identified application, as may be requested by said Assignee; and we do hereby authorize said Assignee to insert here the corresponding Application Number, Filing Date, and Filing Country

| Application Number | Filing Date | Filing Country |
|--------------------|-------------|----------------|
| | | |

of the corresponding application in any country where that patent property must be entered for recordal of this Assignment; and we do hereby authorize and request that any such Letters Patent be issued to said Assignee in accordance herewith, and consent to the recordal of this Assignment being under covenant, not only that we have full power to make the same, but also that such assigned rights are not encumbered by any grant, license, or other right heretofore given.

| Subscribed and Swom I | by us at Midland, Michigan 48674, USA | |
|-----------------------|---------------------------------------|--|
| this20_ day of | October, 20 10 | |

DOW INTERNATIONAL TECHNOLOGY

CORPORATION

CORP. SEAL

MICHAEL L. GLENN

Authorized Representative

Attach Notarial Certificate (Corporation)

PATENT REEL: 038813 FRAME: 0506 ■660 ■ 660

This Assignee Acceptance 660 is in the ENGLISH language and has the same meaning in other languages with the same 660 number FORM 660

ASSIGNEE ACCEPTANCE

WE, the ASSIGNEE: THE DOW CHEMICAL COMPANY 2030 Dow Center Midland, Michigan 48674 **United States of America** hereby accept the ASSIGNMENT attached hereto which is dated: October 20, 2010; with an effective date as of April 9, 2010 From, the ASSIGNOR: DOW INTERNATIONAL TECHNOLOGY CORPORATION 2030 Dow Center Midland, Michigan 48674 United States of America of the invention entitled: CATALYST COMPOSITIONS FOR PRODUCING MIXED ALCOHOLS without any restrictions and with all rights and obligations deriving therefrom and declare that this confirmation of acceptance shall be deemed a part of the said ASSIGNMENT. Midland, Michigan 48674, USA THE DOW CHEMICAL COMPANY CORP. SEAL Authorized Representative NOTARIAL CERTIFICATE (Corporation) UNITED STATES OF AMERICA)SS STATE OF MICHIGAN County/Parish of Midland) On this 20 day of October _____, 20___/O__, personally appeared before me, MICHAEL L. GLENN, Authorized Representative, known or identified to me to be the individual described in and who executed the foregoing document and acknowledged the same as a free act and deed for uses and purposes therein expressed by authority of the said Corporation incorporated under the laws of the State of Delaware, United States of America. I further certify that said authority, dated February 9, 2006, is based on an authority of a Resolution by the Board of Directors which I have seen, appointing the said individual Authorized Representative with full power to sign the foregoing document on behalf of the said corporation and that the purposes for which said document is granted are within the scope of the objects or activities of said corporation.

Kathy SugWerts
NOTARY PUBLIC, MIDLAND COUNTY, MICHIGAN
MY COMMISSION EXPIRES APRIL 07, 2012

PATENT REEL: 038813 FRAME: 0507

RECORDED: 06/06/2016