PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

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

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------------|----------------|
| Victor J. Johnston | 11/30/2011 |
| Adam Orosco | 11/30/2011 |
| Lincoln Sarager | 11/30/2011 |
| Mark O. Scates | 11/30/2011 |
| Ronald D. Shaver | 11/30/2011 |
| James H. Zink | 11/30/2011 |

RECEIVING PARTY DATA

| Name: | Celanese International Corporation |
|-----------------|------------------------------------|
| Street Address: | 1601 West LBJ Freeway |
| City: | Dallas |
| State/Country: | TEXAS |
| Postal Code: | 75234 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13292837 |

CORRESPONDENCE DATA

Fax Number:(703)848-2981Phone:703-584-3270

Email: KLane@rmsclaw.com,IP@rmsclaw.com,docketing@rmsclaw.com

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

via US Mail.

501750472

Correspondent Name: Robert Mlotkowski Safran & Cole, P.C.

Address Line 1: PO Box 10064

Address Line 4: McLean, VIRGINIA 22102-8064

| ATTORNEY DOCKET NUMBER: | 342234-19701 |
|-------------------------|--------------|
| | |

PATENT

REEL: 027356 FRAME: 0732

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| NAME OF SUBMITTER: | Keith Fredlake |
|--|----------------|
| Total Attachments: 3 source=00001607#page1.tif source=00001607#page2.tif source=00001607#page3.tif | |

PATENT REEL: 027356 FRAME: 0733

ASSIGNMENT

WHEREAS, VICTOR J. JOHNSTON residing at 3234 PLEASANT COVE COURT, HOUSTON, TX 77505; ADAM OROSCO residing at 2107 VILLAGE DALE AVENUE, HOUSTON, TX 77059; LINCOLN SARAGER residing at 16110 LA CABANA DRIVE, HOUSTON, TX 77062; MARK O. SCATES residing at 18117 SANDY COVE, HOUSTON, TX 77058; RONALD D. SHAVER residing at 906 BRIDGE HOLLOW COURT, HOUSTON, TX, 77062 and JAMES H. ZINK residing at 3219 IVORY POINT DRIVE, LEAGUE CITY, TX 77575 (hereinafter referred to as ASSIGNORS), has been assigned the entire right, title and interest in and to the same in the United States and throughout the world certain new and useful improvements in PRODUCING ETHANOL USING TWO DIFFERENT STREAMS FROM ACETIC ACID CARBONYLATION PROCESS (hereinafter referred to as THE INVENTION) for which an application for United States Letters Patent was filed on November 9, 2011, as Serial No. 13/292,837.

WHEREAS, CELANESE INTERNATIONAL CORPORATION, a corporation duly organized under and pursuant to the laws of Delaware and whose post office address is 1601 WEST LBJ FREEWAY, DALLAS TX 75234, (hereinafter referred to as ASSIGNEE), is desirous of acquiring the entire right, title and interest in and to the same in the United States and throughout the world.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, ASSIGNORS, by these presents does sell, assign and transfer unto said ASSIGNEE, the entire right, title and interest in and to said invention and application throughout the United States of America, including any and all United States Letters Patent granted on any non-provisional, division, continuation, and reissue of said application; and the entire right, title and interest in and to said invention throughout the world, including the right to apply for patents and inventor certificates in respect thereof and to claim priority pursuant to rights accorded ASSIGNOR under the terms of the Paris International Convention and all other available international conventions and treaties; and the entire right, title and interest in and to any and all patents, patents of addition, utility models, patents of importation, revalidation patents and inventor certificates which may be granted throughout the world in respect of said invention.

ALSO, ASSIGNORS hereby agree to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) or inventor certificate(s) in the United States and in foreign countries for said invention, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said invention, all without further consideration. ASSIGNORS also agree, without further consideration and at ASSIGNEE's expense, to identify and communicate to ASSIGNEE at ASSIGNEE's request documents and information concerning the invention that are within ASSIGNOR's possession or control, and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNORS in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument.

ASSIGNORS also agree, without further consideration and at ASSIGNEE's expense, to transfer the right to sue for past infringement to ASSIGNEE and at ASSIGNEE's request documents and information concerning the enforcement of the right to sue within ASSIGNORS possession or control, and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in respect of the right to sue of any patent encompassed within the terms of this instrument.

ASSIGNORS' obligation under this instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other legal representatives.

Assignors hereby grant the firm of Roberts Mlotkowski Safran & Cole, P.C of McLean, Virginia, the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Assignors hereby authorize and requests the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent referred to above to Assignee of the entire right, title and interest in and to the same, for Assignee's sole use and behalf, and for the use and behalf of Assignee's legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by Assignors had this assignment and sale not been made.

Date 1/30/2011

Signature of Assignor

STATE OF TEXAS)

COUNTY OF HATTIS

Before me personally appeared the person whose name is subscribed to the foregoing instrument, and executed the foregoing instrument in my presence for the purpose contained therein, by signing his name hereto.

Subscribed and Sworn to before me, in my presence

This 30 H

My commission expires

A PROPERTY OF THE PARTY OF THE

VICTOR J. JOHNSTON

SHERRY POSTON
My Commission Expires
June 17, 2015

Serial No.: 13/292,837

Attorney Docket No. 342234-19701

Date 11/30/11 Signature of Assignor ADAM OROSCO STATE OF TEXAS COUNTY OF Harris

Before me personally appeared the person whose name is subscribed to the foregoing instrument, and executed the foregoing instrument in my presence for the purpose contained therein, by signing his name hereto.

Subscribed and Sworn to before me, in my presence, Notary Public My commission expires

SHERRY POSTON My Commission Expires June 17, 2015

Signature of Assignor

STATE OF TEXAS COUNTY OF Harris

Before me personally appeared the person whose name is subscribed to the foregoing instrument, and executed the foregoing instrument in my presence for the purpose contained therein, by signing his name hereto.

Subscribed and Sworn to before me, in my presence,

Notary Public Allie

My commission expires

SHERRY POSTON My Commission Expires June 17, 2015

Date Nov. 30, 2011

Signature of Assignor

STATE OF TEXAS

Before me personally appeared the person whose name is subscribed to the foregoing instrument, and executed the foregoing instrument in my presence for the purpose contained therein, by signing his name hereto.

Subscribed and Sworn to before me, in my presence,

My commission expires

SHERRY POSTON My Commission Expires June 17, 2015

PATENT

REEL: 027356 FRAME: 0735

Serial No.: 13/292,837

Attorney Docket No. 342234-19701

Signature of Assignor

Renald D.

STATE OF TEXAS

COUNTY OF Harris

Before me personally appeared the person whose name is subscribed to the foregoing instrument, and executed the

foregoing instrument in my presence for the purpose contained therein, by signing his name hereto

Subscribed and Sworn to before me, in my presence,

Notary Public Alury) My commission expires

Date 11/30/2011

Signature of Assignor

STATE OF TEXAS) SS COUNTY OF Hains)

Before me personally appeared the person whose name is subscribed to the foregoing instrument, and executed the foregoing instrument in my presence for the purpose contained therein, by signing his name hereto.

Subscribed and Sworn to before me, in my presence,

RECORDED: 12/09/2011

SHERRY POSTON My Commission Expires June 17, 2015

SHERRY POSTON My Commission Expires June 17, 2015

PATENT REEL: 027356 FRAME: 0736