PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT2733917

SUBMISSION TYPE:		NEW ASSIGNMENT	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT	
CONVEYING PART	Y DATA			
		Name	Execution Date	
STEVE M. AUGUS	TINE		02/10/2014	
DAVID M. CHAPM	AN		02/10/2014	
DENNIS F. CLARK			02/10/2014	
	Ź DATA			
Name:	CRISTAL USA INC.			
Street Address:	20 WIGHT AVENUE			
Internal Address:	SUITE 150			
City:	HUNT VALLEY			
State/Country:	MARYLAND			
Postal Code:	21030			
Property Type Application Number:		Number 13975073		
CORRESPONDENC]			
	nude	ockat@atlaw.com		
Email:	-	ocket@gtlaw.com <i>Mail when the email attempt is unsucce</i> .	ssful.	
Email: <i>Correspondence wi</i>	ll be sent via US	ocket@gtlaw.com <i>Mail when the email attempt is unsucce</i> . ENBERG TRAURIG, LLP	ssful.	
Email: <i>Correspondence wi</i> Correspondent Nan	<i>Il be sent via US</i> ne: GRE	Mail when the email attempt is unsucces	ssful.	
Email: <i>Correspondence wi</i> Correspondent Nan Address Line 1: Address Line 2:	<i>Il be sent via US</i> ne: GRE MET 200	<i>Mail when the email attempt is unsucces</i> ENBERG TRAURIG, LLP LIFE BUILDING PARK AVENUE	ssful.	
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Date:	02/20/2014
Total Attachments: 3 source=EXECUTED ASSIGNMENT#page1 source=EXECUTED ASSIGNMENT#page2 source=EXECUTED ASSIGNMENT#page3	.tif

WHEREAS, we,

1. Steve M. Augustine, a citizen of the United States, residing at 4380 Doncaster Drive, Ellicott City, MD 21043; and

2. David M. Chapman, a citizen of the United States, residing at 10327 Pine Ridge Drive, Ellicott City, MD 21042; and

3. Dennis F. Clark, a citizen of the United States, residing at 1917 Old Frederick Road, Catonsville, MD 21228

are the inventors of the invention described in

CATALYST SUPPORT MATERIALS, CATALYSTS, METHODS OF MAKING THEM AND USES THEREOF

for which we have executed an application for a Patent of the United States

- which was filed herewith
- which was filed on August 23, 2013 as U.S. Patent Application No. 13/975.073

WHEREAS, Cristal USA Inc., a Delaware corporation having an office for the transaction of business at 20 WIGHT AVENUE, SUITE 150, HUNT VALLEY, MD 21030, ASSIGNEE, is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we, the said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, our entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals, continuations, and continuations-in-part thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

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PATENT REEL: 032251 FRAME: 0900 AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of the instrument.

AND WE HEREBY covenant and agree that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, it successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

Date: 2/10/14

Signed: Steve M. Augustine

STATE OF Maryland) SS.: COUNTY OF Baltimore

On \underline{Feb} $\underline{10}$, 2014, before me personally appeared Steve M. Augustine, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

gepenske Notary Public

TERESA B. SZCZEPANSKI NOTARY PUBLIC BALTIMORE COUNTY MARYLAND MY COMMISSION EXPIRES APRIL 7, 2014

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Attorney Docket 142580.010301

TERESA B. SZCZEPANSKI NOTARY PUBLIC BALTIMORE COUNTY MARYLAND

MY COMMISSION EXPIRES APRIL 7, 2014

Date: 46, 10, 2014

Signed:

STATE OF Mary and)) SS.: COUNTY OF Baltimen)

Feb. 10, 2014, before me personally appeared David M. On Chapman, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

<u>a po</u>rstu Notary Public

Date: 02/10

Signed:

Dennis F. Clark

STATE OF Maryland ?) SS.: COUNTY OF Baltimore

On <u>Feb</u> 2014, before me personally appeared <u>Dennis</u> F. Clark, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal Notary Public

TERESA B. SZCZEPANSKI NOTARY PUBLIC BALTIMORE COUNTY MARYLAND MY COMMISSION EXPIRES APRIL 7, 2014

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PATENT REEL: 032251 FRAME: 0902

RECORDED: 02/20/2014