02/23/2017 504241894

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4288571

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
JONATHAN G. WEIS	09/27/2016
WENJUN XU	09/27/2016
NAN-RONG CHIOU	09/29/2016
MOHAMMAD T. ISLAM	09/28/2016
GEORGE C. JACOB	11/02/2016
BHAWESH KUMAR	09/27/2016
SARAH E. MISTROIANNI	09/28/2016

## **RECEIVING PARTY DATA**

Name:	Rohm and Haas Electronic Materials CMP Holdings, Inc.
Street Address:	451 Bellevue Road
City:	Newark
State/Country:	DELAWARE
Postal Code:	19713
Name:	DOW GLOBAL TECHNOLOGIES LLC
Name: Street Address:	DOW GLOBAL TECHNOLOGIES LLC 2040 DOW CENTER
Street Address:	2040 DOW CENTER

## **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	15264056

#### CORRESPONDENCE DATA

Fax Number: (302)283-2144

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: 302-456-6622 Email: pconnell@dow.com **Correspondent Name:** PATRICIA CONNELL Address Line 1: 451 BELLEVUE ROAD

Address Line 4: NEWARK, DELAWARE 19713

REEL: 041359 FRAME: 0592

PATENT -

504241894

ATTORNEY DOCKET NUMBER:	79580
NAME OF SUBMITTER:	PATRICIA CONNELL
SIGNATURE:	/Patricia Connell/
DATE SIGNED:	02/23/2017
Total Attachments: 7 source=79580AssignmentsExecuted#page1.tif source=79580AssignmentsExecuted#page2.tif	

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Application Serial Number: 15/264,056 Filing Date: September 13, 2016 Attorney Docket No.: 79580

#### ASSIGNMENT OF PATENT APPLICATION

We/I, the undersigned

Jonathan G. Weis, of Bear, Delaware; Wenjun Xu, of Pottstown, Pennslyvania; Nan-Rong Chiou, of Wilmington, Delaware; Mohammad T. Islam, of Newark, Delaware

Hereby declare that

We/I are true and first inventor(s) of an invention relating to

HIGH PLANARIZATION EFFICIENCY CHEMICAL MECHANICAL POLISHING PADS AND
METHODS OF MAKING 27th 28th
which is disclosed in an application for Letters Patent in the United States of America, executed the day of high processing and processing patents of the States of America, executed the excising and adequacy of which is hereby acknowledged and in fulfillment of our pre-existing obligation of assignment, we hereby sell, assign and transfer unto Rohm and Haas Electronic Materials CMP Holdings, Inc., a corporation organized and existing under the laws of the State of Delaware in the United States of America and having its mailing address at 451 Bellevue Road, Newark, Delaware, hereinafter referred to as the assignee, the entire right, title, and interest in and to the aforesaid application for Letters Patent, including any priority rights derived from the aforesaid application for Letters Patent by virtue of the International Convention for the Protection of Industrial Property for any and all member countries of the aforesaid International Convention, and the entire right, title and interest in and to any and all our inventions, whether joint or sole, disclosed in the aforesaid application for Letters Patent, and in and to any and all applications for letters Patent for any such inventions in any country whatsoever, and in and to any and all patents for any such inventions in any country whatsoever, with the sole right to file such applications under the aforesaid International Convention, together with the sole right to have said patents granted in its name or ours and to enforce said patents and to sue for and recover profits and damages for any and all infringements thereof, and hereby agree, whenever requested, to communicate to us respecting said inventions, to testify in any legal proceeding, to execute all applications, papers, or instruments necessary or required by said assignee, its successors, assigns, and legal representatives to carry into effect any of the provisions of this instrument, and generally to do everything possible to aid said assignee, its successors, assigns and legal representatives t
IN WITNESS WHEREOF, We have hereunto signed our names on the day and year set forth below.

Jaka y Wo 9/27/2016

Jonathan G. Weis DATE

Wenjun Xu	DATE
Mann Chs	912976016
Nan-Rong Chiou	DATE
all	9/28/2016
Mohammad T. Islam	DATE

Application Serial Number: 15/264,056 Filing Date: September 13, 2016 Attorney Docket No.: 79580

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Hereby declare that

We/I are true and first inventor(s) of an invention relating to

HIGH PLANARIZATION EFFICIENCY CHEMICAL MECHANICAL POLISHING PADS AND METHODS OF MAKING

which is disclosed in an application for Letters Patent in the United States of America, executed the 27th , 2016 (Case No. 79580); and, for valuable consideration, the receipt day of September and adequacy of which is hereby acknowledged and in fulfillment of our pre-existing obligation of assignment, we hereby sell, assign and transfer unto Rohm and Haas Electronic Materials CMP Holdings, Inc., a corporation organized and existing under the laws of the State of Delaware in the United States of America and having its mailing address at 451 Bellevue Road, Newark, Delaware, hereinafter referred to as the assignee, the entire right, title, and interest in and to the aforesaid application for Letters Patent, including any priority rights derived from the aforesaid application for Letters Patent by virtue of the International Convention for the Protection of Industrial Property for any and all member countries of the aforesaid International Convention, and the entire right, title and interest in and to any and all our inventions, whether joint or sole, disclosed in the aforesaid application for Letters Patent, and in and to any and all applications for letters Patent for any such inventions in any country whatsoever, and in and to any and all patents for any such inventions in any country whatsoever, with the sole right to file such applications in its name or ours, including the sole right to file such applications under the aforesaid International Convention, together with the sole right to have said patents granted in its name or ours and to enforce said patents and to sue for and recover profits and damages for any and all infringements thereof, and hereby agree, whenever requested, to communicate to us respecting said inventions, to testify in any legal proceeding, to execute all applications, papers, or instruments necessary or required by said assignee, its successors, assigns, and legal representatives to carry into effect any of the provisions of this instrument, and generally to do everything possible to aid said assignee, its successors, assigns and legal representatives to obtain and enforce proper patent protection for said inventions in any and all countries.

IN WITNESS WHEREOF, We have hereunto si	igned our names on the day and year set forth below.
Jonathan G. Weis	DATE

Page 1 of 2

Wenjun Xu () X2L	9/27/20/6 DATE
Nan-Rong Chiou	DATE
Maliamenad T. Iclans	PATE

REEL: 041359 FRAME: 0597

FORM 110 (R 5/97)

## INDIVIDUAL ASSIGNMENT AND INVENTOR'S DECLARATION

(with Priority Rights)

I/we verily believe I am/we are the original, first and sole/joint inventor(s) of the subject matter which is embraced by and for which a patent is sought on the invention entitled: HIGH PLANARIZATION EFFICIENCY CHEMICAL MECHANICAL POLISHING PADS AND METHODS OF MAKING

which invention was made and invented by me/us out of and in the course of my/our employment with my/our respective employers as stated below my/our name(s). I/we acknowledge that I/we hold the invention and all patent and other rights and powers obtainable or exercisable in respect thereof in trust for our respective employers. As trustee(s), and for good and valuable consideration and/or the remuneration received for my/our work, I/we sell, assign and transfer unto:

Dow Global Technologies LLC 2040 Dow Center

Midland, Michigan 48674 United States of America

an entity organized and existing under the laws of the state of Delaware (hereinafter referred to as the "Assignee"); my/our entire right, title and interest throughout the world, in and to the invention and all rights and powers to make applications, including provisional applications when permitted by law, for Letters Patent in its own name, or in the name of its designee (or nominee(s)); and all rights and powers to file any corresponding or equivalent applications in any and all countries, including all rights to claim priority under all United States domestic laws, International Convention(s) and Treaties in the name of Assignee, and do hereby authorize Assignee or its designee to insert here the Priority Number, Filing Date, and Filing Country

	Priority Number	Filing Date	Filing Country
	t HOUTTY (ACTION)	Titing Date	Time Coding
i	15/264 056	September 13, 2016	United States of America
- 1	1,0204,030		Officed States of Afficient

of the application, on which the claim for priority will be based; and in and to any Letters Patent that may be issued for the invention in any and all countries. I/we do hereby agree to assist Assignee in the prosecution of the application(s) and in any interference, conflict, opposition or litigation which may arise involving the invention or the patent or patents thereon, and to execute for any and all countries any document relating to applications derived from, corresponding to or equivalent to the above identified application as Assignee may request.

I/we authorize Assignee or its designee to translate this Assignment into all languages necessary; and we request that any such Letters Patent be issued to Assignee; and consent to the recordal of this Assignment, or a Notarial True Copy thereof, being under covenant not only that I/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 Declared by me/us:

At: Thewark, Delaware this 2nd day of November , 20 16 Effective as of September 13, 2016 Signature: George C. Jacob Mailing Address: 451 Bellevue Road Newark, Delaware 19713 United States of America	At: this day of 20 Effective as of September 13, 2016  Signature: Full Name: Bhawesh Kumar Mailing Address: B-1470 2301 N. Brazosport Boulevard Freeport, Texas 77541 United States of America
At: this day of , 20 Effective as of September 13, 2016  Signature: Full Name: Sarah E. Mastroianni Mailing Address: 451 Bellevue Road Newark, Delaware 19713 United States of America	At: this day of , 20  Signature: Full Name: Mailing Address:
At: this day of , 20  Signature: Full Name: Mailing Address:	At: this day of , 20  Signature: Full Name: Mailing Address:

#### FORM 110 (R.5/97)

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which invention was made and invented by me/us out of and in the course of my/our employment with my/our respective employers as stated below my/our name(s). I/we acknowledge that I/we hold the invention and all patent and other rights and powers obtainable or exercisable in respect thereof in trust for our respective employers. As trustee(s), and for good and valuable consideration and/or the remuneration received for my/our work, I/we sell, assign and transfer unto:

Dow Global Technologies LLC 2040 Dow Center Midland, Michigan 48674

United States of America

an entity organized and existing under the laws of the state of Delaware (hereinafter referred to as the "Assignee"); my/our entire right, title and interest throughout the world, in and to the invention and all rights and powers to make applications, including provisional applications when permitted by law, for Letters Patent in its own name, or in the name of its designee (or nominee(s)); and all rights and powers to file any corresponding or equivalent applications in any and all countries, including all rights to claim priority under all United States domestic laws, International Convention(s) and Treatics in the name of Assignce, and do hereby authorize Assignce or its designce to insert here the Priority Number, Fifing Date, and Filing Country

Priority Number	Filing Date	Filing Country	
15/264,056	September 13, 2016	United States of America	ŕ

of the application, on which the claim for priority will be based; and in and to any Letters Patent that may be issued for the invention in any and all countries. I/we do hereby agree to assist Assignee in the prosecution of the application(s) and in any interference, conflict, opposition or litigation which may arise involving the invention or the patent or patents thereon, and to execute for any and all conturies any document relating to applications derived from, corresponding to or equivalent to the above identified application as Assignce may request.

I/we authorize Assignee or its designee to translate this Assignment into all languages necessary; and we request that any such Letters Patent be issued to Assignee; and consent to the recordal of this Assignment, or a Notarial True Copy thereof, being under covenant not only that I/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 Declared by me/us:

At:		At: Lake Jackson, TX this 27 day of September, 2016
this day of	, 20	this 27 day of September, 2016
Effective as of September 13, 2016		Effective as of September 13, 2016
Signature;		Effective as of September 13, 2016 Signature: Blawesh Hundr
Full Name: George C. Jacob	-	Full Name: Bhawesh Kumar
Mailing Address: 451 Bellevue Road	MARKET	Mailing Address: B-1470
Newark, Delaware 19713		2301 N. Brazosport Boulevard
United States of America		Freeport, Texas 77541
		United States of America
TAt:		At:
this day of	, 20	this day of , 20
Effective as of September 13, 2016	, Total Control of the Control of th	
Signature:	- Control of the Cont	Signature:
Signature:   Full Name:   Sarah E. Mastroianni	-	Full Name:
Mailing Address: 451 Bellevue Road		Mailing Address:
Newark, Delaware 19713	-	
United States of America		
AI:	D-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0	At:
this day of	, 20	this day of, 20
Signature:		Signature:
Full Name:		Full Name:
Mailing Address:		Mailing Address:
<b>W</b>		*

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FORM 110 (R 5/97)

# INDIVIDUAL ASSIGNMENT AND INVENTOR'S DECLARATION

(with Priority Rights)

I/we verily believe I am/we are the original, first and sole/joint inventor(s) of the subject matter which is embraced by and for which a patent is sought on the invention entitled: HIGH PLANARIZATION EFFICIENCY CHEMICAL MECHANICAL POLISHING PADS AND METHODS OF MAKING

which invention was made and invented by me/us out of and in the course of my/our employment with my/our respective employers as stated below my/our name(s). I/we acknowledge that I/we hold the invention and all patent and other rights and powers obtainable or exercisable in respect thereof in trust for our respective employers. As trustee(s), and for good and valuable consideration and/or the remuneration received for my/our work, I/we sell, assign and transfer unto:

Dow Global Technologies LLC 2040 Dow Center Midland, Michigan 48674 United States of America

an entity organized and existing under the laws of the state of Delaware (hereinafter referred to as the "Assignee"); my/our entire right, title and interest throughout the world, in and to the invention and all rights and powers to make applications, including provisional applications when permitted by law, for Letters Patent in its own name, or in the name of its designee (or nominee(s)); and all rights and powers to file any corresponding or equivalent applications in any and all countries, including all rights to claim priority under all United States domestic laws, International Convention(s) and Treaties in the name of Assignee, and do hereby authorize Assignee or its designee to insert here the Priority Number, Filing Date, and Filing Country

1	Priority Number	Filing Date	Filing Country
	15/264,056	September 13, 2016	United States of America

of the application, on which the claim for priority will be based; and in and to any Letters Patent that may be issued for the invention in any and all countries. I/we do hereby agree to assist Assignee in the prosecution of the application(s) and in any interference, conflict, opposition or litigation which may arise involving the invention or the patent or patents thereon, and to execute for any and all countries any document relating to applications derived from, corresponding to or equivalent to the above identified application as Assignee may request.

I/we authorize Assignee or its designee to translate this Assignment into all languages necessary; and we request that any such Letters Patent be issued to Assignee; and consent to the recordal of this Assignment, or a Notarial True Copy thereof, being under covenant not only that I/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 Declared by me/us:

At:	At:
uns day or	this day of, 20
Effective as of September 13, 2016	Effective as of September 13, 2016
Signature:	Signature:
Full Name: George C. Jacob	Full Name: Bhawesh Kumar
Mailing Address: 451 Bellevue Road	Mailing Address: B-1470
Newark, Delaware 19713	2301 N. Brazosport Boulevard
United States of America	Freeport, Texas 77541
	United States of America
AL Aubum Hills, MI	At:
this 28 day of September . 20 16	this day of , 20
Effective as of September 13, 2016	
1 = M	
Signature: Let. 18th	Signature:
Full Name: Sarah E. Mastroianni	Full Name:
Mailing Address: 451 Bellevue Road	Mailing Address:
Newark, Delaware 19713	
United States of America	
At:	At:
this day of , 20	this day of, 20
Signature:	Signature:
Full Name:	Full Name:
Mailing Address:	Mailing Address:

**PATENT** REEL: 041359 FRAME: 0600

RECORDED: 02/23/2017