PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3011928

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
GAVIN MICHAEL BROWN	01/20/2012
ANDREW FRANCIS CHIFFEY	01/19/2012
PAUL RICHARD PHILLIPS	01/18/2012
ANDREW PETER WALKER	01/27/2012
PHILIP GERALD BLAKEMAN	02/17/2012
SOUGATO CHATTERJEE	02/23/2012
JANE GAST	03/08/2012
RAJ RAO RAJARAM	02/16/2012
GLEN SPREITZER	02/20/2012

RECEIVING PARTY DATA

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State/Country:	UNITED KINGDOM
Postal Code:	EC4A 4AB

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14199247

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER: 70050US2

> REEL: 033683 FRAME: 0693 502965329

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NAME OF SUBMITTER:	LINDA J. REMER			
SIGNATURE:	/Linda J. Remer/			
DATE SIGNED:	09/07/2014			
Total Attachments: 8				
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PATENT REEL: 033683 FRAME: 0694

ROY/70050USP/ADN

ASSIGNMENT - Patent Application			Docket Number: JMYT-552USP			
Whereas, the Assignor, comprising the following named inventors:						
	1. Phili	p Geraid Blakeman	2.	Gavin Michael Brown		
ASSIGNOR(s)/ INVENTOR(s)	3. Sou	gato Chatterjee	4,	Andrew Francis Chiffey		
	5. Jane	Gast	6.	Paul Richard Phillips		
	7. Raji	Rao Rajaram	8.	Glen Spreitzer		
	9. And	rew Peter Walker	10	10.		
made an inventio	n entitled:	CATALYSED SUBSTRATE MONC	LITH			
for which a Provis		lication for Patent:				
is executed concurrently herewith was filed in the U.S. Patent and Trademark Office on <u>December 12, 2011</u> , as U.S. Provisional Patent Application No.: 61/569.523						
Johnson Matthey Public Limited Company ASSIGNEE (Full Name and Address) 5 th Floor 25 Farringdon Street London EC4A 4AB United Kingdom						

is desirous of acquiring the entire interest in and to said invention, the Provisional Application for Patent, and all Letters Patent to be obtained therefor,

Now, therefore, in consideration of the payment by Assignee to Assignor of a sum corresponding to One Dollar (\$1.00), and for other good and valuable consideration, the receipt of which is hereby acknowledged, Assignor, intending to be legally bound, hereby sells, assigns and transfers to Assignee, its successors and assigns, the full and exclusive right, title and interest in and to said invention, the Provisional Application for Patent, all other applications for Letters Patent for said invention, including all non-provisional applications for Letters Patent for said invention, and all divisions, continuations, and continuations-in-part thereof, all rights to claim priority based thereon, and all Letters Patent, including reissues, to be obtained therefor, including any and all foreign patent rights in this invention corresponding thereto.

Assignor hereby warrants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this Assignment.

Assignor agrees it shall be legally bound, upon request of the Assignee or its successors or assigns or a legal representative thereof, to supply all information and evidence of which the Assignor has knowledge or possession, relating to the making and practice of said invention, to testify in any legal proceeding relating thereto, to execute all instruments proper to patent the invention in the United States of America and foreign countries in the name of the Assignee, and to execute all instruments proper to carry out the intent of this instrument.

If the invention requires a biological deposit, Assignor also grants to Assignee such control over any deposit made by Assignor as may be necessary to the validity of the patent rights assigned herein.

Page 1 of 3 Modified 2/6/03

ASSIGNMENT - Patent Application

Docket Number: JMYT-552USP

Assignor authorizes Assignor's attorney to insert at the end hereof, the serial number and filing date of the aforesaid application for United States Letters Patent and/or the Attorney Docket or file designation for this application if not identified above.

If the Assignor includes more than one individual, these obligations shall apply to these individuals both individually and collectively.

In witness whereof, this Assignment is executed on the day indicated below.

*,	Typed or Printed N	lame	Signature	Date	
	1. Philip Gerald Blai	(eman			
	2. Gavin Michael Brown		* Witness to Assignor #1 S W * Witness to Assignor #2	20/1/12 20/01/12	
	3, Sougato Chatteri	G B			
SIGNATURE	4. Andrew Francis	Chiffey	* Witness to Assignor #3 Ander Charles A Catherine * Witness to Assignor #4	19/1/2012	
	5. Jane Gast				
	6. Paul Richard Ph	i#ips	* Verness to Assignor #5 * Witness to Assignor #6	18/1/12 18/1/12	
	plication Patent:		2.5		
Serial No.:		<u>61/569.5</u> 2	•		
Filed:			er 12, 2011	•	
Attorney Dock		JMYT-55			
Total Number	of Assignment Pages	2	* Witness signature recommend	led, mandatory for some countries	

Page 2 of 3 Modified 2/6/03

ASSIGN	MENT - Pater	nt Applic	ation	Docket Number: JMY	<u>r-552USP</u>
	Typed or Printed	Name	Si	gnature	Date
	7. Raj Rao Rajaran	n			
			* Witness to	: Assignor #1	
	8. Glen Spreitzer				
			* Witness to	Assignor #2	
	9. Andrew Peter V	/alker	Ud.e.	·Libe	27/1/12
SIGNATURE			* Witness to	AssignoN#3	27/1/12
	10.				
		\N	* Witness b	o Assignor #6	
Provisional App	olication Patent:				
Serial No.:		61/669.523			
Filed:		December	12, 2011		
Attorney Docks	it Number:	JMYT-5521	<u> ISP</u>		
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Docket Number: JMYT-552USP

Assignor authorizes Assignor's attorney to insert at the end hereof, the serial number and filing date of the aforesaid application for United States Letters Patent and/or the Attorney Docket or file designation for this application if not identified above.

If the Assignor Includes more than one Individual, these obligations shall apply to these individuals both individually and collectively.

in witness whereof, this Assignment is executed on the day indicated below.

	Typed or	Printed Name	Signature	Date
	1. Philip C	seraid Blakeman		17-2:12
	******************		Witness to Assignor #1	<u> </u>
	2. Gavin f	lichael Brown		
	****************	***************************************	* Witness to Assignor #2	
	3. Sougat	o Chatterjee		
SIGNATURE			* Witness to Assignor #3	
	4. Andrew	v Francis Chiffey		
	************************		* Witness to Assignor #4	
	5. Jans C	ast		
	*************	*******************************	* Witness to Assignor #5	
	6. Paul R	ichard Phillips		
			* Witness to Assisnor #6	
Provisional App	lication Pate	nt:		
Serial No.:		<u> 91/569,53</u>	23	
Filed:		Qaçembs	<u>r 12, 2011</u>	
Attorney Docks	t Number:	JMYT-55	ZUSP	
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Page 2 of 3 Modified 2/6/03

ASSIGNMENT - Patent Application

Docket Number: <u>JMYT-552USP</u>

Assignor authorizes Assignor's attorney to insert at the end hereof, the serial number and filing date of the aforesaid application for United States Letters Patent and/or the Attorney Docket or file designation for this application if not identified above.

If the Assignor includes more than one individual, these obligations shall apply to these individuals both individually and collectively.

In witness whereof, this Assignment is executed on the day indicated below.

	Typed or Printed	Name	Signature	Date
***************************************	1. Philip Gerald Blo			
	***************************************		* Witness to Assignor #1	
	2. Gavin Michael 8	irown		
			* Witness to Assignor #2	
	3. Sougato Chatte	rjec	<u> 1000000000000000000000000000000000000</u>	
SIGNATURE			* Witness to Assignor #3	
	4. Andrew Francis	Chiffey		
		,	* Witness to Assignor #4	
	5. Jane Gast			
			× Witness to Assignor #5	
	6. Paul Richard P	hillips		
			* Witness to Assignor #6	
Provisional App	dication Patent:			
Serial No.:		61/569,52	33	
Filed:		<u>Decembe</u>	<u>r 12, 2011</u>	
Attorney Docks	nt Number:	<u> </u>	<u> 2USP</u>	
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Docket Number: JMYT-\$52USP

Assignor authorizes Assignor's attorney to insert at the end hereof, the serial number and filing date of the aforesaid application for United States Letters Patent and/or the Attorney Docket or file designation for this application if not identified above.

if the Assignor includes more than one individual, these obligations shall apply to these individuals both individually and collectively.

in witness whereof, this Assignment is executed on the day indicated below.

	pr -44,44	Typed or Printed	Name	Signature	Date		
	1.	Philip Gerald Si	akeman	***************************************	***************************************		
		,		* Witness to Assignor #1			
	2.	Gavin Michael E	กพวาย	THE STATE OF THE S	***************************************		
				* Witness to Assignor #2	***************************************		
SIGNATURE	3.	Sougato Chatte	rjes	······································	\$100\$\$\$\$\$##############################		
		······································	****	* Witness to Assignor #3	***************************************		
	4.	Andrew Francis	Chiffey	· · · · · · · · · · · · · · · · · · ·	***************************************		
				* Witness to Assignor #4			
	5.	Jana Gast		Jane Gast Fillen Durkonsk	03/08/12		
	S.	Paul Richard Pi	hillips	/* Witness to Assigner #8			
		······································	······································	* Witness to Assignor #6	***************************************		
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ŗ	Туре	d or Printed	Name	Sig	gnature	Date
	7. Raj	Rso Rajarar	n	RARC	102	11/5/5010
	***************************************			* Witness to	Assignor #1	16/2/2012
	8. Gle	n Spreitzer		***************************************		***************************************
				* Witness to	Assignor #2	
	9. Andrew Peter V		Valker	***************************************	***************************************	***************************************
SIGNATURE				* Witness to	Assigner #3	
	10.			***************************************		
			~~~~	* Witness to	Assignor #5	
Provisional App	lication P	atent;		***************************************	***************************************	
Serial No.:		61/569.52	3			
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PH 19711111111111111111111111111111111111	Typed or Printer	i Nama	Signature			
	7. Raj Rao Rajara		<i>ગણ લા ભ</i> જ	Date		
		N *	Vitness to Assignor #1			
	8. Gien Spreitzer		Nitness to Assignor #2	2/22/12 2/22/12		
SIGNATURE	9. Andrew Peter (	Valker				
			Vitness to Assignor #3	B		
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		×V	Witness to Assignor \$6			
Provisional App	olication Patent:	***************************************				
Serial No.:		61/569,523				
Filed		December 12, 2011				
Attorney Docket Number:		JMYT-552USP	<b>,</b> v			
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