

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT3011928

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
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
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	JOHNSON MATTHEY PUBLIC LIMITED COMPANY
<b>Street Address:</b>	5TH FLOOR
<b>Internal Address:</b>	25 FARRINGDON STREET
<b>City:</b>	LONDON
<b>State/Country:</b>	UNITED KINGDOM
<b>Postal Code:</b>	EC4A 4AB
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14199247
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(610)971-3022
<i>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.</i>	
<b>Phone:</b>	610.971.3047
<b>Email:</b>	LINDA.REMER@JMUSA.COM
<b>Correspondent Name:</b>	KEVIN M. CARROLL
<b>Address Line 1:</b>	435 DEVON PARK DRIVE
<b>Address Line 2:</b>	SUITE 600
<b>Address Line 4:</b>	WAYNE, PENNSYLVANIA 19087
<b>ATTORNEY DOCKET NUMBER:</b>	70050US2

PATENT

<b>NAME OF SUBMITTER:</b>	LINDA J. REMER
<b>SIGNATURE:</b>	/Linda J. Remer/
<b>DATE SIGNED:</b>	09/07/2014
<b>Total Attachments: 8</b> source=70050USP - Executed Assignment#page1.tif source=70050USP - Executed Assignment#page2.tif source=70050USP - Executed Assignment#page3.tif source=70050USP - Executed Assignment#page4.tif source=70050USP - Executed Assignment#page5.tif source=70050USP - Executed Assignment#page6.tif source=70050USP - Executed Assignment#page7.tif source=70050USP - Executed Assignment#page8.tif	

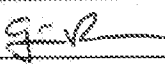
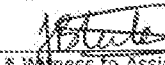
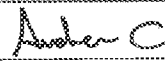
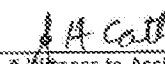

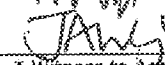
ASSIGNMENT - Patent Application		Docket Number: <u>JMYT-552USP</u>
Whereas, the Assignor, comprising the following named inventors:		
ASSIGNOR(s)/ INVENTOR(s)	1. Philip Gerald Blakeman	2. Gavin Michael Brown
	3. Sougato Chatterjee	4. Andrew Francis Chiffey
	5. Jane Gast	6. Paul Richard Phillips
	7. Raj Rao Rajaram	8. Glen Spreitzer
	9. Andrew Peter Walker	10.
made an invention entitled: <u>CATALYSED SUBSTRATE MONOLITH</u>		
for which a Provisional Application for Patent: (Select one of the following):		
<input type="checkbox"/> is executed concurrently herewith <input checked="" type="checkbox"/> was filed in the U.S. Patent and Trademark Office on <u>December 12, 2011</u> , as U.S. Provisional Patent Application No.: <u>61/569,523</u>		
ASSIGNEE (Full Name and Address)	<b>Johnson Matthey Public Limited Company</b> (a British body corporate) 5 <sup>th</sup> 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.		

**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 Name	Signature	Date
1. Philip Gerald Blakeman		
	* Witness to Assignor #1	
2. Gavin Michael Brown		20/1/12
		20/01/12
	* Witness to Assignor #2	
3. Sougato Chatterjee		
	* Witness to Assignor #3	
4. Andrew Francis Chiffey		19/1/12
		19/1/2012
	* Witness to Assignor #4	
5. Jane Gast		
	* Witness to Assignor #5	
6. Paul Richard Phillips		18/1/12
		18/1/12
	* Witness to Assignor #6	

Provisional Application Patent:

Serial No.: 61/569,523Filed: December 12, 2011Attorney Docket Number: JMYT-552USPTotal Number of Assignment Pages 2

\* Witness signature recommended, mandatory for some countries

# ASSIGNMENT - Patent Application

Docket Number: JMYT-552USP

Typed or Printed Name	Signature	Date
7. Raj Rao Rajaram		
	* Witness to Assignor #1	
8. Glen Spreitzer		
	* Witness to Assignor #2	
9. Andrew Peter Walker	<i>Andrew Walker</i>	27/1/12
	<i>John T. ...</i>	27/1/12
	* Witness to Assignor #3	
10.		
	* Witness to Assignor #6	

SIGNATURE

Provisional Application Patent:

Serial No.: 61/569,523

Filed: December 12, 2011

Attorney Docket Number: JMYT-552USP

Total Number of Assignment Pages 3

\* Witness signature recommended, mandatory for some countries

**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 Name	Signature	Date
SIGNATURE	1. Philip Gerald Blakeman	<u>P Blakeman</u>	<u>17-2-12</u>
		<u>Kuruppan Koo</u>	<u>17-2-12</u>
		* Witness to Assignor #1	
	2. Gavin Michael Brown	_____	_____
		* Witness to Assignor #2	
	3. Sougato Chatterjee	_____	_____
		* Witness to Assignor #3	
	4. Andrew Francis Chiffey	_____	_____
		* Witness to Assignor #4	
	5. Jane Gast	_____	_____
		* Witness to Assignor #5	
	6. Paul Richard Phillips	_____	_____
	* Witness to Assignor #6		

Provisional Application Patent:

Serial No.: 61/569,523Filed: December 12, 2011Attorney Docket Number: JMYT-552USPTotal Number of Assignment Pages 2

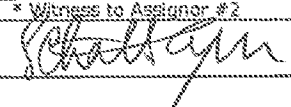
\* Witness signature recommended, mandatory for some countries

**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 Name	Signature	Date
1. Philip Gerald Blakeman	_____	_____
	* Witness to Assignor #1	_____
2. Gavin Michael Brown	_____	_____
	* Witness to Assignor #2	_____
3. Sougato Chatterjee		2/23/12
	* Witness to Assignor #3	_____
4. Andrew Francis Chiffey	_____	_____
	* Witness to Assignor #4	_____
5. Jane Gast	_____	_____
	* Witness to Assignor #5	_____
6. Paul Richard Phillips	_____	_____
	* Witness to Assignor #6	_____

SIGNATURE

Provisional Application Patent:

Serial No.: 61/569,523Filed: December 12, 2011Attorney Docket Number: JMYT-552USPTotal Number of Assignment Pages 2

\* Witness signature recommended, mandatory for some countries

<b>ASSIGNMENT - Patent Application</b>	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 Blakeman	_____	_____
	* Witness to Assignor #1	_____
2. Gavin Michael Brown	_____	_____
	* Witness to Assignor #2	_____
3. Sougato Chatterjee	_____	_____
	* Witness to Assignor #3	_____
4. Andrew Francis Chiffey	_____	_____
	* Witness to Assignor #4	_____
5. Jane Gast	<i>Jane Gast</i>	03/08/12
	<i>John Burford</i>	3/8/12
	* Witness to Assignor #5	_____
6. Paul Richard Phillips	_____	_____
	* Witness to Assignor #6	_____

Provisional Application Patent:	
Serial No.:	<u>61/569,523</u>
Filed:	<u>December 12, 2011</u>
Attorney Docket Number:	<u>JMYT-552USP</u>
Total Number of Assignment Pages <u>2</u>	* Witness signature recommended, mandatory for some countries



# ASSIGNMENT - Patent Application

Docket Number: JMYT-552USP

Typed or Printed Name	Signature	Date
7. Raj Rao Rajaram		11/2/2012
		11/2/2012
	* Witness to Assignor #1	
8. Glen Spreitzer		
	* Witness to Assignor #2	
9. Andrew Peter Walker		
	* Witness to Assignor #3	
10.		
	* Witness to Assignor #6	

Provisional Application Patent:

Serial No.: 61/569,523

Filed: December 12, 2011

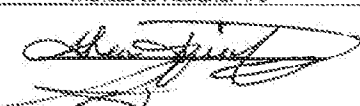
Attorney Docket Number: JMYT-552USP

Total Number of Assignment Pages 3

\* Witness signature recommended, mandatory for some countries

# ASSIGNMENT - Patent Application

Docket Number: JMYT-552USP

Typed or Printed Name	Signature	Date
7. Raj Rao Rajaram	_____	_____
	* Witness to Assignor #1	_____
8. Glen Spreitzer		<u>2/20/12</u>
	* Witness to Assignor #2	<u>2/22/12</u>
9. Andrew Peter Walker	_____	_____
	* Witness to Assignor #3	_____
10.	_____	_____
	* Witness to Assignor #5	_____

Provisional Application Patent:

Serial No.: 61/569,523

Filed: December 12, 2011

Attorney Docket Number: JMYT-552USP

Total Number of Assignment Pages 8

\* Witness signature recommended, mandatory for some countries.