09-25-2003

Form PTO-1595 U.S. DEPARTMENT OF COMMERCE (Rev. 10/02) U.S. Patent and Trademark Office OMB No. 0651-0027 (Exp. 6/30/2005) 102559069 To the Honorable Commissioner of Patents and Trad original documents or copy thereof Name of conveying party(ies): Name and address of receiving party(ies): Susan Joy Cooper Name: Johnson Matthey Public Limited John Malcolm Gascoyne Company Thomas Robertson Raiph Karen Leanne Hogarth Internal Address: 2-4 Cockspur Street Street Address: Trafalgar Square London SW1Y 5BQ Additional name(s) of conveying party(ies) attached? ☐ YES ☒ NO City: 3. Nature of Conveyance: State: Assignment Merger Zip: Security Agreement ☐ Change of Name Correction of Assignment Recordation Country: England (previously recorded at Reel _____, Frame ___ Other Additional name(s) & address(es) attached?

YES

NO Execution Date: 5/7/03; 6/17/03; 6/30/03; 9/11/03 Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: ____ A. Patent Application Number(s) 10/416,049 B. Patent Number(s) Additional number(s) attached? ☐ YES ⊠ NO Name and address of party to whom correspondence 6. Total number of applications and patents involved: concerning document should be mailed: Name: Jonathan H. Spadt 7. Total fee (37 CFR 3.41): \$40.00 Internal Address: RatnerPrestia Suite 301 Authorized to be charged to deposit account One Westlakes Berwyn, P.O. Box 980 8. Deposit account number: 18-0350 City: Valley Forge State: PA (Attach duplicate copy of this page if paying by depent account.) ZIP: 19482-0980 Street Address: Nemours Building 1007 Orange Street Suite 1100, P.O. Box 1596 City: Wilmington State: DE ZIP: 19899 DO NOT USE THIS SPACE Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. SEPT. 18,2003 Jonathan H. Spadt 45,122 Name of Person Signing Registration No. Date

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PATENT

REEL: 014514 FRAME: 0226

04-32-03

FROM-RatnerPrestia

ASSIGNMENT - Patent Application				Docket Number: JMYT-292US		
Whereas, the Assignor, comprising the following named inventors:						
ASSIGNOR(s)/ INVENTOR(s)	1. Susan Joy Cooper		2.	John Malcolm Gascoyne		
	3. Thomas Robertson Ralph		4.	Karen Leanne Hogarth		
	5.		6.			
made an invention entitled: Gas Diffusion Substrate						
for which an application for Letters Patent of the United States: (Select one of the following):						
is executed concurrently herewith was filed in the U.S. Patent and Trademark Office on November 2, 2001, as U.S. Patent Application Serial No.: PCT/GB01/04868						
ASSIGNEE (Full Name and A	ddress)	Johnson Matthey Public Limited C 2-4 Cockspur Street Trafalgar Square London SW1Y 5BQ	Company	/		

is desirous of acquiring the entire interest in and to said invention and the 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, all applications for Letters Patent for said invention, including 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 2 Modified 2/6/03

PATENT REEL: 014514 FRAME: 0227 10:38

ASSIGNMENT - Patent Application

Docket Number: JMYT-292US

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 Nam	ne Signature	Date			
SIGNATURE	1. Susan Joy Cooper	Sosan Cooper K. P. Neale * Witness to Assignor #1	7/05/2003 07/05/2003			
	2. John Malcolm Gascoyne	All Gascorpe.	17/05/2003			
	3. Thomas Robertson Raip	* Witness to Assignor#2 * Witness to Assignor#3	30/06/2003			
	4. Karen Leanne Hogarth	Cholouff . * Witness to Assistant #4	11/9/03			
	5.					
	6.	* Witness to Assignor #5				
		* Witness to Assignor #6				
Application for United States Letters Patent:						
Serial No.: Filed:	10/416,049 5/6/03					
Attorney Docket Number: JMYT-292US						
Total Number of	Assignment Pages 2	* Witness signature recommended, man	Vitness signature recommended, mandatory for some countries			

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