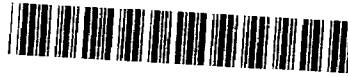


09-23-2004

RECEIVED 24 AUG 2004 PATENT ONLY

Form PTO-1595 (Rev. 10/02) OMB No. 0651-0027 (Exp. 6/30/2005)



102842114

U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office

8-24-04

To the Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof

1. Name of conveying party(ies):

- 1) Andrew Mark Ward
- 2) Sean Alexander Axon
- 3) Paul John Murray

Additional name(s) of conveying party(ies) attached?  YES  NO

2. Name and address of receiving party(ies):

Name: Johnson Matthey Public Limited Company

Internal Address:

Street Address: 2-4 Cockspur Street Trafalgar Square

City: London

State:

Zip: SW1Y 5BQ

Country: United Kingdom

Additional name(s) & address(es) attached?  YES  NO

3. Nature of Conveyance:

- Assignments (2)  Merger
- Security Agreement  Change of Name
- Correction of Assignment Recordation (previously recorded at Reel \_\_\_\_\_, Frame \_\_\_\_\_).
- Other

Execution Dates: 1) March 4, 2004 2) March 17, 2004 3) March 1, 2004

4. 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) 10/489,016 B. Patent Number(s) \_\_\_\_\_

Additional number(s) attached?  YES  NO

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Christopher R. Lewis Internal Address: RatnerPrestia Street Address: Suite 301 One Westlakes Berwyn, P.O. Box 980 Valley Forge State: PA 19482-0980 City: ZIP:

Street Address: Nemours Building 1007 Orange Street Suite 1100, P.O. Box 1596 Wilmington State: DE 19899 City: ZIP:

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$ 40.00

- Enclosed
- Authorized to be charged to deposit account

8. Deposit account number: 18-0350 (Attach duplicate copy of this page if paying by deposit account.)

DO NOT USE THIS SPACE

9. 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.

Christopher R. Lewis Name of Person Signing

36,201 Registration No.

Signature

August 24, 2004 Date

Total Number of Pages including cover sheet, attachments and documents: 5

Mail documents to be recorded with required cover sheet information to: Mail Stop Assignment Recordation Services Director of the US Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450

**ASSIGNMENT - Patent Application**Docket Number: **JMYS-113US**

Whereas, the Assignor, comprising the following named inventors:

ASSIGNOR(s)/ INVENTOR(s)	1. <b>Andrew Mark Ward</b>	2. <b>Sean Alexander Axon</b>
	3. <b>Paul John Murray</b>	4.
	5.	6.

made an invention entitled: **SPINEL BASED HIGH TEMPERATURE SHIFT CATALYST**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 \_\_\_\_\_,  
as U.S. Patent Application Serial No.: \_\_\_\_\_

ASSIGNEE  
(Full Name and Address)**Johnson Matthey Public Limited Company  
(a British body corporate)  
2-4 Cockspur Street, Trafalgar Square  
London SW1Y 5BQ  
United Kingdom**

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.

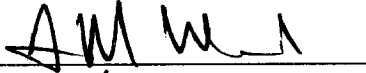
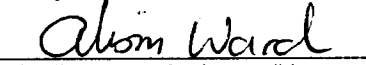
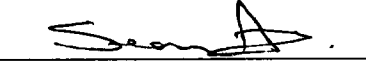
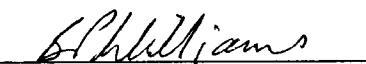
# ASSIGNMENT - Patent Application

Docket Number: **JMYS-113US**

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. Andrew Mark Ward		4.3.2004
	 * Witness to Assignor #1	4.3.2004
2. Sean Alexander Axon		17-3-2004
	 * Witness to Assignor #2	17 <sup>th</sup> March 2004
3. Paul John Murray	_____	_____
	_____	_____
	* Witness to Assignor #3	
4.	_____	_____
	_____	_____
	* Witness to Assignor #4	
5.	_____	_____
	_____	_____
	* Witness to Assignor #5	
6.	_____	_____
	_____	_____
	* Witness to Assignor #6	

SIGNATURE

Application for United States Letters Patent:

Serial No.: 10/489,016

Filed: March 8, 2004

Attorney Docket Number: **JMYS-113US**

Total Number of Assignment Pages  2

\* Witness signature recommended, mandatory for some countries

**ASSIGNMENT - Patent Application**Docket Number: **JMYS-113US**

Whereas, the Assignor, comprising the following named inventors:

ASSIGNOR(s)/ INVENTOR(s)	1. <b>Andrew Mark Ward</b>	2. <b>Sean Alexander Axon</b>
	3. <b>Paul John Murray</b>	4.
	5.	6.

made an invention entitled: **SPINEL BASED HIGH TEMPERATURE SHIFT CATALYST**

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 \_\_\_\_\_,  
as U.S. Patent Application Serial No.: \_\_\_\_\_

ASSIGNEE (Full Name and Address)	<b>Johnson Matthey Public Limited Company (a British body corporate) 2-4 Cockspur Street, Trafalgar Square London SW1Y 5BQ United Kingdom</b>
-------------------------------------	---

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.

# ASSIGNMENT - Patent Application

Docket Number: **JMYS-113US**

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. <b>Andrew Mark Ward</b>	_____	_____
		* Witness to Assignor #1	_____
	2. <b>Sean Alexander Axon</b>	_____	_____
		* Witness to Assignor #2	_____
	3. <b>Paul John Murray</b>	<i>Paul Murray</i> <i>Murray</i>	01/03/2004 01/03/2004
		* Witness to Assignor #3	_____
	4.	_____	_____
		* Witness to Assignor #4	_____
	5.	_____	_____
		* Witness to Assignor #5	_____
	6.	_____	_____
		* Witness to Assignor #6	_____

Application for United States Letters Patent:

Serial No.: 10/489,016

Filed: March 8, 2004

Attorney Docket Number: **JMYS-113US**

Total Number of Assignment Pages  2

\* Witness signature recommended, mandatory for some countries