

## PATENT ASSIGNMENT COVER SHEET

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<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
THE UNIVERSITY OF NOTTINGHAM	04/03/2012
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	PROMETHEAN PARTICLES LIMITED
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<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Patent Number:	7566436
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<b>SIGNATURE:</b>	/Matthew E. Martin/
<b>DATE SIGNED:</b>	06/27/2014
<b>Total Attachments: 13</b>	
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DATED *3<sup>rd</sup> April* 2012

DEED OF ASSIGNMENT OF PATENT RIGHTS

THE UNIVERSITY OF NOTTINGHAM (1)

AND

PROMETHEAN PARTICLES LIMITED (2)



20 Regent Street  
Nottingham  
NG1 5BQ

T: 0115 9 100 200  
F: 0115 9 101 301  
Ref: TG.41499.1.3

We hereby certify that this is a true *(redacted)*  
and correct copy of the original.  
Dated this *31* day of *Dec* 20 *13*  
*Partee, B* *David Hearn*  
.....  
**Barter Brettell LLP**  
**Chartered Patent Agents**  
**Birmingham B16 9PW** *800*

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THIS DEED is dated

3<sup>rd</sup> April

2012

## PARTIES

- (1) **The University of Nottingham** of University Park, Nottingham NG7 2RD ("Assignor").
- (2) **Promethean Particles Limited** (company number 06427290) incorporated and registered in England and Wales whose registered office is at 22-26 Nottingham Road, Stapleford, Nottingham NG9 8AA ("Assignee").

## BACKGROUND

- (A) The Assignor is the owner of the Patent (as defined below).
- (B) The Assignee is a company which has been established with the assistance of the Assignor in order to exploit the Patent.
- (C) The Assignor granted the Assignee an exclusive license to the patent on 25 January 2008 ("**License Agreement**") . Under the terms of License Agreement the Assignee was obliged to reimburse all patents cost incurred by the Assignor in the prosecution of the Patents.
- (D) The Assignor has entered into a share subscription and shareholders' agreement with the Assignee and others ("**Investment Agreement**") and pursuant to the terms thereof the Assignor has agreed to assign the Patent to the Assignee on the terms set out in this deed.

## AGREED TERMS

### 1. INTERPRETATION

- 1.1 The definitions and rules of interpretation in this clause apply in this deed.

**Business Day:** a day other than a Saturday, Sunday or public holiday in England when banks in the City of London are open for business.

**Improvement:** means any input, enhancement, alternation or modification to the Patent;

**Know-How:** means all present knowledge, technical information and other information, designs, drawings, systems, results of experimentation, whether or not recorded in material form, including all data, techniques, processes test results, prototypes, experiments, notebooks, records and other relevant information relating

to the use, development, carrying out of research into, marketing, promotion and commercial exploitation of the Patent, as is in writing and as the Assignor is at liberty to disclose, has not previously been disclosed and in the opinion of the Assignor is reasonably necessary for the use, development, carrying out of research into, marketing, promotion and commercial exploitation of the Patent;

**Intellectual Property Rights:** patents, rights to inventions, copyright and related rights, trade marks and services marks, trade names and domain names, rights in get-up, goodwill and the right to sue for passing off and unfair competition, rights in designs, rights in computer software, database rights, rights to preserve the confidentiality of information (including know-how and trade secrets) and any other intellectual property rights, including all applications for (and rights to apply for and be granted), renewals or extensions of, and rights to claim priority from, such rights and all similar or equivalent rights or forms of protection which subsist or will subsist, now or in the future, in any part of the world.

**Patent(s):** the patent(s) and application(s) short particulars of which are set out in Schedule 1 of this deed.

**Pipeline Agreement:** means the pipeline agreement dated 25<sup>th</sup> January 2008 entered into between the Assignor and the Assignee relating to the further development of Intellectual Property Rights associated with the Patent and the commercial development of the Assignee.

- 1.2 Clause and schedule headings shall not affect the interpretation of this deed.
- 1.3 The schedules form part of this deed and shall have effect as if set out in full in the body of this deed. Any reference to this deed includes the schedules.
- 1.4 References to clauses and schedules are to the clauses and schedules of this deed.
- 1.5 Unless the context otherwise requires, words in the singular include the plural and in the plural include the singular.
- 1.6 Unless the context otherwise requires, a reference to one gender shall include a reference to the other genders.

- 1.7 A reference to a statute, statutory provision or subordinated legislation is a reference to it as it is in force from time to time, provided that, as between the parties, no such amendment or re-enactment shall apply for the purposes of this agreement to the extent that it would impose any new or extended obligation, liability or restriction on, or otherwise adversely affect the rights of, any party. This clause does not, however, apply in relation to taxation.
- 1.8 A reference to a statute or statutory provision shall include any subordinate legislation made from time to time under that statute or statutory provision.
- 1.9 **Writing or written** includes faxes but not e-mail.
- 1.10 Any words following the terms **including, include, in particular** or any similar expression shall be construed as illustrative and shall not limit the sense of the words preceding those terms.
- 1.11 A **person** includes a natural person, corporate or unincorporated body (whether or not having separate legal personality) and that person's legal and personal representatives, successors and permitted assigns.

2. **ASSIGNMENT**

- 2.1 Pursuant to the Investment Agreement and in consideration for the issue to the Assignor of the Share Warrant the Assignor hereby assigns to the Assignee absolutely with full title guarantee all its right, title and interest in the Patent.
- 2.2 The assignment effected by this clause 2 shall include, without limitation, the assignment and transfer of:
- (a) all patents that may derive priority from or have equivalent claims to or be based on the Patent in any country in the world; and
  - (b) all rights of action, powers and benefits arising from ownership of the Patent, including the right to sue for damages and other legal and equitable remedies (and retain any financial award made in any action) in respect of all causes of action arising prior to, or on or after the date of this deed.
- 2.3 The Assignee hereby grants to the Assignor an irrevocable royalty-free, non-exclusive licence back of the Patent for the Assignor to use and develop such rights for academic and research purposes only.

**3. LICENCE OF KNOW HOW**

3.1 The Assignor hereby grants the Assignee an irrevocable, non-exclusive, perpetual, royalty free, worldwide licence of the Know-How for the purposes of the continued use, development, carrying out of research into, marketing, promotion and commercial exploitation of the Patent.

**4. FURTHER ASSURANCE**

4.1 The Assignor shall at the expense of the Assignee execute any further documents that may reasonably be required by the Assignee to register the Assignee as proprietor of the Patent including:

- (a) registration of the Assignee as applicant or (as applicable) proprietor of the Patent; and
- (b) assisting the Assignee in obtaining, defending and enforcing the Patent, and assisting with any other proceedings which may be brought by or against the Assignee against or by any third party relating to the Patent.

**5. NO WARRANTY**

5.1 The Assignor does not warrant or guarantee the validity of the Patent or that any invention described in the Patent does not infringe any valid and subsisting patent or other rights not held by the Assignor.

5.2 All other warranties, undertakings or representations that might be implied as given by the Assignor whether by law or otherwise shall be excluded to the fullest extent permitted by law with the exception of those contained in clause 5.3.

5.3 The Assignor warrants and represents that:

- (a) it is the sole legal and beneficial owner of, and owns all the rights and interests in, the Patents;
- (b) it is properly registered as the applicant or registered proprietor of the Patent, and all application, registration and renewal fees have been paid;
- (c) it has not licensed or assigned the Patent to any third party other than the Assignee;
- (d) the Patent is free from any security interest, option, mortgage, charge or lien granted to any third party;



**10. WAIVER**

No failure or delay by a party to exercise any right or remedy provided under this agreement or by law shall constitute a waiver of that or any other right or remedy, nor shall it preclude or restrict the further exercise of that or any other right or remedy. No single or partial exercise of such right or remedy shall preclude or restrict the further exercise of that or any other right or remedy.

**11. VARIATION**

No variation of this deed shall be effective unless it is in writing and signed by the parties (or their authorised representatives) as a deed.

**12. SEVERANCE**

12.1 If any court or competent authority finds that any provision of this deed (or part of any provision) is invalid, illegal or unenforceable, that provision or part-provision shall, to the extent required, be deemed to be deleted, and the validity and enforceability of the other provisions of this deed shall not be affected.

12.2 If any invalid, unenforceable or illegal provision of this deed would be valid, enforceable and legal if some part of it were deleted, the provision shall apply with the minimum modification necessary to make it legal, valid and enforceable.

**13. COUNTERPARTS**

This deed may be executed in any number of counterparts, each of which when executed and delivered shall constitute an original of this deed, but all the counterparts shall together constitute the same deed.

**14. NOTICES**

14.1 Any notice required to be given under this deed shall be in writing and shall be delivered personally, or sent by pre-paid first-class post or recorded delivery or by commercial courier, to each party required to receive the notice to the address of that party stated herein or as otherwise specified by the relevant party by notice in writing to each other party.

14.2 Any notice shall be deemed to have been duly received:

- (a) if delivered personally, when left at the address and for the contact referred to in this clause;

(b) if sent by pre-paid first-class post or recorded delivery, at 9.00 am on the second Business Day after posting; or

(c) if delivered by commercial courier, on the date and at the time that the courier's delivery receipt is signed.

14.3 A notice required to be given under this deed shall not be validly given if sent by e-mail.

## Schedule 1 Patents

The patent application(s) derived from international patent application PCT/GB2005/000483, published as WO2005/077505.

**Publication Number:** WO/2005/077505    **International Application No.:** PCT/GB2005/000483

**Publication Date:** 25.08.2005    **International Filing Date:** 11.02.2005

**Int. Class.:** B01F 3/04 (2006.01), B01F 3/08 (2006.01), B01F 5/04 (2006.01), B01J 19/24 (2006.01), B01J 3/00 (2006.01), B01F 5/00 (2006.01)

**Applicants:** THE UNIVERSITY OF NOTTINGHAM [GB/GB]; University Park, Nottingham NG7 2RD (GB) (All Except US).

LESTER, Edward Henry [GB/GB]; Latin House, Derby Road, Risley, Derbyshire DE72 3SU (GB) (US Only).

AZZOPARDI, Barry, James [GB/GB]; 5 Grange Avenue, Beeston, Nottingham NG9 1GJ (GB) (US Only).

**Inventors:** LESTER, Edward Henry [GB/GB]; Latin House, Derby Road, Risley, Derbyshire DE72 3SU (GB) (US Only).

AZZOPARDI, Barry, James [GB/GB]; 5 Grange Avenue, Beeston, Nottingham NG9 1GJ (GB) (US Only).

**Agent:** BARKER BRETTELL; 138 Hagley Road, Edgbaston, Birmingham B16 9PW (GB).

**Priority Data:** 0402963.3    11.02.2004    GB

**Title:** COUNTER CURRENT MIXING REACTOR

**Abstract:** A mixing reactor for mixing efficiently streams of fluids of differing densities. In a preferred embodiment, one of the fluids is supercritical water, and the other is an aqueous salt solution. Thus, the reactor enables the production of metal oxide nanoparticles as a continuous process, without any risk of the reactor blocking due to the inefficient mixing inherent in existing reactor designs.

Details of current patent status

<b>Patent No/Application No</b>	<b>Country</b>	<b>Issue Date</b>	<b>Status</b>
2005211990	Australia	11/11/2010	Granted / Issued
1 713 569 (E)	Belgium	03/06/2009	Granted / Issued
1 713 569 (E)	Ireland (Eire)	03/06/2009	Granted / Issued
1 713 569 (E)	United Kingdom (Great Britain)	03/06/2009	Granted / Issued
1 713 569 (E)	France	03/06/2009	Granted / Issued
1 713 569 (E)	Spain	03/06/2009	Granted / Issued
1 713 569 (E)	Denmark	03/06/2009	Granted / Issued
1 713 569 (E)	Germany	03/06/2009	Granted / Issued
7 566 436	United States	21/10/2009	Granted / Issued
4554/DELNP/2006	India		In examination
2,597,480	Canada		In examination
2006-552685	Japan		In examination
200580004767.0	China		In examination
10-2006-7018374	Republic of Korea		In examination

IN WITNESS whereof the parties have executed and delivered this deed on the day and year first before written.

EXECUTED as a DEED by )  
THE UNIVERSITY OF NOTTINGHAM ) .....  
acting by )  
 ) .....

EXECUTED as a DEED by )  
PROMETHEAN PARTICLES LIMITED ) *Alexandra Gow*  
acting by one director ) Director  
in the presence of: )

Name of Witness:

*Alexandra Gow*

Signature of Witness:

Address of Witness:

.....  
**ACTONS**  
**SOLICITORS**  
**16 & 20 REGENT STREET**  
**NOTTINGHAM**  
**NG1 5BQ**  
.....

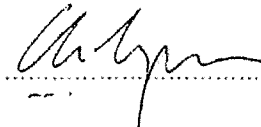

Occupation of  
Witness:

IN WITNESS whereof the parties have executed and delivered this deed on the day and year first before written.

EXECUTED as a DEED by )

THE UNIVERSITY OF NOTTINGHAM )

acting by )

)   
) 

EXECUTED as a DEED by )

PROMETHEAN PARTICLES LIMITED )

acting by one director )

Director

in the presence of: )

Name of Witness: .....

Signature of Witness: .....

Address of Witness: .....

Occupation of .....

Witness:

RECORDED IN THE PATENTS  
OFFICE

13<sup>th</sup> DAY OF January 20 14

*D. Corcoran*  
PP CONTROLLER