

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
Oxonica Materials Ltd.	09/29/2009
RECEIVING PARTY DATA	
Name:	Oxonica Energy Limited
Street Address:	7 Begbroke Science Park, Sandy Lane,
Internal Address:	Yarnton
City:	Kidlington, Oxfordshire
State/Country:	UNITED KINGDOM
Postal Code:	OX5 1PF
PROPERTY NUMBERS Total: 2	
Property Type	Number
Patent Number:	7169196
Application Number:	10542770
CORRESPONDENCE DATA	
Fax Number:	(617)646-8646
Phone:	6176468000
Email:	patents_JohnV@wolfgreenfield.com
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>	
Correspondent Name:	Wolf, Greenfield & Sacks, P.C.
Address Line 1:	600 Atlantic Avenue
Address Line 4:	Boston, MASSACHUSETTS 02210-2206
ATTORNEY DOCKET NUMBER:	M0106.70021 AND 70023
NAME OF SUBMITTER:	John R. Van Amsterdam

Total Attachments: 12
 source=M010670021US00_AND_M010670023_ASSIGNMENT#page1.tif

501742437

PATENT
REEL: 027319 FRAME: 0802

OP \$80.00 7169196

source=M010670021US00_AND_M010670023_ASSIGNMENT#page2.tif
source=M010670021US00_AND_M010670023_ASSIGNMENT#page3.tif
source=M010670021US00_AND_M010670023_ASSIGNMENT#page4.tif
source=M010670021US00_AND_M010670023_ASSIGNMENT#page5.tif
source=M010670021US00_AND_M010670023_ASSIGNMENT#page6.tif
source=M010670021US00_AND_M010670023_ASSIGNMENT#page7.tif
source=M010670021US00_AND_M010670023_ASSIGNMENT#page8.tif
source=M010670021US00_AND_M010670023_ASSIGNMENT#page9.tif
source=M010670021US00_AND_M010670023_ASSIGNMENT#page10.tif
source=M010670021US00_AND_M010670023_ASSIGNMENT#page11.tif
source=M010670021US00_AND_M010670023_ASSIGNMENT#page12.tif

OXONICA MATERIALS LTD

and

OXONICA ENERGY LIMITED

INTELLECTUAL PROPERTY ASSIGNMENT

○

O'MELVENY & MYERS LLP

I hereby certify that this is a true copy
of the original assignment and I have
initialled each page in the bottom right hand
corner of this copy.



PETER ENTWISTLE

SOLICITOR

10th March 2011

EAST END HOUSE, EAST END,
FAIRFOLD, GLAS., SL7 4AP

PATENT

REEL: 027319 FRAME: 0804

THIS DEED is made the 29th day of September 2009

PARTIES:

- (1) **OXONICA MATERIALS LTD**, a company incorporated under the laws of England and Wales with company number 03533639 and whose registered office is at Begbroke Science Park, Sandy Lane, Yarnton, Kidlington, Oxfordshire, OX5 1PF (the "Assignor"); and
- (2) **OXONICA ENERGY LTD**, a company incorporated under the laws of England and Wales with company number 04332799 and whose registered office is at Begbroke Science Park, Sandy Lane, Yarnton, Kidlington, Oxfordshire, OX5 1PF (the "Assignee")

WHEREAS:

- (A) The Assignor is the legal and beneficial owner of the Ancillary Business Intellectual Property.
- (B) The Assignor has agreed to assign the Ancillary Business Intellectual Property to the Assignee on the terms set out in this deed.

IT IS AGREED as follows:

1. INTERPRETATION

Ancillary Business Intellectual Property	means the Intellectual Property owned by the Assignor but used predominantly in the Business including but not limited to the registered Intellectual Property (or applications therefor) and unregistered Intellectual Property set out in Schedule 1.
Assignor Group	means the Assignor and its subsidiaries and subsidiary undertakings and its holding companies and parent undertakings and the subsidiaries and subsidiary undertakings of such holding companies and parent undertakings from time to time
Business	means the liquid fuels additive business (limited to emissions Improvements and combustion efficiency) of the Assignor Group as carried on in the 12 months prior to the date of this deed

Intellectual Property

means all existing patents and pending patent applications, copyrights (including in software), database rights, moral rights and rights in trade marks, business and internet domain names, goodwill, designs, know-how and confidential information and all other similar or equivalent forms of protection anywhere in the world whether registered or unregistered and including applications for registration and rights to apply for registration or extension of such rights

2. ASSIGNMENT

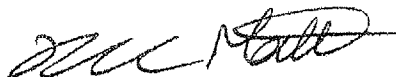
2.1 In consideration of the sum of £1 (receipt and sufficiency of which the Assignor hereby acknowledges), the Assignor assigns to Assignee with full title guarantee all the Assignor's:

- (a) rights, title and interest in and to the Ancillary Business Intellectual Property;
- (b) rights of action (whether actual or contingent) in respect of any past, present or future infringement of the Ancillary Business Intellectual Property; and
- (c) rights to apply and claim priority for, prosecute and obtain protection anywhere in the world in respect of the Ancillary Business Intellectual Property.

3. GENERAL

- 3.1 The Assignee may assign any or all of its rights and benefits under this deed to Energenics Holdings Pte Ltd.
- 3.2 This deed shall be governed by and construed in accordance with the laws of England and the English Courts shall assume exclusive jurisdiction over any claim or matter arising in connection with this deed.
- 3.3 This agreement may be executed in any number of counterparts and when executed each counterpart shall be an original, and all the counterparts together shall constitute one and the same agreement.

SIGNED and delivered as a deed by
OXONICA MATERIALS LIMITED acting
by KEVIN MATTHEWS, a duly
authorised director in the presence of a



witness:

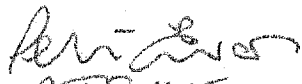
Witness:

Signature

Name

Address

Occupation

: 
: P. J. STEWART
: EAST END HOUSE, GARDENS, GUY 9AP
: Solicitor

SIGNED and delivered as a deed by
OXONICA ENERGY LIMITED acting by
KEVIN MATTHEWS, a duly authorised
director in the presence of a witness:



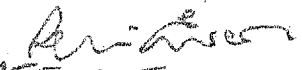
Witness:

Signature

Name

Address

Occupation

: 
: P. J. STEWART
: EAST END HOUSE, GARDENS, GUY 9AP
: Solicitor

SCHEDULE 1

ANCILLARY BUSINESS INTELLECTUAL PROPERTY

Patents

Cerium oxide nanoparticles

Country	Status	Priority Date	Patent Number	Application Number
Australia	Pending	06/11/01		2002341189
Canada	Pending	06/11/01		2467957
China	Pending	06/11/01		02826782.6
European Patent Office	Pending	06/11/01		02774983.7
Hong Kong	Pending	06/11/01		04106054.6
India	Pending	06/11/01		IN1503/DELNP/2004
Japan	Pending	06/11/01		2003542310
Mexico	Granted	06/11/01	249547	PA/a/2004/004253
New Zealand	Granted	06/11/01	533239	533239
Philippines	Pending	06/11/01		1-2004-500634
Singapore	Granted	06/11/01	SG104516	200402653-0
United States of America	Granted	06/11/01	US7169196	10/494815

Cerium oxide nanoparticles as fuel additives

Country	Status	Priority Date	Patent Number	Application Number
Australia	Pending	23/01/03		2004205788
Brazil	Pending	23/01/03		PI 0406921-8
Canada	Pending	23/01/03		2514146
China	Pending	23/01/03		200480007843.9
European Patent Office	Pending	23/01/03		04704663.6
Hong Kong	Pending	23/01/03		05109752.4
India	Granted	23/01/03	220514	3241/DELNP/2005
Japan	Pending	23/01/03		2006500244
Korea (South)	Pending	23/01/03		7013595/2005
Mexico	Pending	23/01/03		PA/a/2005/007820
New Zealand	Granted	23/01/03		541393
Philippines	Pending	23/01/03		1-2005-501335

Russia	Granted	23/01/03	2352618	2005123391
Singapore	Granted	23/01/03	113972	200504544-8
South Africa	Granted	23/01/03	2005/059 33	2005/05933
United States of America	Pending	23/01/03		10/542770

R-

Trade Marks

Mark	Country	Number	Classes	Status
ENVIROX	US	3031418	01; 04	Registered
	HK	300016659	01; 04	Registered
	CA	1440105	01; 04	Filed 2.6.09
	PH	4-2003-08263	01; 04	Registered
	ZA	2005/03687	1	Registered
		2005/03688	4	Registered
	NZ	725778	01; 04	Registered
	MY	2003-11059	1	Registered
		2003-11060	4	Registered
	IN	1228827	1	Registered
		1228828	4	Registered
	Madrid Protocol:	819446	01; 04	
	CN			Registered
	AU			Registered
	SG			Registered
	KR			Class 4 only
	IR			Registered
	RU			Registered
	CA			Filed 18.5.09
	JP			Registered

Domain Names

cerulean-northamerica.com
envirox.com
envirox.de
envirox.ru
enviroxdriverpack.com
enviroxtgk.com
oxonica-envirox.com

UNREGISTERED ANCILLARY BUSINESS INTELLECTUAL PROPERTY

1. Engine and Vehicle Test Work Conducted in Support of Envirox™
 - MIRA (2002/2003/2008)
 1. 'MIRA-03-0315022-01 Fuel Additive Discrimination by Engine Dynamometer Test 1'
 2. 'MIRA-04-0315022-02 Fuel Additive Discrimination by Engine Dynamometer Test 11'
 3. 'MIRA-09-1018454-02 Determination of Fuel Additive Influence by Engine

Dynamometer Test'

- **Ricardo (2002)**
 1. 'RD 02/3795 A Brief Report on the Evaluation for Oxonica of Effects of a Novel Diesel Fuel Additive on Regulated Gaseous, Particulate and Particle Emissions'
- **Associated Octel Company (2002)**
 1. '284V03 Diesel Fuel Lubricity Test in a Distributor Type Injection Pump'
 2. 'Effects of a Diesel Additive on the Regulated Exhaust Emissions from a Light Duty Vehicle'
- **University of Applied Sciences, Dresden (2002)**
 1. 'Comparative Investigations of Different Fuel-borne Catalysts'
- **Aristotle University, Thessaloniki (2003)**
 1. '0306 Evaluation of a Cerium Based Fuel Additive with Respect to Raw Emissions and DPF Performance'
- **Shell Global Solutions (2005)**
 1. 'Evaluation of Oxonica's Envirox Additive. Light Duty Fleet Test Report December 2005'
- **Oxford Brookes University (2004/2005)**
 1. Phase 1 'Preliminary Independent Report on the Combustion Performance of Diesel Fuels Containing Envirox Additives Supplied by Oxonica Ltd'
 2. Phase 2 'Diesel Fuel Combustion Research in Conjunction with Oxonica Ltd'
- **Southwest Research Institute (2006)**
 1. 'SwRI 03.10740A Fuel and Fuel Additive Registration Testing for Oxonica Energy Ltd'
- **Millbrook Proving Ground (2006/2008/2009)**
 1. 'Evaluation of Envirox Fuel-borne Additive in a Cummins Test Engine'
 2. '06/0759 CEC F-23-01 Diesel Engine Injector Nozzle Coking in the Peugeot XUD9 Engine'
 3. '06/0760 CEC F-23-01 'Diesel Engine Injector Nozzle Coking in the Peugeot XUD9 Engine'
 4. '06/0762 CEC F-23-01 'Diesel Engine Injector Nozzle Coking in the Peugeot XUD9 Engine'
 5. '06/0770 CEC F-23-01 'Diesel Engine Injector Nozzle Coking in the Peugeot XUD9 Engine'
 6. '06/0842 CEC F-23-01 'Diesel Engine Injector Nozzle Coking in the Peugeot XUD9 Engine'
 7. '06/0844 CEC F-23-01 'Diesel Engine Injector Nozzle Coking in the Peugeot XUD9 Engine'
 8. MBK 07/0880 'Emissions Effect of Oxonica Additive over MLTB (Millbrook London Transport Buses) Test Cycle
 9. MBK 08/0265 'Emissions Test Results Following Three Months In Service Operation

10. 'Evaluation of Chassis Dynamometer Test Procedure to Demonstrate Vehicle Emissions Performance'

- **SSC, Italy**
 1. 'Evaluation of Envirox™ Fuel-borne Additive on the Exhaust Emissions from a Light Duty Vehicle'
 2. 'Report on the Fuel Borne Catalyst Envirox According to the European Directive 98/69/EC'
 - **NCMS Project No. 124001**
 1. 'Heavy Duty Fuel Economy Programme' (Draft)
 - **California Environmental Engineering**
 1. Cat 3406 0-170hr Test Sheets
 - **Oxonica**
 1. 'Envirox Technical Performance Summary Version 1'
 2. 'Envirox Technical Performance Summary Version 2'
2. **Toxicology Programmes in Support of Envirox™**
- **BASF(2004)**
 1. Diesel Emission Reduction Technologies Fuel-Born Catalysts
 2. Toxicology Potential
 - **Product Assessment and Regulatory Compliance (PARC) (2006)**
 1. 'Review of the Current Data to Support a Safety and Risk Assessment for Optisol and Envirox'
 - **Kings College London (2006)**
 1. Investigating the Impact of Oxonica Nano Fuel Additive, Envirox
 - **SafePharm Laboratories**
 1. '1915/007 Cerium oxide: Determination of Skin Irritation Potential in the Epiderm Skin Model'
 2. '1915/011 Cerium oxide: BS EN ISO 10993-5 Tissue Culture Cytotoxicity Test Using L929 Cells - Indirect Contact (Agar Diffusion) Method'
 3. '1915/012 Cerium oxide standard: Reverse Mutation Assay "Ames Test" using Salmonella Typhimurium'
 4. '1915/013 Cerium oxide nanoparticles: Reverse Mutation Assay "Ames Test" using Salmonella Typhimurium'
 5. '1915/025 Cerium dioxide (non nanoparticulate): Determination of Skin Irritation Potential in the Epiderm Skin Model'
 6. '1915/026 Nano cerium oxide: Acute toxicity to Daphnia Magna'
 7. '1915/027 Nano cerium oxide: Assessment of the inhibitory effect on the respiration of activated sewage sludge'
 8. '1915/028 Non-nano cerium dioxide: Acute toxicity to Daphnia Magna'

9. '1915/029 Non nano cerium oxide: Assessment of the inhibitory effect on the respiration of activated sewage sludge'

- **Edinburgh University**

- 1. 'A Study of the Toxicity of Cerium Oxide Nanoparticles and Diesel Soot In Vitro for Oxonica'

- **Inserm (University of Rouen, France 2004, 2005)**

- 1. 'O43034/C76 Study of Envirox Additivition on Combustion Emission Aerosol Lung Safety by the use of Organotypic Cultures of Lung Slices'
 - 2. '1963-10/06/2004 Characterisation of APT-Cerium Oxide Aerosol Lung Safety by the use of Organotypic Culture of Lung Slices'

- **Aristotle University, Thessaloniki (2003)**

- 1. 'Assessment of the Possible Environmental Effects from the use of Cerium Based Fuel Additive'

3. **Field Trials Conducted in Support of Envirox™**

- **GTM Milan (2008)**

- 1. 'GTM, Milan Envirox™ Fuel Economy Trial Final Report, February 2008'

- **Arriva (2009)**

- 1. 'Arriva Envirox Trial July 2009'

- **First Group (2009)**

- 1. 'First Group Trial Presentation 26/06/09'
 - 2. 'First Group Trial Presentation 01/09/09'

- **BASF Loco(2007)**

- 1. BASF Loco Trial

- **BHP Mt. Keith (2006)**

- 1. 'Trial Status'

- **BOC(2006)**

- 1. BOC 12 October 2006

- **Cemex (2009)**

- 1. 'Cemex Trial Presentation 03/09/09'

- **Connexxion (2007)**

- 1. 'Trial Data'

- **Finglands (2007)**

- 1. 'Finglands Trial Results'

- **Go Ahead (Metrobus) (2007)**
 1. 'Metrobus Report'
- **City Bus Hong Kong (2003)**
 1. 'Statistical Report of Hong Kong Bus Trial of Diesel Additive for Oxonica Ltd'
- **Stagecoach (2005, 2006, 2008)**
 1. 'Final Results for London Bus Trial of Diesel Additive for Oxonica Ltd'
 2. 'Interim Results for a Statistical Analysis of data for Bus Trial of Diesel Additive in NW England for Oxonica Ltd'
 3. 'Stagecoach NW Run down Trial – Final Report 0109'
- **Philippines Lopez Sugar Corp. (2006)**
 1. 'Trial Results'
- **Singapore SBS Bedok (2006)**
 1. 'SBS BN Full Depot Evaluation – Envirox'
- **Transco/National Grid (2007)**
 1. 'Transco/National Grid Trial'
 2. 'Transco Trial Report'
- **Vander Luyt**
 1. Trial data
- 4. **White Papers/Magazine Articles**
 - **Technology Analysis and Strategy Mangement. Vol. 20 Jan 2008**
 1. 'Envirox Fuel Borne Catalyst : Developing and Launching a Nano Fuel Additive'
 - **Inhalation Technology. Vol.20 April 2008**
 1. 'Hazard and Risk assessment of a Nanoparticulate Cerium Oxide based Diesel Fuel Additive – A Case Study'
 - **Particle and Fibre Technology. December 2007**
 1. 'Initial In Vitro Screening Approach to Investigate the Potential Health and Environmental Hazards of Envirox – A Nano Particulate Cerium oxide'
 - **Nanotechnology, Sept. 2007**
 1. 'Evaluation of Cerium Oxide and Cerium Oxide Based Fuel Additive Safety on Organotypic Cultures of Lung Slices'
- 5. **Chemical Analysis of Product**
 - **Oxford Materials Characterisation Service**

1. 'OM 07/055, 07/128 Analysis of Envirox 1 Production Materials'
2. 'OM 07/055 and 07/128 Analysis of Envirox 2 Production Materials'
3. 'Investigation of DDSA Behaviour In Ceria Suspensions'
4. 'Other Investigations of Envirox Materials'

6. **Other**

- Evaluserve IP Landscape Analysis – "Improving Combustion Efficiency Using Metal Oxides"
- The report, "Evaluation of nanoparticulate metal oxide catalysts in the enhanced combustion of biomass derived fuels."
- Oxonica Energy lab books (so far as distinguishable)
- Statistical processing techniques
- Primary data relating to field trials
- Quality control data