# 502800049 05/08/2014

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2846644

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

# **CONVEYING PARTY DATA**

Name	Execution Date
RAYMOND JACOBUS WILHELMUS KNAAPEN	04/02/2014
RUUD OLIESLAGERS	04/04/2014
DENNIS VAN DEN BERG	04/03/2014
MATIJS C. VAN DEN BOER	04/02/2014
DIEDERIK JAN MAAS	04/03/2014
JACQUES COR JOHAN VAN DER DONCK	04/03/2014
FREDDY ROOZEBOOM	04/02/2014

# **RECEIVING PARTY DATA**

Name:	NEDERLANDSE ORGANISATIE VOOR TOEGEPAST-NATUURWETENSCHAPPELIJK ONDERZOEK TNO
Street Address:	SCHOEMAKERSTRAAT 97
City:	DELFT
State/Country:	NETHERLANDS
Postal Code:	2628 VK

# **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	14237577

# CORRESPONDENCE DATA

Fax Number:	(202)	824-3001
Correspondence will be sent a US Mail.	to the	e-mail address first; if that is unsuccessful, it will be sent via
Email:	csmits@bannerwitcoff.com, BWPTOPAT@bannerwitcoff.com	
Correspondent Name:	BANNER & WITCOFF	
Address Line 1:	1100	13TH STREET N.W.
Address Line 4:	WAS	HINGTON, DISTRICT OF COLUMBIA 20005-4051
ATTORNEY DOCKET NUMBER		007938.00093
NAME OF SUBMITTER:		BENJAMIN C. SPEHLMANN
SIGNATURE:		/Benjamin C. Spehlmann/
DATE SIGNED:		05/08/2014
Total Attachments: 15		

# 502800049

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BW Reference: 007938.00093 P95573US00

## ASSIGNMENT

WHEREAS, WE Raymond Jacobus Wilhelmus KNAAPEN, residing in The Netherlands, Ruud OLIESLAGERS, residing in The Netherlands, Dennis VAN DEN BERG, residing in The Netherlands, Matijs C. VAN DEN BOER, residing in The Netherlands, Diederik Jan MAAS, residing in The Netherlands, Jacques Cor Johan VAN DER DONCK, residing in The Netherlands and Freddy ROOZEBOOM residing in The Netherlands (ASSIGNORS), are the inventors of certain inventions and improvements described in a U.S. patent application identified by having the title:

#### METHOD AND APPARATUS FOR DEPOSITING ATOMIC LAYERS ON A SUBSTRATE

which application was filed as U.S. Application Serial Number <u>14/237.577</u> on February 7, 2014, and filed as PCT International Application <u>PCT/NL2012/050540</u> (published as WO 2013/022339 A1) on July 30, 2012.

#### and WHEREAS

## Nederlandse Organisatie voor toegepast-natuurwetenschappelijk onderzoek TNO Schoemakerstraat 97 2628 VK Delft The Netherlands

ASSIGNEE, desires to acquire the entire right, title and interest in and to the said application, inventions and improvements and any patents that may be granted on or as a result thereof in the United States of America (U.S.) and in any and all foreign countries;

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged,

We hereby assign, to the above named ASSIGNEE, its successors, assign and legal representatives (NOMINEES) the entire right, title and interest in and to said application, inventions and improvements throughout the world and to any and all patents, petty patents and utility model patents which may be granted therefor, and all continuations, continuations-in-part, divisions, reissues, extensions, renewals, and any non-provisional based on a provisional thereof (LETTERS PATENT).

And we covenant that we have full right to convey the entire interest herein assigned, and that we have not executed and will not execute any agreement or do anything in conflict herewith;

And we further covenant and agree that we will without undue delay execute without further consideration all such papers as may be necessary to perfect the title to said application,

#### U.S. Application Serial No.: 14/237,577 BW Reference: 007938.00093 P95573US00 inventions and improvements, and LETTERS PATENT in the ASSIGNEE or its NOMINEES, and we agree to communicate to said ASSIGNEE or its NOMINEES all known facts respecting

said application, inventions, improvements, and LETTERS PATENT, to testify in any legal proceedings, to sign all lawful papers, and generally to do all things necessary to aid ASSIGNEE or its NOMINEES to obtain and enforce for their own benefit patent protection for said application, inventions and improvements in any and all countries, all at the expense, however, of the ASSIGNEE or its NOMINEES;

And we authorize the ASSIGNEE or its NOMINEES to file in our names or their own, as appropriate, application for LETTERS PATENT in any and all countries of the world, and we authorize and request the Commissioner of Patents and Trademarks of the United States, and any proper official of any country, to issue to said ASSIGNEE or its NOMINEES any and all LETTERS PATENT for said application, inventions and improvements, for their sole use, to the full end of the term for which such LETTERS PATENT may be granted;

Date: <u>x 2-4</u> -2114	Inventor:	
	Inventor: X Rund OLIESLAGERS	
Date: x	Inventor: X Dennis VAN DEN BERG	
Date: <u>x2-4</u> -2014	Inventor: XAN DEN BOER	
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BW Reference: 007938.00093 P95573US00

Date:	х

Inventor: <u>x</u> Diederik Jan MAAS

Date: \_x\_\_\_\_

Inventor: <u>x</u> Jacques Cor Johan VAN DER DONCK

Date: \_x Inventor: x Freddy ROOZEBOOM

Note: No legalization or other witness required.

BW Reference: 007938.00093 P95573US00

## ASSIGNMENT

WHEREAS, WE Raymond Jacobus Wilhelmus KNAAPEN, residing in The Netherlands, Ruud OLIESLAGERS, residing in The Netherlands, Dennis VAN DEN BERG, residing in The Netherlands, Matijs C. VAN DEN BOER, residing in The Netherlands, Diederik Jan MAAS, residing in The Netherlands, Jacques Cor Johan VAN DER DONCK, residing in The Netherlands and Freddy ROOZEBOOM residing in The Netherlands (ASSIGNORS), are the inventors of certain inventions and improvements described in a U.S. patent application identified by having the title:

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And we further covenant and agree that we will without undue delay execute without further consideration all such papers as may be necessary to perfect the title to said application,

#### BW Reference: 007938.00093 P95573US00

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inventions and improvements, and LETTERS PATENT in the ASSIGNEE or its NOMINEES, and we agree to communicate to said ASSIGNEE or its NOMINEES all known facts respecting

said application, inventions, improvements, and LETTERS PATENT, to testify in any legal proceedings, to sign all lawful papers, and generally to do all things necessary to aid ASSIGNEE or its NOMINEES to obtain and enforce for their own benefit patent protection for said application, inventions and improvements in any and all countries, all at the expense, however, of the ASSIGNEE or its NOMINEES;

And we authorize the ASSIGNEE or its NOMINEES to file in our names or their own, as appropriate, application for LETTERS PATENT in any and all countries of the world, and we authorize and request the Commissioner of Patents and Trademarks of the United States, and any proper official of any country, to issue to said ASSIGNEE or its NOMINEES any and all LETTERS PATENT for said application, inventions and improvements, for their sole use, to the full end of the term for which such LETTERS PATENT may be granted;

Date: _x	Inventor: <u>x</u> Raymond Jacobus Wilhelmus KNAAPEN	
Dates24x04_201 \$	Inventor: x Ruud OLIESTAGERS	
Date: _x	Inventor: X Dennis VAN DEN BERG	
Date: x	Inventor: X Matijs C. VAN DEN BOER	
	Page 2 of 3	
	PA	ΓΕΝΤ

BW Reference: 007938.00093 P95573US00

Date: _x	Inventor: x Diederik Jan MAAS
Date: _x	Inventor: <u>x</u> Jacques Cor Johan VAN DER DONCK
Date: <u>x</u>	Inventor: x Freddy ROOZEBOOM

Note: No legalization or other witness required.

BW Reference: 007938.00093 P95573US00

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WHEREAS, WE Raymond Jacobus Wilhelmus KNAAPEN, residing in The Netherlands, Ruud OLIESLAGERS, residing in The Netherlands, Dennis VAN DEN BERG, residing in The Netherlands, Matijs C. VAN DEN BOER, residing in The Netherlands, Diederik Jan MAAS, residing in The Netherlands, Jacques Cor Johan VAN DER DONCK, residing in The Netherlands and Freddy ROOZEBOOM residing in The Netherlands (ASSIGNORS), are the inventors of certain inventions and improvements described in a U.S. patent application identified by having the title:

# METHOD AND APPARATUS FOR DEPOSITING ATOMIC LAVERS ON A SUBSTRATE

which application was filed as U.S. Application Serial Number <u>14/237.577</u> on February 7, 2014, and filed as PCT International Application <u>PCT/NL2012/050540</u> (published as WO 2013/022339 A1) on July 30, 2012.

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#### BW Reference: 007938.00093 P95573US00

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said application, inventions, improvements, and LETTERS PATENT, to testify in any legal proceedings, to sign all lawful papers, and generally to do all things necessary to aid ASSIGNEE or its NOMINEES to obtain and enforce for their own benefit patent protection for said application, inventions and improvements in any and all countries, all at the expense, however, of the ASSIGNEE or its NOMINEES;

And we authorize the ASSIGNEE or its NOMINEES to file in our names or their own, as appropriate, application for LETTERS PATENT in any and all countries of the world, and we authorize and request the Commissioner of Patents and Trademarks of the United States, and any proper official of any country, to issue to said ASSIGNEE or its NOMINEES any and all LETTERS PATENT for said application, inventions and improvements, for their sole use, to the full end of the term for which such LETTERS PATENT may be granted;

Date: _x	Inventor: x Raymond Jacobus Wilhelmus KNAAPEN
	Raymond Jacobus Wilhelmus KNAAPEN
Date: x	Inventor: x Ruud OLIESLAGERS
Data: + 3/4/2014	Inventor: x Araberry
course a spect and	Dennis VAN DEN BERG
Date: _x	Inventor: x
	Matijs C. VAN DEN BOER
	Page 2 of 3

BW Reference: 007938.00093 P95573US00

Date:x	Inventor: x Diederik Jan MAAS
Date: <u>x</u>	Inventor: X Jacques Cor Johan VAN DER DONCK
Date:x	Inventor: <u>x</u> Freddy ROOZEBOOM

Note: No legalization or other witness required.

# ASSIGNMENT

WHEREAS, WE Raymond Jacobus Wilhelmus KNAAPEN, residing in The Netherlands, Ruud OLIESLAGERS, residing in The Netherlands, Dennis VAN DEN BERG, residing in The Netherlands, Matijs C. VAN DEN BOER, residing in The Netherlands, Diederik Jan MAAS, residing in The Netherlands, Jacques Cor Johan VAN DER DONCK, residing in The Netherlands and Freddy ROOZEBOOM residing in The Netherlands (ASSIGNORS), are the inventors of certain inventions and improvements described in a U.S. patent application identified by having the title:

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## and WHEREAS

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We hereby assign, to the above named ASSIGNEE, its successors, assign and legal representatives (NOMINEES) the entire right, title and interest in and to said application, inventions and improvements throughout the world and to any and all patents, petty patents and utility model patents which may be granted therefor, and all continuations, continuations-in-part, divisions, reissues, extensions, renewals, and any non-provisional based on a provisional thereof (LETTERS PATENT).

And we covenant that we have full right to convey the entire interest herein assigned, and that we have not executed and will not execute any agreement or do anything in conflict herewith;

And we further covenant and agree that we will without undue delay execute without further consideration all such papers as may be necessary to perfect the title to said application,

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# PATENT REEL: 032846 FRAME: 0297

#### BW Reference: 007938.00093 P95573US00

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And we authorize the ASSIGNEE or its NOMINEES to file in our names or their own, as appropriate, application for LETTERS PATENT in any and all countries of the world, and we authorize and request the Commissioner of Patents and Trademarks of the United States, and any proper official of any country, to issue to said ASSIGNEE or its NOMINEES any and all LETTERS PATENT for said application, inventions and improvements, for their sole use, to the full end of the term for which such LETTERS PATENT may be granted;

And we hereby grant our attorneys at the law firm of Banner & Witcoff the power to insert into this document information sufficient to identify the patent application to which this assignment pertains.

Date: <u>x</u>	Inventor: <u>x</u> Raymond Jacobus Wilhelmus KNAAPEN
Date: _x	Inventor: x Ruud OLIESLAGERS
Date: <u>x</u>	Inventor: x Dennis VAN DEN BERG
Date: _x	Inventor: x Matijs C. VAN DEN BOER

Page 2 of 3

U.S. Application Serial No.: 14/237,577	BW Reference: 007938.0009 P95573US0
Date: $\int_{-\infty}^{\infty} d\mu^{\infty} (2\pi)^{4}$ In	Diederik Jan MAAS 💫 💫
Qpri/3 <sup>rd</sup> 2014 Date:_x Ir	all wall - I for a k
Date: _x Ir	ventor: x Freddy ROOZEBOOM

Note: No legalization or other witness required.

BW Reference: 007938.00093 P95573US00

# ASSIGNMENT

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And we further covenant and agree that we will without undue delay execute without further consideration all such papers as may be necessary to perfect the title to said application,

#### BW Reference: 007938.00093 P95573US00 ASSIGNEE or its NOMINEES,

inventions and improvements, and LETTERS PATENT in the ASSIGNEE or its NOMINEES, and we agree to communicate to said ASSIGNEE or its NOMINEES all known facts respecting

said application, inventions, improvements, and LETTERS PATENT, to testify in any legal proceedings, to sign all lawful papers, and generally to do all things necessary to aid ASSIGNEE or its NOMINEES to obtain and enforce for their own benefit patent protection for said application, inventions and improvements in any and all countries, all at the expense, however, of the ASSIGNEE or its NOMINEES;

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Date: x	Inventor: <u>x</u> Raymond Jacobus Wilhelmus KNAAPEN
Date:x	Inventor: x Ruud OLIESLAGERS
Date: x	Inventor: x Dennis VAN DEN BERG
Date: _x	Inventor: <u>x</u> Matijs C. VAN DEN BOER
	Page 2 of 3
	54

BW Reference: 007938.00093 P95573US00

Date: x	Inventor: <u>x</u> Diederik Jan MAAS
Date: _x	inventor: <u>x</u> Jacques Cor Johan VAN DER DONCK
	and the second sec

April 2, 2014 Date: x\_\_\_\_

Inventor:

Freddy ROOZEBOOM

Note: No legalization or other witness required.