

## PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

EPAS ID: PAT3531013

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
RAYMOND JACOBUS WILHELMUS KNAAPEN	08/17/2015
RUUD OLIESLAGERS	09/10/2015
DENNIS VAN DEN BERG	08/17/2015
MATIJS C. VAN DEN BOER	08/18/2015
FREDDY ROOZEBOOM	08/17/2015
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	NEDERLANDSE ORGANISATIE VOOR TOEGEPAST-NATUURWETENSCHAPPELIJK ONDERZOEK TNO
<b>Street Address:</b>	ANNA VAN BUERENPLEIN 1
<b>City:</b>	'S-GRAVENHAGE
<b>State/Country:</b>	NETHERLANDS
<b>Postal Code:</b>	2595 DA
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14766362
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(202)824-3001
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	(202) 824-3000
<b>Email:</b>	bwptopat@bannerwitcoff.com, kvancleve@bannerwitcoff.com
<b>Correspondent Name:</b>	BANNER & WITCOFF, LTD.
<b>Address Line 1:</b>	1100 13TH ST. NW
<b>Address Line 2:</b>	STE 1200
<b>Address Line 4:</b>	WASHINGTON, D.C. 20005
<b>ATTORNEY DOCKET NUMBER:</b>	007938.00154
<b>NAME OF SUBMITTER:</b>	BENJAMIN C. SPEHLMANN
<b>SIGNATURE:</b>	/Benjamin C. Spehlmann/
<b>DATE SIGNED:</b>	09/17/2015
<b>Total Attachments: 8</b>	

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ASSIGNMENT

WHEREAS, I, **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**, 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 14/766,362 on August 6, 2015, and filed as PCT International Application PCT/NL2014/050071 (published as WO 2014/123415 A1) on February 6, 2014.

and WHEREAS

**Nederlandse Organisatie voor toegepast-natuurwetenschappelijk onderzoek TNO**  
**Anna van Buurenplein 1**  
**2595 DA 's-Gravenhage**  
**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).

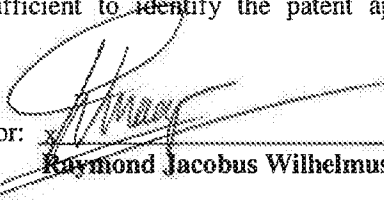
And we covenant that we have full right to convey the entire interest herein assigned, and that we have not executed and will not execute any agreement or do anything in conflict herewith;

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, 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 name 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 attorney 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: 17-8-2015 Inventor:   
Raymond Jacobus Wilhelmus KNAAPEN

Date: x Inventor: x  
Ruud OLIESLAGERS

Date: x Inventor: x  
Dennis VAN DEN BERG

Date: xx Inventor: x  
Matijs C. VAN DEN BOER

Date: 17-8-2015 Inventor:   
Freddy ROOZEBOOM

Note: No legalization or other witness required.

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Date: x \_\_\_\_\_ Inventor: x \_\_\_\_\_  
Raymond Jacobus Wilhelmus KNAAPEN

Date: x 10-9-2015 Inventor: x \_\_\_\_\_  
Ruud OLIESLAGERS

Date: x \_\_\_\_\_ Inventor: x \_\_\_\_\_  
Dennis VAN DEN BERG

Date: xx \_\_\_\_\_ Inventor: x \_\_\_\_\_  
Matijs C. VAN DEN BOER

Date: x \_\_\_\_\_ Inventor: x \_\_\_\_\_  
Freddy ROOZEBOOM

Note: No legalization or other witness required.

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Date: x                      Inventor: x  
Raymond Jacobus Wilhelmus KNAAPEN

Date: x                      Inventor: x  
Ruud OLIESLAGERS

Date: 08-17-2015              Inventor: x  
Dennis VANDEN BERG

Date: xx                      Inventor: x  
Matijs C. VAN DEN BOER

Date: x                      Inventor: x  
Freddy ROOZEBOOM

Note: No legalization or other witness required.



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Raymond Jacobus Wilhelmus KNAAPEN

Date: x \_\_\_\_\_ Inventor: x \_\_\_\_\_  
Ruud OLIESLAGERS

Date: x \_\_\_\_\_ Inventor: x \_\_\_\_\_  
Dennis VAN DEN BERG

Date: 10-08-2015  
xx \_\_\_\_\_ Inventor:  \_\_\_\_\_  
Matijs C. VAN DEN BOER

Date: x \_\_\_\_\_ Inventor: x \_\_\_\_\_  
Freddy ROOZEBOOM

Note: No legalization or other witness required.