

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT5663246

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
ANDREAS ROBERT ZEMLA	03/22/2019
THILO SCHARF	03/19/2019
LIAM MCNELIS	03/22/2019
CHRISTIAN EITSCHBERGER	03/28/2019
SHMUEL SILVERMAN	04/01/2019
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	DYNAENERGETICS GMBH & CO. KG
<b>Street Address:</b>	KAISERSTRASSE 3
<b>City:</b>	TROISDORF
<b>State/Country:</b>	GERMANY
<b>Postal Code:</b>	53840
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	16537720
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(866)250-1636
<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>	2034284420
<b>Email:</b>	mkenney@moylesip.com
<b>Correspondent Name:</b>	MOYLES IP LLC
<b>Address Line 1:</b>	1 ENTERPRISE DRIVE
<b>Address Line 2:</b>	SUITE 428
<b>Address Line 4:</b>	SHELTON, CONNECTICUT 06484
<b>ATTORNEY DOCKET NUMBER:</b>	DMC512US
<b>NAME OF SUBMITTER:</b>	MICHAEL P. KENNEY
<b>SIGNATURE:</b>	/Michael P. Kenney/
<b>DATE SIGNED:</b>	08/12/2019
<b>Total Attachments: 7</b>	

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GLOBAL ASSIGNMENT

In accordance with my/our obligation(s) under any employee agreement or (as applicable) arising out of other agreements, and/or for other good and valuable consideration of which we acknowledge receipt, I/we,

Inventor First Name	Inventor Middle Name	Inventor Last Name		Residence Town	Residence County	Residence Country
Andreas	Robert	Zemla	of	Much		DE
Thilo		Scharf	of	Letterkenny	Co.Donegal	IE
Liam		McNelis	of	Bonn		DE
Christian		Eitschberger	of	München		DE

hereby sell and assign to:

Name of Company: DynaEnergetics GmbH & Co. KG
Address: Kaiserstrasse 3, Troisdorf 53840, Germany

herein referred to as "Company", its successors and assigns our entire respective rights, titles and interests in the application(s) listed in the following table:

Country of Filing	Type of Filing	Application Number	Filing Date	Title
US	Provisional	62/823,737	03/26/2019	SYSTEM AND METHOD FOR NAVIGATING A WELLBORE AND DETERMINING LOCATION IN A WELLBORE
US	Provisional	62/831,215	04/09/2019	SYSTEM AND METHOD FOR NAVIGATING A WELLBORE AND DETERMINING LOCATION IN A WELLBORE
US	Utility	16/537,720	08/12/2019	SYSTEM AND METHOD FOR NAVIGATING A WELLBORE AND DETERMINING LOCATION IN A WELLBORE


(We hereby authorize and request the Company or its delegated attorneys or agents to insert above the application number and filing date of the application(s) when known.)

and any and all applications for patent and patents therefrom in any and all countries, including all divisions, continuations, continuations-in-part, reexaminations, renewals, and reissues thereof, and all rights of priority resulting from the filing of the application(s), and authorize and

request any official whose duty it is to issue patents, to issue any patent on the inventions and improvements resulting therefrom to the Company, or its successors or assigns, and agree that on request and without further consideration, we will communicate to the Company or its representatives or nominees any facts known to us respecting the inventions and improvements and testify in any legal proceeding, make all rightful oaths, sign all lawful papers and execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights in all countries including, but not limited to, any provisional, non-provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, for any derivation proceedings relating thereto, and, as to any patents that issue from such applications, for any supplemental examination, derivation proceeding, opposition, post grant review, reissue, re-examination, inter partes review, or extension thereof, and generally do everything possible to aid the Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for the invention and its improvements in all countries.

Remuneration claims of the inventor(s)/assignor(s) potentially arising from German Law on Employee Inventions, or any other respective country law, remain unaffected by this assignment.

INVENTOR 1


Signature:   
Andreas Robert Zemla

Date: 22<sup>nd</sup> March 2019

Witnessed by:   
Signature

Date: 22<sup>nd</sup> March 2019

TOBIAS SCHATTSCHNEIDER  
Printed Name of Witness

Witnessed by:   
Signature

Date: 22.03.2019

ANYA SCHULZE  
Printed Name of Witness

INVENTOR 2

Signature: Thilo Scharf  
Thilo Scharf

Date: 19-MAR-2019

Witnessed by: Anne Marie Scharf  
Signature

Date: 19/03/19

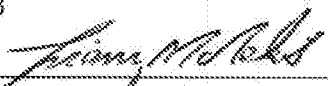
ANNE MARIE SCHARF  
Printed Name of Witness

Witnessed by: Mary Gallagher  
Signature

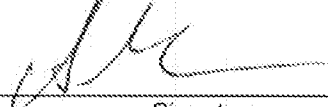
Date: 19/3/19

MARY GALLAGHER  
Printed Name of Witness

INVENTOR 3

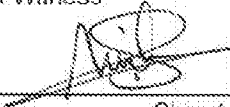
Signature:   
Liam McNells

Date: March 22<sup>nd</sup> 2019

Witnessed by:   
Signature

Date: March 22<sup>nd</sup> 2019

ARASH SHAHIN POUR  
Printed Name of Witness

Witnessed by:   
Signature

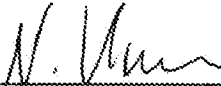
Date: March 22<sup>nd</sup> 2019

Atakan SEVER  
Printed Name of Witness

INVENTOR 4


Signature:   
Christian Eitschberger

Date: 28.3.19

Witnessed by:   
Signature

Date: 28.3.19

Nadia Vianello  
Printed Name of Witness

Witnessed by:   
Signature

Date: 28.3.19

Luigi Vianello  
Printed Name of Witness

GLOBAL ASSIGNMENT

In accordance with my/our obligation(s) under United States laws, any employee agreement or (as applicable) arising out of other agreements, and/or for other good and valuable consideration of which we acknowledge receipt, I/we,

Inventor First Name	Inventor Last Name		Residence Town	Residence State/County	Residence Country
Shmuel	Silverman	of	Novato	California	US

hereby sell and assign to:

Name of Company: DynaEnergetics GmbH & Co. KG
Address: Kaiserstrasse 3, Troisdorf 53840, Germany

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(We hereby authorize and request the Company or its delegated attorneys or agents to insert above the application number and filing date of the application(s) when known.)

and any and all applications for patent and patents therefrom in any and all countries, including all divisions, continuations, continuations-in-part, reexaminations, renewals, and reissues thereof, and all rights of priority resulting from the filing of the application(s), and authorize and request any official whose duty it is to issue patents, to issue any patent on the inventions and improvements resulting therefrom to the Company, or its successors or assigns, and agree that on request and without further consideration, we will communicate to the Company or its representatives or nominees any facts known to us respecting the inventions and improvements



and testify in any legal proceeding, make all rightful oaths, sign all lawful papers and execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights in all countries including, but not limited to, any provisional, non-provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, for any derivation proceedings relating thereto, and, as to any patents that issue from such applications, for any supplemental examination, derivation proceeding, opposition, post grant review, reissue, re-examination, inter partes review, or extension thereof, and generally do everything possible to aid the Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for the invention and its improvements in all countries.

INVENTOR

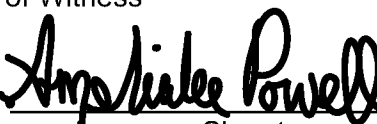
Signature:   
Shmuel Silverman

Date: April 11/2019

Witnessed by:   
Signature

Date: 4/1/2019

Nicole Borsian  
Printed Name of Witness

Witnessed by:   
Signature

Date: 4/1/19

Ameliatee Powell  
Printed Name of Witness