

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT7147095

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
PHOTONIS SCIENTIFIC, INC.	01/28/2022

RECEIVING PARTY DATA

Name:	AETHER FINANCIAL SERVICES SAS, AS SECURITY AGENT
Street Address:	36 RUE DE MONCEAU
City:	PARIS
State/Country:	FRANCE
Postal Code:	75008

PROPERTY NUMBERS Total: 43

Property Type	Number
Patent Number:	9425030
Patent Number:	6828729
Patent Number:	7026177
Patent Number:	6958474
Patent Number:	7141787
Patent Number:	7154086
Patent Number:	7081618
Patent Number:	8084732
Patent Number:	7555185
Patent Number:	7038223
Patent Number:	7695978
Patent Number:	6239549
Patent Number:	5770858
Patent Number:	5440115
Patent Number:	5625459
Patent Number:	5550945
Patent Number:	6384519
Patent Number:	6045677
Patent Number:	5914561
Patent Number:	5997713

PATENT

Property Type	Number
Patent Number:	6492657
Patent Number:	6060708
Patent Number:	5726076
Patent Number:	5568013
Patent Number:	5618217
Patent Number:	5378960
Patent Number:	5544772
Patent Number:	5569355
Patent Number:	7791038
Patent Number:	7990032
Patent Number:	8221181
Patent Number:	8445858
Patent Number:	8445861
Patent Number:	8507872
Patent Number:	8766206
Patent Number:	8835864
Patent Number:	8884237
Patent Number:	9082907
Patent Number:	9297914
Patent Number:	9651688
Patent Number:	9941438
Application Number:	16460300
Application Number:	16795077

CORRESPONDENCE DATA

Fax Number: (212)751-4864
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.
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ATTORNEY DOCKET NUMBER:	036001-0081
NAME OF SUBMITTER:	JESSICA BAJADA-SILVA
SIGNATURE:	/s/ Jessica Bajada-Silva
DATE SIGNED:	01/28/2022

Total Attachments: 8
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PATENT SECURITY AGREEMENT
(SHORT-FORM)

This PATENT SECURITY AGREEMENT, dated as of January 28, 2022 (this "Patent Security Agreement"), by the Grantors party hereto in favor of AETHER FINANCIAL SERVICES SAS, as security agent for the Secured Parties (in such capacity, the "Security Agent").

Reference is made to that certain Pledge and Security Agreement, dated as of January 28, 2022 (as amended, restated, amended and restated, supplemented, waived or otherwise modified from time to time, the "Security Agreement"), by and among PHOTONIS HOLDING INC., a Delaware corporation, PHOTONIS SCIENTIFIC, INC., a Delaware corporation and PHOTONIS DEFENSE INC., a Pennsylvania corporation, each of the other Grantors from time to time party thereto and AETHER FINANCIAL SERVICES, in its capacity as security agent for the Secured Parties (in such capacity, the "Security Agent").

The Secured Parties' agreements in respect of extensions of facilities and subscription of the Bonds are set forth in the Finance Documents. Each Grantor party hereto will derive substantial benefits from the extensions of facilities and subscription of the Bonds pursuant to the Finance Documents and is willing to execute and deliver this Patent Security Agreement in order to induce the Lenders to extend, and maintain the extension of, such credit. Accordingly, the parties hereto agree as follows:

Section 1. Terms. Capitalized terms used in this Patent Security Agreement and not otherwise defined herein have the meanings specified in the Security Agreement, and if not defined therein, the Intercreditor Agreement. The rules of construction specified in Clause 1.2 of the Intercreditor Agreement also apply to this Agreement.

Section 2. Notice and Confirmation of Grant of Security Interest. As security for the payment or performance, as the case may be, in full of the Secured Obligations, each Grantor party hereto, pursuant to and in accordance with the Security Agreement, did and hereby does grant to the Security Agent, its successors and permitted assigns, for the benefit of the Secured Parties, a continuing security interest in and continuing lien on, all of such Grantor's right, title and interest in or to any and all of the following assets and properties now owned or at any time hereafter acquired by such Grantor or in which such Grantor now has or at any time in the future may acquire any right, title or interest, in each case to the extent the same constitute Collateral (collectively, the "Patent Collateral"):

all letters patent of the United States, all registrations and recordings thereof, and all applications for letters patent of the United States, including, without limitation, those listed on Schedule I hereto, and all reissues, re-examinations, continuations, divisions, continuations-in-part, renewals or extensions thereof, and the inventions disclosed or claimed therein, all claims for, and rights to sue for, past or future infringement of any of the foregoing, and all income, royalties, damages and payments now or hereafter due or payable with respect to any of the foregoing.

Section 3. Termination. This Patent Security Agreement is made to secure the satisfactory performance and payment of the Secured Obligations. The security interest granted hereby shall automatically terminate under the conditions and to the same extent set forth in Section 6.12 of the Security Agreement. The Security Agent shall, in connection with any termination or release herein or under the Security Agreement, execute and deliver to the Grantors party hereto (at the sole cost and expense of the Grantors) instruments, in writing and in recordable form, effecting or evidencing such termination and releasing the collateral pledge, grant, assignment, lien and security interest in the Patent Collateral under this

Patent Security Agreement. Additionally, upon such termination or release, the Security Agent shall reasonably cooperate with any efforts made by a Grantor to record or otherwise confirm such satisfaction including, but not limited to, the release and/or termination of this Patent Security Agreement and any security interest in, to or under the Patent Collateral.

Section 4. Supplement to the Security Agreement. The security interests granted to the Security Agent herein are granted in furtherance, and not in limitation of, the security interests granted to the Security Agent pursuant to the Security Agreement. Each Grantor party hereto hereby acknowledges and affirms that the rights and remedies of the Security Agent with respect to the Patent Collateral are more fully set forth in the Security Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this Patent Security Agreement and the Security Agreement, the terms of the Security Agreement shall govern.

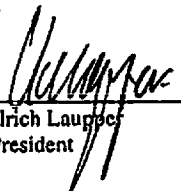
Section 5. Governing Law. Sections 6.09 (Governing Law; Jurisdiction; Venue; Waiver of Jury Trial) of the Security Agreement are incorporated herein by reference, mutatis mutandis.

Section 6. Purpose. This Patent Security Agreement has been executed and delivered by each Grantor party hereto for the purpose of recording the grant of security interest with the United States Patent and Trademark Office. This Patent Security Agreement is expressly subject to the terms and conditions of the Security Agreement. The Security Agreement (and all rights and remedies of the Lenders thereunder) shall remain in full force and effect in accordance with its terms.

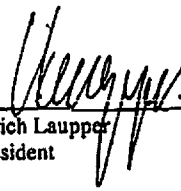
Section 7. Counterparts. This Patent Security Agreement may be executed in one or more counterparts (and by different parties hereto in different counterparts), each of which shall constitute an original, but all of which together shall constitute a single contract. Delivery by facsimile or electronic transmission of an executed counterpart of a signature page to this Patent Security Agreement shall be effective as delivery of an original executed counterpart of this Patent Security Agreement. Delivery of an executed signature page of this Patent Security Agreement by facsimile transmission or electronic transmission (i.e., a "pdf" or "tif") shall be effective as delivery of a manually executed counterpart hereof. For purposes hereof, the words "execution," "execute," "executed," "signed," "signature" and words of like import shall be deemed to include electronic signatures, the electronic matching of assignment terms and contract formulations on electronic platforms, or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, or any other similar state laws based on the Uniform Electronic Transaction Act.

IN WITNESS WHEREOF, the parties hereto have duly executed this Patent Security Agreement as of the day and year first above written.

PHOTONIS HOLDING INC.,
as a Grantor

By: 
Name: Ulrich Laupper
Title: President

PHOTONIS SCIENTIFIC INC.,
as a Grantor

By: 
Name: Ulrich Laupper
Title: President

PHOTONIS DEFENSE, INC.,
as a Grantor

By: _____
Name: Larry Stack
Title: President

[SIGNATURE PAGE TO PATENT SECURITY AGREEMENT]

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as a Grantor

By: _____
Name: Ulrich Laupper
Title: President

PHOTONIS SCIENTIFIC INC.,
as a Grantor

By: _____
Name: Ulrich Laupper
Title: President

PHOTONIS DEFENSE, INC.,
as a Grantor

By: _____
Name: Larry Stack
Title: President

[SIGNATURE PAGE TO PATENT SECURITY AGREEMENT]

ACCEPTED AND ACKNOWLEDGED BY:

AETHER FINANCIAL SERVICES SAS,
as Security Agent

Louis Thuiliez

Head of Private Debt Execution

By: AETHER FINANCIAL SERVICES

Name:

Title:

[SIGNATURE PAGE TO PATENT SECURITY AGREEMENT]

U.S.A. PATENTS

PATENTS OWNED BY PHOTONIS SCIENTIFIC, INC.		
TITLE	EXPIRATION DATE	PATENT NO.
DIFFERENTIAL COATING OF HIGH ASPECT RATIO OBJECTS THROUGH METHODS OF REDUCED FLOW AND DOSING VARIATIONS	N/A (PENDING)	16460300
ELECTROSTATIC SUPPRESSION OF ION FEEDBACK IN A MICROCHANNEL PLATE PHOTOMULTIPLIER		9425030
ELECTROSTATIC SUPPRESSION OF ION FEEDBACK IN A MICROCHANNEL PLATE PHOTOMULTIPLIER	1-JUL-35	9425030B2
BIPOLAR TIME OF FLIGHT DETECTOR, CARTRIDGE & DETECTION METHOD	16-JUN-22	6828729
DIVISION 6828729 BIPOLAR TIME OF FLIGHT DETECTOR, CARTRIDGE & DETECTION METHOD	16-MAR-21	7026177
DETECTOR FOR A BIPOLAR TIME-OF-FLIGHT MASS SPECTROMETER	16-MAR-21	6958474
CO-AXIAL TIME OF FLIGHT DETECTOR (BIPOLAR)	17-MAY-25	7141787
CONDUCTIVE TUBE FOR USE AS A REFLECTRON LENS (RESISTIVE GLASS)	8-MAR-24	7154086
ION MOBILITY SPECTROMETER (RESISTIVE GLASS)	24-MAR-24	7081618
RESISTIVE GLASS STRUCTURES USED TO SHAPE ELECTRIC FIELDS IN ANALYTICAL INSTRUMENTS & RESISTIVE GLASS	12/22/2029	8084732
MICROCHANNEL PLATE HAVING MOUNTING PAD SEGMENTS	1-SEP-25	7555185
CONTROLLED CHARGE NEUTRALIZATION OF ION-IMPLANTED ARTICLES	5-APR-24	7038223
MALDI TARGET PLATE UTILIZING MICRO-WELLS	31-JAN-27	7695978
ELECTRON MULTIPLIER ELECTRON SOURCE AND IONIZATION SOURCE USING IT	9-JAN-18	6239549
MICROCHANNEL PLATE-BASED DETECTOR FOR TIME OF FLIGHT MASS SPECTROMETER	28-FEB-17	5770858

ZENER DIODE BIASED ELECTRON MULTIPLIER WITH STABLE GAIN CHARACTERISTIC	5-APR-14	5440115
DIFFUSE REFLECTANCE PROBE (DISCONTINUED)	3-MAR-15	5625459
INTEGRATED IMAGE CONDUIT AND ILLUMINATION	11-MAY-15	5550945
MICRO-DYNODE INTEGRATED ELECTRON MULTIPLIER	30-OCT-17	6384519
MICROPOROUS MICROCHANNEL PLATES AND METHOD OF MANUFACTURING SAME	1-FEB-17	6045677
SHORTENED PROFILE PHOTOMULTIPLIER TUBE WITH FOCUSING ELECTRODE		5914561
FLEXIBLE LEAD ASSEMBLY FOR MICROCHANNEL PLATE BASED DETECTOR	17-AUG-13	806495
SILICON ETCHING PROCESS FOR MAKING MICROCHANNEL PLATES	8-MAY-18	5997713
INTEGRATED SEMICONDUCTOR MICROCHANNEL PLATE AND PLANAR DIODE ELECTRON FLUX AMPLIFIER AND COLLECTOR	27-JAN-20	6492657
CORONA GENERATING DEVICE WITH UNITARY REMOVABLE SHIELD	8-JUL-18	6060708
METHOD OF MAKING THIN-FILM CONTINUOUS DYNODES FOR ELECTRON MULTIPLICATION	10-MAR-15	5726076
MIRO-FABRICATED ELECTRON MULTIPLIERS	29-JUL-14	5568013
METHOD OF FABRICATION OF DISCRETE DYNODE ELECTRON MULTIPLIERS	25-JUL-15	5618217
METHOD OF MANUFACTURING THIN FILM CONTINUOUS DYNODE FOR ELECTRON MULTIPLIER	12-JUL-13	5378960
FABRICATION OF A MICROCHANNEL PLATE FROM A PERFORATED SILICON	25-JUL-15	5544772
METHOD FOR FABRICATION OF MICROCHANNEL ELECTRON MULTIPLIERS	11-JAN-15	5569355
NEUTRON DETECTION		7791038
ELECTRON MULTIPLIERS AND MICROCHANNEL PLATES		7990032
ELECTRON MULTIPLIERS AND MICROCHANNEL PLATES		8221181
NEUTRON DETECTION AND COLLIMATION		8445858
NEUTRON DETECTION BASED ON INDUCED CHARGES		8445861
NEUTRON DETECTION		8507872
NEUTRON DETECTION BASED ON ENERGY SPECTRUM CHARACTERISTICS		8766206
NEUTRON DETECTION		8835864

NEUTRON DETECTION		8884237
NEUTRON DETECTION AND COLLIMATION		9082907
NEUTRON DETECTION		9297914
NEUTRON DETECTION		9651688
NEUTRON DETECTION		9941438
NEUTRON IMAGING SYSTEM HAVING NEUTRON SHIELD		16/795077

PATENTS OWNED BY PHOTONIS DEFENSE, INC.	
Title	Patent No.
Stress Relieved Filament Support Assembly	6,191,527
Integrated Semiconductor Microchannel Plate and Planar Diode Electron Flux Amplifier and Collector	6,492,657
Diamond Transmission Dynode and Photomultiplier or Imaging Device Using Same	6,657,385
Electrostatic Suppression of Ion Feedback in a Microchannel Plate Photomultiplier	9,425,030
Mounting System and Method for Night Vision Tubes	9,791,320
Optical system retaining system for vision augmenting system	10746954
Optical alignment system	10234674

PATENT APPLICATIONS OWNED BY PHOTONIS DEFENSE, INC.	
Title	Application No.
Optical Retaining System for Vision Augmenting System	15/346,993
Mounting System and Method for Night Vision Tubes	14/794,543
Optical Alignment System	14/924,417