UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/964,938	08/12/2013	Donald K. Smith	EGQ-005CP3C1	1022
42532 PROSKAUER	7590 07/17/201 ROSE LLP	EXAMINER		
ONE INTERNA	ATIONAL PLACE		MCCORMACK, JASON L	
BOSTON, MA 02110			ART UNIT	PAPER NUMBER
			2881	
			NOTIFICATION DATE	DELIVERY MODE
			07/17/2014	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DocketingPatentBoston@proskauer.com oandrews@proskauer.com



	13/964,938	SMITH, DOI	SMITH, DONALD K.	
Office Action Summary	Examiner JASON MCCORMACK	Art Unit 2881	AIA (First Inventor to File) Status No	
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with t	the corresponden	ce address	
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION B6(a). In no event, however, may a reply will apply and will expire SIX (6) MONTHS cause the application to become ABANE	TION. be timely filed from the mailing date of	of this communication.	
Status				
1) Responsive to communication(s) filed on 17 Julia A declaration(s)/affidavit(s) under 37 CFR 1.1		<u>.</u>		
2a) ☐ This action is FINAL . 2b) ☐ This	action is non-final.			
3) An election was made by the applicant in respo	•		ng the interview on	
; the restriction requirement and election				
4) Since this application is in condition for allowar closed in accordance with the practice under E	•	•	to the merits is	
Disposition of Claims				
5) \boxtimes Claim(s) <u>1-30</u> is/are pending in the application.				
5a) Of the above claim(s) is/are withdray	vn from consideration.			
6) Claim(s) is/are allowed.				
7) Claim(s) <u>1-30</u> is/are rejected.				
8) Claim(s) is/are objected to.	o ala alia a maaniina aa aal			
9) Claim(s) are subject to restriction and/or	·	Dunnan High		
If any claims have been determined <u>allowable,</u> you may be eliparticipating intellectual property office for the corresponding as			iway program at a	
naticipating intellectual property office for the corresponding aparticipating intellectual property of the corresponding aparticipating apa	•	•		
	an inquiry to 111 meedbacktods	pto.gov.		
Application Papers				
10) The specification is objected to by the Examine				
11) The drawing(s) filed on is/are: a) acce				
Applicant may not request that any objection to the			` '	
Replacement drawing sheet(s) including the correct	ion is required if the drawing(s) i	s objected to. See	3/ CFR 1.121(d).	
Priority under 35 U.S.C. § 119				
12) Acknowledgment is made of a claim for foreign	priority under 35 U.S.C. § 11	9(a)-(d) or (f).		
Certified copies:				
a) ☐ All b) ☐ Some * c) ☐ None of the:				
1. Certified copies of the priority document				
2. Certified copies of the priority document	• • • • • • • • • • • • • • • • • • • •			
3. Copies of the certified copies of the prio	•	ceived in this Na	tional Stage	
application from the International Bureau	, , , ,	1		
* See the attached detailed Office action for a list of	the certified copies not received	1.		
Attachment(s)				
) X Notice of References Cited (PTO-892)	3) Interview Sum	mary (PTO-413)		
		ail Date		
P) 🕅 Information Disclosure Statement(s) (PTO/SR/08)				

Application No.

Applicant(s)



Application/Control Number: 13/964,938 Page 2

Art Unit: 2881

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 6/17/2014 have been fully considered but they are not persuasive.

Regarding applicant's argument (beginning on page 9) that Wester fails to disclose a pressurized plasma chamber; Wester discloses "a vacuum pump 118 removes exhaust plasma gas from the chamber 120" [0005]. Since it is impossible for the vacuum pump 118 of Wester to form a perfect vacuum, the chamber inherently has some gas pressure and is therefore pressurized as required by claim 1. It is believed from applicant's specification and the response that applicant intends for the chamber to operate above atmospheric pressure (particularly since paragraph [0069] describes that the chamber operates "at a pressure of greater than 10 atmospheres to produce a high brightness light"). However, MPEP 2111.01 describes that "the claims must be interpreted as broadly as their terms reasonably allow. In re American Academy of Science Tech Center, 367 F.3d 1359, 1369, 70 USPQ2d 1827, 1834 (Fed. Cir. 2004)". Such an interpretation of the term "pressurized" is not unreasonable since, for example, Kisa U.S. Patent No. 4,738,748 describes in its claim 11 "an airtight vacuum pressurized reaction chamber having a vacuum created therein". Clearly, one of ordinary skill in the art at the time of the invention would recognize that a chamber that is pressurized to a vacuum condition is still considered "pressurized". For this reason, the current rejection in view of Wester remains proper.



Application/Control Number: 13/964,938 Page 3

Art Unit: 2881

If, however, the claims were to be amended and/or interpreted that the term "pressurized" referred to "above atmospheric pressure", Bykanov et al. U.S. PGPUB No. 2006/0097203 describes that "In a typical LPP setup, it may be desirable to maintain a relatively strong vacuum in the chamber 806, and thus, the amount of etchant introduced into the chamber 806 is limited. As a consequence, the allowable etchant flow rate and pressure are generally too small to effectively heat the window 800 to a temperature sufficient to achieve a reasonable reaction rate between the etchant and debris deposits. For example, HBr gas at 600 degrees C. and at a pressure of 1 to 2 torr in the gas cone can only transport about 1 Watt of heating power at typical flow rates. On the other hand, when applying a heated gas to the outside surface 808, an elevated (greater than 1 atm) pressure can be used allowing the mass flow to be significantly higher and a power in the range of about 10.sup.1-10.sup.2 W is feasible" [0063]. It would have been obvious to one possessing ordinary skill in the art at the time of the invention to have combined Wester and Bykanov, since Bykanov describes that a typical low-pressure system (such as that of Wester) may be modified by the application of a heated gas outside of a laser irradiation window to operate at pressures greater than 1 atm (above atmospheric pressure), in order to prevent the buildup of undesirable debris on delicate optical systems, and to "significantly" increase the power of the ultraviolet beam output from the plasma. However, Examiner maintains that such an interpretation need to apply to the present claim language.

Applicant cited Tejnil U.S. PGPUB No. 2005/0243390 (on page 10) as evidence that pressurizing the chamber of Wester would prevent the light source of Wester from



Application/Control Number: 13/964,938 Page 4

Art Unit: 2881

producing EUV light. As stated, above, the chamber of Wester may already be considered "pressurized". Additionally, as stated, above, it would have been obvious to operate the chamber of Wester above atmospheric pressure in order to prevent debris buildup in the plasma chamber. The portion of Tejnil cited in applicant's remarks pertains to "EUV imaging" and is silent regarding chamber pressures of a plasma chamber during the formation of a plasma. Further, Tejnil states that EUV imaging "may" be carried out in a near vacuum. As stated, above, it is Examiner's position that a "near vacuum" is pressurized above a vacuum state. Additionally, this portion of Tejnil merely states that EUV imaging may be in a vacuum, thereby leaving the possibility that it may not be performed in a vacuum. Tejnil does not include a specific teaching that EUV radiation cannot or should not be formed except in a vacuum.

Applicant cites (on page 10) the entry "extreme ultraviolet radiation" in McGraw-Hill Dictionary of Scientific and Technical Terms; this merely teaches that extreme ultraviolet radiation may sometimes be referred to as "vacuum ultraviolet radiation" and is silent regarding the conditions of a plasma chamber in which such radiation may be formed - particularly in the field of a laser produced plasma.

Applicant contends (on page 10) that claim 1 relates to high brightness light in a wavelength between 290 and 400 nm. It is noted that the brightness and wavelength are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant's claims do not distinguish the difference between EUV radiation and high brightness radiation, but



DOCKET

Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

