

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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GLOBALFOUNDRIES U.S., INC., GLOBALFOUNDRIES DRESDEN  
MODULE ONE LLC & CO. KG, GLOBALFOUNDRIES DRESDEN  
MODULE TWO LLC & CO. KG, and  
THE GILLETTE COMPANY,  
Petitioners,

v.

ZOND, LLC,  
Patent Owner

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IPR2014-01083<sup>1</sup>  
Patent 7,147,759 B2

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**PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE**

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<sup>1</sup> Case IPR2014-00988 has been joined with the instant proceeding.

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    A. A person of ordinary skill in the art would have found it obvious to  
    combine Wang and Kudryavtsev..... 3

    B. Wang in view of Kudryavtsev teaches choosing an amplitude and rise  
    time of a voltage pulse to increase the excitation rate in order to create  
    a multi-step ionization process that generates a strongly-ionized plasma  
    (Claim 40)..... 6

    C. Wang in view of Kudryavtsev teaches the multi-step ionization process  
    of exciting ground state atoms to excited atoms, and then ionizing the  
    excited atoms without forming an arc discharge (Claim 40). ..... 15

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**TABLE OF AUTHORITIES**

**CASES**

*In re Mouttet*, 686 F.3d 1322 (Fed. Cir. 2012) .....6

**OTHER AUTHORITIES**

*Epistar, et al. v. Trustees Of Boston University*, IPR2013-00298 (P.T.A.B.  
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*Ex parte Liebich*, Appeal 2011-001343 (P.T.A.B. Sept. 3, 2013).....15

**REGULATIONS**

37 C.F.R. § 42.23 .....1

**PETITIONER'S EXHIBIT LIST**

May 4, 2015

<b>Exhibit</b>	<b>Description</b>
1401	U.S. Patent No. 7,147,759
1402	Kortshagen Declaration
1403	D.V. Mozgrin, <i>et al</i> , <u>High-Current Low-Pressure Quasi-Stationary Discharge in a Magnetic Field: Experimental Research</u> , Plasma Physics Reports, Vol. 21, No. 5, pp. 400-409, 1995 ("Mozgrin")
1404	A. A. Kudryavtsev and V.N. Skerbov, <u>Ionization relaxation in a plasma produced by a pulsed inert-gas discharge</u> , Sov. Phys. Tech. Phys. 28(1), pp. 30-35, January 1983 ("Kudryavtsev")
1405	U.S. Pat. No. 6,413,382 ("Wang")
1406	Plasma Etching: An Introduction, by Manos and Flamm, pp. 185-258, Academic Press (1989) ("Manos")
1407	File History for U.S. Pat. No. 7,147,759, Response of June 14, 2004 ("06/14/04 Response")
1408	File History for U.S. Pat. No. 7,147,759, Office Action of August 30, 2004 ("08/30/04 Office Action")
1409	File History for U.S. Pat. No. 7,147,759, Response of February 24, 2005 ("02/24/05 Response")
1410	File History for U.S. Pat. No. 7,147,759, Office Action of May 27, 2005, ("05/27/05 Office Action")
1411	File History for U.S. Pat. No. 7,147,759, Request for Continued Examination of October 27, 2005 ("10/27/05 RCE")
1412	File History for U.S. Pat. No. 7,147,759, Office Action of January 11, 2006 ("01/11/06 Office Action")
1413	File History for U.S. Pat. No. 7,147,759, Response of May 2, 2006

	("05/02/06 Response")
1414	File History for U.S. Pat. No. 7,147,759, Response of August 28, 2006 ("08/28/2006 Response")
1415	File History for U.S. Pat. No. 7,147,759, Notice of Allowance Mailed October 11, 2006 ("10/11/2006 Allowance")
1416	European Patent Application 1560943, Response of April 21, 2008 ("04/21/08 Response in EP 1560943")
1417	Claim Chart Based on Mozgrin and Kudryavtsev as used in 1:13-cv-11570-RGS ("Claim Chart based on Mozgrin and Kudryavtsev")
1418	Claim Chart Based on Wang and Kudryavtsev as used in 1:13-cv-11570-RGS ("Claim Chart based on Wang and Kudryavtsev")
1419	List of Related Litigations
1420	Affidavit of Brett C. Rismiller in Support of Petitioner's Motion for <i>Pro Hac Vice</i> Admission
1421	Declaration of Lawrence J. Overzet, Ph.D. ("Overzet Decl.")
1422	U.S. Patent No. 5,247,531 ("Muller-Horsche")
1423	Deposition Transcript of Larry D. Hartsough Ph.D. for U.S. Patent No. 6,853,142 (IPRs 2014-00818, 2014-00819, 2014-00821, 2014-00827, 2014-01098) dated February 26, 2015 ("142 Dep. Tr.")
1424	Deposition Transcript of Larry D. Hartsough Ph.D. for U.S. Patent No. 7,147,759 (IPRs 2014-00781, 2014-00782, 2014-01083, 2014-01086, 2014-01087) dated February 25, 2015 ("759 Dep. Tr.")
1425	Deposition Transcript of Larry D. Hartsough Ph.D. for U.S. Patent No. 7,808,184 (IPRs 2014-00803, 2014-00799) dated February 11, 2015 ("184 Dep. Tr.")
1426	Deposition Transcript of Larry D. Hartsough Ph.D. for U.S. Patent No. 8,125,155 (IPRs 2014-00477, 2014-00479) dated February 12, 2015 ("155 Dep. Tr.")
1427	Deposition Transcript of Larry D. Hartsough Ph.D. for U.S. Patent No. 6,896,775 (IPRs 2014-00578, 2014-00604, 2014-01482, 2014-01494) dated February 19, 2015 ("775 Dep. Tr.")

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