

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

IPR2014-01086¹
Patent 7,147,759 B2

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

¹ Case IPR2014-00981 has been joined with the instant proceeding.

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 A. Zond’s Arguments are Based on a Flawed Premise That Ignores the
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 B. Zond Improperly Confounds the Embodiments of Wang 4

 C. A person of ordinary skill in the art would have found it obvious to
 combine Wang and Kudryavtsev 5

 D. Wang in view of Kudryavtsev teaches a power supply configured to
 generate a voltage pulse with an amplitude and rise time to increase the
 excitation rate in order to create a multi-step ionization process that
 generates a strongly-ionized plasma (Claim 1). 9

 E. 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 1). 14

 F. Li teaches “a temperature controller that controls the temperature of the
 substrate support” (Claim 11) 17

 G. Wang in view of Muller-Horsche teaches an ionization source
 comprising a UV source, an X-ray source, an electron beam source, and
 or an ion beam source (Claim 17). 19

 H. Wang in view of Mozgrin Thesis teaches a rise time of a voltage pulse
 approximately between 0.01 and 100 V/sec (Claim 44). 20

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TABLE OF AUTHORITIES

CASES

In re Mouttet, 686 F.3d 1322 (Fed. Cir. 2012)5

OTHER AUTHORITIES

Epistar, et al. v. Trustees Of Boston University, IPR2013-00298 (P.T.A.B.
November 15, 2103)9

REGULATIONS

37 C.F.R. § 42.231

PETITIONER'S EXHIBIT LIST

May 4, 2015

Exhibit	Description
1001	U.S. Patent No. 7,147,759
1002	Kortshagen Declaration
1003	D.V. Mozgrin et al, High-Current Low-Pressure Quasi-Stationary Discharge in a Magnetic Field: Experimental Research, Plasma Physics Reports- Vol. 21, No. 5- pp. 400-409- 1995 - Mozgrin
1004	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")
1005	U.S. Pat. No. 6,413,382 ("Wang")
1006	Plasma Etching: An Introduction, by Manos and Flamm, pp. 185-258, Academic Press (1989) ("Manos")
1007	File History for U.S. Pat. No. 7,147,759, Response of June 14, 2004 ("06/14/04 Response")
1008	File History for U.S. Pat. No. 7,147,759, Office Action of August 30, 2004 ("08/30/04 Office Action")
1009	File History for U.S. Pat. No. 7,147,759, Response of February 24, 2005 ("02/24/05 Response")
1010	File History for U.S. Pat. No. 7,147,759, Office Action of May 27, 2005, ("05/27/05 Office Action")
1011	File History for U.S. Pat. No. 7,147,759, Request for Continued Examination of October 27, 2005 ("10/27/05 RCE")
1012	File History for U.S. Pat. No. 7,147,759, Office Action of January 11, 2006 ("01/11/06 Office Action")
1013	File History for U.S. Pat. No. 7,147,759, Response of May 2, 2006

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