UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

THE GILLETTE COMPANY, TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD., TSMC NORTH AMERICA CORP., FUJITSU SEMICONDUCTOR LIMITED, and FUJITSU SEMICONDUCTOR AMERICA, INC.

Petitioners

V.

ZOND, LLC Patent Owner

Case IPR2014-00578¹ Patent 6,896,775 B2

PATENT OWNER'S RESPONSE 35 USC §§ 316 AND 37 CFR §42.120



¹ Case IPR2014-01494, has been joined with the instant proceeding.

TABLE OF CONTENTS

I. INTRODUCTION	1
II. TECHNOLOGY BACKGROUND	3
A. Plasma Fundamentals.	4
B. Plasma Ignition	6
C. High-Density Plasmas	7
III. THE '775 PATENT	8
IV. ARGUMENT.	. 16
A. A skilled artisan would not be motivated to combine the teachings of the prior art references to achieve the claimed invention of the '775 patent	. 16
1. Scope and content of prior art.	. 18
2. Differences between the prior art and the claims.	. 25
B. The claims are patentable over Wang, Mozgrin and Kudryavtsev	. 35
C. Claim 15 is patentable over the cited references because the petition fails t address all of the limitations of the claim.	
D. <i>Wang</i> , <i>Mozgrin</i> , and <i>Kudryavtsev</i> do not suggest "a cathode that is positioned adjacent to the anode and forming a gap there between," as recited independent claim 1.	
E. <i>Wang, Mozgrin</i> and <i>Kudryavtsev</i> do not suggest "a quasi-static electric field," as recited in dependent claims 2 and 18	. 49
F. Wang, Mozgrin and Kudryavtsev do not suggest "a rise time of the electric field is chosen to increase an ionization rate of the excited atoms in the weakly ionized plasma," as recited in dependent claim 4.	y-
G. <i>Wang</i> , <i>Mozgrin</i> and <i>Kudryavtsev</i> do not suggest "a rise time of the electric field is chosen to increase an etch rate of the surface of the substrate," as recite in dependent claim 5.	ed



	H. <i>Wang</i> , <i>Mozgrin</i> and <i>Kudryavtsev</i> do not suggest the requirements of claim 21 and 24.	
	I. Wang, Mozgrin, and Kudryavtsev do not suggest the chosen "volume between the anode and the cathode" required by dependent claim 9	. 56
	J. Wang, Mozgrin and Kudryavtsev do not suggest "applying the electric field a constant power," as recited in dependent claim 16.	
	K. Wang, Mozgrin, Kudryavtsev and Lantsman do not suggest "applying the electric field at a constant voltage," as recited in dependent claim 17	. 59
V	/ CONCLUSION	60



TABLE OF AUTHORITIES

CASES Alza Corp. v. Mylan Labs., Inc., Callaway Golf Co. v. Acushnet Co., Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc., Graham v. John Deere Co., Grain Processing Corp. v. American-Maize Prods. Co., Heart Failure Technologies, LLC v. Cardiokinetix, Inc., *In re Fine.* In re Icon Health and Fitness, Inc., In re Kahn, In re Wilson, KSR Int'l Co. v. Teleflex Inc.,



Mintz v. Dietz & Watson, Inc.,

IPR2014-00578 U.S. Patent No. 6,896,775

Proctor & Gamble Co. v. Teva Pharm. USA, Inc., 566 F.3d 989 (Fed. Cir. 2009)	16
STATUTES	
35 U.S.C. § 316(e)	26, 38
OTHER AUTHORITIES	
MPEP § 2143.03	37



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