

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.,  
TSMC NORTH AMERICA CORPORATION, FUJITSU  
SEMICONDUCTOR LIMITED, FUJITSU SEMICONDUCTOR  
AMERICA, INC., ADVANCED MICRO DEVICES, INC., RENESAS  
ELECTRONICS CORPORATION, RENESAS ELECTRONICS  
AMERICA, INC., GLOBAL FOUNDRIES U.S., INC.,  
GLOBALFOUNDRIES DRESDEN MODULE ONE LLC & CO. KG,  
GLOBALFOUNDRIES DRESDEN MODULE TWO LLC & CO. KG,  
TOSHIBA AMERICA ELECTRONIC COMPONENTS, INC., TOSHIBA  
AMERICA INC., TOSHIBA AMERICA INFORMATION SYSTEMS,  
INC., TOSHIBA CORPORATION, and THE GILLETTE COMPANY,

Petitioners

v.

ZOND, LLC  
Patent Owner

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Case IPR2014-00828<sup>1</sup>  
Patent 6,805,779

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ZOND LLC'S PATENT OWNER RESPONSE

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<sup>1</sup> Cases IPR2014-00856, IPR2014-01070, and IPR2014-01022 have been joined with the instant proceeding.

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**Exhibit List**

<b>Exhibit No.</b>	<b>Description</b>
Ex. 2004	Transcript of deposition of Dr. Kortshagen, Petitioners' expert, for the '779 Patent, 1/16/2015.
Ex. 2005	Declaration of Dr. Hartsough, Patent Owner's expert.

## I. INTRODUCTION

The Petitioners' arguments hinge on fanciful misreadings of the prior art by their proffered expert, Dr. Kortshagen. As will be shown below, neither Iwamura, Angelbeck nor Pinsley teaches a "generating a magnetic field proximate to a volume of ground state atoms to substantially trap electrons proximate to the volume of ground state atoms, [and] generating a volume of metastable atoms from the volume of ground state atoms," as recited in claim 30, and as similarly recite in claim 40. Once the Board recognizes that Dr. Kortshagen essentially invented some of the alleged "teachings" in Iwamura, Angelbeck, or Pinsley to suit the Petitioners' objectives, the Board should agree to confirm the challenged claims.

The '779 patent discloses and illustrates in FIG. 6 (reproduced on the next page below) a metastable atom source 500 including a chamber 502, first 504a, b and second magnets 506a, b that create magnetic fields 508a, b through the chamber 502. A power supply 510 is coupled to the metastable atom source 500. A gas line 528 is coupled to an input 530 of the chamber 502. An output 532 of the chamber 502 is coupled to an input 534 of an electron/ion absorber 536. In operation, ground state atoms 208 from the gas source (not shown) flow to the metastable atom source 500 through the input 530 of the chamber 502. The ground state atoms 208 flow between the first electrode 524

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