

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.
and TSMC NORTH AMERICA CORPORATION,
Petitioners,

v.

ZOND, LLC,
Patent Owner.

Case IPR2014-00828
Patent 6,805,779 B2

Before KEVIN F. TURNER, DEBRA K. STEPHENS, JONI Y. CHANG,
SUSAN L. C. MITCHELL, and JENNIFER M. MEYER,
Administrative Patent Judges.

CHANG, *Administrative Patent Judge.*

DECISION
Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

Taiwan Semiconductor Manufacturing Company, Ltd. and TSMC North America Corporation (collectively, “TSMC”) filed a Petition requesting *inter partes* review of claims 30–37, 39, and 40 of U.S. Patent No. 6,805,779 B2 (“the ’779 patent”).¹ Paper 2 (“Pet.”). Zond, LLC (“Zond”) filed a Preliminary Response. Paper 8 (“Prelim. Resp.”). We have jurisdiction under 35 U.S.C. § 314.

The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides:

THRESHOLD.—The Director may not authorize an *inter partes* review to be instituted unless the Director determines that the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.

Upon consideration of TSMC’s Petition and Zond’s Preliminary Response, we conclude that the information presented in the Petition demonstrates that there is a reasonable likelihood that TSMC would prevail in challenging claims 30–37, 39, and 40 as unpatentable under 35 U.S.C. § 103(a). Pursuant to 35 U.S.C. § 314, we hereby authorize an *inter partes* review to be instituted as to claims 30–37, 39, and 40 of the ’779 patent.

¹ In its statement of relief and conclusion, TSMC indicates that it also is challenging claim 38. *See, e.g.*, Pet. 2, 60. TSMC, however, fails to present any specific ground of unpatentability or analysis as to claim 38. Pet. 20–59. As such, we presume that TSMC does not intend to challenge claim 38 in the instant proceeding. We note that claim 38 is being challenged in *Taiwan Semiconductor Mfg. v. Zond*, Case IPR2014-00917 (Paper 2).

A. Related Matters

TSMC indicates that the '779 patent was asserted in several related district court proceedings, including *Zond, LLC v. Fujitsu Corp.*, No. 1:13-cv-11634-WGY (D. Mass.). Pet. 1. TSMC also identifies other Petitions for *inter partes* review that are related to the instant proceeding. *Id.*

B. The '779 patent

The '779 patent relates to a method and a system for generating a plasma with a multi-step ionization process. Ex. 1201, Abs. For instance, Figure 2 of the '779 patent, reproduced below, illustrates a cross-sectional view of a plasma generating apparatus:

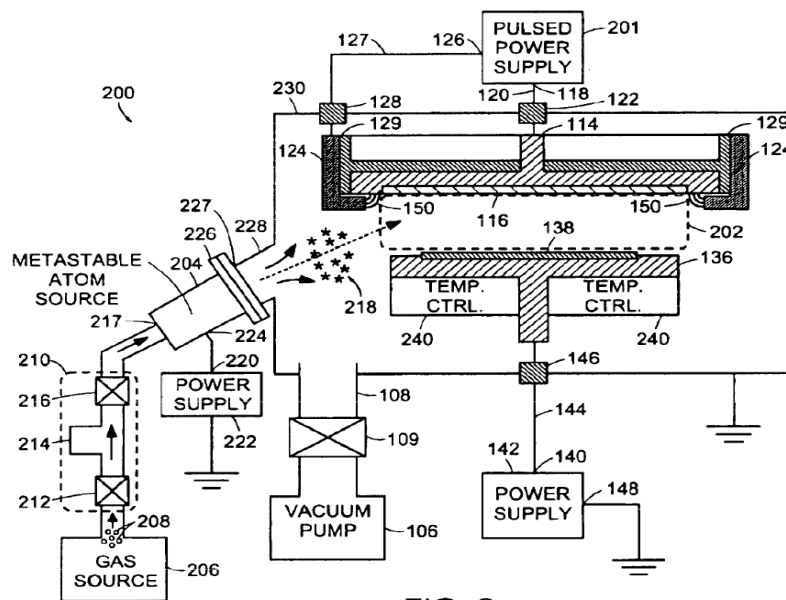


FIG. 2

In the embodiment shown in Figure 2, feed gas source 206 supplies ground state atoms 208 (e.g., ground state argon atoms) to metastable atom source 204 that generates excited or metastable atoms 218 from ground state

atoms 208. *Id.* at 4:26–42. Plasma 202 is generated from the excited or metastable atoms 218 in process chamber 230. *Id.* at 5:25–34.

Electrons and ions are formed in metastable atom source 204 along with excited or metastable atoms 218. *Id.* at 8:20–23. In another embodiment, the ions and electrons are separated from excited or metastable atoms 218 and trapped in electron/ion absorber before excited or metastable atoms 218 are injected into plasma chamber 230. *Id.* at 8:23–26, 18:62–67, Fig. 10. Figure 12B of the '779 patent illustrates an electron/ion absorber and is reproduced below:

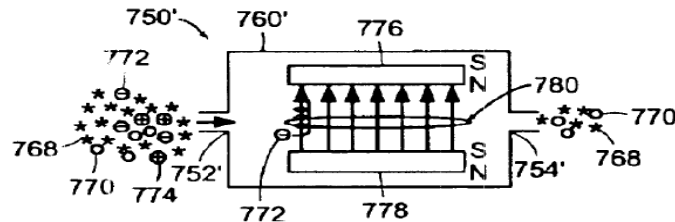


FIG. 12B

As shown in Figure 12B, electron/ion absorber 750' includes magnets 776 and 778 that generate magnetic field 780, trapping electrons 772 and ions 774 in chamber 760'. *Id.* at 20:9–13. Excited or metastable atoms 768 and ground state atoms 770 then flow through output 754'. *Id.* at 20:19–21.

C. Illustrative Claims

Of the challenged claims, claims 30 and 40 are the only independent claims. Claims 31–37 and 39 depend directly from claim 30.

Claims 30 and 40 are illustrative:

30. A method for generating a plasma with a multi-step ionization process, the method comprising:

generating a magnetic field proximate to a volume of

ground state atoms to substantially trap electrons proximate to the volume of ground state atoms;

generating a volume of metastable atoms from the volume of ground state atoms; and

raising an energy of the metastable atoms so that at least a portion of the volume of metastable atoms is ionized, thereby *generating a plasma with a multi-step ionization process.*

Ex. 1201, 23:24–34 (emphases added).

40. A method for generating a plasma with a multi-step ionization process, the method comprising:

generating a magnetic field proximate to a volume of ground state molecules to substantially trap electrons proximate to the volume of ground state molecules;

generating a volume of *metastable molecules* from the volume of ground state molecules; and

raising an energy of the metastable molecules so that at least a portion of the volume of metastable molecules is ionized, thereby *generating a plasma with a multistep ionization process.*

Id. at 23:66–24:9 (emphases added).

D. Prior Art Relied Upon

TSMC relies upon the following prior art references:

Pinsley	US 3,761,836	Sept. 25, 1973	(Ex. 1205)
Angelbeck	US 3,514,714	May 26, 1970	(Ex. 1206)
Iwamura	US 5,753,886	May 19, 1998	(Ex. 1207)
Wells	PCT WO 83/01349	Apr. 14, 1983	(Ex. 1214)
Lovelock	EP 0 242 028 A2	Oct. 21, 1987	(Ex. 1215)

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.