IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
SHERMAN DIVISION

CHIEN-MIN SUNG, Plaintiff, v. TEXAS INSTRUMENTS INCORPORATED, Defendant.	Civil Action No. 4:23-cv-753 **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Chien-Min Sung, Ph.D. ("Dr. Sung" or "Plaintiff"), for his Complaint against Defendant Texas Instruments Incorporated ("TI"), alleges the following:

NATURE OF THE ACTION

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq*.

THE PARTIES

2. Plaintiff Dr. Sung is an individual residing at No. 4, Lane 32, Chung Cheng Road, Tansui, Taipei, Taiwan.

3. On information and belief, Defendant TI is a corporation organized and existing under the laws of Delaware, with its principal place of business at 12500 TI Boulevard, Dallas, Texas 75243. TI is registered with the State of Texas and may be served with process through its registered agent, CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, TX 75201. On information and belief, TI has a regular and established place of business in this District, including at least 6412 US-75, Sherman, Texas 75090.

4. Upon information and belief, TI sells and offers to sell products and services throughout the United States, including in this judicial district, and introduces products and services into the stream of commerce and that incorporate infringing technology knowing that they would be sold in this judicial district and elsewhere in the United States.

5. Defendant TI owns, operates, or controls semiconductor fabrication plants ("fabs") within and/or outside of the United States, including in Sherman (Texas), Richardson (Texas), Dallas (Texas), Lehi (Utah), South Portland (Maine), Miho (Japan), Aizu (Japan), Chengdu (China), and Freising (Germany) to produce the accused products. *See, e.g.*, TI's "Worldwide Manufacturing," *available at* https://www.ti.com/about-ti/company/ti-at-a-glance/manufacturing.html.

6. On information and belief, Defendant TI, directly or indirectly, has a contractual relationship with certain pad conditioner manufacturers that design, develop, or manufacture chemical mechanical polishing/planarization ("CMP") pad conditioners implicated in this Action to TI, including at least one of EHWA Diamond Industrial Co Ltd. ("EHWA"), Minnesota Mining and Manufacturing Company (or "3M"), Seasol Diamond Ind. Co., Ltd. ("Seasol"), Shinhan Diamond Ind. Co., Ltd. ("Shinhan"), and/or Abrasive Technology, LLC ("AT"). For example, TI purchases and uses certain pad conditioners manufactured by EHWA. (*See* "Reduced Cost of Ownership Oxide CMP Process using 300mm Consumables for 200mm Processing," *available at* https://nccavs-usergroups.avs.org/wp-content/uploads/CMPUG2018/CMP418-6-Brannon.pdf (last accessed Jul. 17, 2022); *see also* https://nccavs-usergroups.avs.org/wp-content/uploads/CMPUG2011/cmp2011_5brannon-1.pdf ("To improve the tool's performance, EWHA™ conditioners were pivotal in adding additional functionality to the process thru end of life evaluations. (see figure 6)") (last accessed Jul. 17,

2023); *see also* https://nccavs-usergroups.avs.org/wp-content/uploads/CMPUG2018/CMP418-6-Brannon.pdf ("To improve the tool's performance, EHWA™ conditioners were pivotal in adding additional functionality to the process thru end of life evaluations") (last accessed Jul. 17, 2023).) TI also has as a "decade-long" relationship with 3M on the design, development, and manufacture of the accused products manufactured using the infringing CMP pad conditioners. (*See, e.g.*, https://www.electronicproducts.com/texas-instruments-and-3ms-decade-long-relationship-delivers-rfid-innovation-to-libraries-worldwide/?utm_source=eetimes&utm_medium=relatedcontent; *see also* https://news.3m.com/2005-06-14-3M-and-Texas-Instruments-Implement-Authenticated-RFID-to-Combat-Counterfeit-Drugs-Authenticated-RFID-Platform-Boosts-Pharmaceutical-Supply-Chain-Security-to-Help-Protect-the-Nations-Drug-Supply.) Similarly, Saesol identifies TI as one of its customers. (*See, e.g.*, http://www.saesoldia.com/bbs/content.php?co_id=exporting (map showing TI as a customer to which Saesol exports its products)).

7. Upon information and belief, Defendant TI uses certain pad conditioners manufactured by third-party pad conditioner manufacturers at its manufacturing facilities for manufacturing or fabricating the accused products, including at least one of 3M's Trizact and Diamond pad conditioners; Saesol's Standard and Hive pad conditioners; Shinhan's Diamond pad conditioners; AT's Infinity II pad conditioners; or EHWA's pad conditioners.

8. On information and belief, Defendant TI uses or employs these third-party pad conditioners to design, develop, or manufacture one or more of the accused products either domestically or for importation into the United States for use, sale, and/or offer for sale in this district and throughout the United States, including, but not limited to, semiconductor products and devices, such as amplifiers (e.g., current sense amplifiers, difference amplifiers, fully

differential amplifiers, instrumentation amplifiers, operational amplifiers, programmable & Variable gain amplifiers, and special function amplifiers), audio solutions (e.g., audio amplifiers, audio converters, audio interface ICs, and specialty audio ICs), clock & timing (e.g., clock buffers, clock generators, clock jitter cleaners & synchronizers, oscillators, real-time clocks (RTCs) & timers, RF PLLs & synthesizers), dies and wafers (e.g., amplifiers, data converters, interfaces, switches, voltage regulators, microcontrollers, x-ray detectors, controllers, comparators, processors, transceivers, receivers, temperature sensors, diodes, and current sources), data converters (e.g., analog-to-digital converters, digital potentiometers, digital-to-analog converters, and integrated/special function data converters), DLP products (imaging products such as near-infrared, near-UV, UV, and visible products, scan & machine vision products, automotive products including display, exterior lighting and projection products, and array products such as array pico and array products, and spectroscopy & optical networking products), interface solutions (e.g., CAN & LIN transceivers & SBCs, circuit protection ICs, ethernet ICs, HDMI/DisplayPort/MIPI ICs, high-speed SerDes, I2 ICs, IO-Link & digital I/Os, LVDS/M-LVDS/PECL ICs, multu0switch detection interface ICs, optical networking ICs, PCIe, SAS & SATA ICs, RS-232 transceivers, RS-485 & RS-422 transceivers, SDI ICs, UARTs, and USB ICs), isolation (e.g., digital isolators, isolated ADCs, isolated amplifiers, isolated comparators, isolated gate drivers, isolated interface ICs, signal isolators, and solid-state relays), logic & voltage translation (e.g., buffers, drivers, & transceivers, flip-flops, latches, registers, logic gates, specialty logic ICs, and voltage translators and level shifters), microcontrollers & processors (e.g., ARM-based microcontrollers, C2000 real-time microcontrollers, MSP 430 microcontrollers, digital signal processors, and ARM-based processors), motor drivers (e.g., actuator drivers, brushed DC motor drivers, brushless D motor drivers, half-bridge drivers,

isolated gate drivers, low-side drivers, optical-disk drivers, solenoid drivers, stepper motor drivers), power management (AC/DC and isolated DC/DC switch regulators, battery management ICs, DC/DC switching regulators, DDR memory power ICs, digital power ICs, LED drivers, Linear & low-dropout regulators, MOSFETS, multi-channel ICs, power-over ethernet ICs, power switches, sequencers, supervisor & reset ICs, USB power witches & charging port controllers, USB-type C & USB power delivery ICs, and voltage reference products), RF & microwave products (e.g., mixers, modulators, mmWave radar sensors, RF amplifiers, RF PLLs & synthesizers, RF power detectors, and wideband transceivers, receivers, and transmitters), sensors (humidity sensors, magnetic sensors, mmWave radar sensors, specialty sensors, and temperature sensors), switches & multiplexers (analog switches & mux, digital demux and decoders, digital mux and encoders, power switches, and protocol-specific switches & muxes), and wireless connectivity products (e.g., Bluetooth products, multi-protocol products, sub-1 GHz products, thread products, Wi-Fi products, Wi-SUN products, and Zigbee products), and similar systems, products, devices, and integrated circuits ("Accused Products").

9. For example, on information and belief, Defendant TI uses or employs at least one of 3M's Trizact or Diamond pad conditioners, Saesol's Standard or Hive pad conditioners, Shinhan's Diamond pad conditioners, AT's Infinity II pad conditioners, and/or EHWA's CVD CMP pad conditioners to manufacture or fabricate the Accused Products (or integrated circuits contained therein) either domestically or for importation into the United States for use, sale, and/or offer for sale in this district and throughout the United States. TI also assists third parties, directly or through others, to import third-party systems, products, and/or devices that incorporate the Accused Products into the United States and offer to sell, and sell, such third-party products in the United States.

JURISDICTION AND VENUE

10. This is an action for patent infringement arising under the Patent Laws of the United States, Title 35 of the United States Code.

11. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

12. Defendant TI is subject to this Court's general personal jurisdiction at least because TI is a resident of Texas as defined by Texas law. On information and belief, TI is headquartered in Texas.

13. Defendant TI is additionally subject to this Court's general and specific personal jurisdiction because TI has sufficient minimum contacts within the State of Texas and this District, pursuant to due process and/or the Texas Long Arm Statute, Tex. Civ. Prac. & Rem. Code § 17.042. On information and belief, Defendant TI contracted with one or more Texas residents in this District and one or both parties performed the contract at least in part in the State of Texas and this District; TI committed the tort of patent infringement in State of Texas and this District; TI purposefully availed itself of the privileges of conducting business in the State of Texas and in this District; TI regularly conducts and solicits business within the State of Texas and within this District; TI recruits residents of the State of Texas and this District for employment inside or outside the State of Texas; Plaintiff's causes of action arise directly from TI's business contacts and other activities in the State of Texas and this District; and TI distributes, makes available, imports, sells and offers to sell products and services throughout the United States, including in this judicial District, and introduces infringing products and services that into the stream of commerce knowing that they would be used and sold in this judicial district and elsewhere in the United States.

14. On information and belief, Defendant TI designs, develops, manufactures, sells, offers to sell, and/or imports products, devices, systems, and/or components of systems,

including the Accused Products, that either infringe or support the infringement of the patents asserted in this action.

15. On information and belief, TI sells and offers to sell products and services throughout the United States and in Texas, including in this District, through major electronics retailers in the United States, and in concert and partnership with third parties.

16. Furthermore, personal jurisdiction over TI in this action comports with due process. TI has conducted and regularly conducts business within the United States and this District. TI has purposefully availed itself of the privileges of conducting business in the United States, and more specifically in the State of Texas and this District. TI has sought protection and benefit from the laws of the State of Texas by making available products and services, including websites and associated web pages, that infringe the Asserted Patents with the awareness and/or intent that they will be used (or visited) by consumers in this District. Having purposefully availed itself of the privilege of conducting business within this District, TI should reasonably and fairly anticipate being brought into court here.

17. Venue is proper in this judicial district under 28 U.S.C. § 1391 and 28 U.S.C. §1400(b). On information and belief, TI has a regular and established place of business in this District, including at least at 6412 US-75, Sherman, TX 75090. On information and belief, TI's acts of infringement have taken place within this District. On information and belief, TI's presence in this District is substantial, including at least at 6412 US-75, Sherman, TX 75090. TI's presence in this District includes an 80,000 square foot, 150 mm fabrication facility that produces over 4,500 device types, including at least semiconductors and integrated circuits for use in multiple automotive, commercial, military, and space applications.

18. Additionally, TI—directly or through intermediaries (including distributors, retailers, and others), subsidiaries, alter egos, and/or agents—ships, distributes, offers for sale, and/or sells its products and services in the United States and this District. TI has purposefully and voluntarily placed one or more of its products into the stream of commerce through the accused instrumentalities that infringe the patents asserted in this action with the awareness and/or intent that they will be purchased by consumers in this District. TI knowingly and purposefully ships infringing products into, and within, this District. These infringing products have been, and continue to be, purchased by consumers and businesses in this District.

THE ASSERTED PATENTS

19. On September 22, 2015, U.S. Patent No. 9,138,862 ("the '862 patent"), entitled "CMP Pad Dresser Having Leveled Tips and Associated Methods" was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '862 patent is attached as Exhibit 1.

20. Plaintiff is the assignee and owner of the right, title and interest in and to the '862 patent, and holds the right to sue and recover damages for infringement thereof, including past infringement.

21. On August 8, 2017, U.S. Patent No. 9,724,802 ("the '802 patent"), entitled "CMP Pad Dressers Having Leveled Tips and Associated Methods" was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '802 patent is attached as Exhibit 2.

22. Plaintiff is the assignee and owner of the right, title and interest in and to the '802 patent, and holds the right to sue and recover damages for infringement thereof, including past infringement.

23. On March 10, 2015, U.S. Patent No. 8,974,270 ("the '270 patent"), entitled "CMP Pad Dresser Having Leveled Tips and Associated Methods" was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '270 patent is attached as Exhibit 3.

24. Plaintiff is the assignee and owner of the right, title and interest in and to the '270 patent, and holds the right to sue and recover damages for infringement thereof, including past infringement.

25. The '862, '802, and '270 patents (collectively, "Asserted Patents") generally relate to chemical mechanical polishing/planarization ("CMP") pad dressers and dressing and conditioning methods associated with pad conditioning (e.g., smoothing, polishing, and dressing), and the CMP polishing of a work piece such as an integrated circuit or semiconductor wafer.

26. In manufacturing semiconductor wafers, one important physical trait is their surface flatness and smoothness. To achieve these important physical characteristics, CMP techniques, which involve pad polishing and conditioning, are generally used to planarize the wafer surface through both chemical and mechanical reactions, whereby protrusions and residues existing on the surface of a wafer chemically react with a slurry supplied to the wafer at the same time when they are planarized mechanically by rotation of a polishing pad. In CMP, the quality of the polishing pad dictates the removal rate, planarization, and uniformity, and thus plays a key role in the overall performance of the polishing process.

27. To optimize the condition and minimize deformation of the pad, a pad dresser is used to dress the pad so as to remove debris and by-products in the pad (e.g., deglazing the pad)

and to regenerate new pad surface sufficient to open up asperities in the pad surface to capture and hold chemical slurry for cleaning the semiconductor wafer.

28. As discussed above, the pad dresser is used to create and form pad asperities in the pad, which in turn polish the semiconductor wafer. In polishing, the dresser's tips profile generally dictates the pad asperities profile. Due to the miniaturization of transistors and advancement of manufacturing technologies, these tips must be stringently coordinated (e.g., in terms of count, configuration, spacing, and cutting depth) to avoid any possibility of damaging the semiconductor wafer (e.g., via scratches on wafer surface or underlying metal-interconnect). The Asserted Patents are generally directed to providing a pad dresser with optimized tips for performing CMP polishing and conditioning using the same.

COUNT I – INFRINGEMENT OF U.S. PATENT NO. 9,138,862

29. Plaintiff incorporates and realleges the preceding paragraphs as if fully set forth herein.

30. At least as of December 8, 2021, Dr. Sung placed TI on actual notice of the '862 patent and actual notice that its actions constituted and continued to constitute infringement of the '862 patent. TI has had actual knowledge of the '862 patent and its own infringement of the '862 patent since at least that time.

31. On information and belief, Defendant TI has directly infringed and continues to infringe at least claim 1 of the '862 patent literally or under the doctrine of equivalents, by importing into the United States, and/or making, using, and/or selling, and/or offering for sale in the United States, without authority or license, semiconductor devices and/or integrated circuits designed, developed, fabricated and/or manufactured using certain infringing CMP pad conditioners, including 3M's pad conditioners, Saesol's CMP pad conditioners, Shinhan's CMP pad conditioners, AT's CMP pad conditioners, EHWA's pad conditioners, and/or similar pad

conditioners (e.g., pad conditioners with the same claimed structural characteristics and manufactured by other pad conditioner manufacturers) ("'862 Accused Instrumentalities"), and systems, products, and/or devices containing these semiconductor devices and/or integrated circuits including at least the Accused Products in violation of 35 U.S.C. § 271(a). The Accused Products are/were manufactured and/or fabricated using pad conditioners with the claimed structural characteristics. Each such product includes an integrated circuit fabricated or manufactured using, for example, at least one of 3M's Trizact or Diamond pad conditioners, Seasol's Standard or Hive pad conditioners, Shinhan's Diamond pad conditioners, AT's Infinity II pad conditioners; and/or EHWA's CVD CMP pad conditioners.

32. On information and belief, TI sells and/or offers for sale the Accused Products in the United States. For example, TI provides direct sales through its own sales channels and/or its distributors and sells the Accused Products to businesses including original equipment manufacturers and electronic manufacturing service providers. On information and belief, these direct sales include sales of the Accused Products in the United States. For example, TI engages in sales, marketing, and contracting activity in the United States and/or with United States offices of its customers.

33. Discovery is expected to uncover the full extent of TI's infringement of the '862 patent beyond the Accused Products already identified herein.

34. Additionally, on information and belief, TI has directly infringed and continues to infringe at least claim 1 of the '862 patent literally or under the doctrine of equivalents, by importing into the United States, and/or making, using, and/or selling, and/or offering for sale in the United States, without authority or license, the Accused Products, in violation of 35 U.S.C. § 271(g). On information and belief, Defendant TI imports the Accused Products into the United

States for sales and distribution to customers located in and outside the United States. On information and belief, Defendant TI sells and/or offers for sale the Accused Products in the United States. For example, Defendant TI provides direct sales through its own sales channels and/or its distributors or contract manufacturers and sells the Accused Products to businesses including original equipment manufacturers and electronic manufacturing service providers. On information and belief, these direct sales include sales of the Accused Products in the United States. For example, Defendant TI engages in sales, marketing, and contracting activity in the United States and/or with United States offices of its customers.

35. The Accused Products are/were manufactured by a process including all of the limitations of at least claim 1 of the ’862 patent. The Accused Products are/were made by the claimed methods. Each of the Accused Products, for example, is or contains an integrated circuit fabricated or manufactured using, for example, at least one of the ’862 Accused Instrumentalities, such as 3M’s pad conditioners (e.g., Trizact or Diamond), Saesol’s pad conditioners (Standard or Hive), Shinhan’s pad conditioners (e.g., Diamond), AT’s pad conditioners (e.g., Infinity II), or EHWA’s pad conditioners (e.g., CVD CMP).

36. For example, during the manufacture of the Accused Products, Defendant TI uses the ’862 Accused Instrumentalities to perform the steps of: pressing a CMP pad dresser (e.g., any of 3M’s Trizact or Diamond pad conditioner, Saesol’s Standard or Hive pad conditioner, Shinhan’s Diamond pad conditioner, AT’s Infinity II pad conditioner, or EHWA’s CVD CMP pad conditioner) against a CMP pad, the dresser including a monolayer of a plurality of superabrasive particles protruding from a matrix layer, wherein the difference in protrusion distance between the highest protruding tip and the second highest protruding tip of the monolayer of superabrasive particles is less than or equal to about 10 microns and the difference

in protrusion distance between the highest 10 protruding tips of the monolayer of superabrasive particles are within about 20 microns or less; and rotating the dresser against the CMP pad such that asperities are cut into the CMP pad having a maximum cutting depth of about 60 microns. On information and belief, TI contracted and continues to contract with at least one of 3M, Seasol, Shinhan, AT and/or EWHA to purchase and use the ’862 Accused Instrumentalities with the claimed structural characteristics for the manufacture or fabrication of the Accused Products by or on behalf of TI.

37. Attached hereto as Exhibits 4-8, and incorporated by reference herein, are claim charts detailing how the ’862 Accused Instrumentalities are used to manufacture or fabricate the Accused Products and satisfy each element of at least claim 1 of the ’862 patent, literally or under the doctrine of equivalents. For example, each chart illustrates a representative pad conditioner from 3M, Saesol, Shinhan, AT, and EHWA (e.g., 3M’s Trizact pad conditioner, Saesol’s Standard or Hive pad conditioner, Shinhan’s Diamond pad conditioner, AT’s Infinity II pad conditioner, and EHWA’s CVD CMP pad conditioner), which is representative of the remaining ’862 Accused Instrumentalities (including any pad conditioners that remain unknown to Plaintiff) because the representative pad conditioner has the same claimed structural characteristics as these remaining ’862 Accused Instrumentalities.

38. On information and belief, at least as of December 8, 2021, TI has induced and continues to induce others, including third-party pad conditioner manufacturers, to infringe one or more claims of the ’862 patent, including, but not limited to, claim 1, pursuant to 35 U.S.C. § 271(b), by actively encouraging or inducing them to make, use, sell and/or offer to sell in the United States, the ’862 Accused Instrumentalities with the claimed characteristics for the

manufacture of the Accused Products, through TI's commitment to purchase the '862 Accused Instrumentalities and actual order placement for the '862 Accused Instrumentalities.

39. On information and belief, at least as of December 8, 2021, TI also has induced and continues to induce others actively, knowingly, and intentionally, including its suppliers and contract manufacturers, to infringe one or more claims of the '862 patent, including, but not limited to, claim 1, pursuant to 35 U.S.C. § 271(b), by actively encouraging others to import into the United States, and/or make, use, sell, and/or offer to sell in the United States, the Accused Products or systems, devices, or products containing the Accused Products, by actively inducing others to infringe the '862 patent by making, using, selling, offering for sale, marketing, advertising, and/or importing the Accused Products to their customers for use in downstream products that infringe, or were manufactured using processes that infringe, the '862 patent, and by instructing others to infringe the '862 patent.

40. For example, TI actively promotes the sale and importation of the Accused Products in marketing materials, technical specifications, data sheets, web pages on its website (e.g., https://www.ti.com), press releases, training tutorials, development and design tools, user manuals, and developer forums as well as at trade shows (e.g., the Consumer Technology Association's Consumer Electronics Show ("CES")) and through its sales and distribution channels that encourage infringing sales, offers to sell, and importation of the Accused Products. As another example, TI's representatives travel to customer sites in and outside the United States for sales, support, and/or importation activities that include working with customers to facilitate these customers' infringing testing, marketing, importation, and sales activity. On information and belief, TI supplies customers with Accused Products so that they may be imported, sold, or offered for sale by those customers, and/or incorporated into third-party products (more below).

For example, TI provides direct sales to original equipment manufacturers and electronic manufacturing service providers. On information and belief, these direct sales include sales to customers in and outside the United States. TI also promotes, publicly on its website, uses of the Accused Products by customers in the United States. TI additionally provides a wide range of technical support to its customers and businesses in connection with the Accused Products made using the ’862 Accused Instrumentalities by or on behalf of TI, including product-specific solutions (*see, e.g.*, https://education.ti.com/en/customer-support; https://ticsc.service-now.com/csm; https://www.ti.com/info/contact-us.html) and community forums (e.g., https://e2e.ti.com/).

41. On information and belief, TI also actively encourages third-party pad conditioner manufacturers so that the ’862 Accused Instrumentalities may be designed, developed, used, imported, sold, or offered for sale to TI with the claimed structural characteristics. On information and belief, TI assisted and continues to assist these third-party manufacturers, directly and/or through intermediaries, in the design, development or manufacture of the ’862 Accused Instrumentalities, and provides technical support or supports the sales and importation of the ’862 Accused Instrumentalities (as well as the Accused Products that are/were manufactured using the ’862 Accused Instrumentalities).

42. In addition, on information and belief, TI sells or offers for sale the Accused Products to third parties that incorporate the Accused Products into third party products (“the ’862 Third Party Products”).

43. On information and belief, TI assists third parties, directly and/or through intermediaries, in the development and manufacture of the ’862 Third Party Products and

provides technical support and supports the sales and importation of the ’862 Third Party Products.

44. On information and belief, the ’862 Third Party Products are imported into the United States for use, sale, and/or offer for sale in this District and throughout the United States (“Imported ’862 Third Party Products”).

45. On information and belief, to the extent any entity other than TI, including but not limited to any of TI’s third-party importers, imports the Accused Products and/or ’862 Third-Party Products into the United States for or on behalf of TI (“Third Party Importer”), TI is liable for inducement of infringement by the Third Party Importer. TI has encouraged the Third Party Importer to infringe the ’862 patent and intended that it do so. This encouragement includes at least ordering or instructing the Third Party Importer to import the Accused Products and/or ’862 Third-Party Products into the United States, providing directions and other materials to the Third Party Importer to enable such importation, and/or conditioning the receipt of benefits (included but not limited to payment) to the Third Party Importer on such importation. On information and belief, this behavior has continued since TI first became aware of the ’862 patent and the infringement thereof.

46. On information and belief, to the extent any entity other than TI, including but not limited to any foundry contracted or engaged by TI, uses the patented method to fabricate or manufacture the Accused Products and/or Imported ’862 Third-Party Products in the United States for or on behalf of TI (“Third Party Manufacturer”), TI is liable for inducement of infringement by the Third Party Manufacturer. TI has encouraged the Third Party Manufacturer to infringe the ’862 patent and intended that it do so. This encouragement includes, without limitation, ordering or seeking the importation of the Accused Products from the Third Party

Manufacturer since TI first became aware of the ’862 patent, or instructing the Third Party Manufacturer to use the ’862 Accused Instrumentalities for the manufacture or fabrication of the Accused Products.

47. For example, by providing technical specification and development criteria of the Accused Products to the Third Party Manufacturer for manufacturing such products (and/or third party pad conditioner manufacturers), including instructing such Third Party Manufacturer to use any of the ’862 Accused Instrumentalities in order to accomplish or achieve such criteria, TI has induced, and continues to induce, third parties to infringe using the claimed methods and the ’862 Accused Instrumentalities. Specifically, by providing technical specification and/or design/development criteria of the Accused Products to the Third Party Manufacturer for manufacturing such products using the claimed methods and the ’862 Accused Instrumentalities, TI has induced, and continues to induce, third parties to infringe the ’862 patent (e.g., to ensure that the Accused Products are/were manufactured without errors or flaws or that the Accused Products meet TI’s stringent technical/design/development criteria).

48. Despite having notice of the ’862 patent prior to the filing of this Complaint, TI has made a decision to continue the alleged inducement post-service of the Complaint. Indeed, following the filing of this Complaint, on information and belief, TI—acting with knowledge of the ’862 patent—used and continues to use the ’862 Accused Instrumentalities in the manufacture or fabrication of the Accused Products, and/or submitted and continues to submit purchase orders for the ’862 Accused Instrumentalities to third-party pad conditioner manufacturers with the intent of using the ’862 Accused Instrumentalities for manufacturing or fabricating the Accused Products.

49. TI has benefitted and continues to benefit from the importation into the United States of the Accused Products, ’862 Third Party Products, and Imported ’862 Third Party Products.

50. Dr. Sung has suffered, and continues to suffer, damages as a result of TI’s infringement of the ’862 patent.

51. TI has continued to infringe the ’862 patent since at least December 8, 2021, despite being on notice of the ’862 patent and its infringement. TI has therefore infringed the ’862 patent knowingly, willfully, deliberately, and in disregard of Dr. Sung’s patent rights since at least December 8, 2021, at least by performing acts of infringement with actual knowledge of its direct and indirect infringement or while remaining willfully blind to the fact of its direct and indirect infringement. As a result of at least this conduct, Plaintiff is entitled to enhanced damages under 35 U.S.C. § 284 and to attorneys’ fees and costs under 35 U.S.C. § 285.

52. Dr. Sung reserves the right to modify its infringement theories as discovery progresses in this case. Dr. Sung shall not be estopped or otherwise limited or restricted for purposes of its infringement contentions or its claim constructions by the claim charts that it provides with this Complaint. Dr. Sung intends the claim charts for the ’862 patent to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Dr. Sung’s preliminary or final infringement contentions or preliminary or final claim construction positions.

COUNT II – INFRINGEMENT OF U.S. PATENT NO. 9,724,802

53. Plaintiff incorporates and realleges the preceding paragraphs as if fully set forth herein.

54. At least as of December 8, 2021, Dr. Sung placed TI on actual notice of the ’802 patent and actual notice that its actions constituted and continued to constitute infringement of

the ’802 patent. TI has had actual knowledge of the ’802 patent and its own infringement of the ’802 patent since at least that time.

55. On information and belief, Defendant TI has directly infringed and continues to infringe at least claim 1 of the ’802 patent literally or under the doctrine of equivalents, by using in the United States, or importing into the United States, without authority or license, certain CMP pad conditioners, including 3M’s pad conditioners, Saesol’s CMP pad conditioners, Shinhan’s CMP pad conditioners, AT’s CMP pad conditioners, EHWA’s pad conditioners, and/or similar pad conditioners (e.g., pad conditioners with the same claimed structural characteristics and manufactured by other pad conditioner manufacturers) (“’802 Accused Instrumentalities”) to design, develop, manufacture or fabricate semiconductor devices and/or integrated circuits, and systems, products, and/or devices containing these semiconductor devices and/or integrated circuits, including at least the Accused Products, in violation of 35 U.S.C. § 271(a).

56. On information and belief, TI also sells and/or offers for sale the Accused Products in the United States. For example, TI provides direct sales through its own sales channels and/or its distributors and sells the Accused Products to businesses including original equipment manufacturers and electronic manufacturing service providers. On information and belief, these direct sales include sales of the Accused Products in the United States. For example, TI engages in sales, marketing, and contracting activity in the United States and/or with United States offices of its customers.

57. Discovery is expected to uncover the full extent of TI’s infringement of the ’802 patent beyond the Accused Products already identified herein.

58. The Accused Products are/were manufactured by using a pad conditioner that includes all of the limitations of at least claim 1 of the ’802 patent. For example, each of the Accused Products is/was fabricated or manufactured using, for example, at least one of the ’802 Accused Instrumentalities, such as 3M’s pad conditioners (e.g., Trizact or Diamond), Saesol’s pad conditioners (Standard or Hive), Shinhan’s pad conditioners (e.g., Diamond), AT’s pad conditioners (e.g., Infinity II), or EHWA’s pad conditioners (e.g., CVD CMP).

59. For example, during the manufacture of the Accused Products, Defendant TI uses a CMP pad dresser (e.g., any of 3M’s Trizact or Diamond pad conditioner, Saesol’s Standard or Hive pad conditioner, Shinhan’s Diamond pad conditioner, AT’s Infinity II pad conditioner, or EHWA’s CVD CMP pad conditioner) that includes a rigid support substrate; and a monolayer of a plurality of superabrasive particles coupled to the support substrate, wherein each superabrasive particle in the monolayer extends away from the support substrate to a protrusion distance, wherein a tip of each of the plurality of superabrasive particles aligns along a designated profile with a tip variation of from about 5 microns to about 100 microns, and wherein the difference in protrusion distance between the highest protruding tip and the second highest protruding tip of the monolayer of superabrasive particles is less than or equal to about 50 microns, and the difference in protrusion distance between the highest 1% of the protruding tips of the monolayer of superabrasive particles are within about 80 microns or less. On information and belief, TI contracted and continues to contract with at least one of 3M, Seasol, Shinhan, AT and/or EWHA to purchase and use the ’802 Accused Instrumentalities with the claimed structural characteristics for the manufacture or fabrication of the Accused Products by or on behalf of TI.

60. Attached hereto as Exhibits 9-13, and incorporated by reference herein, are claim

charts detailing how the ’802 Accused Instrumentalities used by or on behalf of TI to manufacture or fabricate the Accused Products satisfy each element of at least claim 1 of the ’802 patent, literally or under the doctrine of equivalents. Each chart illustrates a representative pad conditioner from each of the pad conditioner manufacturers, including 3M, Saesol, Shinhan, AT, and EHWA (e.g., 3M’s Trizact pad conditioner, Saesol’s Standard or Hive pad conditioner, Shinhan’s Diamond pad conditioner, AT’s Infinity II pad conditioner, and EHWA’s CVD CMP pad conditioner), which is representative of the remaining ’802 Accused Instrumentalities (including any pad conditioners that remain unknown to Plaintiff) because it has the same claimed structural characteristics as these remaining ’802 Accused Instrumentalities.

61. On information and belief, at least as of December 8, 2021, TI has induced and continues to induce others, including third-party pad conditioner manufacturers, to infringe one or more claims of the ’802 patent, including, but not limited to, claim 1, pursuant to 35 U.S.C. § 271(b), by actively encouraging or inducing them to make, use, sell and/or offer to sell in the United States, the ’802 Accused Instrumentalities with the claimed characteristics for the manufacture of the Accused Products, through TI’s commitment to purchase the ’802 Accused Instrumentalities and actual order placement for the ’802 Accused Instrumentalities.

62. On information and belief, at least as of December 8, 2021, TI also has induced and continues to induce others actively, knowingly, and intentionally, including its suppliers and contract manufacturers, to infringe one or more claims of the ’802 patent, including, but not limited to, claim 1, pursuant to 35 U.S.C. § 271(b), by actively encouraging others to import into the United States, and/or make, use, sell, and/or offer to sell in the United States, the Accused Products or systems, devices, or products containing the Accused Products, by actively inducing others to infringe the ’802 patent by making, using, selling, offering for sale, marketing,

advertising, and/or importing the Accused Products to their customers for use in downstream products that infringe, or were manufactured using processes that infringe, the ’802 patent, and by instructing others to infringe the ’802 patent.

63. For example, TI actively promotes the sale and importation of the Accused Products in marketing materials, technical specifications, data sheets, web pages on its website (e.g., https://www.ti.com), press releases, training tutorials, development and design tools, user manuals, and developer forums as well as at trade shows (e.g., the Consumer Technology Association’s Consumer Electronics Show (“CES”)) and through its sales and distribution channels that encourage infringing sales, offers to sell, and importation of the Accused Products. As another example, TI’s representatives travel to customer sites in and outside the United States for sales, support, and/or importation activities that include working with customers to facilitate these customers’ infringing testing, marketing, importation, and sales activity. On information and belief, TI supplies customers with Accused Products so that they may be imported, sold, or offered for sale by those customers, and/or incorporated into third-party products (more below). For example, TI provides direct sales to original equipment manufacturers and electronic manufacturing service providers. On information and belief, these direct sales include sales to customers in and outside the United States. TI also promotes, publicly on its website, uses of the Accused Products by customers in the United States. TI additionally provides a wide range of technical support to its customers and businesses in connection with the Accused Products made using the ’802 Accused Instrumentalities by or on behalf of TI, including product-specific solutions (*see, e.g.*, https://education.ti.com/en/customer-support; https://ticsc.service-now.com/csm; https://www.ti.com/info/contact-us.html) and community forums (e.g., https://e2e.ti.com/).

64. On information and belief, TI also actively encourages third-party pad conditioner manufacturers so that the ’802 Accused Instrumentalities may be designed, developed, used, imported, sold, or offered for sale to TI with the claimed structural characteristics. On information and belief, TI assisted and continues to assist these third-party manufacturers, directly and/or through intermediaries, in the design, development or manufacture of the ’802 Accused Instrumentalities and provides technical support or supports the sales and importation of the ’802 Accused Instrumentalities (as well as the Accused Products that are/were manufactured using the ’802 Accused Instrumentalities).

65. Additionally, on information and belief, TI sells or offers for sale the Accused Products to third parties that incorporate the Accused Products into third party products (“the ’802 Third Party Products”).

66. On information and belief, TI assists third parties, directly and/or through intermediaries, in the development and manufacture of the ’802 Third Party Products and provides technical support and supports the sales and importation of the ’802 Third Party Products.

67. On information and belief, the ’802 Third Party Products are imported into the United States for use, sale, and/or offer for sale in this District and throughout the United States (“Imported ’802 Third Party Products”).

68. On information and belief, to the extent any entity other than TI, including but not limited to any of TI’s third-party importers, imports the ’802 Accused Instrumentalities, the Accused Products and/or ’802 Third-Party Products into the United States for or on behalf of TI (“Third Party Importer”), TI is liable for inducement of infringement by the Third Party Importer. TI has encouraged the Third Party Importer to infringe the ’802 patent and intended

that it do so. This encouragement includes at least ordering or instructing the Third Party Importer to import the ’802 Accused Instrumentalities, Accused Products and/or ’802 Third-Party Products into the United States, providing directions and other materials to the Third Party Importer to enable such importation, and/or conditioning the receipt of benefits (included but not limited to payment) to the Third Party Importer on such importation. On information and belief, this behavior has continued since TI first became aware of the ’802 patent and the infringement thereof.

69. On information and belief, to the extent any entity other than TI, including but not limited to any foundry contracted or engaged by TI, uses the ’802 Accused Instrumentalities to fabricate or manufacture the Accused Products and/or Imported ’802 Third-Party Products in the United States for or on behalf of TI (“Third Party Manufacturer”), TI is liable for inducement of infringement by the Third Party Manufacturer. TI has encouraged the Third Party Manufacturer to infringe the ’802 patent and intended that it do so. This encouragement includes, without limitation, ordering or seeking the importation of the Accused Products from the Third Party Manufacturer since TI first became aware of the ’802 patent, or instructing the Third Party Manufacturer to use the ’802 Accused Instrumentalities for the manufacture or fabrication of the Accused Products.

70. For example, by providing technical specification and development criteria of the Accused Products to the Third Party Manufacturer for manufacturing such products (and/or third party pad conditioner manufacturers), TI has induced, and continues to induce, third parties to infringe using the ’802 Accused Instrumentalities. Specifically, by providing technical specification and/or design/development criteria of the Accused Products to the Third Party Manufacturer for manufacturing such products or to third-party pad conditioner manufacturers

for designing, developing and/or configuring the ’802 Accused Instrumentalities for manufacturing such products, TI has induced, and continues to induce, third parties to infringe the ’802 patent (e.g., to ensure that the Accused Products are/were manufactured without errors or flaws or that the Accused Products meet TI’s stringent technical/design/development criteria).

71. Despite having notice of the ’802 patent prior to the filing of this Complaint, TI has made a decision to continue the alleged inducement post-service of the Complaint. Indeed, following the filing of this Complaint, on information and belief, TI—acting with knowledge of the ’802 patent—used and continues to use the ’802 Accused Instrumentalities in the manufacture or fabrication of the Accused Products, and/or submitted and continues to submit purchase orders for the ’802 Accused Instrumentalities to third-party pad conditioner manufacturers with the intent of using the ’802 Accused Instrumentalities for manufacturing or fabricating the Accused Products.

72. Through active inducement, TI has benefitted and continues to benefit from using the ’802 Accused Instrumentalities in the United States, or importing them into the United States, for the manufacture and fabrication of the Accused Products and third-party products that incorporate the Accused Products.

73. Dr. Sung has suffered, and continues to suffer, damages as a result of TI’s infringement of the ’802 patent.

74. TI has continued to infringe the ’802 patent since at least December 8, 2021, despite being on notice of the ’802 patent and its infringement. TI has therefore infringed the ’802 patent knowingly, willfully, deliberately, and in disregard of Dr. Sung’s patent rights since at least December 8, 2021, at least by performing acts of infringement with actual knowledge of its direct and indirect infringement or while remaining willfully blind to the fact of its direct and

indirect infringement. As a result of at least this conduct, Plaintiff is entitled to enhanced damages under 35 U.S.C. § 284 and to attorneys' fees and costs under 35 U.S.C. § 285.

75. Dr. Sung reserves the right to modify its infringement theories as discovery progresses in this case. Dr. Sung shall not be estopped or otherwise limited or restricted for purposes of its infringement contentions or its claim constructions by the claim charts that it provides with this Complaint. Dr. Sung intends the claim charts for the '802 patent to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Dr. Sung's preliminary or final infringement contentions or preliminary or final claim construction positions.

COUNT III – INFRINGEMENT OF U.S. PATENT NO. 8,974,270

76. Plaintiff incorporates and realleges the preceding paragraphs as if fully set forth herein.

77. At least as of December 8, 2021, Dr. Sung placed TI on actual notice of the '270 patent and actual notice that its actions constituted and continued to constitute infringement of the '270 patent. TI has had actual knowledge of the '270 patent and its own infringement of the '270 patent since at least that time.

78. On information and belief, Defendant TI has directly infringed and continues to infringe at least claim 1 of the '270 patent literally or under the doctrine of equivalents, by using in the United States, or importing into the United States, without authority or license, certain CMP pad conditioners, including 3M's pad conditioners and/or similar pad conditioners (e.g., pad conditioners with the same claimed structural characteristics and manufactured by other pad conditioner manufacturers not presently known) ("'270 Accused Instrumentalities") to design, develop, manufacture or fabricate semiconductor devices and/or integrated circuits, and systems,

products, and/or devices containing these semiconductor devices and/or integrated circuits, including at least the Accused Products, in violation of 35 U.S.C. § 271(a).

79. Additionally, on information and belief, TI sells and/or offers for sale the Accused Products in the United States. For example, TI provides direct sales through its own sales channels and/or its distributors and sells the Accused Products to businesses including original equipment manufacturers and electronic manufacturing service providers. On information and belief, these direct sales include sales of the Accused Products in the United States. For example, TI engages in sales, marketing, and contracting activity in the United States and/or with United States offices of its customers.

80. Discovery is expected to uncover the full extent of TI's infringement of the '270 patent beyond the Accused Products already identified herein.

81. The Accused Products are/were manufactured by a process including all of the limitations of at least claim 1 of the '270 patent. The Accused Products are/were made by the claimed methods. Each of the Accused Products, for example, is or contains an integrated circuit fabricated or manufactured using, for example, at least one of the '270 Accused Instrumentalities, such as 3M's Trizact and Diamond pad conditioners.

82. For example, during the manufacture of the Accused Products, Defendant TI uses a CMP pad dresser (e.g., 3M's Trizact pad conditioner) that includes a first monolayer of superabrasive particles disposed on and protruding from one side of a metal support layer, wherein the difference in protrusion distance between the highest protruding tip and the second highest protruding tip of the monolayer of superabrasive particles is less than or equal to about 50 microns; a second monolayer of superabrasive particles disposed on the metal support layer on an opposite side from the first monolayer, wherein the superabrasive particles of the second

monolayer are positioned to have substantially the same distribution as the superabrasive particles of the first monolayer; and a rigid support coupled to the second monolayer of superabrasive particles opposite the first monolayer. On information and belief, TI contracted and continues to contract with 3M and/or other pad conditioner vendors to purchase and use the ’270 Accused Instrumentalities with the claimed structural characteristics for the manufacture or fabrication of the Accused Products by or on behalf of TI.

83. Attached hereto as Exhibit 14, and incorporated by reference herein, are claim charts detailing how the ’270 Accused Instrumentalities used to manufacture or fabricate the Accused Products satisfy each element of at least claim 1 of the ’270 patent, literally or under the doctrine of equivalents. The chart illustrates a representative pad conditioner from 3M, which is representative of the remaining ’270 Accused Instrumentalities (including any pad conditioners that remain unknown to Plaintiff) because it has the same claimed structural characteristics as these remaining ’270 Accused Instrumentalities.

84. On information and belief, at least as of December 8, 2021, TI has induced and continues to induce others, including third-party pad conditioner manufacturers, to infringe one or more claims of the ’270 patent, including, but not limited to, claim 1, pursuant to 35 U.S.C. § 271(b), by actively encouraging or inducing them to make, use, sell and/or offer to sell in the United States, the ’270 Accused Instrumentalities with the claimed characteristics for the manufacture of the Accused Products, through TI’s commitment to purchase the ’270 Accused Instrumentalities and actual order placement for the ’270 Accused Instrumentalities.

85. On information and belief, at least as of December 8, 2021, TI also has induced and continues to induce others actively, knowingly, and intentionally, including its suppliers and contract manufacturers, to infringe one or more claims of the ’270 patent, including, but not

limited to, claim 1, pursuant to 35 U.S.C. § 271(b), by actively encouraging others to import into the United States, and/or make, use, sell, and/or offer to sell in the United States, the Accused Products or systems, devices, or products containing the Accused Products, by actively inducing others to infringe the ’270 patent by making, using, selling, offering for sale, marketing, advertising, and/or importing the Accused Products to their customers for use in downstream products that infringe, or were manufactured using processes that infringe, the ’270 patent, and by instructing others to infringe the ’270 patent.

86. For example, TI actively promotes the sale and importation of the Accused Products in marketing materials, technical specifications, data sheets, web pages on its website (e.g., https://www.ti.com), press releases, training tutorials, development and design tools, user manuals, and developer forums as well as at trade shows (e.g., the Consumer Technology Association’s Consumer Electronics Show (“CES”)) and through its sales and distribution channels that encourage infringing sales, offers to sell, and importation of the Accused Products. As another example, TI’s representatives travel to customer sites in and outside the United States for sales, support, and/or importation activities that include working with customers to facilitate these customers’ infringing testing, marketing, importation, and sales activity. On information and belief, TI supplies customers with Accused Products so that they may be imported, sold, or offered for sale by those customers, and/or incorporated into third-party products (more below). For example, TI provides direct sales to original equipment manufacturers and electronic manufacturing service providers. On information and belief, these direct sales include sales to customers in and outside the United States. TI also promotes, publicly on its website, uses of the Accused Products by customers in the United States. TI additionally provides a wide range of technical support to its customers and businesses in connection with the Accused Products made

using the ’802 Accused Instrumentalities by or on behalf of TI, including product-specific solutions (*see, e.g.*, https://education.ti.com/en/customer-support; https://ticsc.service-now.com/csm; https://www.ti.com/info/contact-us.html) and community forums (e.g., https://e2e.ti.com/).

87. On information and belief, TI also actively encourages third-party pad conditioner manufacturers so that the ’270 Accused Instrumentalities may be designed, developed, used, imported, sold, or offered for sale to TI with the claimed structural characteristics. On information and belief, TI assisted and continues to assist these third-party manufacturers, directly and/or through intermediaries, in the design, development or manufacture of the ’270 Accused Instrumentalities and provides technical support or supports the sales and importation of the ’270 Accused Instrumentalities (as well as the Accused Products that are/were manufactured using the ’270 Accused Instrumentalities).

88. Additionally, on information and belief, TI sells or offers for sale the Accused Products to third parties that incorporate the Accused Products into third party products (“the ’270 Third Party Products”).

89. On information and belief, TI assists third parties, directly and/or through intermediaries, in the development and manufacture of the ’270 Third Party Products and provides technical support and supports the sales and importation of the ’270 Third Party Products.

90. On information and belief, the ’270 Third Party Products are imported into the United States for use, sale, and/or offer for sale in this District and throughout the United States (“Imported ’270 Third Party Products”).

91. On information and belief, to the extent any entity other than TI, including but not limited to any of TI's third-party importers, imports the '270 Accused Instrumentalities, the Accused Products and/or '270 Third-Party Products into the United States for or on behalf of TI ("Third Party Importer"), TI is liable for inducement of infringement by the Third Party Importer. TI has encouraged the Third Party Importer to infringe the '270 patent and intended that it do so. This encouragement includes at least ordering or instructing the Third Party Importer to import the '270 Accused Instrumentalities, Accused Products and/or '270 Third-Party Products into the United States, providing directions and other materials to the Third Party Importer to enable such importation, and/or conditioning the receipt of benefits (included but not limited to payment) to the Third Party Importer on such importation. On information and belief, this behavior has continued since TI first became aware of the '270 patent and the infringement thereof.

92. On information and belief, to the extent any entity other than TI, including but not limited to any foundry contracted or engaged by TI, uses the '270 Accused Instrumentalities to fabricate or manufacture the Accused Products and/or Imported '270 Third-Party Products in the United States for or on behalf of TI ("Third Party Manufacturer"), TI is liable for inducement of infringement by the Third Party Manufacturer. TI has encouraged the Third Party Manufacturer to infringe the '270 patent and intended that it do so. This encouragement includes, without limitation, ordering or seeking the importation of the Accused Products from the Third Party Manufacturer since TI first became aware of the '270 patent, or instructing the Third Party Manufacturer to use the '270 Accused Instrumentalities for the manufacture or fabrication of the Accused Products.

93. For example, by providing technical specification and development criteria of the

Accused Products to the Third Party Manufacturer for manufacturing such products (and/or third party pad conditioner manufacturers), TI has induced, and continues to induce, third parties to infringe using the ’270 Accused Instrumentalities. Specifically, by providing technical specification and/or design/development criteria of the Accused Products to the Third Party Manufacturer for manufacturing such products or to third-party pad conditioner manufacturers for designing, developing and/or configuring the ’270 Accused Instrumentalities for manufacturing such products, TI has induced, and continues to induce, third parties to infringe the ’270 patent (e.g., to ensure that the Accused Products are/were manufactured without errors or flaws or that the Accused Products meet TI’s stringent technical/design/development criteria).

94. Despite having notice of the ’270 patent prior to the filing of this Complaint, TI has made a decision to continue the alleged inducement post-service of the Complaint. Indeed, following the filing of this Complaint, on information and belief, TI—acting with knowledge of the ’270 patent—used and continues to use the ’270 Accused Instrumentalities in the manufacture or fabrication of the Accused Products, and/or submitted and continues to submit purchase orders for the ’270 Accused Instrumentalities to third-party pad conditioner manufacturers with the intent of using the ’270 Accused Instrumentalities for manufacturing or fabricating the Accused Products.

95. Through active inducement, TI has benefitted and continues to benefit from using the ’270 Accused Instrumentalities for the manufacture and fabrication of the Accused Products and third-party products that incorporate the Accused Products.

96. Dr. Sung has suffered, and continues to suffer, damages as a result of TI’s infringement of the ’270 patent.

97. TI has continued to infringe the ’270 patent since at least December 8, 2021, despite being on notice of the ’270 patent and its infringement. TI has therefore infringed the ’270 patent knowingly, willfully, deliberately, and in disregard of Dr. Sung’s patent rights since at least December 8, 2021, at least by performing acts of infringement with actual knowledge of its direct and indirect infringement or while remaining willfully blind to the fact of its direct and indirect infringement. As a result of at least this conduct, Plaintiff is entitled to enhanced damages under 35 U.S.C. § 284 and to attorneys’ fees and costs under 35 U.S.C. § 285.

98. Dr. Sung reserves the right to modify its infringement theories as discovery progresses in this case. Dr. Sung shall not be estopped or otherwise limited or restricted for purposes of its infringement contentions or its claim constructions by the claim charts that it provides with this Complaint. Dr. Sung intends the claim charts for the ’270 patent to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Dr. Sung’s preliminary or final infringement contentions or preliminary or final claim construction positions.

JURY DEMAND

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Plaintiff demands a trial by jury on all issues triable as such.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Dr. Sung demands judgment for itself and against Defendant TI as follows:

A. A judgment that Defendant TI has directly infringed, and continues to infringe, one or more claims of each of the Asserted Patents;

B. A judgment that Defendant TI has induced infringement, and continues to induce infringement, of one or more claims of the Asserted Patents;

C. A judgment awarding Plaintiff damages to be paid by Defendant TI in an amount to be proven at trial adequate to compensate Plaintiff for TI's past infringement and any continuing or future infringement through the date such judgment is entered, but in no event less than a reasonable royalty for TI's infringement;

D. A judgment awarding Plaintiff treble damages pursuant to 35 U.S.C. § 284 as a result of Defendant TI's willfulness;

E. A judgment and order finding that this case is exceptional and awarding Plaintiff its reasonable attorneys' fees to be paid by Defendant TI as provided by 35 U.S.C. § 285;

F. A judgment awarding expenses, costs, and disbursements in this action against Defendant TI, including pre-judgment and post-judgment interest; and

G. A judgment awarding Plaintiff such other relief as the Court may deem just and equitable.

Dated: August 21, 2023

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