

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INNOSCIENCE AMERICA, INC.,
Petitioner,

v.

INFINEON TECHNOLOGIES AUSTRIA AG,
Patent Owner.

IPR2025-00721
U.S. Patent 9,899,481

**PETITIONER'S REASONS FOR PARALLEL PETITIONS AND
PETITION RANKING**

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TABLE OF EXHIBITS

Exhibit	Description
Ex-1001	U.S. Patent No. 9,899,481 (“the ’481 patent”)
Ex-1002	Prosecution History of the ’481 Patent (“Prosecution History”)
Ex-1003	Expert Declaration of Dr. Michael Lebby (“Lebby”)
Ex-1004	Curriculum Vitae of Dr. Michael Lebby
Ex-1005	U.S. Patent Application Publication No. 2014/0110760 (“Nega”)
Ex-1006	U.S. Patent Application Publication No. 2014/0175454 (“Roberts”)
Ex-1007	U.S. Patent Application Publication No. 2014/0225124 (“Otremba124”)
Ex-1008	U.S. Patent Application Publication No. 2014/0084433 (“Otremba433”)
Ex-1009	U.S. Patent No. 7,880,280 (“Otremba280”)
Ex-1010	U.S. Patent No. 10,930,524 (“Liu”)
Ex-1011	U.S. Provisional Patent Application No. 62/196,629 (“Provisional”)
Ex-1012	<i>Infineon Technologies Austria AG v. Innoscience (Suzhou) Technology Company, Ltd. et al.</i> , No. 3:24-cv-01553-SK, Dkt. No. 1, Complaint (N.D. Cal. Mar. 13, 2024)
Ex-1013	Anders Lind, <i>Source-Sense Packages for HV MOSFETs</i> , 46th International Symposium on Microelectronics (2013) (“Lind”)
Ex-1014	U.S. Patent No. 9,589,869 (“McKnight”)
Ex-1015	U.S. Patent Application Publication No. 2014/0097528 (“Otremba528”)

Petitioner's Reasons for Parallel Petitions and Petition Ranking
U.S. Patent 9,899,481

Exhibit	Description
Ex-1016	ThinPAK 8x8 New High Voltage SMD-Package (Apr. 2010) ("ThinPAK 8x8 Brochure")
Ex-1017	Recommendations for Printed Circuit Board Assembly of Infineon VDSO Packages (ThinPAK) (July 2010) ("ThinPAK Recommendations")
Ex-1018	U.S. Patent No. 9,099,441 ("Otremba441")
Ex-1019	<i>Infineon Technologies Austria AG v. Innoscience (Suzhou) Technology Company, Ltd. et al.</i> , No. 3:24-cv-01553-SK, Dkt. No. 56, Order Staying and Conditionally Closing Case for Statistical Purposes (N.D. Cal. Aug. 30, 2024)
Ex-1020	U.S. Patent No. 9,230,880 ("Otremba880")
Ex-1021	U.S. Patent No. 8,691,631 ("Otremba631")
Ex-1022	Excerpts of Stephen Pearton, <i>GaN and ZnO-based Materials and Devices</i> , Springer Series in Materials Science (2012) ("Pearton")
Ex-1023	Excerpts of Muhammad H. Rashid, <i>Power Electronics Handbook</i> , Academic Press Series in Engineering (2001) ("Rashid")
Ex-1024	Xiucheng Huang et al., <i>Evaluation and Applications of 600V/650V Enhancement-Mode GaN Devices</i> , IEEE Explore (2015) ("Huang")
Ex-1025	<i>Innoscience America, Inc. v. Infineon Technologies Austria AG</i> , IPR2024-00975, Paper 1, Petition for <i>Inter Partes</i> Review of U.S. Pat. No. 9,899,481 (June 14, 2024)
Ex-1026	<i>Innoscience America, Inc. v. Infineon Technologies Austria AG</i> , IPR2024-00975, Paper 6, Patent Owner's Preliminary Response (September 20, 2024)
Ex-1027	<i>Innoscience America, Inc. v. Infineon Technologies Austria AG</i> , IPR2024-00975, Paper 7, Decision Denying Institution (December 11, 2024)

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Exhibit	Description
Ex-1028	<i>Innoscence America, Inc. v. Infineon Technologies Austria AG</i> , IPR2024-00975, Paper 8, Petitioner's Request for Rehearing (January 10, 2025)
Ex-1029	USPTO rescinds memorandum addressing discretionary denial procedures (February 28, 2025)
Ex-1030	Deposition of Ralf Otremba (February 12, 2025)
Ex-1031	Certain Semiconductor Devices and Products Containing the Same, Inv. No. 337-TA-1414, Public Verified Complaint (Jul. 26, 2024)

Petitioner's Reasons for Parallel Petitions and Petition Ranking
U.S. Patent 9,899,481

Innoscence America, Inc. ("Petitioner") requests review of U.S. Patent 9,899,481 (Ex-1001) and cancellation of claims 1-17. Petitioner is effectively filing parallel petitions (IPR2024-00975 and IPR2025-00721) separately challenging claims 1-17.

The Board should institute this Petition in the event that it maintains its decision denying institution of IPR2024-00975 (Ex-1027). Both petitions raise material patentability questions of the challenged claims of the '481 Patent, including whether the Board erred in a manner material to the patentability of the challenged claims by relying on Patent Owner's misrepresentations of the patent, its prosecution history, and the prior art (Ex-1028).

This Petition further confirms that post-grant review is appropriate and raises deposition testimony of the named-inventor acknowledging that at least claim 5 should never have issued. *See* Ex-1030 Otremba Depo. Trs., 99:18-100:3, 127:1-128:9 ("Q: And you said you reviewed the claims before they were submitted to the patent office?" "A: Yes. I didn't recognize that." "Q: Did you or Infineon ever inform the patent office that this claim was unexplainable?" "A: I just—I just realized that right now, just now.").

I. REASONS WARRANTING ADDITIONAL PETITIONS

A. Discretionary Denial Under 35 U.S.C. §325(D) Is Not Warranted

The factors in *Becton*, *Dickinson* and *Advanced Bionics* favor institution.

Advanced Bionics, step 1 (*BD* factors (a), (b), (d)) is satisfied as the same cited references and arguments in this petition were presented in petition IPR2024-00975, which the Board denied institution. Ex-1025; Ex-1027.

Advanced Bionics, step 2, (*BD* factors (c), (e), (f)) favor institution because, in denying institution of IPR2024-00975 (Ex-1027), the Board erred in a manner material to the patentability of the challenged claims by relying on Patent Owner's misrepresentations of the patent, its prosecution history, and the prior art (Ex-1028). The cited references in IPR2024-00975 (and here) nevertheless disclose 1) "the first transistor device is a lateral transistor device and a drain or a source of the first transistor device is coupled to the die pad" (which applicants argued was not presented in the examined art (Ex-1002, 31-32)), and 2) "the first current electrode is coupled to the die pad by a plurality of bond wires or a contact clip" (which the Examiner identified in the reasons for allowance (*id.*, 12-14)).

The institution decision based its decision on whether the petition's prior-art combinations rendered obvious the "lateral transistor" limitation of claim 1. Ex-1027, pp. 8-10, 21-23, 47-48. Indeed, as discussed above (Grounds 1A and 2A, [1f]),

the '481 patent definitively defines a "lateral transistor" as a device with its electrodes arranged laterally on the same surface. Ex-1001, 5:56-60. And when applying for the patent, Patent Owner disclaimed "vertical transistors" by defining them based on the electrode locations. Ex-1002, pp. 31-32. Yet, when addressing this prosecution history in its Patent Owner's Preliminary Response in IPR2024-00975, Patent Owner clipped its admissions about the electrode placement and argued that only current flow can dictate whether a transistor is defined as "lateral" or "vertical." Ex-1026, pp. 8-10, 21-23, 47-48.

Patent Owner then doctored evidence in its POPR, arguing that the petition's prior-art designs were distinguishable because they were not lateral transistors. Ex-1028, pp. 1-2. Patent Owner presented a state-of-the-art reference ("Murari") disclosing a transistor structure with mixed current flows (i.e., parallel and perpendicular) similar to the transistor structure described in the IPR2024-00975 petition's prior art and argued that Murari's disclosures undermined the petition's obviousness case. *Id.* Patent Owner, however, egregiously doctored the most material figure in Murari for its argument. *Id.* At bottom, Patent Owner tried to rewrite a transistor reference to suggest that the presence of vertical current flow makes a transistor a vertical transistor, and that the petition's prior-art designs were not lateral transistors because they had vertical current flows. *Id.*, pp. 2-3.

When the record is viewed accurately, however, and not through the lens of the doctored evidence, it becomes clear that the lateral transistor in claim 1 can have both lateral and vertical current flows—as Murari and the petition's obviousness combinations show. *Id.* It is also clear from the decision denying institution that Patent Owner's misrepresentations, omissions, and doctored evidence caused the Board to misapprehend the record. *Id.*, p. 3. The Board incorrectly relied on these very misrepresentations in its analysis. Ex-1027, pp. 10, 15.

This Petition includes further discussion underscoring the plain & ordinary meaning of the “lateral transistor” element—defined by the current flow *and* electrode placement—as described in the '481 patent and as applied by applicant throughout the prosecution history (Grounds 1A and 2A, [1f]). Institution is appropriate here to further address these material errors and the challenges to the patentability of the '481 patent claims.

B. The Differences for the Petitions

The Grounds challenging the claims of the '481 patent for both petitions are the same, but the new petition (IPR2025-00721) further adds named-inventor public testimony from the ITC Investigation material to the patentability of the challenged claims and also addresses the Office's updated policy procedures for *Fintiv* discretionary denial. It would be efficient to institute one of the petitions so the Board

may consider the Grounds in light of the new named-inventor testimony and address errors pertaining to the patentability of the challenged claims.

C. The Petitions Do Not Constitute an Abuse of Process

Other than Petitioner's two petitions discussed herein, there have been no petitions previously filed by any petitioner challenging the claims of the '481 Patent. As noted above, institution is appropriate for two reasons—(1) the named-inventor already acknowledged that claim 5 should never have issued in the first place, and (2) in denying institution of IPR2024-00975 (Ex-1027), the Board erred in a manner material to the patentability of the challenged claims by relying on Patent Owner's misrepresentations of the patent, its prosecution history, and the prior art (Ex-1028). Instituting review of at least one of the petitions will allow the efficient consideration of the patentability of the challenged claims.

II. ORDERING OF THE PETITIONS

Petitioner requests the Board consider the petitions in the following order and not exercise its discretion to deny either: Rank 1 - IPR2024-00975; Rank 2 – IPR2025-00721.

Petitioner's Reasons for Parallel Petitions and Petition Ranking
U.S. Patent 9,899,481

Dated: March 13, 2025

/Lionel M. Lavenue/

Lionel M. Lavenue

Reg. No. 46,859

CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing **PETITIONER'S REASONS FOR PARALLEL PETITIONS AND PETITION RANKING** was served by Priority Mail Express on the correspondence address of record indicated in the Patent Office's Patent Center website for the '481 patent:

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Date: March 13, 2025

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