

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INNOSCIENCE AMERICA, INC.,
Petitioner,

v.

INFINEON TECHNOLOGIES AUSTRIA AG,
Patent Owner.

IPR2025-00175
U.S. Patent 8,686,562

**PETITIONER'S BRIEF UNDER 37 C.F.R. § 42.20(d)
PURSUANT TO BOARD ORDER**

Yu alone discloses the disputed limitation, in a single embodiment, unmodified. Patent Owner counters only “no motivation to combine.” But *Guardant Health* requires no motivation finding where, as here, a single reference discloses the elements in a single embodiment. *Guardant Health, Inc. v. Univ. of Wash.*, No. 2024-1129, 2026 WL 184334, at *4 (Fed. Cir. Jan. 23, 2026) (non-precedential). The counter collapses.

I. Yu Alone Discloses the Disputed Limitation; *Guardant Health* Forecloses Patent Owner’s “No Motivation to Combine” Attack.

The Petition expressly preserved a Yu-alone theory for the disputed limitation, asserting that “Yu at least suggests” “a capping layer thicker than a bottommost metal layer” and invoking Usui only “[t]o the extent Yu does not expressly disclose” it. Petition 38–39, 43, 45. Although Ground 5 is captioned as a § 103 combination of Yu and Usui, that preserved theory—a single-reference, single-embodiment disclosure—triggers *Guardant Health*. Where “the disputed elements of a claim are disclosed in a single embodiment in a single reference, no finding regarding a motivation to combine to arrive at those claimed elements is required.” *Guardant Health*, 2026 WL 184334, at *4 (citing *Gen. Elec. Co. v. Raytheon Techs. Corp.*, 983 F.3d 1334, 1352 (Fed. Cir. 2020)).

Yu ¶ [0036] is that embodiment. Yu names refractory metal nitrides expressly: the capping layer “may comprise . . . metal, such as . . . titanium nitride, tantalum nitride.” Yu, ¶ [0036]; see POR 57 (Patent Owner conceding that “Yu discloses that

these materials [TiN and TaN] can be used for capping layer 226. Yu, [0036].”). The same paragraph teaches that the capping layer may include metal “[with] a thickness between about 50 Å and about 1,000 Å.” Yu, ¶ [0036]. The entire 50–1,000Å range—including the disputed 600Å—is thicker than Yu’s 20Å-thick bottommost layer. Yu, ¶ [0029]; Zhao Decl. (Ex. 1002) ¶ 165 (a POSITA would understand these thicknesses apply regardless of capping-layer material); *see also* POR 62. Yu thus discloses the disputed limitation, a refractory metal capping layer thicker than the bottommost metal layer, in a single embodiment without modification.

Patent Owner’s “no motivation to combine” objection mistakes a single-reference disclosure for a two-reference combination. *See* POR 65–68; Sur-Reply 24. Under *Guardant Health*, Petitioner’s Yu-based assertions stand on a single-reference, single-embodiment disclosure; the motivation-to-combine objection is foreclosed. Patent Owner’s anticipated rejoinder—that Yu-alone is unpreserved because Ground 5 is captioned “Yu and Usui”—is the argument the Federal Circuit rejected in *Guardant Health*. The patent owner there contended the petitioner “never presented an argument solely relying on” the lead reference; the court disagreed, holding that the Petition’s citation to a single embodiment expressly teaching the disputed limitation preserved the single-reference theory, and that the Board “erred . . . by treating the Petition as if it were relying on modifying” one reference with the other. *Guardant Health*, 2026 WL 184334, at *5. The Board must

address Petitioner’s properly presented Yu-alone theory. *See Provisur Techs. Inc. v. Weber, Inc.*, 50 F.4th 117, 123–24 (Fed. Cir. 2022).

II. The Reply’s explanation that Yu includes a 600Å refractory metal cap is responsive, not new.

Patent Owner contends the Reply newly identifies that Yu includes a 600Å thick TiN and TaN capping layer, but it is not new. Sur-Reply, 24. The Petition mapped the disputed limitation to Yu ¶ [0036], which discloses a 50–1,000Å range for metals that include TiN and TaN. Petition 43 (“these thicknesses apply . . . whether Yu’s capping layer is comprised of polysilicon or titanium nitride or tantalum nitride”); *see also* Sur-Reply 22–23 (quoting Petition verbatim). *Guardant Health* shows this properly presents the argument. 2026 WL 184334, at *5. Patent Owner itself characterized the Petition as asserting “Yu alone suggests . . . a capping layer of a refractory metal nitride thicker than Yu’s alleged bottommost layer,” but argued its preferred 200Å thickness counseled against 600Å. POR 59–60. The Reply explained, in direct response, that Yu’s “metal” category embraces TiN and TaN and the disclosed 50–1,000Å range embraces 600Å. Reply 27–28. A reply may “expand on” the petition’s rationale when responding to Patent Owner’s arguments. *Apple Inc. v. Andrea Elecs. Corp.*, 949 F.3d 697, 706–07 (Fed. Cir. 2020). The Petition’s mapping is unchanged; the Reply sharpened its resolution. That is proper.

Dated: May 26, 2026

/Lionel M. Lavenue/
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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on May 26, 2026, a true and correct copy of the foregoing PETITIONER’S BRIEF UNDER 37 C.F.R. § 42.20(d) was served by electronic mail on the following counsel of record for Patent Owner:

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