

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ZHUHAI COSMX BATTERY CO., LTD.,
Petitioner

v.

NINGDE AMPEREX TECHNOLOGY LIMITED,
Patent Owner

Case IPR2025-00389
U.S. Patent No. 11,923,498

**PETITIONER'S AUTHORIZED RESPONSE TO DIRECTOR REVIEW
REQUEST**

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Patent Trial and Appeal Board
U.S. Patent and Trademark Office
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TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	PATENT OWNER’S RECYCLED ARGUMENTS AGAINST THE PRIOR-ART GROUNDS ARE NOT APPROPRIATE FOR DIRECTOR REVIEW AND REMAIN INCORRECT.	1
	A. The Board correctly found that the prior art discloses “a second insulating glue layer” having “a length larger than a length of the second recess,” and Patent Owner mischaracterizes the Petition and Board’s findings as relying exclusively on expert testimony for this claim element.	3
	B. The Board correctly found that Takemura’s disclosure does not teach away from the prior-art combination.	7
III.	PATENT OWNER’S REPETITION OF ITS DISCRETIONARY DENIAL ARGUMENTS FAILS TO SHOW ERROR IN THE ACTING DIRECTOR’S CORRECT DETERMINATION TO REFER THIS IPR TO THE BOARD.	10
IV.	CONCLUSION.....	14

I. INTRODUCTION

Patent Owner's Request for Director Review (Paper 13, "Request") merely rehashes its arguments previously considered and rejected by the Board and Acting Director. Based on the same facts and arguments, Patent Owner now requests the Director to reach opposite conclusions. The Director should not. Indeed, the Request falls woefully short of demonstrating any abuse of discretion or erroneous conclusion of law or material fact that would warrant Director Review. Accordingly, the Director should deny the Request.

The Request fails on both its fronts: (1) in its Institution Decision, the Board properly considered Patent Owner's same arguments against the prior-art grounds and correctly found them unpersuasive, and (2) in its Referral, the Acting Director considered the same discretionary denial arguments and correctly found them unpersuasive as well. Nothing in Patent Owner's Request provides reason to disturb those findings.

II. PATENT OWNER'S RECYCLED ARGUMENTS AGAINST THE PRIOR-ART GROUNDS ARE NOT APPROPRIATE FOR DIRECTOR REVIEW AND REMAIN INCORRECT.

Director Review of a Board decision is appropriate only for "(a) an abuse of discretion, (b) important issues of law or policy, (c) erroneous findings of material fact, or (d) erroneous conclusions of law." Director Review Process, 2(B)¹; 37

¹ Available at <https://www.uspto.gov/patents/ptab/decisions/director-review->

C.F.R. § 42.75. The Board abuses its discretion when its ruling “(1) is clearly unreasonable, arbitrary, or fanciful; (2) is based on an erroneous conclusion of law; (3) rests on clearly erroneous fact findings; or (4) involves a record that contains no evidence on which the [Board] could rationally base its decision.” *In re Vivint, Inc.*, 14 F.4th 1342, 1351 (Fed. Cir. 2021) (cleaned up). Patent Owner’s arguments do not come close to satisfying any of the reasons for Director Review.

Instead, Patent Owner’s Request rehashes two arguments from its Preliminary Response against the prior-art grounds. First, Patent Owner contends that the Board allegedly relied exclusively on expert testimony to supply a missing claim element, namely the second insulating glue layer having a length larger than a length of a second recess. Request, 7-9. Second, Patent Owner asserts that the Board ignored disclosure in Takemura that allegedly teaches away from using insulating tape. Request, 9-11. Both of these arguments lack merit and neither gives rise to a reason for Director Review. Patent Owner simply requests reconsideration of issues already resolved against it in the Board’s Institution Decision.

process.

- A. The Board correctly found that the prior art discloses “a second insulating glue layer” having “a length larger than a length of the second recess,” and Patent Owner mischaracterizes the Petition and Board’s findings as relying exclusively on expert testimony for this claim element.**

Patent Owner repeats its false argument that “the Petition relies ... exclusively on expert opinion from Dr. von Sack to supply th[e] missing claim limitation” [1.I]/[9.I.2]/[17.I], which recites “a second insulating glue layer” having “a length larger than a length of the second recess.” Request, 7-9. First, both the Acting Director and the Board already considered this argument and correctly found it unpersuasive. Second, the Petition relies on Takemura, with the support of Dr. von Sacken’s testimony, to show that the prior-art combinations disclose element [1.I]/[9.I.2.]/[17.I].

To begin with, the Acting Director already rejected Patent Owner’s missing element argument as part of its “holistic assessment” in the Referral to the Board. *See* Referral Decision (Paper 3, “Referral”), 3 (“[T]he determination not to exercise discretion to deny institution is based on a holistic assessment of all of the evidence and arguments presented.”); Patent Owner’s Discretionary Denial Brief (Paper 6, “DD Br.”), 35-37 (contending that Petitioner “relies on cursory expert testimony alone as evidence” to show claim element [1.I]/[9.I.2.]/[17.I]); Petitioner’s Opposition (Paper 7), 28-30 (rebutting Patent Owner’s missing element argument by explaining that Dr. von Sacken’s testimony confirms, not

supplants, what the prior art discloses to show the claim elements). There is no reason for the Director to reconsider this argument.

Moreover, the Board's Institution Decision also evaluated Patent Owner's same argument and correctly found "that Petitioner has shown sufficiently that the combination of Sato and Takemura accounts for limitation [1.I]." DI (Paper 10), 22-23, 25-26.² Specifically, the Board noted "that *Takemura discloses and renders obvious such tape sizing.*" DI, 23.³ Indeed, as the Petition explained, Takemura describes that "if there is no opposing negative electrode active material 4, such as the positive electrode active material 3 arranged around the negative electrode current collector terminal 2 in FIG. 9, *the surface of the positive electrode active material 3 has to be covered with masking tape 7.*" EX1006, ¶[0008]; Pet., 36-37 (addressing elements [1.I]/[17.I] (citing EX1006, ¶[0008])). The Board correctly credited the Petition identifying this disclosure in Takemura for showing how the prior-art combination discloses claim element [1.I]. DI, 23; Pet., 36-38.

² The Board also found that Petitioner had shown a reasonable likelihood of success in showing that claims 9 and 17, including elements [9.I.2] and [17.I], were unpatentable. DI, 28, 30.

³ Emphasis added unless otherwise noted.

The evidentiary record clearly supports the Board’s findings such that there are no erroneous conclusions of law or material fact that would warrant Director Review. Takemura explicitly discloses that the exposed conductor surface and terminals must be insulated from the active material of an opposing electrode to prevent short-circuiting and lithium plating. EX1006, ¶¶0008]; Pet., 36-38; EX1005 ¶¶[0113], [0137] (discussing to insulate leads from the active material of the opposing electrode). As the Petition notes, this disclosure *alone* in Takemura would have disclosed to a skilled artisan reader that the length of insulating tapes in Sato and Takemura must be longer than the length of the exposed current collector surface—i.e., the alleged missing element [1.I]/[9.I.2]/[17.I]. Pet., 36-38; EX1003, ¶¶150-152 (“[A] POSA would have understood that Takemura’s tape 7 had a length larger than the length of the exposed metal on the negative electrode current collector 6 ... to avoid lithium plating ...”). Indeed, if it were not, the tape would not serve its purpose to prevent lithium plating and short-circuiting. Pet., 36-39 (“It would have been illogical to apply a tape smaller than the second recess to cover the exposed metal from the positive active material.”); EX1003, ¶¶153-155. Thus, Patent Owner’s assertion that Petitioner admitted a claim limitation “was literally missing from all of the prior art” is fiction and mischaracterizes the record. Request, 2, 7-8.

Relatedly, Patent Owner is likewise demonstrably wrong that the Petition failed to satisfy the requirements under 35 U.S.C. § 311(b) and 37 C.F.R. § 42.104(b)(4) by allegedly relying exclusively on expert testimony to disclose element [1.I]/[9.I.2]/[17.I]. Request, 7-9. For example, citing paragraph [0008] of Takemura, the Petition explained that “Takemura’s insulating tape 7 is sized such that it overlaps (i) *all* the exposed metal on the negative current collector 6 and (ii) the edge of the negative active material 4 above and below the negative lead 2, to insulate exposed metal and prevent lithium plating.” Pet., 36; EX1003, ¶¶150-151. The Petition further explained that the “only logical sizing to avoid lithium plating,” in view of Takemura’s suggestion to cover all exposed metal, was “to form Sato’s additional polypropylene adhesive tape wider and longer than the width and length of the second recess formed in Sato’s negative active material.” Pet., 38. Dr. von Sacken’s testimony supported all of these explanations in the Petition, which were all grounded in the prior-art references. EX1003, ¶¶149-155.

The Board did, indeed, give Dr. von Sacken’s testimony “substantial weight,” DI, 25-26, as it should have. But, contrary to Patent Owner’s false assertions, the Board did not rely solely on Dr. von Sacken’s testimony for a missing claim element lacking in the prior-art patents and printed publications. Rather, as is entirely appropriate, the Board credited that Dr. von Sacken’s testimony confirms what the prior art discloses to a skilled artisan. DI, 25-26; *GD*

Energy Products, LLC v. Kerr Machine Co., PGR2025-00031, Paper 11 at 2

(P.T.A.B. June 25, 2025) (determining Petitioner did not improperly rely on expert testimony when testimony merely complies “with regulations requiring disclosure of ‘underlying facts or data’”).

Dr. von Sacken testifies to the plain, undisputed fact that a skilled artisan would have recognized that Takemura, along with other references, teaches to insulate *all* of the exposed conductor surface to prevent lithium plating and short-circuiting. EX1003, ¶¶149-155; *see also id.*, ¶¶39-73 (citing EX1008-EX1018) (showing that insulating tape was strategically placed to cover exposed metal in batteries to prevent lithium plating). Thus, the Board correctly recognized that Dr. von Sacken’s expert testimony confirms what was disclosed and known in the prior art, without supplanting the teachings of Sato and Takemura themselves.

B. The Board correctly found that Takemura’s disclosure does not teach away from the prior-art combination.

Patent Owner also repeats its incorrect and rejected argument that “Takemura disparages using the tape shown in Figs. 8 and 9 and therefore undercuts Petitioner’s proposed combination by explicitly teaching that a [POSA] should minimize or eliminate the use of tape.” Request, 9-10. The Board properly considered this argument against Petitioner’s obviousness rationale and was “not persuaded, on the current record, that Takemura teaches away from the particular

combination that has been proposed.” DI, 24-25. The Board’s analysis is fully grounded in its consideration of the prior art and follows established case law.

To teach away, a prior-art reference must “criticize, discredit, or otherwise discourage the solution claimed.” *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004). A reference does *not* teach away even if it expresses a general preference for an alternative invention. *See DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009). Indeed, a “given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine.” *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006). Patent Owner’s teaching away argument does not even approach the required standard.

Takemura discloses two alternative ways for preventing lithium plating without teaching away from either option. First, as shown in Figures 8 and 9, for example, Takemura discloses placing an insulating tape 7 on the positive electrode active material layer 3 adjacent to a negative lead 2 and exposed portions of the negative current collector 6. EX1006, ¶¶[0003], [0008], FIGs. 8, 9. Second, as shown in Figure 7, for example, Takemura also discloses removing the active material layer from the surface of the positive electrode current collector 5 that is located opposite the exposed portions of the negative current collector 6 and negative lead 2. EX1006, ¶¶[0018]-[0020], [0035], FIG. 7.

Takemura never “disparages” or discredits the use of insulating tape.

Request, 3; *see* EX1006, ¶[0035]. For example, in describing the embodiment in Figure 3, Takemura discloses that the “positive electrode active material layer 3 opposite the beginning of the winding end of the negative electrode is covered with insulating tape 7 to prevent lithium metal deposition” or “instead of covering it with insulating tape 7, the active material in this portion *may* be removed.” EX1006, ¶[0021]. That is, Takemura recognizes the strategic placement of insulating tape and the selective removal of active material as two suitable alternatives for preventing lithium plating. Thus, the Board correctly recognized that Takemura would not have discouraged a skilled artisan from using the insulating tape as described with respect to Figures 8 and 9 and as applied in the Petition’s combination.

The Board acknowledged that the invention disclosed in Takemura “seeks to improve on the ‘conventional’ design disclosed in Figures 8 and 9” and that “Takemura discloses a variety of benefits to its approach over the approach disclosed in Figures 8 and 9.” DI, 24. And the Board correctly found that Takemura’s discussion of the invention disclosed in Figures 1-7 “does not negate the teachings provided in Figures 8 and 9.” DI, 24; *see Intel Corp. v. Qualcomm Inc.*, 21 F.4th 784, 800 (Fed. Cir. 2021) (“It’s not necessary to show that a combination is the *best* option, only that it be a *suitable* option.” (cleaned up)). As

the Board recognized, “Petitioner only relies on Takemura for teaching how the tape disclosed in Sato would be sized and placed.” DI, 24; *see* Pet., 19-23, 36, 65-66. While Takemura’s alternative approach may offer other benefits, “that does not diminish Takemura’s teachings of a known size and placement that was conventionally used in the art.” DI, 24-25. Thus, the Board did not commit any legal error.

Additionally, Patent Owner’s citation to *Galderma Labs* is inapposite. *Galderma Lab’s., L.P. v. Tolmar, Inc.*, 737 F.3d 731 (Fed. Cir. 2013); Request, 10. There, the Federal Circuit reversed the district court’s finding that the patent challenger’s prior-art references taught away from each other. *Id.* at 738 (“[T]o the extent the court found that these facts taught away from the claimed invention, it clearly erred.”). Specifically, the Federal Circuit found that even the prior art’s preference for a composition concentration outside the claimed range did not rise to a teaching away from the prior-art combination. *Id.* at 738-739. Thus, here, even if Takemura is interpreted as expressing a preference for an alternative embodiment, that does not teach away from the use of insulating tape as shown in Figures 8 and 9.

III. PATENT OWNER’S REPETITION OF ITS DISCRETIONARY DENIAL ARGUMENTS FAILS TO SHOW ERROR IN THE ACTING DIRECTOR’S CORRECT DETERMINATION TO REFER THIS IPR TO THE BOARD.

Rather than showing—or even alleging, for that matter—any error in the

Decision to refer this IPR to the merits panel, Patent Owner simply rehashes arguments made in its Discretionary Denial Brief and requests a different outcome. That does not satisfy the standard for Director Review. The Acting Director considered—and rejected—Patent Owner’s arguments and correctly determined that “in view of all relevant considerations, discretionary denial of institution is not appropriate.” Referral, 2. That remains so.

First, Patent Owner fails to show any error, or misapprehension of the facts, in the Acting Director’s determination that “the early challenges to the patent[] tip[s] the balance against discretionary denial.” Referral, 2-3. In its Request, Patent Owner merely repeats its arguments that this IPR should be denied because trial in the district court is currently scheduled to proceed shortly before the FWD in this IPR and that Petitioner’s *Sotera* stipulation does not outweigh reasons for denial. *Compare* Request, 12, 15, with DD Br., 3-5, 18-19, 25-26. The Acting Director considered these arguments. Referral, 2. The Acting Director then rejected Patent Owner’s request for discretionary denial and concluded “the considerations counseling against discretionary denial *outweigh* those that favor it.” *Id.* There was no abuse of discretion or misapprehension of facts.

Next, despite Patent Owner’s attempt to characterize its arguments in related cases IPR2025-00405, IPR2025-00722, and IPR2025-00524 as new reasons for discretionary denial (Request, 13), they are not. These arguments were also

considered by the Acting Director. Patent Owner presented its arguments on the purported weaknesses of a subset of claims in the -405 IPR (DD Br., 8, 38). While largely irrelevant here, those arguments were considered, and rejected, as a reason for discretionary denial. *See* Referral, 2 (noting the parties' arguments and the record were considered when making the determination discretionary denial is not appropriate). Moreover, as Patent Owner acknowledged, the Board *instituted* the -405 IPR, undercutting Patent Owner's arguments. And Patent Owner's argument about the discretionary denial of the -722 IPR is beside the point because, as also acknowledged by Patent Owner, the Board *instituted* the higher-ranked proceeding (IPR2025-00431) challenging the same '131 patent. Furthermore, in its arguments about the -524 IPR, Patent Owner leaves out that the reason for the increased time between the FWD and the trial is because of *Patent Owner's own actions*. Patent Owner's late amendment to the district court complaint added the challenged patent—a fact that was known, and noted, by the Acting Director in the decision to refer the -524 IPR to the Board. *See* IPR2025-00524, Paper 10 at 1 (P.T.A.B. Sept. 3, 2025). Thus, Patent Owner fails to show that any of these related cases demonstrate changed circumstances that are a new reason to deny this IPR for discretionary reasons.

Finally, Patent Owner's attempt to equate the vastly different circumstances presented here to *Icashe* are inapposite. *Contra* Request, 14-15. In *Icashe*, more

than half the IPRs were determined to warrant discretionary denial; the remaining two cases were discretionarily denied for efficiency reasons. *Samsung Elecs Co., Ltd. v. Icashe, Inc.*, IPR2025-00639, Paper 11 at 2 (P.T.A.B. Aug. 14, 2025). Here, the Acting Director determined only one proceeding out of seven petitions warranted discretionary denial (and only because it was a parallel petition) and referred the remaining six proceedings to the Board. *See* Referral (referring all 5 IPRs); IPR2025-00524, Paper 10 at 3 (denying the -722 IPR and referring the -524 IPR). Of the six proceedings that were referred, four have already been instituted, one remains pending, and the one proceeding that was denied (IPR2025-00385) is pending Director Review. Moreover, the -385 IPR involves significantly different technology (related to the properties of the battery separator) than the battery structure technology at issue in this proceeding. Accordingly, Patent Owner's efficiency arguments ring hollow. *See Tesla, Inc. v. Intellectual Ventures II LLC*, IPR2025-00217, Paper 9 at 3 (P.T.A.B. June 13, 2025) (Stewart) ("[T]he Board is better suited to review a large number of patents involving diverse subject matter."); *also Shenzen Tuozhu Tech Co., Ltd. v. Stratasy, Inc.*, IPR2025-00438, Paper 10 at 3 (P.T.A.B. July 17, 2025) (Stewart).

Patent Owner fails to show any erroneous findings of material fact or conclusion of law made by the Acting Director when she determined "discretionary denial of institution is not appropriate" for this IPR. Referral, 2.

Accordingly, Director Review is not warranted. *See* Director Review Process, §
2.B.⁴

IV. CONCLUSION

Patent Owner has not shown that the Board or Acting Director abused their discretion or committed any error. Accordingly, Petitioner respectfully requests that the Director deny the Request.

Respectfully submitted,

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⁴ Available at <https://www.uspto.gov/patents/ptab/decisions/director-review-process>.

CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e))

I certify that the above-captioned **PETITIONER'S AUTHORIZED
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