

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 IPR2025-00524
U.S. Patent No. 12,015,118

**PETITIONER'S OPPOSITION TO
PATENT OWNER'S DISCRETIONARY DENIAL BRIEF**

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PETITIONER’S UPDATED EXHIBIT LIST

Exhibit No.	Description
1001	U.S. Patent No. 12,015,118
1002	File History of U.S. Patent No. 12,015,118
1003	Chinese Publication No. 202905885 with Certified English Language Translation (“Li”)
1004	Japanese Publication No. 2013-211096 with Certified English Language Translation (“Ishigaki”)
1005	U.S. Patent Publication No. 2011/0168550 (“Wang”)
1006	U.S. Patent Publication No. 2017/0256776 (“Saka”)
1007	Excel Spreadsheet of Saka Calculations
1008	U.S. Patent Publication No. 2016/0013480 (“Sikha”)
1009	U.S. Patent Publication No. 2013/0302685 (“Kim”)
1010	Declaration of Dr. Samuel Gido
1011	<i>Curriculum Vitae</i> of Dr. Samuel Gido
1012	Certified Translation of the File History of Chinese Patent No. 109004170
1013	“Lithium Ion Battery Nickel Manganese Cobalt Oxide Nmc Cathode Raw Material For Lab Battery Research,” Alibaba, accessed at https://www.alibaba.com/product-detail/Lithium-Ion-Battery-Nickel-Manganese-Cobalt_1600084022147.html
1014	<i>Intentionally Left Blank</i>
1015	File History of U.S. Patent No. 11,664,528
1016	File History of U.S. Patent No. 11,322,774
1017	File History of U.S. Patent No. 10,693,181
1018	ISO 13320-1 standard
1019	<i>Intentionally Left Blank</i>
1020	Kim, J., et al., “Structure Dependent Electrochemical Behaviors of Hard Carbon Anode Materials Derived from Natural Polymers for Next-Generation Sodium Ion Battery” <i>Polymers</i> , 15(22):4373 (Nov. 2023)

Exhibit No.	Description
1021	Malvern Instruments Ltd., “A basic guide to particle characterization,” accessed at https://www.malvernpanalytical.com/en/learn/knowledge-center/whitepapers/wp120620basicguidepartchar
1022	“Battery Capacity,” accessed at https://www.pveducation.org/pvcdrom/battery-characteristics/battery-capacity
1023	“What is the difference between hard carbon black and soft carbon black?,” <i>Dery Chemical</i> , accessed at https://www.dr-carbonblack.com/what-is-the-difference-between-hard-carbon-black-and-soft-carbon-black
1024	“Overview of carbon black industry in China,” Henan Jinhe Industry Co., Ltd., accessed at https://www.jinhetec.com/blog/overview-of-carbon-black-industry-in-china-53773.html
1025	Abanades, A., et al., “Experimental analysis of direct thermal methane cracking,” <i>International Journal of Hydrogen Energy</i> , Vol. 36, pp. 12877-86 (Aug. 2011)
1026	Kim, M., et al., “Preparation of high-crystallinity synthetic graphite from hard carbon-based carbon black,” <i>Applied Physics</i> , Vol. 127:156 (Feb. 2021)
1027	Dick, J.S., et al., “Alternate Instrumental Methods of Measuring Scorch and Cure Characteristics,” <i>Polymer Testing</i> , Vol. 14, pp. 45-84 (April 1994)
1028	Schlögl, R., “Part A: 2.1.10 Carbons,” <i>Department of Inorganic Chemistry, Fritz-Haber-Institute of the MPG</i> (2008)
1029	“PGR and IPR Institution Rates over Time,” Biologics HQ, accessed at https://biologicsshq.com/stats_entry/pgr-and-ipr-institution-rates-over-time/ (last accessed Aug. 4, 2025)
1030	Declaration of John C. Evans

I. INTRODUCTION

The present Petition challenges one of six patents asserted against Petitioner in co-pending district court litigation. The patent here was later added in an amended complaint. The Acting Director already referred five of the seven Petitions challenging these patents to the Board for determination on the merits. *See Zhuhai CosMx Battery Co., Ltd. v. Ningde Amperex Technology Ltd.*, IPR2025-00385, Paper 9; IPR2025-00389, Paper 9; IPR2025-00405, Paper 11; IPR2025-00431, Paper 14; IPR2025-00432, Paper 9 (PTAB July 2, 2025) (finding that “the challenged patents ... not be[ing] in force for a significant period of time” outweighs other factors, including the timing of the parallel litigation). The last two petitions, including this Petition, are pending referral decisions. *See Zhuhai CosMx Battery Co., Ltd. v. Ningde Amperex Technology Ltd.*, IPR2025-00722.

The reasoning for declining discretionary denial in the five referred cases applies with equal force—if not more—to the present Petition. The patent challenged here issued even more recently (13 months ago) than the patents challenged in those petitions (issuing in 2021, 2023, and early 2024), and therefore the lack of settled expectations favors institution on the merits even more strongly. *See id.* This Petition should be referred to the merits panel as well.

Additionally, issues of judicial economy and fairness in the co-pending litigation favor institution here. Trials that are targeted and streamlined by PTAB

assistance are more efficient and fairer than a trial that is overburdened with issues.

See, e.g., STA Group LLC v. Motorola Solns., Inc., No. 2:23-cv-00030, Dkt. No. 402 (E.D. Tex. Aug. 27, 2024). Indeed, it is a common litigation strategy to assert an unwieldy number of patents, even where most are weak (as PO has done here) in order to drive up costs and distract defendants. Plaintiffs can then drop patents on the eve of trial and focus their jury presentation on the strongest claims, leaving the threat of the other, dubious patents looming over the industry. Empowering defendants to resist that tactic has been one of the greatest benefits of IPR practice. This Petition will benefit from PTAB assistance at least to the same extent as the five related petitions already referred to merits panels.

To that end, and of particular importance to this Petition, the PTAB provides a tribunal of specialist judges who are well-versed in the law of patentability and have scientific backgrounds. The present Petition presents arguments based on (1) inherent anticipation, which is a nuanced legal doctrine, and (2) highly technical arguments against the claimed numeric values. A panel of experienced APJs is better suited to adjudicate the issues raised in this Petition than a lay jury.

II. THE INTERIM GUIDANCE WEIGHS STRONGLY AGAINST DISCRETIONARY DENIAL.

All of the factors discussed in the memorandum on Interim Processes for PTAB Workload Management issued March 26, 2025 weigh against discretionary denial here. The Acting Director has already found, for five petitions arising out of

the same litigation as the present Petition, that these factors outweigh the collective effect of any reasons that favor discretionary denial. *See Zhuhai CosMx*, IPR2025-00385, Paper 9; IPR2025-00389, Paper 9; IPR2025-00405, Paper 11; IPR2025-00431, Paper 14; IPR2025-00432, Paper 9. Accordingly, this Petition should be referred to a merits panel.

A. There are no settled expectations in the '118 patent's validity and the Petition's early challenge favors institution.

Patent Owner ("PO") argues that "the 'settled expectations' factor cannot outweigh the other factors." Patent Owner's Discretionary Denial Brief ("Br."), 5 (citing nothing). To the contrary, the "settled expectations" factor *can* outweigh the other factors, and the Acting Director has already found that it did in all five petitions related to this one. *See Zhuhai CosMx*, IPR2025-00385, Paper 9; IPR2025-00389, Paper 9; IPR2025-00405, Paper 11; IPR2025-00431, Paper 14; IPR2025-00432, Paper 9. It does here as well.

The '118 patent issued in mid-2024—just over a year ago. While PO alleges that Petitioner was generally aware of the application family earlier than that, the earliest PO even alleges such awareness is 2021. *See Br.* at 5. That does not amount to a duration that the Acting Director has found to weigh in favor of discretionary denial. By any metric (issue date or asserted date), this Petition is an early challenge—even earlier than the challenges brought in all of the related petitions, which the Acting Director considered to be early challenges. *See Zhuhai*

CosMx, IPR2025-00385, Paper 9; IPR2025-00389, Paper 9; IPR2025-00405, Paper 11; IPR2025-00431, Paper 14; IPR2025-00432, Paper 9. Indeed, the challenge brought here is the earliest challenge practicable under the IPR statute.

PO faults Petitioner for filing an IPR upon the opening of the statutory window for doing so, instead of rushing to file a PGR a few months earlier. Br. at 5-6. That difference of—at most—a few months from when the amended complaint triggered the challenge does not outweigh the fact that the challenged patent has not been in force long and there are multiple invalidating prior art references that were not considered during prosecution. Additionally, the present IPR was filed only a few months after the '118 patent was added to the litigation, while Petition was also diligently preparing petitions on other patents as well. Filing an IPR instead of a PGR can hardly be considered a lack of diligence under the circumstances.

To the extent the Office recently indicated it currently prefers PGR challenges instead of IPR challenges, that preference had not been stated at the time the amended complaint was filed adding the '118 patent or at the time Petitioner prepared and filed its IPR—a mere five months after the '118 patent was added to the copending litigation and 10 months after the '118 patent issued. Historically, the statistics appeared to favor petitioners filing IPRs over PGRs as

the mechanism for challenging newly-issued patents, so PO's attempt to fault Petitioner for not filing a PGR contradicts rational action. *See* EX1029.

Regardless, the fact that Petitioner filed an IPR instead of a PGR—even if that may no longer be the Office's preferred mechanism—should not outweigh the other reasons the Board has indicated weigh in favor of referring this Petition to the merits panel. “In particular, the challenged patent[] ha[s] not been in force for a significant period of time (issued in 2024, . . .), and, accordingly, Patent Owner has not developed strong settled expectations that favor discretionary denial.” *See Zhuhai CosMx*, IPR2025-00385, Paper 9 at 2; IPR2025-00389, Paper 9 at 2; IPR2025-00405, Paper 11 at 2; IPR2025-00431, Paper 14 at 2; IPR2025-00432, Paper 9 at 2. The Acting Director should forward the Petition to the merits panel.

B. The Petition's legal and technical arguments and appropriate reliance on expert testimony weigh against discretionary denial.

The Petition's reliance on expert testimony does not support discretionary denial under the facts of this case. *Contra* Br., 34-37. Petitioner appreciates the Board's comment that certain kinds of expert testimony are better adjudicated in an Article III court. Where arguments rely heavily on the experts' experience or impressions of ordinary skill, live testimony can allow the factfinder to make credibility determinations. That is not the case with the particular arguments or expert testimony here.

The expert declaration supporting the present Petition provides helpful context for the scientific principles underlying the alleged point of novelty. The patent claims the composition of a battery electrode based on well-known properties like compaction density and average particle size. *See* EX1002, ¶121; EX1001, 1:60-63. The expert declaration accompanying the petition explains the context for these properties, as well as other ways of expressing the same phenomena that are also commonly used in the art. EX1010, ¶¶67-69 (explaining based scientific properties of electrodes), ¶¶62-66 (explaining the general state of the art as reflected in the cited references).

Two of the cited prior-art references, Ishigaki and Saka, disclose battery electrodes that satisfy the density and particle-size limitations of the claims, but do not expressly disclose the numeric values for the compaction density or average particle size of the individual layers in their respective electrodes. *See* Pet., 22, 51 (disclosing ranges of total compaction densities of the bilayer electrodes). One of skill in the art would nonetheless readily appreciate that the battery electrodes disclosed in Ishigaki and Saka have these features, because compaction density and average particle size are properties necessarily present in every battery electrode.

A POSA would also appreciate how to determine the compaction density and average particle size of the individual layers of the electrodes disclosed in these references because the references disclose other numeric values for related

physical properties from which the compaction density and average particle size of the individual layers can be calculated, such as the total compaction density of the electrodes, the densities of other compositions (*e.g.*, the conductive carbon and the binder) of the electrodes, and information related to relative volumes (thicknesses) of the individual layers. *See* EX1010, ¶¶90, 151, 199, 295, 311-313; EX1007.

Petitioner's expert, Dr. Guido, walks through these calculations and provides the results. *Id.*

The role of the expert declaration is, therefore, to educate the reader about the basic physical properties and relevant calculations for certain limitations of the claims, and illustrate how those calculations are applied to the prior art. Upon receiving that education, a technically savvy reader (like an APJ) could read the Petition, follow the calculations and scientific reasoning, and appreciate the disclosure of the prior art without needing to defer to any opinions in the declaration based solely on Dr. Guido's credibility.

In other words, the expert declaration supporting the Petition does not merely use common sense or creativity to fill in gaps in the prior art because there are no such gaps. A panel of APJs can appreciate the merits of the patentability challenge in view of the expert's explanations—without merely deferring to his expertise or experience. The role of expert opinion in supporting the Petition is therefore not the type of authority-driven arguments that are better suited to fact-

finding in an Article III court. Rather, they are scientific, merits-driven arguments that are better suited to the technical experience and legal sophistication of APJs.

C. Compelling economic and public interests weigh against discretionary denial.

Battery safety is at the forefront of in-demand and developing technology. Today, every person carries portable electronic devices like cell phones, laptops, and tablets with them at all times, especially travelers on airlines and other commercial transportation. As electronic devices become more powerful and battery capacity increases, the danger of short circuits, battery fires, and even explosions increases.

According to FAA statistics, incidents of lithium battery fires on U.S. flights have surged by 388% since 2015, now happening nearly twice a week. EX1022, 0003. A passenger involved in one such incident reported to CBS News: “It was absolute chaos. It truly felt like every man for themselves. And it was terrifying. I didn’t know if we were going to explode. All I knew was I needed to get out and survive.” *Id.* David Wroth of UL Standards & Engagement, an organization focused on safety research, commented: “Any fire at 30,000 feet is unacceptable.” *Id.* A survey conducted by UL with over 800 flight attendants showed that 87% are concerned about the risks posed by lithium batteries on airplanes, with more than a third feeling that more should be done to ensure passenger safety. *Id.*

Safety measures to prevent these accidents are imperative. The use of short-resistant separators that prevent battery fires in the first place is far preferable to regulations or restrictions on passengers traveling with electronic devices. There is therefore a compelling need to ensure that only truly deserving inventions receive exclusive rights in this burgeoning area of technology. Patents that seek to monopolize broad technological concepts and read on prior art stifle innovation and competition. Enforcement of these patents drives up the costs of safe batteries for consumers. The '118 patent is one such undeserving monopoly.

Petitioner's batteries are a crucial commodity in the consumer-electronics market. Household names like HP and Apple have multi-million-dollar contracts with Petitioner to supply explosion-safe batteries for their devices. Allowing invalid patents to disrupt these supply chains and deprive these market-leading companies of their choice in batteries will ultimately hurt the economy and needlessly endanger consumers. The PTAB should avert this outcome by instituting review of the challenged claims, and after evaluating patentability on the merits, finding all claims unpatentable.

D. PO identifies a number of factors as allegedly “neutral” or favoring denial that actually weigh against discretionary denial.

No other forum has already adjudicated the validity or patentability of these claims. Especially in view of the facts that (1) none of the cited prior art was considered during original prosecution, and (2) Petitioner's expert identified at

least two errors in the sparse prosecution history of the '118 patent and its family, this factor weighs against discretionary denial. EX1010, ¶¶46-61.

The fact that there have been no material changes in the law does *not* favor discretionary denial here, as PO alleges, where the patent has not been in force for even a full year and there were clear errors in prosecution. *Contra* PO Brief, 34-35. PO argues that the Board should not revisit and second-guess the Examiner's decisions so soon after the claim's issuance, but that ignores that the Examiner never considered the art cited in the Petition. Pet., 70. Moreover, PO's argument here contradicts its purported criticism that Petitioner filed an IPR instead of a PGR—arguing both that Petitioner should have filed its challenge sooner, and also that the Board should not consider a challenge filed so soon after the patent issued. *Compare* Br., 5-6, *with* Br., 34-35.

To the contrary, the fact that the patent has not been in force long further supports that there are no settled expectations of the parties, which weighs against discretionary denial. *Contra* Br., 38-39 (suggesting, contrary to the Acting Director's express findings, that the settled expectations factor is neutral). These factors, on balance support an institution decision on the merits. Indeed, the '118 patent relatively recently issued, and has a long enforcement life ahead of it. The Office and the public have an interest in determining whether the claims were patentable in the first place.

E. The issue PO raises under Memo Factor 7 does not favor discretionary denial.

The only issue PO raises under Memo Factor 7 is the allegation that one of the co-pending petitions (challenging the '910 patent) fails to make a *prima facie* case of obviousness for one challenged claim (claim 20). *See* Br., 41. Petitioner already debunked this argument in its responsive brief defending the petition against the '910 patent—citing support for its challenge to claim element 20.7—and the Acting Director already declined discretionary denial for that petition. *See Zhuhai CosMx Battery Co., Ltd. v. Ningde Ampere Technology Ltd.*, IPR2025-00405, Paper 10 at 34-38 (PTAB June 13, 2025); *see Zhuhai CosMx*, IPR2025-00385, Paper 9; IPR2025-00389, Paper 9; IPR2025-00405, Paper 11; IPR2025-00431, Paper 14; IPR2025-00432, Paper 9. PO's continued focus on this non-issue does nothing to support its request for discretionary denial.

III. *FINTIV* DOES NOT SUPPORT DISCRETIONARY DENIAL.

While the Acting Director observed for the five related petitions that the *Fintiv* Factors weigh slightly in favor of denial, it ultimately did not outweigh other discretionary denial factors. *See Zhuhai CosMx*, IPR2025-00385, Paper 9; IPR2025-00389, Paper 9; IPR2025-00405, Paper 11; IPR2025-00431, Paper 14; IPR2025-00432, Paper 9. Similarly, for this Petition, the *Fintiv* Factors do not justify discretionary denial.

A. *Fintiv* Factor 1 is neutral or weighs slightly against denial: The district court may stay proceedings for any patents that are instituted, promoting efficiency between the two tribunals.

The Eastern District of Texas regularly issues stays following institution of IPR proceedings under circumstances similar to the present situation. PO's suggestion that the district court here has indicated that it will not issue a stay is simply untrue. *Contra* Br., 14. The court here has not made any statement one way or the other about the appropriateness of a stay, and all of the authorities PO cites relate to *pre-IPR institution* stays. Br., 14-16. That Texas courts, like a number of other courts, do not favor pre-IPR institution stays—and Petitioner here has not requested one—does not mean a post-IPR institution stay is unlikely here.

In deciding whether to stay litigation pending IPR, the Eastern District of Texas considers three factors: (1) whether a stay will simplify the issues in question and the trial of the case, (2) whether a stay will unduly prejudice or present clear tactical disadvantage to the nonmoving party, and (3) whether discovery is complete and whether a trial date has been set. *BarTex Research, LLC v. FedEx Corp.*, 611 F. Supp. 2d 647, 649-50 (E.D. Tex. 2009). Indeed, Texas courts have observed that the PTAB's determination in IPR “could narrow the issues before the court, prevent duplicative or unnecessary discovery, and encourage settlement or dismissal.” *Norman IP Holdings, LLC v. TP-Link Techs., Co.*, No. 6:13-cv-384-JDL, 2014 WL 5035718, at *3 (E.D. Tex. Oct. 8, 2014).

Removing asserted patents or claims from a litigation due to parallel IPR proceedings—even where *other* asserted patents will still proceed to trial—creates invaluable efficiencies in the district court.

The Eastern District of Texas regularly finds that instituted IPRs meet the stay factors and issues stays despite its otherwise aggressive procedural schedules. *See, e.g., Stellar, LLC v. Motorola Sols., Inc.*, No. 4:23-cv-00750, Dkt. No. 170 (E.D. Tex. Apr. 21, 2025); *Cellspin Soft, Inc. v. ByteDance Ltd.*, No. 2:23-cv-00496, Dkt. No. 106 (E.D. Tex. Jan. 27, 2025); *Cobblestone Wireless, LLC v. Cisco Sys., Inc.*, No. 2:23-cv-00454 (E.D. Tex. Dec. 9, 2024); *Intercurrency Software LLC v. Binance Holdings, Ltd.*, No. 2:23-cv-00370, Dkt. No. 86 (E.D. Tex. Aug. 29, 2024); *Foras Techs. Ltd. v. Aptiv PLC*, No. 2:23-CV-00314 (E.D. Tex. July 25, 2024); *Broadphone LLC v. Samsung Elecs. Co., Ltd.*, No. 2:23-cv-00001 (E.D. Tex. July 24, 2024); *STA Group LLC v. Motorola Sols., Inc.*, No. 2:22-cv-00381 (E.D. Tex. June 5, 2024); *Resonant Sys., Inc. v. Samsung Elecs. Co., Ltd.*, No. 2:22-cv-00423 (E.D. Tex. Mar. 8, 2024); *Netlist, Inc. v. Micron Tech., Inc.*, No. 2:22-cv-00203 (E.D. Tex. Feb. 10, 2024); *Commc 'n Techs., Inc. v. Samsung Elecs. Am., Inc.*, No. 2:21-cv-00444 (E.D. Tex. Feb. 2, 2023); *Vill. Green Techs., LLC v. Samsung Elecs. Co.*, No. 2:22-CV-00099 (E.D. Tex. Jan. 25, 2023); *BoxCast Inc. v. Resi Media LLC*, No. 2:21-cv-00217, Dkt. No. 163 (E.D. Tex. May 25, 2022).

Importantly, the Eastern District of Texas does *not* require that all petitions for asserted patents be instituted in order to find that a stay will create efficiencies and assist the district court. The court has stayed *entire cases* where only *some* of the asserted patents had instituted IPRs. *See OnPoint Systems, LLC v. Protect Animals With Satellites, LLC*, No. 4:20-cv-657 (E.D. Tex. July 12, 2022).

Alternatively, the court has bifurcated cases to stay the patents for which IPR was instituted, allowing other patents to proceed to trial. *See STA Group*, No. 2:23-cv-00030, Dkt. No. 402.

The court has found that “the outcome of a PTO proceeding is likely to assist the court in determining patent validity or eliminate the need to try infringement issues.” *NFC Tech. LLC v. HTC Am., Inc.*, No. 2:13-cv-1058 at 1 (E.D. Tex. Mar. 11, 2015). Any IPR that stands to remove or greatly reduce the number of asserted patents or claims is “likely to assist” the district court. *Id.*; *see also DataTreasury Corp. v. Fiserv, Inc.*, No. 2:13-cv-00431, Dkt. 616 at 8 (E.D. Tex. Aug. 14, 2014) (granting stay pending a third-party IPR). The value of IPRs is not simply to moot entire district court trials.¹ It is to streamline unwieldy trials for

¹ Indeed, PO’s logic would imply that any time a plaintiff asserts more than one patent, the PTAB should leave all validity challenges to the district court. This incentivizes patent owners to broaden lawsuits as gamesmanship to avoid

which justice is otherwise out of reach due to cost, complexity, and limited trial time. This is such a case. Streamlining is especially helpful where, as here, each of the asserted patents covers very different subject matter and the Petitions cite different prior art. There is no efficiency to be gained by adjudicating validity of all of the patents in the same forum.

Furthermore, PO's observation that Petitioner has not yet requested a stay in the parallel litigation, and its suggestion that grant of a stay is unlikely, is irrelevant and misleading. Br., 7-8. PO cites *Force MOS Tech. Co., Ltd. v. ASUSTeK Computer, Inc.*, Case No. 2:22-cv-00460, Dkt. No. 74 (E.D. Tex. April 11, 2024) for the proposition that the Eastern District of Texas "has a consistent practice of denying motions to stay when the PTAB *has yet to institute* post-grant proceedings" as to all patents at issue. Br., 15 (emphasis added). That refers to pre-institution stays. As shown above, the Eastern District of Texas, like a number of other courts, is more than willing to grant stays *after* IPR institution. Petitioner will seek such a stay here after institution.

Finally, PO attempts to use alleged missing feature 20.7 from another patent, U.S. Patent No. 11,769,910, challenged in another Petition, IPR2025-00405, as a reason to deny this Petition. Br., 8. *First*, whether or not '910 patent feature 20.7 is

accountability before the PTAB, further burdening litigants and the courts.

met has no bearing on whether to institute or deny in this case. *Second*, the '910 patent Corrected IPR Petition included multiple substantive arguments for claim element 20.7. *See, e.g., Zhuhai CosMx*, IPR2025-00405, Paper 10 at 34-38; IPR2025-00405, Paper 3 at 29-31, 43, 69 (PTAB Jan. 5, 2025). That element is identical in subject matter to previously-addressed elements [3.1] and [17.1], and the Petition cites to that previous analysis for element [20.7]. *See id.* at ix, xii, xiii, 27-28, 30, 67, 69. PO's argument about that IPR here is a mere distraction.

B. *Fintiv* Factor 2 is neutral: The proximity of the court's trial date is not informative here.

Factor 2 is neutral. Trial is currently set for July 6, 2026, which is four months before the latest possible date for the Final Written Decision (FWD) on November 7, 2026. The '118 patent was added to the case by amending the Complaint in late November 2024. That is why it is following a later timeline than the rest of the Petitions. That timing was driven by Patent Owner's strategic choices in litigation and should not be resolved against Petitioner here, who acted diligently and promptly in filing the IPR at the earliest possible time.

Additionally, the currently scheduled trial date here is only a preliminary target. As of this filing, Judge Gilstrap has *thirteen* trials scheduled in his courtroom the same week as the present parties' scheduled trial.² Only one will

² *See* (1) *Wacom Co. Ltd. v. Shenzhen Qianfenyi Intelligent Tech Co., Ltd.*, 2:24-

actually be held. The others will be rescheduled if the parties involved do not settle their respective disputes. Accordingly, the current, *tentative* trial date is not a reliable indication of the actual time to resolution in this case.

A more reliable indicator of the likely timeline is the average time to trial for Judge Gilstrap, which is currently 25 months and has been increasing. EX1026, 0001. That would make the anticipated trial date within weeks of the anticipated Final Written Decision. That time to trial also does not account for resolution of post-trial briefing, which takes an average of four months for Judge Gilstrap's cases in the Eastern District of Texas. EX1026, 0002. Institution will still provide

cv-00702; (2) *WAG Acquisition, L.L.C. v. Technius Ltd.*, 2:24-cv-00714; (3) *Ningde Amperex Tech Ltd v. Zhuhai CosMX Battery Co., Ltd.*, 2:24-cv-00728; (4) *Reid v. Riddell, Inc.*, 2:24-cv-00731; (5) *ElectraLED, Inc. v. Traxon Techs Ltd*, 2:24-cv-00741; (6) *DIGITALDOORS, INC. v. Independent Bank Group, Inc.*, 2:24-cv-00783; (7) *Assets, LLC v. Samsung Elecs Co., Ltd.*, 2:24-cv-00828; (8) *VB Stingray IP Solutions LLC v. Hewlett Packard Enterprise Co*, 2:24-cv-00868; (9) *CM HK Limited v. Samsung Elecs. Co., Ltd*, 2:24-cv-00880; (10) *Jackson v. CenterPoint Energy Inc.*, 2:24-cv-00956; (11) *Holland v. Annett Holdings, Inc.*, 2:24-cv-01072; (12) *Bracey v. Dolgencorp of Texas, Inc.*, 2:25-cv-00045; (13) *Weeks v. Bonvenu Bank, N.A. FKA Citizens National Bank*, 2:25-cv-00063.

judicial economy even where the FWD issues after trial but before post-trial motions. These circumstances make the gap between the IPR and the district court resolution smaller and minimize the weight of Factor 2.

Even these timelines, however, do not reflect the likelihood that Judge Gilstrap will grant a stay of some or all of the case following IPR institution here, as was done in the cases cited above for *Fintiv* Factor 1. Where stays are granted, it does not matter that the statutory FWD deadline will be one, two, or even five months after the *scheduled* jury trial, *contra* Br., 14-16, because any jury trial *will not include* the patents on review at the PTAB. In the event that any claims of the IPR instituted patents survive, the district court can lift the stay and proceed to a trial on the claims surviving FWD. Such a stay would make the current proximity of the anticipated trial date irrelevant to *Fintiv* Factor 2.

C. *Fintiv* Factor 3 weighs against denial: Minimal investment in the parallel proceeding by the time of the institution decision and expeditious IPR filing.

The co-pending district court litigation is still in its early stages. The parties have exchanged contentions and produced documents, many of which are reproductions from an earlier case. No depositions have been taken, no expert reports have been exchanged, and the *Markman* process has not even begun. *Compare* EX1023, with *Motorola Solns., Inc. v. Stellar, LLC*, IPR2024-01205, Paper 19 (PTAB March 28, 2025) (finding substantial investment in parallel

litigation where depositions had been taken, expert reports were already submitted, and a *Markman* ruling was already issued). The parties here will not even exchange potential terms for construction for months. EX1023. Fact discovery does not close until February 2026, when expert discovery will begin, followed by dispositive motions. *Id.* PO's claim to have produced "tens of thousands of documents" is artificially inflated as PO is double-counting *re-productions* from past and foreign litigations, collected months, if not years, ago. Br. at 20. Accordingly, because much of the investment relating to invalidity issues, including expert discovery and dispositive motions, will occur long after institution, this factor weighs against denial.

Furthermore, PO's arguments that the parties have substantially invested in an unrelated parallel litigation are misleading. PO primarily points to investments made in a *past* litigation between the same parties involving *other* patents, and foreign proceedings involving foreign counterparts—not the challenged patent. Br. at 22-25. That is not the kind of investment that is probative of *Fintiv* Factor 3 because it could not have been avoided by earlier filing and institution here. Indeed, PO's brief cites *no authority* for the proposition that sunk costs relating to *other patents and litigations* "should also be considered as investments in this follow-on lawsuit." Br., 24. Petitioner is aware of none. To the extent that discovery taken in a prior litigation is relevant to the current litigation, that actually

reduces the burden of production in this case and results in *less investment* in the current district court proceeding. This factor thus weighs against discretionary denial, not in favor of it.

This factor also weighs against denial because Petitioner here filed its IPR petitions at the earliest possible time. The '118 patent is newly issued and newly added to the copending litigation. Petitioner filed this Petition less than 5 months after it was added to the litigation. To the extent that this factor seeks to promote diligence in filing, such diligence has clearly been demonstrated here. *See, e.g., Samsung Electronics Co., Ltd. v. Headwater Research LLC*, IPR2024-01396, Paper 13 at 7 (PTAB Apr. 1, 2025) (noting that petitioner's diligence in filing the IPR weighed against denial).

Finally, PO observes that Petitioner here has been found liable for patent infringement in the past, as though that prior finding is relevant to the merits of its current patentability challenge or to *Fintiv* Factor 3. For that matter, PO's other patents have also been invalidated in prior proceedings, which (by Petitioner's logic) would counsel in favor of *inter partes* review here. Petition at 17-22. In any event, PO again attempts to distract from the strength of the cases at hand. Every dispute and every petition should be decided on its own merits. The Director should not prejudice its consideration of a given petition with unrelated findings from past litigations. The public benefits from the elimination of patent claims that

should not have issued. Whether a petitioner has been found to infringe other patents in the past does not bear on the merits of the present dispute.

D. *Fintiv* Factor 4 weighs strongly against denial: Petitioner’s *Sotera* stipulation strongly weighs against discretionary denial.

Petitioner filed a *Sotera* stipulation concurrently with every one of its petitions—eschewing any gamesmanship, for example by waiting until after PO’s preliminary response to file a stipulation. Indeed, in so filing its *Sotera* stipulations with its petitions, Petitioner unequivocally consented to having the PTAB adjudicate the prior-art merits of its Petitions. *See Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020) (precedential as to § II.A). According to the PTAB’s procedures in effect at the time of the filing, that concession would have precluded the Board from discretionarily denying the Petition based on the parallel litigation. It would be procedurally irregular and unduly prejudicial for the Office to retroactively apply to Petitioner here its new guidance limiting the effect of such stipulations.

At least for the present Petition, the Director should maintain the standards for institution in place at the time this Petition was filed, which Petitioner relied upon in crafting its Petition and *Sotera* stipulation. Petitioner developed the arguments in the Petition and corresponding litigation strategy based on the standards outlined in the June 21, 2022, Interim Procedure for Discretionary

Denials issued by the Office (the “*Fintiv* memo”), including the PTAB’s stated policy that a *Sotera* stipulation would avoid discretionary denial.

It is well established that the Patent Office cannot apply rules retroactively. *See Bowen v. Georgetown Univ. Hosp.*, 488 U.S. 204, 213-214 (1988) (holding that agencies cannot “act retroactively” unless Congress expressly authorizes). “Elementary considerations of fairness dictate that individuals should have an opportunity to know what the law is and to conform their conduct accordingly.” *Landgraf v. USI Film Prods.*, 511 U.S. 244, 265 (1994).

Guidance like the *Fintiv* Memo, while perhaps not formally a rule, nonetheless has the effect of a rule—especially where it directly sets standards for instituting IPRs and was binding on Board panels. *See* 35 U.S.C. § 316(a) (mandating that “[t]he Director shall prescribe regulations” including regulations “(2) setting forth the standards for the showing of sufficient grounds to institute a review under section 314(a)”). The Office’s rescission of the prior *Fintiv* memo, including the effect of the *Sotera* stipulation, effectively changed the standards for the showing of sufficient grounds to institute review under § 314(a).

Setting aside whether rescinding the *Fintiv* memo is itself an APA violation, *see generally Apple Inc. v. Vidal*, 63 F.4th 1 (Fed. Cir. 2023), applying that change retroactively surely violates the spirit of the APA, *Bowen*, and *Landgraf*.

Petitioners should have an opportunity to know what the institution standard is

upon filing their petition and to conform their petitions accordingly. This is especially true in light of the Office’s representation that any further changes to the institution process would be made through notice-and-comment rulemaking. *See* 88 Fed. Reg. 24,503 (April 21, 2023).

It is furthermore arbitrary and capricious for the Office to issue—and then retroactively enforce—guidance based on changes that *directly contradict* the Office’s prior guidance, particularly the controlling effect of a *Sotera* stipulation. Indeed, the Office did not even provide any reasoned explanation for the changes. *See Food & Drug Admin. v. Wages & White Lion Invs., L.L.C.*, 145 S. Ct. 898, 901 (2025) (explaining that when an agency changes position, it must “offer[] ‘good reasons for the new policy’”).

The reference to “workload needs of the PTAB” in the Director memo does not explain how the changes will aid that goal. *See F.C.C. v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009) (confirming that an agency changing position must show “that the new policy is permissible under the statute, that there are good reasons for it, and that the agency believes it to be better, which the conscious change of course adequately indicates”). The Director memo does not contain any objective analysis or data illustrating how the workload of the PTAB has changed, or, if it has changed, how such change impacts the PTAB’s ability to meet its statutory obligations. *Id.*

Applying the new *Fintiv* standards retroactively to this Petition prejudices the Petitioner, who relied upon the Office's prior guidance in incurring the costs of preparing and filing petitions and in coordinating strategies between district court and USPTO proceedings. This is particularly true where the retroactive application of a new rule was not first subjected to notice-and-comment rulemaking under the Administrative Procedure Act, despite the agency's stated intent to follow such procedures. *See NetworkIP, LLC v. F.C.C.*, 548 F.3d 116, 122-23 (D.C. Cir. 2008). In view of this prejudice, and the procedural irregularity surrounding the new *Fintiv* guidance and the bifurcated briefing process more generally, the Director should not exercise discretion to deny this Petition.

While the Director recently addressed and disregarded this retroactivity concern, *see Motorola Solutions, Inc. v. Stellar, LLC*, IPR2024-01284, Paper 17 at 5 (PTAB May 23, 2025), the Director misunderstood the real issue. The concern with applying the rescission of the *Fintiv* Memo retroactively is not whether Petitioner "had the opportunity to present ... arguments in view of the rescission," as the Director surmised. *Id.* Instead, the concern, as articulated here, is that the retroactive application prejudices the Petitioner who has relied upon the Office's prior guidance in coordinating strategies between district court and PTAB proceedings, and selecting prior art to be applied in both proceedings. This fundamental concern was not addressed by the Director in *Motorola Solutions*.

Additionally, Petitioner’s invalidity contentions are based on independent product testing of public-use batteries, and do not repeat the substantive arguments based on the patents and printed publications raised in the IPR. EX1030. As such, the present IPR serves as a true alternative to district-court litigation, not a duplicative proceeding. The Petition here is therefore distinguishable from the petition that was denied in *Motorola Solutions*, where the petitioner’s reliance on “unpublished system[s]” that mirrored printed prior art raised concerns about duplicative review. *Motorola*, IPR2024-01205, Paper 19 at 4. Accordingly, *Fintiv* Factor 4 weighs strongly against discretionary denial.

Even under the new guidance, the Office has confirmed that *Sotera Wireless, Inc. v. Masimo Corp.* is still binding precedent, and acknowledged that a *Sotera* stipulation—like the stipulation filed with the present Petition—“weighs strongly against exercising discretion to deny institution.” *See Solus Advanced Materials Co., Ltd. v. SK Nexilis Co., Ltd.*, IPR2024-01460, Paper 14 at 15 (PTAB April 22, 2025) (citing IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020)).

E. *Fintiv* Factor 5 is neutral or weighs slightly against discretionary denial.

As is true for most IPRs, Petitioner is a defendant in the parallel litigation, and here this fact is neutral for the reasons discussed for Factor 2. *See Google LLC v. Parus Holdings, Inc.*, IPR2020-00846, Paper 9 at 21 (PTAB Oct. 21, 2020) (“Here, ... Petitioner is the defendant in the parallel proceeding. This fact could

weigh either in favor of, or against, exercising discretion to deny institution, depending on which tribunal was likely to address the challenged patent first.”); *see also NVIDIA Corp. v. Invensas Corp.*, IPR2020-00603, Paper 11 at 23 (Sept. 3, 2020) (“[T]his factor weighs slightly against discretionary denial,” where the district court trial and IPR final written decision are expected “around the same time.”).

F. *Fintiv* Factor 6 and Memo Factor 3: The strong merits of the Petition weigh against discretionary denial.

The Petition presents a strong case of inherent anticipation and obviousness based on multiple grounds. Pet., 9-70. As detailed below, the Petition explains at length how the prior art discloses (and renders obvious) this claim element. PO’s arguments to the contrary do not warrant discretionary denial.

Like the related IPR of U.S. Patent No. 10,964,927 for which the Acting Director has declined discretionary denial, the ’118 patent recites a well-known electrode structure but specifies certain numeric values (compaction density and/or average particle size) that are not necessarily specified in the prior art. *See, e.g.*, IPR2025-00385 Pet. at 32-34, (challenging ’927 patent based on inherent anticipation and obviousness of numeric values). But that does not mean that prior-art electrodes did not have the properties expressed in those numeric values—they did. And a POSA would know how to determine those numeric values through basic calculations. *See* Pet., 51. PO’s focus on the prior-art’s lack of express

disclosure of these numeric values completely ignores Petitioner's argument: that these values are *necessarily present* (i.e. inherent) in the electrodes disclosed in the cited art—and a POSA would readily appreciate as much.

For example, the Petition explains that Ishigaki and Saka disclose battery electrodes that necessarily satisfy the density and particle-size limitations of the claims, even though the references do not expressly disclose the numeric values for these properties. *See* Pet., 22, 51 (disclosing ranges of total compaction densities of the bilayer electrodes). One of skill in the art would have nonetheless readily appreciated that the battery electrodes disclosed in Ishigaki and Saka have these features, because compaction density and average particle size are properties necessarily present in every battery electrode. *See* Pet., 3.

A POSA would have also appreciated how to determine the compaction density and average particle size of the electrodes disclosed in these references because the references disclose other numeric values for related physical properties from which the compaction density and average particle size can be calculated. For example, the total compaction density of the electrodes, the densities of other compositions (e.g., the conductive carbon and the binder) of the electrodes, and the information related to relative volumes (thicknesses) of the individual layers can be used to easily calculate these values. *See* EX1010, ¶¶90, 151, 199, 295, 311-313; EX1007. Where these primary references do not inherently possess a claimed

numeric value, Petitioner provides a secondary reference that does and a motivation to combine. *See* Pet., 35.

In short, PO's main argument against the Petition's obviousness theories is a straw-man argument that misstates the grounds in the Petition. Specifically, PO states:

Instead of identifying explicit teachings or suggestions in the prior art that would have led a POSITA to create a two-layer cathode structure having a compaction density greater than 3.2 g/cc, the Petition and CosMX's expert assume—without substantiation—that a POSITA would universally seek to maximize cathode density, regardless of the structural or compositional differences between single-layer and multi-layer cathodes.

Br., 36. PO's brief cites nothing for this sentence because there is nothing to cite. It is not true. Petitioner makes no such assumption and *does* cite express teachings in the art. Specifically, the Petition cites Kim for teaching that compaction density should be maximized in order to maximize the energy capacity of the battery. *See* Pet., 16, 17, 29 (citing EX1009).

Of course, the Petition acknowledges that there is an upper limit to the compaction density of the electrode, and that any POSA would understand that the benefits of compaction density maximization (energy maximization) is constrained by the function of the electrode in permitting the passage of ions. *See* Pet., 16, 17, 29 (elaborating the motivation to maximize the energy capacity of the battery).

Accordingly, PO's overarching summary of its merits argument is also based on a complete mischaracterization of the Petition:

Petitioner and Dr. Guido rely on flawed logic to form an unsteady cornerstone of all of their invalidity grounds: that a POSITA would desire to maximize the compaction density of a cathode, regardless of the composition or structure of, or manufacturing objectives for, the cathode—even if the resulting cathode would not be functional in a battery because it cannot convey lithium ions.

Br. at 2. It is not flawed logic or a “foundational assumption,” *contra id.*, that a POSA would desire to maximize the compaction density of the electrode because the prior art expressly teaches a POSA to do so and teaches that doing so in the way to maximize the energy density (power) of the battery. Pet., 16, 17, 29.

Moreover, Petitioner's logic does *not* extend regardless of the composition or functional result of the electrode—quite the opposite. The Petition directly addresses the upper limit of compaction density and acknowledges the need to balance that density with the need for ions to flow through the electrode material. Pet., 16, 17, 29. PO's blatant mischaracterization of the Grounds and inability to refute Petitioner's actual arguments reflect the strength of the merits. This factor weighs strongly in favor of institution.

Petitioner further addresses specific arguments raised by PO against each of Grounds 1-4 below.

1. Ground 1: Ishigaki

The Petition demonstrates that the main text of Ishigaki describes a two-layer electrode structure (*see* Pet., 10-15) with a total electrode compaction density of up to 4.4 g/cc (*see id.* at 15-17). Specifically, the Petition explains that Ishigaki teaches a total “electrode density” with a “lower limit of ... preferably 2.6 g/cm³ or more, and an upper limit of normally 4.2 g/cm³.” *Id.* at 17 (citing EX1004, ¶¶151). This range plainly meets the claim element requiring the total compaction density to be “greater than 3.2 g/cc.”

In its Brief, PO contends that “Ishigaki does not discuss a workable density range for a two-layer cathode structure” because “a POSITA would [not necessarily] interpret the entirety of the disclosed density ranges as being applicable to both one-layer *and* two-layer cathode structures.” Br. at 29. PO is simply wrong. Ishigaki first describes the two-layer electrode structure before providing the total electrode compaction density range applicable to that overall electrode structure. *See* EX1004 at 2-37. Accordingly, there is no basis to read Ishigaki’s reported density range as applying to a one-layer electrode structure—it plainly pertains to the described two-layer structure, which is the only structure contemplated by Ishigaki.

Avoiding the substance of Ishigaki’s disclosure, PO jumps to “Ishigaki’s examples [that] have densities that fall between 2.4-2.6 g/cc.” *Id.* But PO cites no

authority for the proposition that examples within a prior-art patent somehow vitiate the teachings of the specification. Indeed, that is not the law—a prior art reference must be read in its entirety. *See In re Warsaw Orthopedic, Inc.*, 832 F.3d 1327, 1332 (Fed. Cir. 2016) (citing *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568 (Fed. Cir. 1987)). Accordingly, PO’s incomplete and selective reading of Ishigaki provides no basis to deny institution.

PO also suggests that compaction densities of one-layer electrode structures would potentially differ from two-layer electrode structures. Br. at 29. That observation is irrelevant because Ishigaki discloses a two-layer electrode structure and a corresponding total compaction density range for that structure. At bottom, a “prima facie case of obviousness typically exists when the ranges of a claimed composition overlap the ranges disclosed in the prior art.” *In re Peterson*, 315 F.3d 1325, 1329 (Fed. Cir. 2003) (citing *In re Geisler*, 116 F.3d 1465, 1469 (Fed. Cir. 1997)); *see also E.I. DuPont de Nemours & Company v. Synvina C.V.*, 904 F.3d 996, 1008 (Fed. Cir. 2018) (““where there is a range disclosed in the prior art, and the claimed invention falls within that range, the burden of production falls upon the patentee to come forward with evidence’ of teaching away, unexpected results or criticality, or other pertinent objective indicia indicating that the overlapping range would not have been obvious in light of that prior art”) (quoting *Galderma*

Labs., L.P. v. Tolmar, Inc., 737 F.3d 731, 738 (Fed. Cir. 2013)). That prima facie case is demonstrated here.

2. Ground 2: Ishigaki and Kim

PO does not dispute that the combination of Ishigaki and Kim teaches the claimed compaction density of greater than 3.2 g/cc. *See* Br. at 30; *see also* Pet., 27–30 (providing motivation to combine). Instead, PO challenges Petitioner’s rationale for combining the references, calling it “flawed.” Br. at 30. PO’s alleged flaws fail for two reasons.

First, PO superficially asserts that a POSA would have been discouraged from attempting the proposed combination because the subject matter is “complicated” and requires consideration of various electrode “characteristics.” Br. at 30. A POSA is not a lay person unfamiliar with lithium-ion battery technology—as PO’s argument assumes—but a person with “at least an undergraduate degree in chemistry, chemical engineering, polymer science and engineering, or materials science and engineering and two years of experience in the field of battery materials and construction.” Pet., 9. Such a POSA would have been more than capable of implementing the straightforward combination proposed—compacting Ishigaki’s electrode to greater than 3.2 g/cc—with a reasonable expectation of success. This is particularly true given: (1) the general teaching in the prior art that higher compaction densities are typically beneficial

(all else being equal); (2) Ishigaki's disclosure of a two-layer electrode structure having a total compaction density ranging above 3.2 g/cc; and (3) Kim's disclosure that compaction densities above 3.31 g/cc, and up to 3.6 g/cc are both desirable and workable. *See* EX1010 at ¶212-214.

Second, PO's suggestion that Petitioner ignored cathode characteristics in the Ishigaki-Kim combination is unfounded. Br. at 30. The Petition specifically notes that both Kim and Ishigaki disclose cathode active materials for lithium-ion batteries using lithium cobalt nickel manganese oxide, with average particle sizes ranging from 5–50 µm. Pet., 27. It also explains that Kim and Ishigaki each disclose overlapping compaction density ranges, including values exceeding 3.2 g/cc. *Id.* at 28–29. Such shared characteristics between the electrodes of the two references would have provided a POSA with a reasonable expectation of success in combining them.

Finally, PO reiterates its irrelevant point that two-layer cathodes may employ different compaction densities than one-layer cathodes. Br. at 30. But as discussed, Ishigaki discloses a two-layer cathode structure with a compaction density that exceeds 3.2 g/cc, and Kim further confirms that such compaction densities are both workable and advantageous. The Petition therefore presents a strong motivation to combine the references.

3. Ground 3: Wang and Saka

PO argues that the motivation to combine Wang and Saka is flawed for the same reasons as Ishigaki and Kim. Br. at 32. PO's argument fails for similar reasons. The Petition explains the motivation to combine clearly. Wang and Saka both disclose lithium-ion batteries with similar structures—the same structures as the '118 Patent. Pet., 35. Wang and Saka both disclose cathode structures with two positive electrode mixture layers. *Id.* at 36. The active layers of both Wang and Saka are made of the same materials. *Id.* Wang teaches repeatedly that compaction is used to achieve any desired net density, which a POSA would have understood to be directly related to the energy capacity of the electrode. *Id.* Saka teaches that density is connected to energy capacity, and more specifically teaches a compaction density of up to 3.5 g/cc. Pet., 37, 44 (citing EX1006, ¶51). As Wang does not teach a specific compaction density, and claims to work with any desired density, a POSA would have been motivated to look to Saka for a known density to implement. *Id.* at 37.

PO makes two further arguments, each of which falls short. The first is that Saka's examples do not have density values greater than 3.2 g/cc. Br. at 32. But again, PO cites no authority that the examples are controlling over the main disclosure and that a POSA would ignore the explicitly taught density range of up to 3.5 g/cc. The second argument is that Saka uses more than one active material in

each layer, which might affect the applicable densities. *Id.* But PO never substantiates this speculation or explains why different active materials would have defeated the motivation to combine—especially in view of all the reasons given in the Petition encouraging the combination. As discussed above, a POSA is not a lay person with no experience in lithium-ion battery technology. A POSA would readily understand how to use different active materials in achieving the desired densities, and would understand that having different active materials does not render all of the teachings of two references inapplicable to one another.

4. Ground 4: Wang and Li

PO argues that the motivation to combine Wang and Li is flawed for the same reasons as Ishigaki and Kim, but provides no detail or support for this argument. Br. at 32. The Petition explains the motivation to combine clearly: Wang and Li disclose lithium-ion batteries with similar structures, including two positive electrode mixture layers that increase the energy density of the batteries. Pet., 60. Wang and Li both teach the use of the same active layer materials. *Id.* Because Wang doesn't teach a specific compaction density, a POSA would have looked to another reference to learn a desired density. The compaction density taught in Li would be a good reference to consider because the two batteries are so similar. *Id.* at 60-61.

PO argues that Wang and Li have “divergent objectives and materials.” Not true. The Petition explains that Wang and Li teach the use of the same materials. Pet., 62. As for “divergent objectives,” both Wang and Li are directed to improved lithium-ion batteries. To the extent Li “focuses on the thickness” and not density, that does not make Li divergent from Wang. Li discloses compaction densities of 3.8 g/cc for the first layer and an average compaction density of 4.1 g/cc across the two-layer structure. *Id.* at 62-63. A POSA would take from Li that these compaction densities would work in the Wang battery, given their other similarities.

IV. CONCLUSION

When the *Fintiv* Factors and other discretionary considerations are evaluated holistically to determine whether efficiency and integrity of the patent system are best served by denying or granting institution of this IPR, the answer here is clear: the Director should not exercise discretion to deny institution.

Respectfully submitted,

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CERTIFICATE OF WORD COUNT (37 C.F.R. § 42.24(d))

1. This Petitioner's Opposition to Patent Owner's Discretionary Denial Brief complies with the type-volume limitation of 14,000 words, comprising 8,371 words, excluding the parts exempted by 37 C.F.R. § 42.24(c).

2. This Patent Owner's Reply Brief on Discretionary Denial complies with the general format requirements of 37 C.F.R. § 42.6(a) and has been prepared using Microsoft® Word 2016 in 14-point Times New Roman font.

Respectfully submitted,

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

I certify that the above-captioned **PETITIONER'S OPPOSITION TO
PATENT OWNER'S DISCRETIONARY DENIAL BRIEF** and associated
Exhibits 1029-1030 were served in their entireties on August 5, 2025, upon the
following parties via electronic mail:

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