

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SK INNOVATION CO., LTD. and SK BATTERY AMERICA, INC.,  
Petitioner,

v.

LG CHEM, LTD. and TORAY INDUSTRIES, INC.,<sup>1</sup>  
Patent Owner.

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IPR2020-00987  
Patent 7,638,241 B2

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Before KRISTINA M. KALAN, CHRISTOPHER M. KAISER,  
and JEFFREY W. ABRAHAM, *Administrative Patent Judges*.

KAISER, *Administrative Patent Judge*.

DECISION  
Denying Institution of *Inter Partes* Review  
*35 U.S.C. § 314*

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<sup>1</sup> The Notice of Filing Date Accorded (Paper 5) identifies Toray Battery Separator Film Co., Ltd, and Toray Industries, Inc. as Patent Owner but does not identify LG Chem, Ltd. as Patent Owner. Patent Owner represents that LG Chem, Ltd. and Toray Industries, Inc. should be identified as Patent Owner. Paper 6, 2 (citing assignment recorded at Reel/Frame 042445/0809).

## INTRODUCTION

### *A. Background*

SK Innovation Co., Ltd. and SK Battery America, Inc. (collectively, “Petitioner”) filed a Petition (Paper 3, “Pet.”) requesting an *inter partes* review of claims 1–5, 9–12, 14–21, 24–31, and 33–36 of U.S. Patent No. 7,638,241 B2 (Ex. 1001, “the ’241 patent”). LG Chem, Ltd. and Toray Industries, Inc. (collectively, “Patent Owner”) filed a Preliminary Response. Paper 9 (“Prelim. Resp.”). With our authorization, Petitioner filed a Reply (Paper 11), and Patent Owner filed a Sur-Reply (Paper 12).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b) (2018); 37 C.F.R. § 42.4(a) (2019). The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted unless “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Section 314(a) does not require the Director to institute an *inter partes* review. *See Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”). Rather, a decision whether to institute is within the Director’s discretion, and that discretion has been delegated to the Board. *See* 37 C.F.R. § 42.4(a); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”).

After considering the Petition, the Preliminary Response, the Reply, the Sur-Reply, and the evidence currently of record, we exercise our

discretion under 35 U.S.C. § 314(a) and deny institution of *inter partes* review.

*B. Related Matters*

The parties identify two lawsuits involving the '241 patent: *Certain Lithium-Ion Battery Cells, Battery Modules, Battery Packs, Components Thereof, and Products Containing the Same*, Inv. No. 337-TA-1181 (Int'l Trade Comm'n), and *LG Chem, Ltd. v. SK Innovation Co., Ltd.*, No. 1:19-cv-01805 (D. Del.). Pet. 64–65; Paper 6, 2. In addition, the '241 patent previously was challenged by Amperex Technology Ltd. in IPR2018-00783. Prelim. Resp. 6–7; Ex. 1013.

*C. The Asserted Grounds of Unpatentability*

Petitioner contends that claims 1–5, 9–12, 14–21, 24–31, and 33–36 of the '241 patent are unpatentable based on the following grounds (Pet. 20–64):<sup>2</sup>

<b>Claim(s) Challenged</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>
1–5, 9–11, 24–29	102	Bucci <sup>3</sup>
1–5, 9–11, 24–29	103(a)	Bucci
2, 3, 11, 12, 14–21, 30, 31, 33–36	103(a)	Bucci, Yong <sup>4</sup>

*D. The '241 Patent*

The '241 patent, titled “Organic/Inorganic Composite Separator Having Morphology Gradient, Manufacturing Method Thereof and Electrochemical Device Containing the Same,” issued on December 29,

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<sup>2</sup> Petitioner also relies on a Declaration from Dr. Dale W. Schaefer. Ex. 1009.

<sup>3</sup> GB 2 005 289 A, published Apr. 19, 1979 (Ex. 1010).

<sup>4</sup> WO 2005/076388 A1, published Aug. 18, 2005 (Ex. 1011).

2009. Ex. 1001, codes (45), (54). The patent relates generally to battery separators, which are components used in batteries to separate electrodes but permit ion flow between electrodes. *E.g., id.* at 1:9–10, 2:47–50, 9:11–13.

The '241 patent discloses that conventional separators include a porous substrate and a porous active layer formed by coating at least one surface of the substrate with a mixture of inorganic particles and a binder polymer. *Id.* at 1:59–67. According to the '241 patent, a conventional active layer “shows homogenous composition morphology toward a thickness direction,” which means that the mixture of inorganic particles and binder polymer is “homogenous” through the thickness of the active layer. *See id.* The '241 patent discloses that conventional separators have “disadvantages in that inorganic particles in the porous active layer are detached and a lamination characteristic towards electrodes is deteriorated during a winding process.” *Id.* at 2:1–15. The '241 patent further discloses that, if the content of binder polymer in the active layer is increased to reduce those disadvantages, the porosity of the active layer is “decreased since the inorganic particles are present in relatively lower content, resulting in deterioration in performances of the electrochemical device, and the safety of the separator is also reduced due to the introduction of the porous active layer.” *Id.*

The '241 patent purports to solve those problems by the use of an active layer that “shows heterogeneity of composition morphology toward a thickness direction in which a content ratio of the binder polymer/inorganic particles present in a surface region of the porous active layer is higher than that of the binder polymer/inorganic particles present inside the porous active layer.” *Id.* at 2:40–45. The '241 patent discloses that, with such a

composition morphology, “stability and performances [sic] of the battery can be all improved together since the detachment of inorganic particles from the porous active layer may be reduced in the assembly process of the electrochemical device.” *Id.* at 2:56–60.

*E. Illustrative Claim*

Claims 1–5, 9–12, 14–21, 24–31, and 33–36 of the ’241 patent are challenged. Claims 1 and 30 are independent, and claim 1 is illustrative; it recites:

1. An organic/inorganic composite separator comprising:
  - (a) a porous substrate having pores; and
  - (b) a porous active layer containing a mixture of inorganic particles and a binder polymer with which at least one surface of the porous substrate is coated, wherein the porous active layer shows heterogeneity of composition morphology toward a thickness direction in which a content ratio of the binder polymer/inorganic particles present in a surface region of the porous active layer is higher than that of the binder polymer/inorganic particles present inside the porous active layer.

Ex. 1001, 16:34–44.

ANALYSIS

Patent Owner argues that we should exercise discretion under 35 U.S.C. § 314 and deny institution, because the ’241 patent is the subject of a pending ITC proceeding “involving the same parties, the same patent, and the same issues” that “will outpace this proceeding by nearly *five months*.” Prelim. Resp. 12 (citing *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”).

Petitioner disagrees, arguing that, “[b]ecause the ITC does not have the

authority to invalidate a patent in a way that is applicable to other forums, any decision by the ITC will not ‘resolve’ the issues in this proceeding.”

Pet. 4. Petitioner also argues that evaluating the factors set forth in *Fintiv* demonstrates we should *not* exercise discretion to deny institution of an *inter partes* review. Reply 6–10.

*A. Parallel Proceedings*

As previously described, Patent Owner has asserted the ’241 patent against Petitioner in both a district court proceeding and an ITC investigation. Pet. 64–65; Paper 6, 2. The district court proceeding has been stayed pending resolution of the ITC investigation. Pet. 4; Prelim. Resp. 13.

A hearing in the ITC investigation is scheduled to begin on December 10, 2020. Ex. 2008, 5. The ITC’s Initial Determination is due on March 19, 2021, and the “target date” for completion of the investigation is July 19, 2021. *Id.* As of the filing date of the Preliminary Response, fact discovery was complete, and the ITC had set a schedule requiring the completion of expert discovery and the filing and/or exchange of several substantive papers and trial preparation documents, including exhibit lists, summary determination motions, deposition transcripts, pre-hearing statements and briefs, and motions *in limine*, prior to the deadline for issuing an institution decision in this proceeding. *Id.* at 4–5.

*B. Discretion Under 35 U.S.C. § 314(a)*

The Board’s precedential decision in *NHK Spring Co. v. Intri-Plex Techs, Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential) guides us in determining whether to exercise discretion to deny institution on behalf of the Director. In *NHK*, the Board found that the “advanced state of [a] district court proceeding” was a “factor that weighs in favor of denying”

the petition under § 314(a). *NHK*, Paper 8 at 20. The Board determined that “[i]nstitution of an *inter partes* review under these circumstances would not be consistent with ‘an objective of the AIA . . . to provide an effective and efficient alternative to district court litigation.’” *Id.* (citing *Gen. Plastic Indus. Co., Ltd. v. Canon Kabushuki Kaisha*, IPR2016-01357, Paper 19, 16–17 (PTAB Sept. 6, 2017) (precedential in relevant part)).

The Board’s precedential decision in *Fintiv* sets forth six factors that we consider when determining whether to use our discretion to deny institution due to the advanced state of a parallel proceeding:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

*Fintiv*, Paper 11 at 6. “These factors relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding.” *Id.* In evaluating these factors, we take “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* (citing Patent Trial and Appeal Board Consolidated Trial Practice Guide 58 (November 2019), available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>).

We discuss the parties' arguments below in the context of considering the above factors.

1. *Factor 1: Whether a Stay Exists or Is Likely to Be Granted if a Proceeding Is Instituted*

Patent Owner contends the *Fintiv* factors apply to ITC investigations and that this factor weighs in favor of denial. Prelim. Resp. 13–16. In particular, Patent Owner notes that the Board in *Fintiv* explained that “ITC final invalidity determinations do not have preclusive effect, but, as a practical matter, it is difficult to maintain a district court proceeding on patent claims determined to be invalid at the ITC.” Prelim. Resp. 15 (quoting *Fintiv*, Paper 11 at 8–9).

With regard to this factor, Patent Owner notes that Petitioner has not requested a stay of the ITC investigation and, even if Petitioner had requested a stay, it is unlikely the ITC would grant a stay in view of the advanced stage of the ITC investigation, noting the December hearing date and July target date in the ITC. Prelim. Resp. 14.

Petitioner contends that Patent Owner's application of the Board's decision in *Fintiv* to the ITC investigation is misplaced, because *Fintiv*'s statement that “it is difficult to maintain a district court proceeding on patent claims determined to be invalid at the ITC” is mere dicta, and it is well established that ITC decisions have no preclusive effect in other forums. Reply 7–8. Petitioner contends this factor weighs in favor of instituting, because the related district court proceeding has been stayed, and the ITC investigation is not duplicative of an *inter partes* review, because the ITC does not have the authority to invalidate a patent, unlike the district court. *Id.*



In its Sur-Reply, Patent Owner contends that *Fintiv* is precedential in its entirety, and points out that in *Fintiv* the Board addressed Petitioner’s arguments regarding ITC proceedings in weighing the factors relating to exercising discretion under § 314(a). Sur-Reply 5–7 (citing *Fintiv*, Paper 11 at 8–9). In particular, Patent Owner notes the Board’s statement in *Fintiv* that “an earlier ITC trial date may favor exercising authority to deny institution.” Sur-Reply 5–6 (quoting *Fintiv*, Paper 11 at 8–9).

As Patent Owner notes, *Fintiv* expressly addresses ITC investigations, and the Board has considered ITC investigations in evaluating whether or not to exercise its discretion under 35 U.S.C. § 314. *Fintiv*, Paper 11 at 8–9 (“[E]ven though the Office and the district court would not be bound by the ITC’s decision, an earlier ITC trial date may favor exercising authority to deny institution under *NHK* if the ITC is going to decide the same or substantially similar issues to those presented in the petition.”); *Garmin Int’l, Inc. v. Koninklijke Philips N.V.*, IPR2020-00754, Paper 11 (PTAB Oct. 27, 2020) (exercising discretion to deny institution under § 314(a) in view of an ITC proceeding); *Comcast Cable Commc’ns, LLC v. Rovi Guides, Inc.*, IPR2020-00800, Paper 10 (PTAB Oct. 22, 2020) (exercising discretion to deny institution under § 314(a) in view of an ITC proceeding). Accordingly, we consider the ITC investigation relevant to our consideration of the *Fintiv* factors.

Specifically with regard to Factor 1, Petitioner has not requested a stay of the ITC investigation, and we agree with Patent Owner that a stay of the ITC investigation is unlikely given the hearing in the ITC investigation is scheduled to begin on December 10, 2020. The pending stay in the district court does not change the fact that the ITC investigation addressing the

validity of the challenged patent is likely to proceed as scheduled. For these reasons, we determine that this factor weighs against institution.

2. *Factor 2: Proximity of the Court’s Trial Date to the Board’s Projected Statutory Deadline*

Patent Owner contends this factor also weighs in favor of denial based on the ITC’s scheduled December 10, 2020 hearing date, the March 19, 2021 Initial Determination date, and the July 19, 2021 target date for a Final Determination. Prelim. Resp. 16–18. Patent Owner notes that the target date will occur roughly five months before the Board’s projected December 4, 2021 date for issuing a final written decision in the present proceeding. *Id.* at 16. Patent Owner further contends the facts of the present proceeding compare favorably to both *NHK* and *Fintiv*, in which the Board ultimately denied institution. Prelim. Resp. 17–18 (citing *NHK*, Paper 8 at 20; *Fintiv*, Paper 15 at 13).

Petitioner contends this factor favors institution, arguing that “[f]inding that this factor weighs in favor of denial would effectively prevent ITC litigants from pursuing IPR” because of the ITC’s average 18-month pendency. Reply 8–9. According to Petitioner, “the ITC’s final determination would always be projected to occur at or before the Board issued a final written decision. Accordingly, this factor does not weigh in favor of denial.” *Id.*

In its Sur-Reply, Patent Owner disputes Petitioner’s argument that finding this factor weighs in favor of denial “would effectively prevent ITC litigants from pursuing IPR.” Sur-Reply 7–8. In particular, Patent Owner argues that this factor is not dispositive in isolation, and the Board’s *Fintiv* analysis “takes a *holistic* view of whether efficiency and integrity of the

system are best served by denying or instituting review.” *Id.* at 8 (citing *Fintiv*, Paper 11, 6).

The current ITC schedule has an evidentiary hearing set for December 10, 2020, just days after the due date for this Decision, with a final determination set to pre-date the Board’s due date for a final written decision by several months. These facts weigh against instituting this proceeding.

We disagree with Petitioner that finding this factor favors denial will “effectively preclude ITC litigants from pursuing IPR.” Reply 8. As Patent Owner points out, this one factor is not dispositive. Rather, we consider this factor in connection with several other factors in determining whether to exercise our discretion under § 314(a).

3. *Factor 3: Investment in the Parallel Proceeding by the Court and Parties*

Patent Owner contends this factor favors denial. Prelim. Resp. 18. According to Patent Owner, the ITC has already resolved claim construction in its investigation, and by the time of projected institution of the present proceeding, the parties “will have already expended the overwhelming majority of total resources dedicated to the investigation,” as “the parties will have finalized contentions and expert reports on validity, filed summary determination motions and pre-hearing briefs, exchanged written witness statements of direct testimony, and prepared witnesses for their cross-examination at the remote hearing.” *Id.*

Petitioner contends this factor weighs in favor of institution, primarily because the claim construction that we would conduct after instituting review would not “duplicate efforts in the ITC.” Reply 9.

It is undisputed that the ITC and the parties have made substantial investments in the ITC proceeding, in the form of addressing claim construction and completing fact discovery, and in view of the hearing scheduled for December 10, 2020. *See* Ex. 2008, 5; Prelim. Resp. 18; Reply 9; Sur-Reply 8–9. We are not persuaded by Petitioner’s arguments that some of the ITC’s efforts would not be duplicated here, because the third *Fintiv* factor focuses on the substantial investment in the proceeding in the other tribunal, not on the degree to which that investment is duplicative of our likely efforts. Moreover, Petitioner’s argument is relevant only to one of the activities the ITC has undertaken, rather than the cumulative efforts of the ITC and the parties on all activities to date. Thus, we determine that the third *Fintiv* factor weighs against institution.

4. *Factor 4: Overlap Between Issues Raised in the Petition and in the Parallel Proceeding*

Patent Owner contends this factor favors denial because there is “extensive overlap” between the unpatentability issues raised in the Petition and the invalidity issues raised in the related ITC investigation. Prelim. Resp. 19; *see* Sur-Reply 9–10. Petitioner argues to the contrary because, “of the 29 claims that Petitioner[] ha[s] challenged, 17 claims . . . are no longer at issue in the ITC.” Reply 9.

There is no dispute that the 17 claims Petitioner identifies have been “withdrawn from the ITC investigation.” Sur-Reply 9. The fact that the ITC will not reach the invalidity of every claim challenged here supports instituting review. On the other hand, the ITC still will reach the invalidity

of 12 of the claims challenged here.<sup>5</sup> On these claims, the overlap of issues is complete, because Petitioner has incorporated its Petition into its invalidity contentions in the ITC investigation, placing before the ITC every issue raised in the present proceeding. Ex. 2012, 97. The complete overlap between the issues before us as to the 12 claims still being asserted at the ITC and the issues before the ITC supports denying institution.

Thus, the key question with respect to the fourth *Fintiv* factor is the relative weight we should give to the 12 challenged claims whose invalidity the ITC will decide and the 17 challenged claims whose invalidity is not at issue before the ITC. We note that *Fintiv* itself describes this situation: “if a petition involves the same prior art challenges but challenges claims in addition to those that are challenged in the district court, it may still be inefficient to proceed because the district court may resolve validity of enough overlapping claims to resolve key issues in the petition.” *Fintiv*, Paper 11 at 13. Given this possibility, *Fintiv* directs parties to discuss “the similarity of the claims challenged in the petition to those at issue in the district court.” *Id.* Despite this instruction, Petitioner does not identify any material differences between the challenged claims at issue in the ITC investigation and the challenged claims not at issue in that proceeding. Reply 9–10.

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<sup>5</sup> Petitioner contacted the Board by email on November 24, 2020, to inform us that the claims at issue in the ITC investigation have been narrowed further, leaving only 5 claims that are at issue both here and in the ITC, with the remaining 24 claims being challenged only in the present proceeding. Ex. 3001. Because both parties briefed *Fintiv* factor 4 in reliance on the original 12-claim overlap, we use that number in our analysis, but we note that the outcome of our analysis would be no different with the present 5-claim overlap.

With regard to this factor, “if the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding, this fact has favored denial” because “concerns of inefficiency and the possibility of conflicting decisions [are] particularly strong.” *Fintiv*, Paper 11 at 12. Here, it is undisputed that the same grounds, arguments, and evidence are presented in the Petition and the parallel ITC investigation. Prelim. Resp. 19; Reply 9–10; Sur-Reply 9–10; *compare* Pet. 15, *with* Ex. 2012, 75–77, 92–93, 97. We recognize that there is not complete overlap between the claims challenged in the Petition and those at issue in the ITC investigation. Although it is likely that some of the claims challenged here but not at issue in the ITC investigation contain additional limitations whose validity will not be passed on by the ITC, Petitioner does not address the substance of those limitations or demonstrate that they result in the Petition including “materially different grounds, arguments, and/or evidence than those presented in” the ITC investigation. *Fintiv*, Paper 11 at 11–12.

In view of the foregoing, we determine that the fourth *Fintiv* factor weighs against institution.

5. *Factor 5: Whether the Petitioner and the Defendant in the Parallel Proceeding Are the Same Party*

Patent Owner asserts that the same parties involved in the present proceeding are also involved in the ITC investigation. Prelim. Resp. 20; Sur-Reply 10. Petitioner does not address this factor. Reply 6–10. Accordingly, this factor weighs against institution.

6. *Factor 6: Other Circumstances that Impact the Board's Exercise of Discretion, Including the Merits*

Patent Owner argues that this factor favors denial because the Petition “is a derivative of ATL’s Petition [from IPR2018-00783] and even relies on the same expert.” Prelim. Resp. 20. Patent Owner also argues that “[d]enial is further warranted by the fact that institution would provide even more road-mapping opportunities for [Petitioner],” including Petitioner’s ability “to leverage [Patent Owner’s] arguments in the ITC investigation to navigate this proceeding.” *Id.* In addition, Patent Owner argues that the merits of the Petition are not unusually strong. Sur-Reply 10.

Petitioner contends this factor weighs in favor of institution. Specifically, Petitioner asserts that, “[t]o the extent the *Fintiv* factors apply and the Board concludes that any weigh in favor of denial, they are outweighed by the merits.” Reply 10.

As Patent Owner notes, there was a previous petition challenging the claims of the ’241 patent. Ex. 1013 (Board decision instituting review in IPR2018-00783). The grounds of unpatentability Petitioner asserts here are quite similar to those asserted in the earlier petition. *Compare* Pet. 15, with Ex. 1013, 5. As Petitioner notes, “[t]he Board has already considered the grounds asserted in the [present] Petition and found them meritorious” by instituting review in the earlier case. Reply 10; *see* Ex. 1013, 35. Given the Board’s treatment of the similar grounds asserted in IPR2018-00783, we acknowledge the probability that the present Petition establishes a reasonable likelihood of prevailing on the merits of Petitioner’s unpatentability assertions. This fact alone, however, does not establish that the merits of Petitioner’s unpatentability assertions are strong.

Accordingly, we determine that the facts underlying the sixth *Fintiv* factor are neutral with respect to our exercise of discretion under § 314.

7. *Conclusion on the Fintiv Factors*

We determine that *Fintiv* factors 1–5 weigh against institution. We determine that the sixth *Fintiv* factor is neutral. Accordingly, based on the facts and circumstances of this case, we determine that the *Fintiv* factors, on balance, weigh in favor of discretionary denial. For these reasons, we exercise our discretion to deny institution under § 314(a).

CONCLUSION

For the reasons set forth above, we determine that the factors and circumstances, on balance, weigh in favor of discretionary denial in this proceeding. Accordingly, we exercise our discretion to deny institution under 35 U.S.C. § 314(a).

ORDER

It is hereby

ORDERED that, pursuant to 35 U.S.C. § 314, the Petition is denied, and no *inter partes* review is instituted.



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