

Filed on behalf of: Zhuhai CosMX Battery Co., Ltd.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ZHUHAI COSMX BATTERY CO., LTD.,

Petitioner,

v.

NINGDE AMPEREX TECHNOLOGY LTD.,

Patent Owner.

Case No. IPR2023-00586

Patent No. 10,833,363

**PETITIONER'S REPLY TO
PATENT OWNER'S PRELIMINARY RESPONSE¹**

¹ This Reply was authorized by the Board's June 7, 2023 email (Exhibit 1033)

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EXHIBIT LIST

Exhibit	Description
1001	U.S. Patent No. 10,833,363
1002	File History for U.S. Patent No. 10,833,363
1003	Declaration of Dr. Menahem Anderman dated February 23, 2023
1004	Chinese Patent No. 106848381 (“Hong”)
1005	Translation of Chinese Patent No. 106848381 (“Hong”)
1006	U.S. Patent Pub. No. 2017/0084956 (“Zhuang”)
1007	U.S. Patent No. 6,544,685 (“Kim ’685”)
1008	U.S. Patent Pub. No. 2017/0069934 (“Kim ’934”)
1009	U.S. Patent Pub. No. 2007/0172736 (“Fujikawa”)
1010	Material Safety Data Sheet for Adiponitrile (ADN)
1011	Material Safety Data Sheet for Diethyl Carbonate (DEC)
1012	Material Safety Data Sheet for Ethylene Glycol Bis(propionitrile) Ether (DENE)
1013	Material Safety Data Sheet for Ethylene Sulfate (DTD)
1014	Material Safety Data Sheet for Ethylene Carbonate (EC)
1015	Material Safety Data Sheet for Fluoroethylene Carbonate (FEC)
1016	Material Safety Data Sheet for 1,3,6-Hexane Tricarbonitrile (HTCN)
1017	Material Safety Data Sheet for Lithium Hexafluorophosphate (LiPF ₆)

Exhibit	Description
1018	Material Safety Data Sheet for Lithium bis(trifluoromethanesulfonyl)imide (LiTFSI)
1019	Material Safety Data Sheet for Propylene Carbonate (PC)
1020	Material Safety Data Sheet for Propyl Propionate (PP)
1021	Material Safety Data Sheet for 1,3-Propane Sultone (PS)
1022	Material Safety Data Sheet for Succinonitrile (SN)
1023	Material Safety Data Sheet for Propanephosphonic Acid Anhydride (T3P)
1024	Material Safety Data Sheet for Vinylethylene Carbonate (VEC)
1025	Seward, et al., “The Dielectric Constants of Ethylene Carbonate and of Solutions of Ethylene Carbonate in Water, Methanol, Benzene and Propylene Carbonate,” <i>J. Phys. Chem.</i> , 62:1, 127-128 (1958)
1026	Declaration of Kelley Hayes Greenhill dated February 23, 2023
1027	ACS Common Organic Solvents Table of Properties
1028	ATL’s Infringement Contentions regarding the ’363 patent in <i>Ningde Amperex Tech. Ltd. v. Zhuhai CosMX Battery Co., Ltd.</i> , Civ. No. 2:22-cv-00232-JRG (E.D. Tex.)
1029	Docket Control Order in <i>Ningde Amperex Tech. Ltd. v. Zhuhai CosMX Battery Co., Ltd.</i> , Civ. No. 2:22-cv-00232-JRG (E.D. Tex.)
1030	United States District Court Judicial Caseload Profile
1031	ATL’s Amended Complaint filed in <i>Ningde Amperex Tech. Ltd. v. Zhuhai CosMX Battery Co., Ltd.</i> , Civ. No. 2:22-cv-00232-JRG (E.D. Tex.)
1032	ATL’s Complaint filed in <i>Ningde Amperex Tech. Ltd. v. Zhuhai CosMX Battery Co., Ltd.</i> , Civ. No. 2:22-cv-00232-JRG (E.D. Tex.)

Exhibit	Description
1033	June 7, 2023, E-mail from Patent Trial and Appeal Board in IPR2023-00586

Recognizing the deficiencies of their challenged claims, Patent Owner ATL disclaimed claims 13 to 16 of the '363 patent thereby negating Grounds 5 and 6, focused its Preliminary Response ("POPR;" Paper 8) on a single aspect of claim 1, and argued for discretionary denial under 35 U.S.C. § 314(a). Petitioner CosMX disputes ATL's characterization of the facts under the *Fintiv* framework and includes herewith a stipulation supporting institution. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential). Accordingly, the Board should not exercise its discretion under § 314(a) as a holistic view of the *Fintiv* factors overwhelmingly favors institution. Petition (Paper 1), 70-72. Indeed, CosMX's Petition presents a compelling case of anticipation by several prior art examples; little to no investment has occurred or is expected to occur in the parallel E.D. Texas litigation; and the Petition includes materially different grounds, arguments, and evidence than those present in the litigation.

***Fintiv* Factor 1 is neutral.** ATL agrees. POPR, 61.

***Fintiv* Factor 2 is neutral.** The parties agree as to the material facts related to the proximity of the E.D. Texas trial date to a FWD in this proceeding. Petition, 71-72; POPR, 61-62. CosMX maintains that this factor is neutral and, if not, does not warrant denial of institution in view of other *Fintiv* factors and CosMX's stipulation.

***Fintiv* Factor 3 weighs in favor of institution.** ATL does not dispute that factor 3 favors institution because little to no parallel investment has occurred or is

expected to occur. POPR, 61-63; Petition, 71; *see also*, *Nearmap US, Inc. v. Eagle View Techs., Inc.*, IPR2022-01009, Paper 7, 9 (PTAB Dec. 14, 2022) (“The litigation also is in a relatively early stage because the parties appear to have recently completed exchanging infringement and invalidity contentions and no claim construction hearing has occurred.”). While ATL served infringement contentions prior to the filing of CosMX’s petition (EX. 1028), ATL sought leave to amend them on June 13, 2023. In view of CosMX’s stipulation (Factor 4) and ATL’s agreement that institution does not depend on construing claims (POPR, 15), the parties and the district court are expected to invest little or no time and resources on duplicative matters. Indeed, the district court has issued no substantive orders related to IPR issues. *See Fintiv*, Paper 11 at 10 (“If, at the time of the institution decision, the district court has not issued orders related to the patent at issue in the petition, this fact weighs against exercising discretion to deny institution under NHK.”).

***Fintiv* Factor 4 weighs in favor of institution.** “[I]f the petition includes materially different grounds, arguments, and/or evidence than those presented in the district court, this fact has tended to weigh against exercising discretion to deny institution under NHK.” *Fintiv*, Paper 11 at 12–13. Even after ATL’s disclaimer of claims 13 to 16, CosMX’s Petition continues to challenge claims that are not involved in the litigation, *i.e.*, claims 7-10 and 12. These non-overlapping claims recite significant limitations that will not be addressed by the district court, such as

the further inclusion of fluoroethers, cyclic phosphonic anhydrides, and/or cyclic carboxylate esters in the claimed electrolyte. *See Google LLC v. Valtrus Innovations Ltd.*, IPR2022-01545, Paper 12, 17 (PTAB April 11, 2023) (finding non-overlapping claims that are not similar to overlapping claims weighs against denial).

ATL's sole argument as to Factor 4 relates to overlap of the prior art. POPR, 62. However, these concerns are mooted as CosMX provides the following stipulation: "If the Patent Trial and Appeal Board institutes an *Inter Partes* Review in this proceeding on the grounds presented in the Petition (Paper 1), then Petitioner will not pursue the same petitioned invalidity grounds in the related district court action (Civ. No. 2:22-cv-00232-JRG), nor will Petitioner pursue any invalidity ground in the litigation that includes any reference from any ground in the Petition." As ATL disclaimed claims 13 to 16, the stipulation's scope is broader than just those grounds that may be instituted. Under similar circumstances, the Board has found such a stipulation "mitigates any concerns of duplicative efforts between the district court and the Board, as well as concerns of potentially conflicting decisions" and favors institution. *VMWare, Inc. v. Intellectual Ventures I LLC*, IPR2020-00470, Paper 13, 20 (PTAB Aug. 18, 2020); *see also, Ericsson Inc. v. Koninklijke KPN N.V.*, IPR2022-00079, Paper 9, 13 (PTAB May 25, 2022) (similar stipulation favored institution with an 8-9 month gap between trial and FWD); *Bank of America, NA v. Nant Holding IP, LLC*, IPR2021-01333, Paper 9, 9-10 (PTAB Feb. 22, 2022) (similar

stipulation favored institution).

***Fintiv* Factor 5 is neutral.** ATL does not dispute the applicability of *Protect Animals with Satellites v. OnPoint Sys.*, IPR2021-01483, Paper 11, 17 (Mar. 4, 2022), which CosMX cited in its petition for the proposition that this factor is neutral. Petition, 72; POPR, 63. In any case, even if the Board concludes that this factor favors denial of institution, it should be given minimal weight in the final analysis.

***Fintiv* Factor 6 favors institution.** Even in the face of ATL's declaration (Ex. 2001), the Petition presents a compelling case that claims 1-6 and 11 are anticipated by each of several examples of CN 106848381 to Hong et al. ("Hong") and claims 7-10 and 12 are obvious over those same examples. Petition, 14-57.

ATL attacks CosMX's expert Dr. Anderman's assumptions for calculating claim 1's formula (3) for Hong's examples; largely with unsupported opinions. POPR, 17-54; *see e.g.*, Ex. 2001, ¶¶ 65, 67, 71-72, 74, 82, 84-88, 100, 109-110. Even if ATL's arguments are accepted as true, ATL leaves Dr. Anderman's alternative position—providing a range based on worst-case scenarios rather than assumptions (Petition, 21; Ex. 1003, ¶¶ 147-151)—essentially unchallenged. First, ATL inexplicably argues the same errors apply even when the assumptions do not. POPR, 55-56. Second, ATL critiques Dr. Anderman for statements not relied on as part of his "alternative" position, rendering its arguments irrelevant. *Id.*, 56-57; Ex. 1003, ¶¶ 147-151. Third, ATL fails to address all aspects of the "worst-case scenario,"

focusing on the upper bound for % PP. POPR, 57-58. Yet, ATL cannot explain how the upper limit % PP of an electrolyte can exceed the starting 25 wt% value when additives are added to, not removed from, the organic solvent to make the electrolyte. POPR, 57.

Further, if true, ATL's critiques on "quantities, states of matter, physical properties, and chemical behaviors" apply with equal force to any attempt to replicate the '363 patent examples. Like Hong, '363 patent Table 6 reports examples S6-5 and S6-6 with ten liquid and solid components (using Hong's organic solvents (including criticized EC), LiPF_6 , dinitrile component, and solid/liquid additives (including criticized FEC)), similarly reporting a relative mass ratio for the organic solvents based on the total (unreported) mass of the organic solvents, mass % of additives based on total (unreported) mass of the electrolyte solution, LiPF_6 molarity based on the total (unreported) volume of the basic electrolyte, all while not reporting temperatures. *Compare* POPR, 18-24, 33-36, 38 with Ex. 1001, 17:1-17 (admit EC is solvent), 22:45-55, 24:24-59, 30:48-31:7.

CosMX's strong anticipation positions establish a high likelihood that it will prevail with respect to at least one challenged claim, thus satisfying the "compelling merits" analysis of Factor 6. ATL's meritless arguments at best raise disputed questions of fact that warrant institution to develop the factual record. CosMX respectfully requests that the Board institute trial and find claims 1-12 unpatentable.

Respectfully submitted,

Date: June 21, 2023

By: / Michele C. Bosch /
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CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing **Petitioner's Reply to Patent Owner's Preliminary Response and Exhibit 1033** were served via email on June 21, 2023, in their entirety on the following:

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Patent Owner has consented to service by email.

Dated: June 21, 2023

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