

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

NINGDE AMPEREX TECHNOLOGY
LIMITED,

Plaintiff,

v.

ZHUHAI COSMX BATTERY CO., LTD.,

Defendant.

§
§
§
§
§
§
§
§
§
§

Civil Action No.: 2:22-CV-232

JURY TRIAL DEMANDED

**PLAINTIFF NINGDE AMPEREX TECHNOLOGY LIMITED'S P.R. 3-1 AND 3-2
DISCLOSURE OF ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS**

Plaintiff Ningde Amperex Technology Limited ("ATL") hereby makes the following disclosure of asserted claims and infringement contentions with respect to U.S. Patent No. 10,971,706 (the "'706 patent"), U.S. Patent No. 11,329,352 (the "'352 Patent"), U.S. Patent No. 10,833,363 (the "'363 Patent"), and U.S. Patent No. 10,964,987 (the "'987 Patent") (collectively, "the Asserted Patents") to Defendant Zhuhai CosMX Battery Co. Ltd. ("CosMX").

ATL's investigation is ongoing, and discovery is in its early stages. Accordingly, these disclosures are based on information available to ATL at this time. ATL reserves the right to supplement this disclosure after further discovery from Defendants and others, particularly documents and other discovery regarding Defendants' accused instrumentalities as disclosed below. ATL also reserves the right to accuse different instrumentalities or find alternative literal and/or equivalent infringing elements in Defendant' Accused Instrumentalities as disclosed below.

Pursuant to P.R. 2-2, all document production accompanying ATL's Disclosure of Asserted Claims and Infringement Contentions, other than publicly available exhibits referenced in ATL's P.R. 3-1(c) charts, shall be deemed "Confidential." Accordingly, the disclosure of all

such document production accompanying ATL's Disclosure of Asserted Claims and Infringement Contentions shall be limited to CosMX's outside attorneys of record and the employees of said outside attorneys.¹

I. ATL's RULE 3-1 DISCLOSURES

A. Each claim of each patent in suit that is allegedly infringed by each opposing party.

Pursuant to P.R. 3-1(a), ATL asserts that CosMX has infringed and continues to infringe at least the following claims of the '706 patent: 1, 5, 8, 12, and 13.

Pursuant to P.R. 3-1(a), ATL asserts that CosMX has infringed and continues to infringe at least the following claims of the '352 patent: 1, 2, 3, 5-12.

Pursuant to P.R. 3-1(a), ATL asserts that CosMX has infringed and continues to infringe at least the following claims of the '363 patent: 1, 2, 3-6, 11, 13, and 16.

Pursuant to P.R. 3-1(a), ATL asserts that CosMX has infringed and continues to infringe at least the following claims of the '987 patent: 1, 2, and 6-9.

As explained above, ATL believes that discovery from CosMX and others will provide additional evidence of the nature and/or scope of CosMX's infringement. Accordingly, ATL reserves the right to amend, supplement, or otherwise revise the Asserted Claims.

¹ In many portions of ATL's 3-1 and 3-2 disclosures, ATL has gone beyond the disclosure requirements required by P.R. 3-1 and 3-2. These additional disclosures and citations are made for the benefit of Defendants. ATL in no way confines their contentions to the specific citations of evidence and explicitly reserve the right to rely on additional or different evidence as the case moves forward through fact discovery, expert discovery, and trial. Furthermore, any omission of any other specific citation to the Accused Instrumentalities or documents related thereto does not constitute a waiver of ATL's right to raise any issues related to the Accused Instrumentalities or other documents related thereto at a later date.

B. Separately for each asserted claim, each accused apparatus, product, device, process, method, act, or other instrumentality ("Accused Instrumentality") of each opposing party of which the party is aware. This identification shall be as specific as possible. Each product, device, and apparatus must be identified by name or model number, if known. Each method or process must be identified by name, if known, or by any product, device, or apparatus which, when used, allegedly results in the practice of the claimed method or process.

Pursuant to P.R. 3-1(b), ATL asserts that the Asserted Claims of the Asserted Patents are infringed by ATL by at least the following Accused Instrumentality: CosMX Cell No. CA3862E1.

Based on information currently available, ATL believes that the following products implement the accused CosMX Cell No. CA3862E1: Lenovo Battery L20D4PC1, and Lenovo Legion 5 laptops. ATL further believes that CosMX specifically entered into agreements with Lenovo regarding the Lenovo's products identified above with the knowledge that such Lenovo products containing the Accused Instrumentality would be imported into and sold in the United States, including this District.

As explained above, ATL believes that discovery from CosMX and others will provide additional evidence of the nature and/or scope of CosMX's infringement. Accordingly, ATL reserves the right to amend, supplement, or otherwise revise the Accused Instrumentalities.

C. A chart identifying specifically where each element of each asserted claim is found within each Accused Instrumentality, including for each element that such party contends is governed by 35 U.S.C. § 112(6), the identity of the structure(s), act(s), or material(s) in the Accused Instrumentality that performs the claimed function.

Pursuant to P.R. 3-1(c), claim charts for CosMX's infringement of the Asserted Claims of the Patents-In-Suit are set forth as Exhibits 1 to 4. As explained above, ATL believes that discovery from CosMX and others will provide additional evidence of the nature and/or scope of CosMX's infringement. Accordingly, ATL reserves the right to amend, supplement, or otherwise revise the claim charts.

D. Whether each element of each asserted claim is claimed to be literally present or present under the doctrine of equivalents in the Accused Instrumentality.

Pursuant to P.R. 3-1(d), ATL asserts that, under the proper construction of the Asserted Claims and their claim terms, every limitation of the Asserted Claims of the Patents-in-Suit is literally present in CosMX's instrumentalities accused of infringing the claims. To the extent that any limitation is found to be not literally present, or to the extent that CosMX argues that any limitation is not present in the accused instrumentalities, ATL asserts that such limitation is present under the doctrine of equivalents.

E. For any patent that claims priority to an earlier application, the priority date to which each asserted claim allegedly is entitled.

Pursuant to P.R. 3-1(e), ATL notes that each of the asserted patents claim priority to an earlier application. Accordingly,

With respect to the '706 patent, the priority date to which each asserted claim is entitled is Nov. 29, 2017.

With respect to the '352 patent, the priority date to which each asserted claim is entitled is Aug. 31, 2015.

With respect to the '363 patent, the priority date to which each asserted claim is entitled is Sep. 21, 2018.

With respect to the '987 patent, the priority date to which each asserted claim is entitled is Apr. 11, 2018.

F. If a party claiming patent infringement wishes to preserve the right to rely, for any purpose, on the assertion that its own apparatus, product, device, process, method, act, or other instrumentality practices the claimed invention, the party must identify, separately for each asserted claim, each such apparatus, product, device, process, method, act, or other instrumentality that incorporates or reflects that particular claim.

Pursuant to P.R. 3-1(f), ATL wishes to preserve the right to rely on the assertion that its own apparatus, product, device, process, method, act, or other instrumentality practices the claimed inventions. Accordingly ATL, identifies the following products as practicing each of the

asserted claims of the Asserted Patents:

For the '352 Patent: GC-SDC-3862E1-010H / Lenovo, GC-SDC-3946B2-010H / Lenovo, GC-SDC-4541A8-010H / Lenovo, GC-SDC-4648C0-100H / Lenovo, GC-SDC-457970-010H / Lenovo, GC-SDC-486766-010H / Lenovo, GC-SDC-536656-100H / Lenovo, GC-SDC-547478-100H / Lenovo, GC-SDC-327890-100H / Dell, GC-SDC-407878-010H / Dell, GC-SDC-417883-010H / Dell, GC-SDC-427377-100H / Dell, GC-SDC-498071-010H / Dell, GC-SDC-585677-010H / Dell, GC-SDC-716159-100H / Dell, GC-SDC-564975-010H / HP, GC-SDC-624266-100H / HP.

For the '706 Patent: GC-SDC-3862E1-010H / Lenovo, GC-SDC-3946B2-010H / Lenovo, GC-SDC-4541A8-010H / Lenovo, GC-SDC-4648C0-100H / Lenovo, GC-SDC-457970-010H / Lenovo, GC-SDC-486766-010H / Lenovo, GC-SDC-536656-100H / Lenovo, GC-SDC-547478-100H / Lenovo, GC-SDC-327890-100H / Dell, GC-SDC-407878-010H / Dell, GC-SDC-417883-010H / Dell, GC-SDC-427377-100H / Dell, GC-SDC-498071-010H / Dell, GC-SDC-585677-010H / Dell, GC-SDC-716159-100H / Dell, GC-SDC-564975-010H / HP, GC-SDC-624266-100H / HP, GC-SDC-566075-010H / HP.

For the '363 Patent: GC-SDC-536656-100H / Lenovo, GC-SCC-516480-100H / Motorola, GC-SCC-7030A1-010H / Facebook, GC-SCC-614864-010H / Apple, GC-SDC-3862B8-010H / Apple, GC-SDC-2982D1-010H / Apple, GC-SCC-2448E0-010H / Apple, GC-SDC-4648C0-100H / Lenovo, GC-SDC-327890-100H / Dell.

For the '987 Patent: GC-SDC-401924-020H / Apple, GC-ADC-523674-010H / Apple, GC-ACC-489266-010H / Apple, GC-SCC-2855H2-010H / Apple, GC-SCC-2855G4-010H / Apple, GC-SCC-267394-010H / Apple.

II. ATL'S RULE 3-2 PRODUCTION OF DOCUMENTS

ATL is producing the documents corresponding to each of the categories set forth in P.R.

3-2 concurrently herewith:

- (a) Documents (e.g., contracts, purchase orders, invoices, advertisements, marketing materials, offer letters, beta site testing agreements, and third party or joint development agreements) sufficient to evidence each discussion with, disclosure to, or other manner of providing to a third party, or sale of or offer to sell, the claimed invention prior to the date of application for the patent in suit. A party's production of a document as required herein shall not constitute an admission that such document evidences or is prior art under 35 U.S.C. §102;
- (b) All documents evidencing the conception, reduction to practice, design, and development of each claimed invention, which were created on or before the date of application for the patent in suit or the priority date identified pursuant to P. R. 3-1(e), whichever is earlier; and
- (c) A copy of the file history for each patent in suit.

Pursuant to the parties' agreement via email on November 3, 2022, ATL will produce its responsive documents by November 04, 2022.

Dated: November 3, 2022

/s/ Michael D. Powell

Michael D. Powell

California Bar No. 202850

Sean Pak (*pro hac vice pending*)

California Bar No. 219032

QUINN EMANUEL URQUHART &
SULLIVAN LLP

mikepowell@quinnemanuel.com

seanpak@quinnemanuel.com

50 California Street, 22nd Floor

San Francisco, California 94111

Telephone: (415) 875-6600

Facsimile: (415) 875-6700

Lance Yang

California Bar No. 260705

QUINN EMANUEL URQUHART &
SULLIVAN LLP

lanceyang@quinnemanuel.com

865 S. Figueroa St., 10th Floor

Los Angeles, California 90017

Telephone: (213) 443-3000

Facsimile: (213) 443-3100

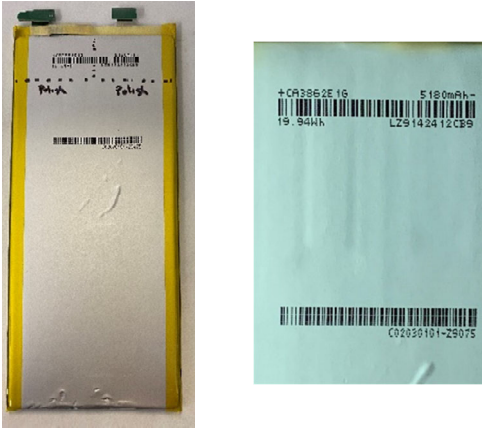
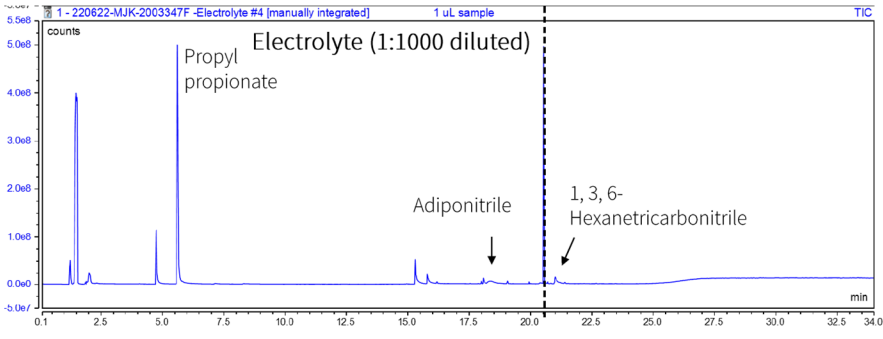
Deron R. Dacus
Texas Bar No. 790553
THE DACUS FIRM, P.C.
ddacus@dacusfirm.com
821 ESE Loop 323
Suite 430
Tyler, Texas 75701
Telephone: (903) 705-1117
Facsimile: (903) 581-2543

*Attorneys for Plaintiff Ningde Ampere
Technology Limited*

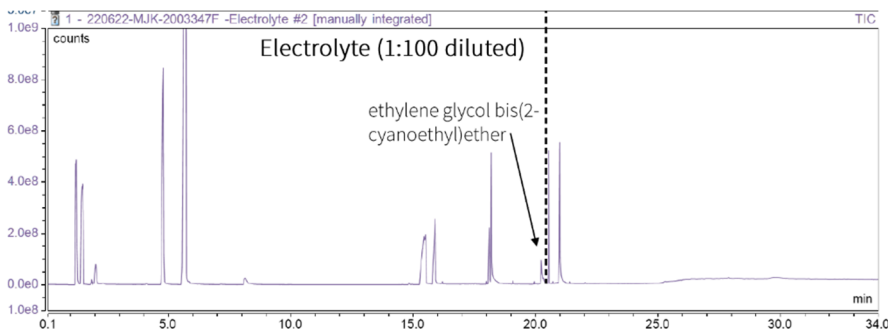
EXHIBIT 3

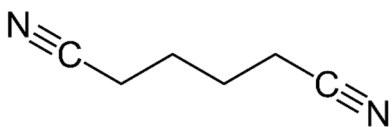
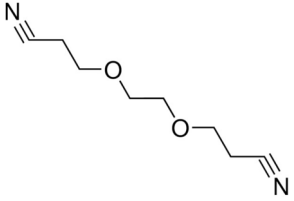
UNITED STATES PATENT NO. 10,833,363
CLAIM CHARTS FOR CLAIMS 1, 2, 3-6, 11, 13, and 16

Plaintiff Ningde Amperex Technology Limited (“ATL”) hereby identifies infringement evidence demonstrating where each limitation of each asserted claim is found within the following exemplary CosMX product: CA3862E1 battery cell.¹

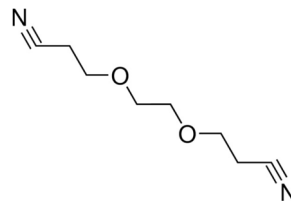
'363 Patent Claim	CosMX CA3862E1 Battery Cell
1.[pre] An electrolyte, comprising:	The CA3862E1 battery cell comprises an electrolyte. 
1.[a] a dinitrile compound, a trinitrile compound, and propyl propionate	The CA3862E1 comprises at least one dinitrile compound (adiponitrile and ethylene glycol bis(2-cyanoethyl)ether), at least one trinitrile compound (1,3,6-hexanetricarbonitrile), and propyl propionate. 

¹ The infringement analysis is preliminary, and ATL’s investigation of CosMX is ongoing. ATL reserves the right to amend or supplement these infringement contentions.

	 Electrolyte (1:100 diluted) ethylene glycol bis(2-cyanoethyl)ether												
1.[b] Wherein, based on a total weight of the electrolyte, a weight percentage of the dinitrile compound is X and a weight percentage of the trinitrile compound is Y,	The CA3862E1 battery cell’s dinitrile and trinitrile compounds have the following weight percentages based on total weight of electrolyte as determined via GC-MS: <table><tr><th colspan="3">Weight Percent in Electrolyte</th></tr><tr><td>Propyl propionate</td><td>Adiponitrile</td><td>1, 3, 6-Hexanetricarbonitrile</td></tr><tr><td>28.8</td><td>1.9</td><td>1.1</td></tr></table> <table><tr><th>Weight Percent in Electrolyte</th></tr><tr><td>Ethylene glycol bis(2-cyanoethyl)ether</td></tr><tr><td>0.6</td></tr></table>	Weight Percent in Electrolyte			Propyl propionate	Adiponitrile	1, 3, 6-Hexanetricarbonitrile	28.8	1.9	1.1	Weight Percent in Electrolyte	Ethylene glycol bis(2-cyanoethyl)ether	0.6
Weight Percent in Electrolyte													
Propyl propionate	Adiponitrile	1, 3, 6-Hexanetricarbonitrile											
28.8	1.9	1.1											
Weight Percent in Electrolyte													
Ethylene glycol bis(2-cyanoethyl)ether													
0.6													
1.[c] where X and Y meet conditions represented by Formula (1)...	The weight percentages of the dinitrile and trinitrile compounds in the CA3862E1 battery cell fall within the claim range. Weight of Adiponitrile (1.9 wt%) + Ethylene Glycol Bis(2-cyanoethyl) ether (0.6 wt%) + 1, 3, 6-Hexanetricarbonitrile (1.1 wt%) = 3.6 wt% about 2 wt % ≤ 3.6 wt % ≤ about 11 wt %												
1.[d] and Formula (2):	The ratio of weight percentages of the dinitrile and trinitrile compounds in the CA3862E1 battery cell fall within the claim range <table><tr><td>Weight of Adiponitrile (1.9 wt%) + Ethylene Glycol Bis(2 – cyanoethyl) ether (0.6 wt%)</td></tr><tr><td>Hexanetricarbonitrile (1.1 wt%)</td></tr></table> is approximately equal to 2.3. About 0.1 ≤ 2.3 ≤ about 8	Weight of Adiponitrile (1.9 wt%) + Ethylene Glycol Bis(2 – cyanoethyl) ether (0.6 wt%)	Hexanetricarbonitrile (1.1 wt%)										
Weight of Adiponitrile (1.9 wt%) + Ethylene Glycol Bis(2 – cyanoethyl) ether (0.6 wt%)													
Hexanetricarbonitrile (1.1 wt%)													

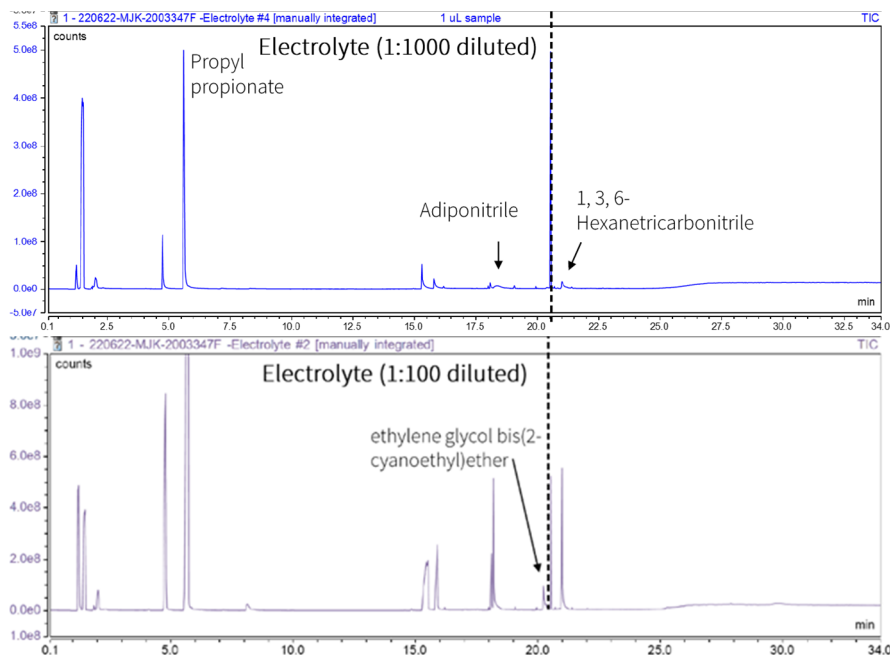
1.[e] wherein, based on the total weight of the electrolyte, a weight percentage of the propyl propionate is Z,	The CA3862E1 battery cell's propyl propionate has the following weight percentages based on total weight of electrolyte as determined via GC-MS: <table><tr><th colspan="3">Weight Percent in Electrolyte</th></tr><tr><th>Propyl propionate</th><th>Adiponitrile</th><th>1, 3, 6-Hexanetricarbonitrile</th></tr><tr><td>28.8</td><td>1.9</td><td>1.1</td></tr></table>	Weight Percent in Electrolyte			Propyl propionate	Adiponitrile	1, 3, 6-Hexanetricarbonitrile	28.8	1.9	1.1
Weight Percent in Electrolyte										
Propyl propionate	Adiponitrile	1, 3, 6-Hexanetricarbonitrile								
28.8	1.9	1.1								
1.[f] where Y and Z meet a condition represented by Formula (3): about $0.01 \leq Y/Z \leq$ about 0.3 (3)	The ratio of weight percentages of the trinitrile compounds and propyl propionate in the CA3862E1 battery cell fall within the claim range: $\frac{1,3,6 - \text{Hexanetricarbonitrile (1.1 wt\%)}}{\text{Propyl Propionate (28.8 wt\%)}}$ is approximately equal to 0.04. About $0.01 \leq 0.04 \leq$ about 0.3									
2.[a] The electrolyte according to claim 1 wherein the dinitrile compound comprises a compound of formula (4) or (5) CN—R1—CN (4); CN—R2—(O—R3) _n —O—R4—CN (5); or a combination thereof,	The adiponitrile present in the CA3862E1 battery cell satisfies this limitation as the chemical structure matches formula (4).  The ethylene glycol bis (2-cyanoethyl) ether present in the CA3862E1 battery cell satisfies this limitation as the chemical structure matches formula (5). 									
2.[b] where R1, R2, R3, and R4 are each independently an alkylene group having 1-5 carbon atoms or an alkenylene group having 2-5 carbon atoms, and n	The adiponitrile present in the CA3862E1 battery satisfies this limitation as the chemical structure comprises an R1 group that is an alkylene group with 1-5 carbon atoms or an alkenylene group with 2-5 carbon atoms. The ethylene glycol bis (2-cyanoethyl) ether present in the CA3862E1 battery cell satisfies this limitation as the chemical structure comprises an R2, R3, and R4 group that are each independently an alkylene group with 1-5 carbon atoms or an alkenylene group with 2-5 carbon atoms and n represents an integer from 0 to 5.									

represents an integer from 0 to 5.



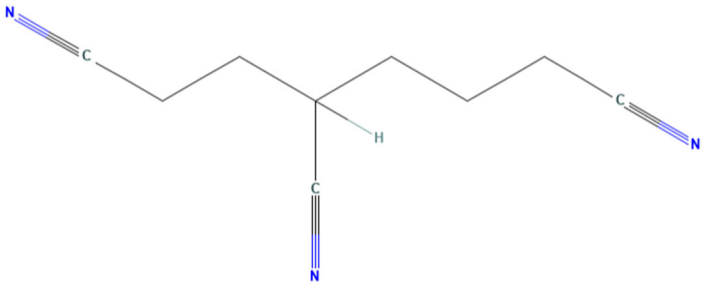
3 The electrolyte according to claim 1, wherein the dinitrile compound is one selected from the group consisting of butanedinitrile, glutaronitrile, adiponitrile, 1,5-dicyanopentane, 1,6-dicyanohexane, 1,7-dicyanoheptane, 1,8-dicyanooctane, 1,9-dicyanononane, 1,10-dicyanodecane, 1,12-dicyanododecane, tetramethylbutanedinitrile, 2-methylglutaronitrile, 2,4-dimethylglutaronitrile, 2,2,4,4-tetramethylglutaronitrile, 1,4-dicyanopentane, 2,6-dicyanoheptane, 2,7-dicyanooctane, 2,8-dicyanononane, 1,6-dicyanodecane, 1,2-dicyanobenzene, 1,3-dicyanobenzene, 1,4-dicyanobenzene, 3,5-dioxa-pimelonitrile, 1,4-bis(cyanoethoxy)butane, ethylene glycol bis(2-cyanoethyl)ether, diethylene glycol bis(2-

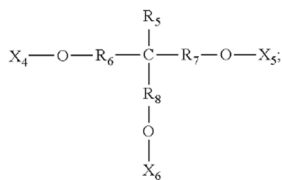
The electrolyte of the CA3862E1 battery cell comprises adiponitrile and ethylene glycol bis (2-cyanoethyl) ether which satisfies this limitation.



Weight Percent in Electrolyte		
Propyl propionate	Adiponitrile	1,3,6-Hexanetricarbonitrile
28.8	1.9	1.1

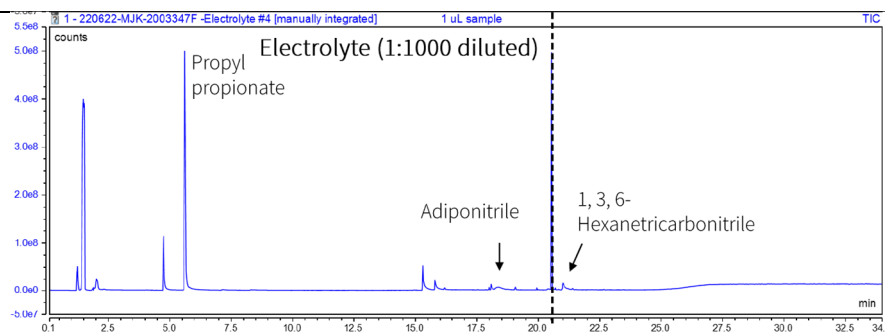
Weight Percent in Electrolyte
Ethylene glycol bis(2-cyanoethyl)ether
0.6

cyanoethyl)ether, triethylene glycol bis(2-cyanoethyl)ether, tetraethylene glycol bis(2-cyanoethyl)ether, 3,6,9,12,15,18-hexaoxaicosanoic dinitrile, 1,3-bis(2-cyanoethoxy)propane, 1,4-bis(2-cyanoethoxy)butane, 1,5-bis(2-cyanoethoxy)pentane, ethylene glycol bis(4-cyanobutyl)ether, 1,4-dicyano-2-butene, 1,4-dicyano-2-methyl-2-butene, 1,4-dicyano-2-ethyl-2-butene, 1,4-dicyano-2,3-dimethyl-2-butene, 1,4-dicyano-2,3-diethyl-2-butene, 1,6-dicyano-3-hexene, 1,6-dicyano-2-methyl-3-hexene, 1,6-dicyano-2-methyl-5-methyl-3-hexene, and any combination thereof.	
4. The electrolyte according to claim 1, wherein the trinitrile compound comprises a compound of Formula (6) or (7): $\text{CN}-(\text{CH}_2)_x-\text{CH}\{(\text{CH}_2)_y-\text{CN}\}-(\text{CH}_2)_z-\text{CN}$ [6]	The electrolyte of the CA3862E1 battery cell comprises 1,3,6-hexanetricarbonitrile as the trinitrile compound which satisfies this limitation. 



(7)

or a combination thereof, where in Formula (6), x, y, and z represent an integer from 0 to 5, and x, y, and z are not 0 at the same time; and in Formula (7), R5 represents hydrogen or an alkyl group having 1-5 carbon atoms, R6, R7 and R8 are each independently an alkylene group having 1-5 carbon atoms, and X4, X5 and X6 are each independently —R9—CN, in which R9 represents an alkylene group having 1-5 carbon atoms.

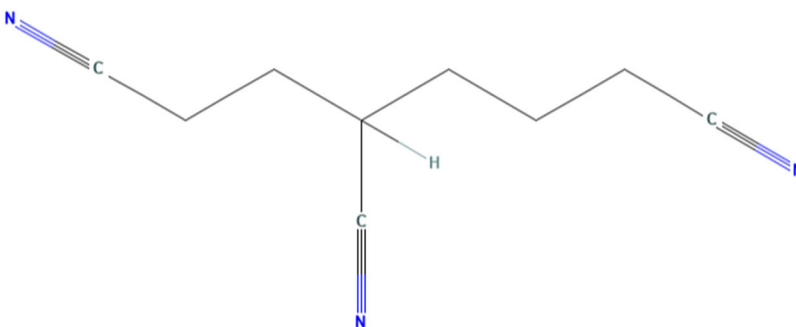


Weight Percent in Electrolyte

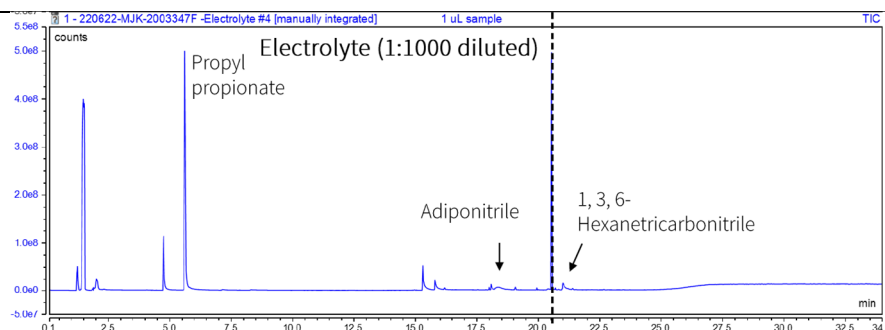
Propyl propionate	Adiponitrile	1,3,6-Hexanetricarbonitrile
28.8	1.9	1.1

5. The electrolyte according to claim 1, wherein the trinitrile compound is one selected from the group consisting of: 1,3,5-pentanetricarbonitrile; 1,2,3-propanetrinitrile; 1,3,6-hexanetricarbonitrile; 1,2,6-

The electrolyte of the CA3862E1 battery cell comprises 1,3,6-hexanetricarbonitrile as the trinitrile compound which satisfies this limitation.



hexanetricarbonitrile; 1,2,3-tris(2-cyanoethoxy)propane; 1,2,4-tris(2-cyanoethoxy)butane; 1,1,1-tris(cyanoethoxymethylene)ethane; 1,1,1-tris(cyanoethoxymethylene)propane; 3-methyl-1,3,5-tris(cyanoethoxy)pentane; 1,2,7-tris(cyanoethoxy)heptane; 1,2,6-tris(cyanoethoxy)hexane; 1,2,5-tris(cyanoethoxy)pentane; and any combination thereof.



Weight Percent in Electrolyte

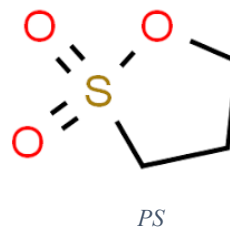
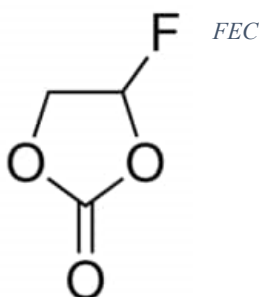
Propyl propionate	Adiponitrile	1, 3, 6-Hexanetricarbonitrile
28.8	1.9	1.1

6. The electrolyte according to claim 1, wherein X is about 0.01-10 wt %, Y is about 0.01-10 wt %, and a weight percentage Z of the propyl propionate is about 5-50 wt %.

See *supra* Claims 1.[b], 1.[c], and 1.[d]

11. The electrolyte according to claim 1, further comprising one selected from a group consisting of: a cyclic carbonate ester having a carbon-carbon double bond, a fluorinated chain carbonate ester, a fluorinated cyclic carbonate ester, a

The electrolyte of the CA3862E1 battery cell comprises fluoroethylene carbonate (FEC) and propane sultone (PS) which satisfy this limitation.



compound having a sulfur-oxygen double bond, and any combination thereof.	<table><tr><td></td><td>DEC</td><td>PP</td><td>FEC</td><td>PC</td><td>EC</td><td>PS</td></tr><tr><td>CA3862E1</td><td>37.5%</td><td>15.30%</td><td>3.0%</td><td>8.49%</td><td>16.67%</td><td>2.75%</td></tr></table>		DEC	PP	FEC	PC	EC	PS	CA3862E1	37.5%	15.30%	3.0%	8.49%	16.67%	2.75%
	DEC	PP	FEC	PC	EC	PS									
CA3862E1	37.5%	15.30%	3.0%	8.49%	16.67%	2.75%									
13. An electrochemical device, wherein the electrochemical device comprises electrodes and an electrolyte comprising a dinitrile compound, a trinitrile compound, and propyl propionate, wherein, based on the total weight of the electrolyte, the weight percentage of the dinitrile compound is X and the weight percentage of the trinitrile compound is Y, where X and Y meet the conditions represented by Formula (1) and Formula (2): about 2 wt % $\leq$ (X+Y) $\leq$ about 11 wt % (1); and about 0.1 $\leq$ (X/Y) $\leq$ about 8 (2).	<i>See supra</i> Claims 1.[a], 1.[b], 1.[c], and 1.[d].														
16. An electronic device, comprising an electrochemical device that includes electrodes and an electrolyte	<i>See supra</i> Claims 1.[a], 1.[b], 1.[c], and 1.[d].														

comprising a dinitrile compound, a trinitrile compound, and propyl propionate, wherein, based on the total weight of the electrolyte, the weight percentage of the dinitrile compound is X and the weight percentage of the trinitrile compound is Y, where X and Y meet the conditions represented by Formula (1) and Formula (2): about 2 wt % $\leq (X+Y) \leq$ about 11 wt % (1); and about 0.1 $\leq (X/Y) \leq$ about 8 (2).	
---	--