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The "small battery" patent war is escalating: ATL sues Zhuhai CosMX, with the amount involved potentially reaching hundreds of millions

Enterprise patent observation 2022-01-17



Author: Ying Huang

On **October 21, 2021**, **Nanfang Daily** published a special report titled "**Can Zhuhai CosMX Become the Next ATL?**". One week before this article, on **October 15**, Zhuhai CosMX had just been listed on the STAR Market.

As **the first enterprise listed on the STAR Market from Zhuhai**, Zhuhai CosMX's "breakthrough from zero" evidently brought considerable honor to the locality. Even reporters from Nanfang Daily couldn't wait to compare it with the current hot power battery hegemon—CATL—in the same frame.

However, anyone familiar with the lithium battery field knows that **Zhuhai CosMX and CATL are two enterprises with completely different business types**.

CATL is the global hegemon in power batteries, which are the power batteries for new energy vehicles that we often refer to, **also known as "large batteries"**. Zhuhai CosMX's main business, by contrast, is **"polymer lithium-ion batteries"**, namely the batteries commonly used in everyday devices such as mobile phones, Pads and notebooks, **also known as "small batteries"**.

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1 / 5

Even if Zhuhai CosMX intends to make “large batteries”, it may not be an easy cross-sector move within the next five years. For this reason, the notion of such a cross-segment competitive rivalry remains rather premature for the time being.

In fact, in the "small battery" field, the entity standing in Zhuhai CosMX's path is not CATL, but rather another global hegemon in "small batteries" likewise from Ningde — **Ningde Amperex Technology Limited (ATL)**.

Zhuhai CosMX's prospectus previously showed that, according to statistics from Techno Systems Research, its 2019 shipments of lithium-ion batteries for notebook computers and tablet computers accounted for 20.87% of the total global shipments for that year, ranking second globally, behind only Ningde Amperex Technology Limited (ATL); its shipments of lithium-ion batteries for mobile phones accounted for 7.27% of the total global shipments of mobile phone lithium-ion batteries for that year, ranking fourth globally.

Therefore, Zhuhai CosMX, as a rapidly growing rising star with unabated momentum, has already reached the point where it can challenge the industry leader ATL. And as early as 2012, ATL had already achieved first place globally in the subdivided field of "polymer lithium-ion batteries", with a market share approaching fifty percent at that time.

This collision between the debut of a rising star and the defending champion's title defense seems unavoidable.

Sure enough, on **January 7, 2022**, Zhuhai CosMX released its first announcement concerning litigation progress since its listing on the STAR Market:

*Zhuhai CosMX Battery Co., Ltd. received on **January 5, 2022** the Civil Complaint and related materials served by the Fuzhou Intermediate People's Court of Fujian Province regarding the lawsuit filed by **Dongguan Amperex Technology Limited and Ningde Amperex Technology Limited** against the Company and its wholly-owned subsidiary Chongqing CosMX Battery Co., Ltd. As of the disclosure date of this announcement, these cases have not yet been heard.*

The litigation involved in this announcement concerns four patents in total: **ZL201220359889.9** (utility model patent, **a lithium-ion battery packaging structure**) ; **ZL201410782528.9** (invention patent, **an electrode sheet and a lithium-ion battery containing the same**); **ZL201420789403.4** (utility model patent, **a power-type lithium-ion battery**); **ZL201720090970.4** (utility model patent, **a secondary battery and heating device**). The above cases involve a total of 3 end-customer products, corresponding to 3 of the Company's battery models.

In fact, the patent dispute between ATL and Zhuhai CosMX began as early as June 2021, when Zhuhai CosMX was still in the review stage for the STAR Market. According to the **"Question 3: Reply regarding the patent lawyer's letter from ATL"** in the *Reply of the Issuer and the Sponsor on the Implementation of Feedback Opinions in the Issuance Registration Process* published by Zhuhai CosMX on September 6, 2021, the basic circumstances and prior progress of the patent disputes with ATL were disclosed.

Question 3

3. Regarding the patent lawyer's letter from ATL

After passing the Listing Committee review, the Issuer received on June 22, 2021 the *Infringement Notice* sent by Ningde Amperex Technology Limited through domestic counsel, and received on June 28, 2021 the infringement notice email sent by ATL and its subsidiaries Ningde Amperex Technology

Limited and Dongguan Amperex Technology Limited through U.S. counsel (hereinafter collectively referred to as ATL and the lawyer's letters), alleging that the lithium battery cell products manufactured and sold by the Issuer that are compatible with multiple notebook and mobile phone models are suspected of infringing 11 patent rights held by ATL-related entities, demanding that the Company immediately cease the infringement, conduct technical comparison and analysis of ATL's patents and the products suspected of infringement, appoint representatives to contact the attorneys retained by ATL or ATL directly, confirm the scope of infringing products, and negotiate with respect to ceasing infringement and compensation.

The Issuer has now signed a confidentiality agreement with ATL and has formally commenced communication regarding the patent matters set out in the lawyer's letter. After comparison, the Issuer determined that the above-mentioned 11 patents involve a total of 19 end-customer products, corresponding to 13 battery models of the Issuer. Given that the lawyer's letters did not expressly specify the amount of compensation sought, the Issuer determined that even if ATL were to file suit in the future and the Issuer were to lose on all counts, the estimated maximum compensation amount would be the total net profit from sales of the relevant models, namely RMB 133.6367 million (approximately RMB 134 million).

Please ask the Issuer to explain: (1) the latest progress of the patent dispute with ATL; (2) the calculation basis and reasonableness of the estimated compensation amount of RMB 133.6367 million, and the relevant arrangements for compensation.

Please ask the sponsor and the Issuer's lawyers to express clear opinions.

Source: Reply of Zhuhai CosMX registration stage

On **June 17, 2021**, Zhuhai CosMX was ultimately approved at the review meeting of the Listing Committee. Less than a week thereafter, ATL sent an infringement warning letter to Zhuhai CosMX, and ATL's U.S. lawyers also sent an infringement notice email at the same time, meaning that ATL officially began rights protection in at least the two major markets of China and the United States, and U.S. litigation was perhaps even more damaging to Zhuhai CosMX, whose export sales accounted for more than seventy percent.

It was mentioned therein that there were **11 patents allegedly infringed**, and after analysis, Zhuhai CosMX believed they corresponded to **19 products across 13 battery models**. In response, Zhuhai CosMX also provided the estimated maximum compensation of **RMB 133.6367 million**. And this is only Zhuhai CosMX's own estimate, so it is very possible that the compensation amount claimed by ATL is far higher than this, and may even trigger punitive damages, which are currently up to three times in the United States and up to five times in China.

Half a year later, Zhuhai CosMX ultimately received the *Civil Complaint* from the Fuzhou Intermediate People's Court, which also **indicated that the negotiations between the parties during this period did not appear to have gone smoothly, and therefore ATL escalated the dispute from a lawyer's letter to a formal lawsuit**. In the future, it cannot be ruled out that Zhuhai CosMX will continue to receive lawsuits filed by ATL in the United States.

For Zhuhai CosMX, which had just been listed on the STAR Market, this could be described as being **attacked from both front and rear**.

Because similarly last year, it was also during the review stage for Zhuhai CosMX on the STAR Market that **it was sued for patent infringement by Hitachi Maxell in the United States**. On August 13, 2021, **Hitachi Maxell** sued the Chinese lithium battery manufacturer Zhuhai CosMX in the U.S. District Court for the Western District of Texas for infringement of four of its basic U.S. lithium battery patents **US8,691,446, US9,350,019, US9,077,035, and US9,166,251**.

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3 / 5



According to Hitachi Maxell's complaint, Maxell sent a letter to Zhuhai CosMX as early as May 19, 2020 requesting patent license negotiations, but did not receive a positive response from Zhuhai CosMX. Therefore, one year later, it chose to file a patent infringement lawsuit against Zhuhai CosMX in the United States.

This result of being hit almost simultaneously by both foreign and domestic giants was probably unexpected for Zhuhai CosMX, whose market had expanded rapidly in recent years. Perhaps it was only then that Zhuhai CosMX realized the importance of patents in this industry. But it may already be too late.

This was reflected in the first round of inquiries by the Listing Committee, in which the Listing Committee noted that among the **26 granted invention patents** disclosed in Zhuhai CosMX's prospectus, **the most recent one was granted on January 29, 2018**, after which no further patents had been granted, and therefore **questioned the reasons for its failure to obtain granted patents and its sustained R&D capability**.

Source: First-round response

In another industry comparison, based on the industry patent situation disclosed by Zhuhai CosMX, Zhuhai CosMX's number of patents at that time (158) could basically be said to be at the bottom among its peers, with a sevenfold gap compared with ATL, but its number of R&D personnel was not low, and was comparable to that of ATL. The R&D efficiency and output in this regard may indeed be a problem.

Company name	Number of domestic patents (items)	Number of R&D personnel (persons)	Percentage of R&D staff	R&D expenses (RMB 10,000)	R&D expenses as a proportion of revenue
ATL	1,110	About 1,200	-	-	-
Samsung SDI	1,376	About 2,300	-	-	-
LG Chem	1,547	About 5,700	2.28%	632,262.81	3.96%
BYD Lithium Battery	1,173	-	-	-	-
Sunwoda	217	5,919	24.23%	152,267.12	6.03%

EVE	235	1,443	15.85%	45,865.55	7.15%
Great Power Energy	79	687	10.23%	11,983.93	3.62%
Zhuhai CosMX	158	1,187	11.79%	31,886.44	5.98%

Source: First-round response

However, in the litigation progress announcement dated January 7, Zhuhai CosMX simultaneously disclosed the latest patent data: **As of December 31, 2021, the Company had obtained 634 granted and valid patents.**

3. The products researched, developed, and produced by the Company have fully independent intellectual property rights, and this litigation will not affect the Company's core technologies or its independent R&D capabilities. Since its establishment, the Company has always attached great importance to R&D and innovation. Through years of technological accumulation, the Company has mastered multiple core technologies, including "high-temperature battery technology", "digital battery electrolyte technology", "key material application technology for high-safety batteries", and "key material application technology for high-energy-density batteries", laying a solid foundation for maintaining the Company's technological leadership. At the same time, the Company attaches great importance to technology protection, and the relevant core technologies have been granted numerous patents. As of December 31, 2021, the Company had obtained 634 granted and valid patents.

Source: Litigation announcement

From only **158** domestic patents in Zhuhai CosMX's first-round response dated **February 2, 2021**, to **634 granted patents** as of **December 31, 2021**, and this despite the Listing Committee having questioned the absence of any granted patents after **January 29, 2018** — what exactly happened in this short span of ten months that caused Zhuhai CosMX's patents to suddenly increase by more than four hundred? Could it be that it purchased a large number of patents? If it did not purchase patents, then it is highly likely that China's unique expedited patent examination played a role. I have not conducted an in-depth search to verify it, but upon careful thought one can understand what was going on.

Many Chinese enterprises only truly think of the role of patents when they encounter danger, and this is very common. However, in essence, this kind of last-minute cramming behavior is more like "speculation" than "innovation". What China currently lacks is solid innovation, and only solid innovation can enable enterprises to go further and give them greater confidence when truly competing with foreign companies.

Therefore, China is now strengthening intellectual property protection from the top-level design, making infringers pay the price and encouraging true innovators, precisely in order to fundamentally change the model of the past few decades in which many Chinese enterprises could rapidly accumulate wealth merely by relying on imitation and speculation, and to transform it into an innovation-driven economic model in which sound development must rely on knowledge and technology accumulation.

Against this broader background, whether it is ATL suing Zhuhai CosMX, CATL suing CALB, or Gree suing AUX, all are typical manifestations of China's innovation model taking a further step forward, and whether intellectual property can truly achieve strict protection and equal protection becomes the key to truly "rolling" the wheels of China's innovation.



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To whom it may concern:

I, Jihua Shang, am Project Manager in this company.

We have translated the following file from the Chinese language to the English language.

- CosMX 2026 Semi-Annual Report (Pages 1 – 3 — Front matter、Pages 33 – 34 — Section 4: Corporate Governance、pages 48 – 49 — Note 35 & Note 36、Pages 63 – 70 — Section 6: Changes in Shares and Shareholder Information、Pages 197 – 201 — Note XIV of the Financial Report (Section 8))
- CosMX 2025 Annual Report (Pages 1 – 3 — Front matter、Pages 46 – 53 — Item V, Information on Directors and Senior Executives: (I) and (II))
- Ex. 2002 (Chinese) - Patent wars erupt over small batteries
- First search record of 2020112496431 (CN112331930A)

I declare under penalty of perjury under the laws of the United States that, to the best of my knowledge, our attached translation of the above file from Chinese into English is a true, full, and accurate translation.

I affirm that the provided translation was produced under the ISO 9001:2015 certified quality management process and the agents responsible for the specified translations are qualified to translate and review documents for the above language pair.

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Jihua Shang

Date: 26/09/2026

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“小电池”专利战硝烟四起：宁德新能源起诉珠海冠宇，涉案或达上亿

企业专利观察 2022-01-17



作者：黄莺

2021年10月21日，南方日报刊发了一篇《珠海冠宇能否成为下一个宁德时代》的专题报道。这篇文章的一周前，10月15日，珠海冠宇刚刚登陆科创板。

作为**珠海首家登陆科创板的企业**，珠海冠宇的“破零”之举，显然为地方带来了诸多荣誉。就连南方日报的记者也迫不及待的将其与当下炙手可热的动力电池霸主——宁德时代——同框比较。

但在锂电池领域的人都知道，**珠海冠宇和宁德时代这是两家业务类型完全不同的企业。**

宁德时代是全球动力电池的霸主，也就是我们常说的新能源汽车的动力电池，也称“**大电池**”。而珠海冠宇的主营业务则是“**聚合物锂离子电池**”，也就是日常生活中常用的手机、Pad和笔记本等电池，也称“**小电池**”。

即使珠海冠宇有心想做“大电池”，可能在未来五年之内也不是一个容易的跨界。所以这个关公战秦琼的说法，目前来看还是有些早了。

实际上，在“小电池”领域，横亘在珠海冠宇面前的，并不是宁德时代，而是另外一家同样来自宁德的“小电池”的全球霸主——**宁德新能源科技有限公司（ATL）**。

珠海冠宇的招股书曾显示，根据Techno Systems Research统计显示，其2019年笔记本电脑及平板电脑锂离子电池出货量占当年全球总出货量的20.87%，全球排名第二，仅次于宁德新能源科技有限公司（ATL）；手机锂离子电池出货量占当年全球手机锂离子电池总出货量的7.27%，全球排名第四。

所以，珠海冠宇作为一个快速成长的新秀，势头不减，已经到了能够挑战行业老大ATL的地步。而ATL在2012年就已经做到了“聚合物锂离子电池”这个细分领域的全球第一了，当时市场份额接近五成。

这场新秀登场与霸主守擂的碰撞似乎在所难免。

果不其然，**2022年1月7日**，珠海冠宇发布了登陆科创板以来首份涉诉进展的公告：

珠海冠宇电池股份有限公司于2022年1月5日收到福建省福州市中级人民法院送达的关于东莞新能源科技有限公司、宁德新能源科技有限公司**起诉公司及全资子公司**重庆冠宇电池有限公司**的《民事起诉状》等相关材料。截至本公告披露日，该等案件尚未开庭审理。**

本次公告涉及的诉讼案件共涉及四个专利：**ZL201220359889.9号**（实用新型专利，**一种锂离子电池封装结构**）。；**ZL201410782528.9号**（发明专利，**一种电极片及含有该电极片的锂离子电池**）；**ZL201420789403.4号**（实用新型专利，**一种动力型锂离子电池**）；**ZL201720090970.4号**（实用新型专利，**一种二次电池及加热装置**）。上述案件共涉及3款终端客户产品，对应公司3个电池型号。

实际上，ATL与珠海冠宇的专利纠纷早在2021年6月，珠海冠宇正在科创板审核阶段就已经展开了。根据珠海冠宇2021年9月6日公布的《发行人及保荐机构关于发行注册环节反馈意见落实函的回复》的“**问题三、关于来自ATL专利律师函的回复**”中，就对与ATL专利纠纷的基本情况和前期进展进行了披露。

问题三

3、关于来自 ATL 专利律师函

通过上市委会后，发行人于 2021 年 6 月 22 日收到宁德新能源科技有限公司委托国内律师发送的《侵权告知函》，并于 2021 年 6 月 28 日收到 ATL 及其子公司宁德新能源科技有限公司、东莞新能源科技有限公司委托的美国律师发送的侵权告知邮件（以下简称 ATL 和律师函），称发行人生产、销售的多款适配于笔记本、手机的锂电池电芯产品涉嫌侵犯 ATL 相关主体持有的 11 项专利权，要求公司立即停止侵权，对 ATL 专利及涉嫌侵权产品进行技术比对与分析，委派代表与 ATL 委托的律师或 ATL 联系，确认侵权产品范围，并就停止侵权及赔偿事宜进行协商。

发行人目前已与 ATL 签订了保密协议，正式启动律师函相关专利沟通事宜。发行人经比对，认为上述 11 项专利共涉及 19 款终端客户产品，对应发行人 13 个电池型号。发行人在律师函未明确要求承担赔偿责任的情况下，认为即使未来 ATL 起诉且发行人全部败诉，预计赔偿的金额上限为销售相关型号产品的净利润合计金额，即 13,363.67 万元。

请发行人说明：（1）与 ATL 之间专利纠纷的最新进展情况；（2）预计的 13,363.67 万元赔偿金额的计算依据及合理性，赔偿的相关安排。

请保荐人、发行人律师发表明确意见。

来源：珠海冠宇注册环节答复

在2021年6月17日，珠海冠宇的上市委审议会议最终获得通过。此后不到一周，ATL就向珠海冠宇发出了侵权律师函，而且ATL美国律师也同步发出侵权告知邮件，意味着ATL至少在中国和美国两大市场的维权正式开始，而美国诉讼对于外销占比超过7成的珠海冠宇来讲，杀伤力或许更大。

其中提到涉嫌侵权的专利有11项，经珠海冠宇分析后认为对应13个电池型号的19款产品。对此，珠海冠宇还给出了预计赔偿的上限13,363.67万元，大约1.34亿元。而这还仅仅是珠海冠宇自己的预估，因此很有可能ATL提出的赔偿金额远高于此，甚至有可能引发惩罚性赔偿，美国目前最高是三倍，中国最高五倍。

时隔半年后，珠海冠宇最终收到福州中院的《民事起诉状》，也表明双方这段时间的谈判似乎并不顺利，所以ATL升级了战事，从律师函直接变为起诉。未来不排除珠海冠宇继续收到ATL从美国的起诉。

这对于刚登陆科创板的珠海冠宇来说，可以说是腹背受敌。

因为同样在去年，也是珠海冠宇在科创板审核阶段，遭到了日立Maxell在美国的专利侵权起诉。2021年8月13日，日立Maxell在美国德州西区地方法院起诉中国锂电池制造商珠海冠宇侵犯其4项美国锂电池

的基础专利US8,691,446、US9,350,019、US9,077,035、US9,166,251。



根据日立Maxell的起诉书显示，Maxell在2020年5月19日就向珠海冠宇发送了要求进行专利许可谈判的函，但是并没有得到珠海冠宇的积极回应。所以，在一年后，选择在美国对珠海冠宇提起专利侵权诉讼。

这个几乎同一时间被国外和国内巨头双重打击的结果，对于近年来市场快速扩张的珠海冠宇而言，恐怕是意料之外的。或许此次珠海冠宇才意识到专利在这个行业中的重要性。但可能为时已晚。

这一点在上市委的首轮问询中就有体现，上市委对珠海冠宇招股书中披露的**已有的26件发明专利中，最近的一件是在2018年1月29日获得的**，之后就没有再获得授权专利，因此**质疑其未能获得授权专利的原因及其研发持续能力**。

来源：首轮回复

在另一份行业对比中，珠海冠宇披露的行业专利情况来看，当时珠海冠宇的专利数量（158件）可以说基本上在同行中居于垫底的位置，与ATL相比有七倍的差距，但是研发人员数量却并不低，与ATL相当。这其中的研发效率和产出可能确实是个问题。

公司名称	境内专利数量(项)	研发人员数量(名)	研发人员占比	研发费用(万元)	研发费用占营收比重
ATL	1,110	约1,200	-	-	-
三星SDI	1,376	约2,300	-	-	-
LG Chem	1,547	约5,700	2.28%	632,262.81	3.96%
比亚迪锂电池	1,173	-	-	-	-
欣旺达	217	5,919	24.23%	152,267.12	6.03%
亿纬锂能	235	1,443	15.85%	45,865.55	7.15%
鹏辉能源	79	687	10.23%	11,983.93	3.62%
珠海冠宇	158	1,187	11.79%	31,886.44	5.98%

来源：首轮回复

但是在1月7日的涉诉进展公告中，珠海冠宇同时披露了最新专利数据：**截至2021年12月31日，公司已获取授权且有效专利634件。**

3、公司所研发生产的产品具有完全自主知识产权，本次诉讼不会对公司核心技术和自主研发能力产生影响。公司自成立以来，始终高度重视研发创新。经过多年的技术积累，公司掌握了“高温电池技术”、“数码电池电解液技术”、“高安全电池关键材料应用技术”、“高能量密度电池关键材料应用技术”等多项核心技术，为保持公司技术领先奠定了坚实的基础。同时，公司高度重视技术保护工作，相关核心技术已取得多项专利，**截至2021年12月31日，公司已获取授权且有效专利634件。**

来源：涉诉公告

从珠海冠宇**2021年2月2日**的首轮回复只有**158件**境内专利，到**2021年12月31日**，就达到**634件**授权专利，而且是在上市委质疑从**2018年1月29日**之后就没有授权专利的情况下，这短短十个月的时间到底发生了什么，让珠海冠宇的专利一下子增加了四百多件？难道大量买入了专利？如果不是买专利，那大概率或又是中国特有的快速预审发挥了作用。我没有深入检索验证，不过仔细想想也能够知道是怎么回事。

中国很多企业只有真切的在遇到危险时才想到专利的作用，这很普遍。但是这种临时抱佛脚的举动本质上来看，更像是一种“投机”，而非“创新”。中国当前缺乏的就是扎实的创新，也只有扎实的创新才能让企业走的更远，才能让企业与国外公司进行真正较量时更有底气。

所以当下中国从顶层设计就开始加大知识产权保护，让侵权者付出代价，鼓励真正创新者，就是要彻底改变过去几十年很多中国企业只需要靠模仿和投机就能快速积累财富的模式，变成必须依靠知识积累和技术沉淀才能形成良性发展的创新型经济模式。

这种大背景下，无论是宁德新能源ATL起诉珠海冠宇、还是宁德时代起诉中航锂电、格力起诉奥克斯，都是中国创新模式更前一步的典型表现，而知识产权到底能不能实现严保护、同保护，就成为能否真正“滚动”中国创新车轮的关键。