

TESLA

Pollution under the Low Carbon Halo

Electric Vehicle Investigative Report I



IPE



PECC

April, 2021

IPE’s investigation of Tesla suppliers uncovered a total of 14 listed companies supplying lithium batteries, aluminum alloy die-casting accessories, chassis parts, and interior and exterior parts to the company. The business links between these companies and Tesla were identified through the companies’ own disclosures, which are required by law of listed companies in China, as well as in their annual reports.

Further research revealed a total of 30 subsidiaries manufacturing for these companies with recent environmental violations¹. See Table 1.

Table 1. Environmental Violations at Tesla’s Suspected Suppliers

| Category | Supplier abbreviation | Corporate or subsidiary name | Year of violation | Violation type |
|--|-----------------------|---|-------------------|--|
| Lithium battery: Lithium-ion battery | CATL | Longyan Sicong New Material Co., Ltd. ² | 2020 | Began construction before EIA approval was obtained |
| Lithium battery: Capacitor electrolyte | CAPCHEM | Shenzhen Capchem Technology Co., Ltd. ³ | 2020 | Failed to set up pollutant discharge outlets as required |
| | | Nantong Tuopu Electronic Materials Co., Ltd. ⁴ | 2020 | Wastewater discharge exceeded legal standards |
| | | BASF Battery Materials (Suzhou) Co., Ltd. ⁵ | 2018 | Violation in solid waste management system |
| | | Shaowu Yongfei Chemical Co.,Ltd. ⁶ | 2017 | Incomplete diversion system of rain and sewage water; non-conformity of hazardous waste records. |
| Lithium battery: Precise structural parts | Kedali | Shenzhen Kedali Industry Co., Ltd. ⁷ | 2018 | No stack gas treatment facilities installed; suspected of direct discharge of exhaust gas |
| Battery thermal | Sanhua | Wuhu Sanhua Automation Components Co., Ltd. ⁸ | 2019 | Began production prior to inspection |
| | | | 2018 | Began production prior to inspection |

¹ It is a good guess that these subsidiaries are manufacturing for Tesla, since they are the factories that make the components for the listed company that has identified itself as a Tesla supplier, but direct documentation is not available to fully verify.

² <http://wwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=12252217&dataType=0&isyh=0&showtype=0>

(All links in this report were accessed on 26 April 2021)

³ <http://wwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=320560&dataType=0&isyh=0&showtype=0>
(See Rectification page)

⁴ <http://wwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=141448&dataType=0&isyh=0&showtype=0>

⁵ <http://wwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=11779494&dataType=0&isyh=0&showtype=0>

⁶ <http://wwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=58217&dataType=0&isyh=0&showtype=0>

⁷ <http://wwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=1071831&dataType=0&isyh=0&showtype=0>

⁸ <http://wwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=137586&dataType=0&isyh=0&showtype=0>

| Category | Supplier abbreviation | Corporate or subsidiary name | Year of violation | Violation type |
|---|-----------------------|---|-------------------|---|
| management system | | Wuhu Sanhua Refrigeration Fittings Co., Ltd. ⁹ | 2018 | Violation of hazardous/solid waste management system |
| | | Zhejiang Sanhua Intelligent Controls Co., Ltd. ¹⁰ | 2016 | Began production prior to inspection |
| Die-casting accessories of aluminum alloy | Chan Shares | Jiangsu Wencan Die Casting Co., Ltd. ¹¹ | 2020 | Began construction before EIA approval was obtained |
| | | | 2019 | Wastewater discharge exceeded legal standards |
| | | | 2019 | Fugitive emissions of particulates |
| | | Hongbang Die Casting (Nantong) Co.,Ltd ¹² | 2018 | Wastewater discharge exceeded legal standards |
| Auto parts molding | TQM | Dongfeng (Shiyan) Auto Forging Steel Parts Co., Ltd ¹³ | 2019 | Began production prior to inspection |
| | | Dongsen Automotive Seals Co., Ltd. ¹⁴ | 2018 | Violation of hazardous waste management regulations |
| Aluminum alloy wheel | STNM | Hebei Sitong New Metal Material Co., Ltd. ¹⁵ | 2018 | Multiple smelting furnace pollution prevention devices were operating abnormally, result in exhaust gas from the smelting furnace being discharged directly |
| | | Qinhuangdao Lizhong Wheel Co., Ltd. ¹⁶ | 2018 | Violation of hazardous waste management regulations |
| Chassis parts | Ningbo Tuopu Group | Langfang Borgers Tuopu Automobile Parts Co.,Ltd. ¹⁷ | 2019 | Violation of hazardous/solid waste management system |
| | | Ningbo Qianhui Auto Decoration Co.,Ltd. ¹⁸ | 2018 | Began construction before EIA approval was obtained |

⁹ <http://wwwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=3508625&dataType=0&isyh=0&showtype=0>

¹⁰ <http://wwwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=12150759&dataType=0&isyh=0&showtype=0>

¹¹ <http://wwwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=11738853&dataType=0&isyh=0&showtype=0>

¹² <http://wwwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=301170&dataType=0&isyh=0&showtype=0>

¹³ <http://wwwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=793319&dataType=0&isyh=0&showtype=0>

¹⁴ <http://wwwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=589318&dataType=0&isyh=0&showtype=0>

¹⁵ <http://wwwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=1999225&dataType=0&isyh=0&showtype=0>

¹⁶ <http://wwwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=293541&dataType=0&isyh=0&showtype=0>

¹⁷ <http://wwwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=9386079&dataType=0&isyh=0&showtype=0>

¹⁸ <http://wwwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=894680&dataType=0&isyh=0&showtype=0>

| Category | Supplier abbreviation | Corporate or subsidiary name | Year of violation | Violation type |
|---|--------------------------|---|-------------------|--|
| Printed circuit board for battery management system | Olympic PCB | Olympic Circuit Technology Co., Ltd. ¹⁹ | 2016 | Wastewater discharge exceeded legal standards |
| Aluminum alloy parts | Shanghai Unison Aluminum | Shanghai Unison Aluminum Co., Ltd. ²⁰ | 2020 | Fugitive emissions of particulates |
| Precision parts-bearing rings | XCC | Hefei Jingong Bearing Co., Ltd. ²¹ | 2020 | Suspected of storing hazardous waste without protective measures in accordance with the national environmental protection standards and causing hazardous waste to disperse and leak |
| | | Zhejiang Fuli Steel Tube Co., Ltd. ²² | 2017 | Irregular operation of air pollution prevention and control facilities to discharge pollutants in a way that evades supervision |
| Auto parts | NBHX | Wuhan Inoac Huaxiang Auto Parts Co., Ltd. ²³ | 2019 | Failed to install and use exhaust gas pollution prevention facilities in accordance with regulations |
| | | Gongzhuling Huaxiang Auto Ceiling System Co., Ltd. ²⁴ | 2018 | Illegal dumping and storing solid waste |
| Auto parts | NBHX | Zhengzhou Inoac Huaxiang Auto Parts Co., Ltd. ²⁵ | 2018 | Unauthorized construction and production without environmental impact assessment procedures |
| Auto parts | NBHX | Ningbo Huaxiang Automotive Decorative Parts Co., Ltd. ²⁶ | 2017 | Suspected of abnormal operation of exhaust gas treatment facilities |
| | | | 2016 | Wastewater discharge exceeded legal standards |

¹⁹ <http://wwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=825926&dataType=0&isyh=0&showtype=0>

²⁰ <http://wwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=27469&dataType=0&isyh=0&showtype=0>

²¹ <http://wwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=2495102&dataType=0&isyh=0&showtype=0>

²² <http://wwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=762456&dataType=0&isyh=0&showtype=0>

²³ <http://wwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=10384556&dataType=0&isyh=0&showtype=0>

²⁴ <http://wwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=11977254&dataType=0&isyh=0&showtype=0>

²⁵ <http://wwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=3601266&dataType=0&isyh=0&showtype=0>

²⁶ <http://wwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=11707451&dataType=0&isyh=0&showtype=0>

| Category | Supplier abbreviation | Corporate or subsidiary name | Year of violation | Violation type |
|---------------------------------|----------------------------|--|-------------------|--|
| Auto interior and exterior trim | Guangdong Hongtu | Dongguan Siweier Wanjing Auto Parts Co., Ltd. ²⁷ | 2019 | Improper handling of hazardous waste |
| | | Changchun FAW Fusheng Swell Auto Parts Co., Ltd. ²⁸ | 2019 | Wastewater discharge exceeded legal standards |
| | | | 2017 | Began production before environmental protection facilities were installed |
| | | Guangdong Baolong Automobile Co., Ltd. ²⁹ | 2018 | Violation of solid waste management system |
| | | Swell-Marui (Guangzhou) Automobile Parts Co., Ltd. ³⁰ | 2018 | Wastewater discharge exceeded legal standards |
| Auto parts | Daimay Automotive Interior | Shanghai Daimay Automotive Interior Co., Ltd. ³¹ | 2016 | Wastewater discharge exceeded legal standards |

Sample Investigations

CASE STUDY #1

In its announcement released on April 10, 2020, **Shenzhen Capchem Technology Co., Ltd.** (hereinafter referred to as CAPCHEM, stock code: 300037) referred itself as a supplier of supercapacitor electrolyte of Tesla (Fig. 1).

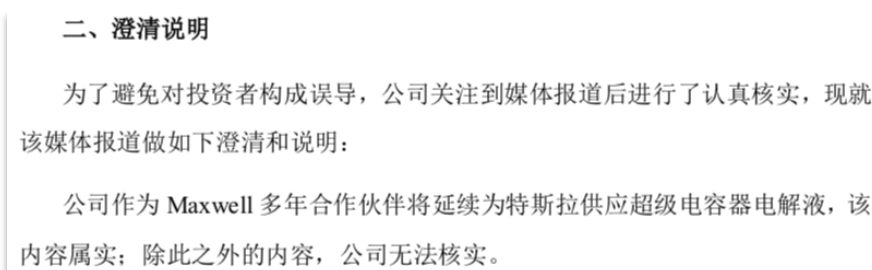


Figure 1. Capchem's announcement released on April 10, 2020

²⁷ <http://www.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=1445705&dataType=0&isyh=0&showtype=0>

²⁸ <http://www.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=270200&dataType=0&isyh=0&showtype=0>

²⁹ <http://www.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=2952184&dataType=0&isyh=0&showtype=0>

³⁰ <http://www.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=29348&dataType=0&isyh=0&showtype=0>

³¹ <http://www.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=637239&dataType=0&isyh=0&showtype=0>

Nantong Tuopu Electronic Materials, is a subsidiary of Shenzhen Capchem Technology Co., Ltd. that manufactures lithium batteries for the company. This factory, which is located along the Yangtze River, was found in serious violation of its permit in 2020 for discharging wastewater containing chemical oxygen demand (COD) at a concentration level seven times higher than the legal discharge standard. It received a fine of RMB 144,000 (\$22,500)³² and was ordered to restrict production within 30 days as of the receipt of the Letter of Decision by Nantong Bureau of Ecology and Environment³³.

Figure 2. The location of Nantong Tuopu Electronic Materials Co., Ltd. on Blue Map APP



³² <http://www.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=141448&dataType=0>

³³ <http://static.cninfo.com.cn/finalpage/2020-08-27/1208280404.PDF>

南通市生态环境局 行政处罚决定书

通06环罚字(2020)第182号

名称:南通托普电子材料有限公司

统一社会信用代码:913206126083637748

法定代表人:覃九三

住所:南通市通州区平潮镇云台山村七组

一、调查情况及发现的环境违法事实、证据和陈述申辩(听证)及采纳情况

2020年6月15日,在江苏省水环境质量保障专项检查行动中,江苏省南通生态环境监测中心于你公司第三级外排池(外送污水处理厂)对废水进行采样监测。2020年8月14日,我局收到本次采样的监测报告[(2020)环监(水)字第(085)号]。监测结果表明,你公司外排池废水化学需氧量指标测定值为 $4.00 \times 10^3 \text{mg/L}$,超过《污水综合排放标准》GB 8978-1996表4相应指标排放限值7倍。

以上事实主要证据如下:

证据一、南通市通州生态环境局现场检查(勘察)笔录(2020年6月15日、8月19日);

证据二、南通市通州生态环境局调查询问笔录(2020年8月19日);

证据三、现场检查照片8张(2020年8月19日);

证据四、江苏省南通环境监测中心监测报告[(2020)环监(水)字第(085)号];

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Figure 3. Nantong Bureau of Ecology and Environment Penalty, Penalty No. 182[2020]

Further details of this factory's violations and penalties were published on the website of the People's Government of Tongzhou District in Nantong, Jiangsu Province, Nantong Top Electronic Materials Co., Ltd³⁴.

Two other subsidiaries manufacturing for Shenzhen Capchem Technology Co., Ltd. were also in violation of environmental requirements in 2020 as listed in Table 1.

³⁴ Link to records no longer available on government website but are on file and available from IPE on request.

CASE STUDY #2

Guangdong Wencan Die Casting Co., Ltd. (hereinafter referred to as Chan Shares, stock code: 603348), stated in its semi-annual report of 2020 that it supplied automotive precision die-casting accessories of aluminum alloy to manufacturers such as Tesla.³⁵

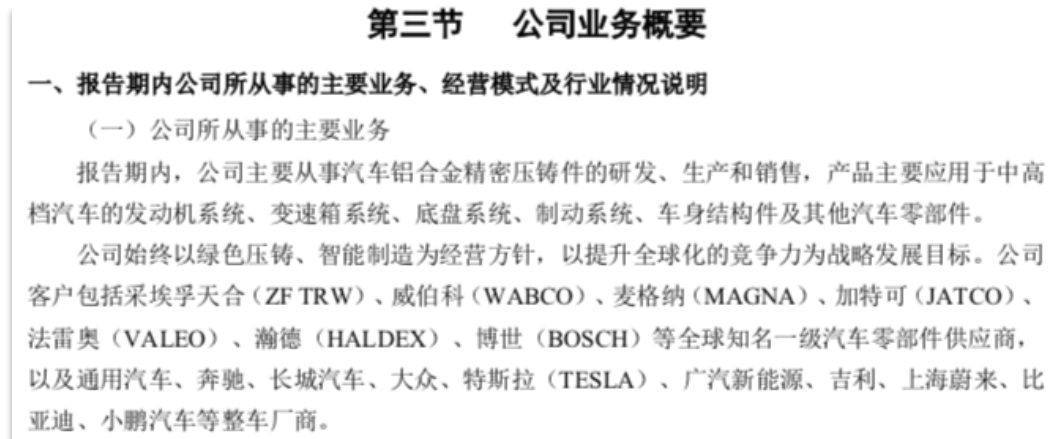


Figure 4. Chan Shares 2020 semi-annual report screenshot

Jiangsu Wencan Die Casting Co., Ltd. (hereinafter referred to as Jiangsu Wencan) is a subsidiary of Chan Shares that manufactures die casting accessories of aluminum alloy for the company. Administrative penalty records disclosed by the Wuxi Municipal Bureau of Ecology and Environment indicate that Jiangsu Wencan had three environmental violations during 2019-2020 with an accumulative fine of RMB 736,800 (\$115,000):³⁶

1. In the most serious violation, in May 2019, Jiangsu Wencan was found to be discharging wastewater from the wastewater collection tank in the North Division and the supernatant liquid from the sludge treatment via a plastic pipe into the storm drain. This violated Article 83 (3) of the "Water Pollution Prevention and Control Law of the People's Republic of China" by discharging water pollutants in a way that evades supervision by using seepage wells, seepage pits, cracks, karst caves, setting up hidden pipes without permission, tampering with or forging monitoring data, or operating water pollution prevention facilities improperly, etc., and resulted in a fine of RMB 400,000(\$62,500).

³⁵ <http://static.cninfo.com.cn/finalpage/2020-08-27/1208264259.PDF>

³⁶ <http://wwen.ipe.org.cn/IndustryRecord/regulatory-record.aspx?companyId=11738853&dataType=0&isyh=0&showtype=0>

2. Also in May 2019, the company was fined RMB 130,000 (\$20,000) for violating Article 99 (3) of the "Air Pollution Prevention and Control Law of the People's Republic of China" of discharging air pollutants in a way that evades supervision due to fugitive emission of dust from melting furnace.

3. In August 2020, Jiangsu Wencan was fined RMB 206,800 (\$32,000) for violating the "Environmental Impact Assessment Law of the People's Republic of China" by adding an X-ray unit without submitting the environmental impact assessment procedures for approval.

Figure 5. The location of Jiangsu Wencan Die Casting Co., Ltd. on Blue Map APP



The city of Yixing, where the subsidiary Jiangsu Wencan is located, is in the upper reaches of Taihu Lake, a lake that government officials have prioritized for greater protection given severe pollution impacts from industries along its shores. The conduct of the company in discharging industrial wastewater into the rainwater drainage system through a plastic pipe poses clear potential to damage water quality in the lake.

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Further Reading: *Pollution under the Green Halo: Investigation of Tesla's Supply Chain*, Southern Weekly reporter - Lin Fangzhou, Southern Weekly intern - Wei Cuicui, Wang Shuya 06-25 at:

https://mcusercontent.com/a773e75e6eb0116a78ee2219f/files/4e3dab95-fbb0-e920-af35-57901748b0f6/Southern_Weekly_article_EN.pdf