



**Global and China Lithium Iron Phosphate
(LiFePO₄) Material and Battery Industry
Report, 2011-2012**

Jun. 2012

STUDY GOAL AND OBJECTIVES

This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

REPORT OBJECTIVES

- ◆ To establish a comprehensive, factual, annually updated and cost-effective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
- ◆ To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
- ◆ To complement the organizations' internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
- ◆ To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
- ◆ To help company to succeed in a competitive market, and

METHODOLOGY

Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications.

Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

INFORMATION SOURCES

The primary information sources include China Battery Industry Association and National Bureau of Statistics of China etc .

Abstract

By merits of high security, long service life and high temperature resistance, LiFePO₄ battery has become the cutting-edge product in the development of lithium battery industry and gained considerable application in EV, electric tool, electric bicycle and energy storage market. The ballooning expansion of LiFePO₄ battery market fuels the robust demand for LiFePO₄ materials. In 2011, the global sales volume of LiFePO₄ material approximated 4,000 tons, making up 6.73% of the sales volume of anode materials for lithium batteries worldwide.

In 2011, apart from A123 System, Valence and Phostech which still take leading positions in the output of LiFePO₄ materials, Taiwan-based enterprises including Formosa Energy & Material Technology and Aleees saw rapid growth in capacity. Additionally, in the Chinese mainland market, enterprises such as Shenzhen-based BTR and HeFei GuoXuan High-Tech Power Energy also witnessed soaring increase in revenue.

The report highlights the following aspects: demand & competition of LiFePO₄ material market in China and worldwide; prices of LiFePO₄ material and the progress of disputes on patent; outlook of major LiFePO₄ battery downstream application market in China. Moreover, the report sheds lights on 18 leading LiFePO₄ material manufacturers, including A123 Systems, Formosa Energy & Material Technology, Tianjin STL Energy Technology and Pulead Technology Industry, as well as 10 major LiFePO₄ battery producers such as BYD, Shenzhen-based China BAK Battery and Pihsiang Energy Technology.

Shenzhen BTR is mainly engaged in the production of electrode materials for lithium ion batteries. In 2011, BTR set up an industry park in Tianjin to build a 2,000 t/a LiFePO₄ material production line. In 2011, the sales of BTR surged by over 40% year-on-year to roughly RMB860 million. In particular, the sales from export business increased by nearly 100% year-on-year.

Hirose Tech currently has a LiFePO₄ capacity of 50 tons per month. The new plant under construction in Longtan, Taiwan will increase the capacity to 1,200 tons per year at the end of 2012. The prospective LiFePO₄ capacity of the new plant will reach 9,600 tons. At the same time, its battery products have marched into the electric vehicle market since the second quarter of 2012.

BYD is the only vehicle LiFePO₄ battery pack producer equipped with large-scale production technology in Chinese mainland. And its independently developed iron-based batteries have been successfully applied in BYD E6 and F3DM. In 2011, BYD issued 79 million shares and raised RMB2.192 billion. And the fund was mainly invested in lithium battery and auto R&D production base projects. BYD is projected to further increase its investment in iron-based battery industry.

Pihsiang Energy Technology, which developed 18650-type LiFePO₄ battery in 2005, is the first fully automated LiFePO₄ battery producer that realizes mass production in the world. In 2012, Pihsiang Machinery, the parent company of Pihsiang Energy Technology, is scheduled to expand European EV market. Pihsiang Energy Technology will ride the winds to build a new 150 million ah/a LiFePO₄ battery plant in Taiwan.

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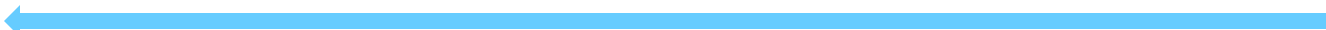
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