



**Global and China MO Source Industry
Report, 2012-2015**

Aug. 2013

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 Company Reports, and National Bureau of Statistics of China etc.

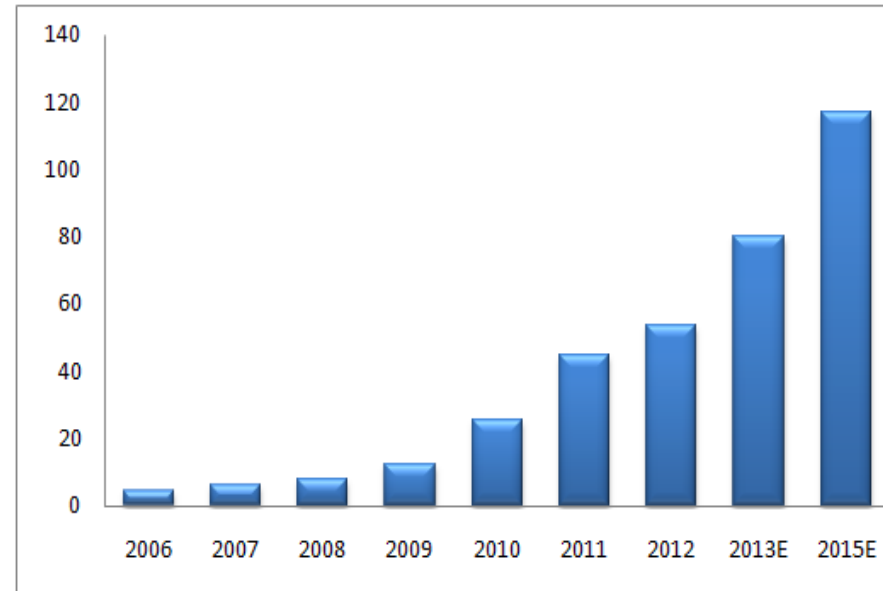
Abstract

High-purity metal organic compounds (MO source) function as the supporting source materials of the modern compound semiconductor industry and the source materials of the semiconductor lighting (LED) industry chain. After 2009, the explosive growth of the global LED industry has promoted the demand for MO source, which reached 53.5 tons in 2012, up 19.4% year on year. In the same period, due to the high technical threshold of the MO source industry, the speed of capacity expansion has been limited, as a result, the global MO source market witnessed an ever widening demand-supply gap for consecutive three years in 2009-2012. In particular, due to the wider demand-supply gap than other MO source products, trimethyl gallium (TMG) has become an investment highlight in the industry.

In 2012, Taiwan and South Korea gradually became new MO source production bases following the United States, Europe, Japan and Mainland China. Taiwan and South Korea are the most important production bases of the global LED industry and occupy a large proportion of upstream epitaxial wafer and chip manufacturing in the industrial chain, therefore, both of them act as the largest MO source consumer market.

Meanwhile, Taiwan and South Korea have to import MO source products from Europe and America because of the absence of local manufacturers, resulting in the deteriorated contradiction between the regional supply and demand. Currently, Kaohsiung and Taoyuan of Taiwan as well as Cheonan and Yeosu of South Korea have become MO source investment hotspots.

Global MO Source Demand, 2006-2015E(Unit: ton)



Source: ResearchInChina Global and China MO Source Industry Report, 2012-2015

Copyright 2012 ResearchInChina

China LED epitaxial chip industry performed sluggishly in 2012. The phasic overcapacity of low- and medium-end chips and falling prices led to the declined profitability of the majority of enterprises which suffered losses. Thus, Chinese MO source market saw slowdown in 2012 and dropping prices. However, with the improved Chinese LED industrial chain and the growing quantity of MOCVD equipment, the domestic MO source demand will surge in 2013, but the tight supply situation will still exist.

Jiangsu Nata Opto-electronic Material is the only MO source manufacturer in China and raised RMB780 million for capacity expansion by IPO in August, 2012. By 2015, the new capacity will be 22.5 tons, so that the total MO source capacity in Mainland China will amount to 26 tons.

Dow Chemical is the world's largest MO source supplier, serving international giants including Taiwan Epistar. In June 2010, the company announced a capacity expansion plan to build a new factory in South Korea which went operation in 2012 while expanding the capacity in the U.S.. The MO source capacity of Dow Chemical will reach 60 tons/a in the future.

The Netherlands-based AKZO Nobel set up its production base in the United States. In June 2010, the company raised the capacity of the production base in Tennessee by 100%. In November, 2010, the company announced to further double the TMG capacity. Currently, the expansion project is under construction. In addition, the company plans to establish a MO source production base in Ningbo city, China. The planned long-term capacity of the company is 100 t/a.

Global and China MO Source Industry Report, 2012-2015 consisting of five chapters makes in-depth analysis on development background and market patterns of global and China MO source industry with detailed data, studies the operation of eight Chinese and foreign large-sized MO source companies (DOW, AKZO Nobel, Jiangsu Nata Opto-electronic Material, etc.), and predicts the development trends of the MO source industry.

1 Overview of MO Source

- 1.1 Profile of MO Source
- 1.2 Classification and Application
- 1.3 Industrial Chain
- 1.4 Industry Features
 - 1.4.1 High Concentration
 - 1.4.2 High Growth Potential

2 Development of Global MO Source Industry

- 2.1 Development Course
- 2.2 Supply
- 2.3 Demand
 - 2.3.1 Influencing Factors
 - 2.3.2 Demand Volume
 - 2.3.3 Demand Structure
- 2.4 Market Competition Pattern
- 2.5 USA
- 2.6 Europe
- 2.7 Japan
- 2.8 South Korea
- 2.9 Taiwan
- Summary

3 Development of MO Source Industry in China

- 3.1 Development Environment
- 3.2 Supply

- 3.3 Demand
- 3.4 Price Trend
- Summary

4 Upstream and Downstream Industries of MO Source in China

- 4.1 Upstream Sectors
 - 4.1.1 Gallium
 - 4.1.2 Indium
 - 4.1.3 Related Policies and Influence
- 4.2 LED Industry
 - 4.2.1 Market Scale
 - 4.2.2 Competition Pattern
 - 4.2.3 Development Prospects
- 4.3 Other Downstream Sectors
 - 4.3.1 New Solar Cell
 - 4.3.2 Phase Change Memory
 - 4.3.3 Semiconductor Laser
 - 4.3.4 Radio Frequency Integrated Circuit Chip
- Summary

5 Key Enterprises Worldwide

- 5.1 DOW
 - 5.1.1 Profile
 - 5.1.2 Operation
 - 5.1.3 Sales Structure
 - 5.1.4 R&D
 - 5.1.5 MO Source Business

- 5.1.6 Business in China
- 5.2 SAFC Hitech
 - 5.2.1 Profile
 - 5.2.2 Operation
 - 5.2.3 MO Source Business
- 5.3 AKZO Nobel
 - 5.3.1 Profile
 - 5.3.2 Operation
 - 5.3.3 MO Source Business
 - 5.3.4 Business in China
- 5.4 Sumitomo Chemical
 - 5.4.1 Profile
 - 5.4.2 Operation
 - 5.4.3 MO Source Business
 - 5.4.4 Business in China
- 5.5 Albemarle
 - 5.5.1 Profile
 - 5.5.2 Operation
 - 5.5.3 MO Source Business
 - 5.5.4 Business in China
- 5.6 Chemtura
 - 5.6.1 Profile
 - 5.6.2 Operation
 - 5.6.3 MO Source Business
 - 5.6.4 Business in China
- 5.7 Lake LED Materials
- 5.8 Nata
- Summary

- Application of MO Source
- Industrial Chain of MO Source
- Output of MO Source Worldwide, 2006-2015
- Demand of MO Source Worldwide, 2006-2015
- Demand of MO Source Worldwide by Industry, 2006-2015
- Number of Newly Added MOCVD Machines in South Korea, 2009-2012
- Production Capacity of MO Source in China, 2008-2015
- Number of Newly Added MOCVD Machines in Local Governments' Plans in China, 2010-2015
- Demand for MO Source in China, 2008-2015
- Prices of Gallium in China, 2006-2012
- Prices of Indium ($\geq 99.99\%$) In China, 2006-2012
- Industrial Chain of LED
- Output Value of LED Industry in China, 2006-2015
- Output Value Distribution of LED Industry by Applications in China, 2012
- Market Scale of LED in China, 2010-2015
- Output Value of LED Chip in China, 2010-2015
- Sales and Net Income of Dow, 2007-2013
- R&D Costs and % of Sales of Dow, 2007-2012
- Sales Structure of Electronic and Functional Materials Business of Dow by Products, 2012
- Sales Structure of Electronic Materials Business of Dow by Regions, 2011
- Sales Structure of Electronic Materials Business of Dow by Businesses, 2011
- Sales of SAFC, 2008-2013
- Revenue and Net Income of AKZO Nobel, 2008-2015
- Revenue of Functional Chemical Products (Include MO Source) of AKZO Nobel, 2009-2012
- Revenue Structure of Functional Chemical Products of AKZO Nobel, 2012

- Sales and Operating Income of Sumitomo Chemical, FY2007-FY2012
- Revenue and Net Income of Albemarle, 2008-2015
- Revenue and Net Income of Chemtura, 2008-2015
- Revenue and Net Income of Nata, 2009-2015
- Revenue Structure of Nata by Regions, 2009-2012
- Number of Newly Added MOCVD Machines and Ownership Worldwide, 2008-2013
- Application of MO Sources in LED manufacturing Worldwide, 2012
- Capacity Expansion and Production Sites of Major MO Source Manufacturers Worldwide, 2010-2011
- Production Sites and Products of MO Source in Europe, 2012
- Production Sites and Customers of MO Source in Japan, 2012
- Number of Newly Added MOCVD Machines and Ownership in Taiwan, 2007-2012
- Output and Demand of MO Sources Worldwide, 2006-2015
- Related Policies of MO Source Industry in China, 2006-2013
- Production Capacity of MO Source in China by Product, 2008-2013
- Number of Newly Added MOCVD Machines and Ownership in China, 2008-2013
- Capacity Expansion Plan of LED Epitaxial Wafer Manufacturers in China, 2010-2012
- Average Prices of MO Source Products in China, 2009-2013
- Production Capacity and Demand of China, 2008-2013
- Output and Consumption of Indium in China, 2006-2012
- Output Value Structure of LED Industry by Products in China, 2006-2012
- Key LED Manufacturers and Business in China, 2012
- Output Value Structure of LED Industry by Products in China, 2010-2015
- Performance Comparison of Different Solar Cells
- Sales of Dow by Businesses, 2009-2011
- Sales of Dow by Businesses, 2012

- Sales by Region, 2012
- Production Sites of Electronic Material Business of Dow Worldwide, 2011
- Sales and EBITDA of Electronic and Functional Materials Business of Dow, 2009-2012
- MO Source Production Sites of SAFC Hitech, 2012
- Revenue of AKZO Nobel by Products, 2009-2013
- Production Sites of Functional Chemical Products of AKZO Nobel in China, 2012
- Sales of Sumitomo Chemical by Businesses, FY2007-FY2012
- Subsidiary Companies and Main Business of Sumitomo Chemical, 2012
- Revenue of Albemarle by Businesses, 2008-2013
- Revenue of Chemtura by Products, 2010-2013
- Main Products of Lake LED Materials, 2012
- Revenue of Nata by Product, 2009-2012
- Gross Margin of Nata by Product, 2009-2012
- MO Source Production Capacity, Output and Capacity Utilization Rate of Nata, 2009-2011
- MO Sales, Sales Volume and Unit Price of Nata, 2009-2011
- Key Projects of Nata, 2010-2015
- Production Capacity and Global Market Share of MO Source of Nata, 2010-2015
- Long Term Planning Capacity of MO Source Manufacturers Worldwide, 2012

You can place your order in the following alternative ways:

1. Order online at www.researchinchina.com
2. Fax order sheet to us at fax number: +86 10 82601570
3. Email your order to: report@researchinchina.com
4. Phone us at +86 10 82600828/ 82601561

Party A:			
Name:			
Address:			
Contact Person:		Tel	
E-mail:		Fax	

Party B:			
Name:	Beijing Waterwood Technologies Co., Ltd (ResearchInChina)		
Address:	Room 502, Block 3, Tower C, Changyuan Tiandi Building, No. 18, Suzhou Street, Haidian District, Beijing, China 100080		
Contact Person:	Liao Yan	Phone:	86-10-82600828
E-mail:	report@researchinchina.com	Fax:	86-10-82601570
Bank details:	Beneficial Name: Beijing Waterwood Technologies Co., Ltd Bank Name: Bank of Communications, Beijing Branch Bank Address: NO.1 jinxiyuan shijicheng, Landianchang, Haidian District, Beijing Bank Account No #: 110060668012015061217 Routing No #: 332906 Bank SWIFT Code: COMMCNSHBJG		

Title	Format	Cost
<i>Total</i>		

Choose type of format

- PDF (Single user license)1,800 USD
- Hard copy 1,900 USD
- PDF (Enterprisewide license)..... 2,800 USD

※ Reports will be dispatched immediately once full payment has been received.
Payment may be made by wire transfer or credit card via PayPal.

About ResearchInChina

ResearchInChina (www.researchinchina.com) is a leading independent provider of China business intelligence. Our research is designed to meet the diverse planning and information needs of businesses, institutions, and professional investors worldwide. Our services are used in a variety of ways, including strategic planning, product and sales forecasting, risk and sensitivity management, and as investment research.

Our Major Activities

- *Multi-users market reports*
- *Database-RICDB*
- *Custom Research*
- *Company Search*

RICDB (<http://www.researchinchina.com/data/database.html>), is a visible financial data base presented by map and graph covering global and China macroeconomic data, industry data, and company data. It has included nearly 500,000 indices (based on time series), and is continuing to update and increase. The most significant feature of this base is that the vast majority of indices (about 400,000) can be displayed in map.

After purchase of our report, you will be automatically granted to enjoy 2 weeks trial service of RICDB for free.

After trial, you can decide to become our formal member or not. We will try our best to meet your demand. For more information, please find at www.researchinchina.com

For any problems, please contact our service team at: