Focus

Great changes of silicone downstream market under excess capacity pressure

News Flash

Rhodia celebrates 30 years of presence in China
Chinese new energy companies’ IPOs are sought after in the US
EVONIK silica products were marked up worldwide
Jingwu Hongbao enters polysilicon industry
Guandian Ningxia Solar 2500t/a polysilicon project commissioned
Chinese silicon metal price climbs slightly once again
Zhongneng’s technological renovation project approved by NDRC
Foxconn and Yingli to co-invest into polysilicon in Shanxi
Cabot’s world-class fumed silica plant expansion project kicks off
World’s largest silicon metal plant will be built in Ganzi Prefecture
Wacker starts up new chinese production plant
TRONY sees its share price down on the first day of listing
DJSilicone shanghai production site starting operation
Sino-German polysilicon cooperation agreement signs in Henan
Rhodia inaugurates a new silica plant in China
Rubber undersupply will remain in next five years
Wacker silicone raises prices for fumed silica
Operations of fumed silica plants worldwide in 2010
Lianxiang’s 70 MW a-Si film cell project starts in Jining
DMC production and distribution of some plants Oct. 14
Zhangjiagang on its way to become a world-class silicone-producing base

Product Innovation

Dow Corning launches silicone sealant
Wacker launches UV-activated silicone elastomer
Momentive launches multiple coating additives

Market

The outlook of silicon metal
Major silica producers gather in Asia for expansion

Statistics

Related Trade Data
Since BlueStar Xinghuo broke through the technology of 10,000 ton class silicon monomer production, China’s silicone industry has maintained a rapid development in recent ten years following fast growth of national economy. The capacity, output and consumption quantity of silicone industry all leaped into the front ranks of the world. According to statistics from CRC-SI, in the end of 2009, the Chinese nominal capacity of silicone monomer was 980,000t/a, output of various polysiloxane products was about 270,000t, and the consumption was more than 400,000t. The output and consumption nearly accounted for 1/3 of the world total, wherein, the consumption had ranked first in the world ahead of USA, and the self provision rate rapidly rose to nearly 65%.

According to statistics of CRCSI, in 2009 the domestic output of silicone rubber (physical qty) was about 500,000t, with a YoY growth rate of nearly 15%. The main growth fields included photovoltaic, building and transportation industries. Domestic output of silicone oil/emulsion (converted into 100%) was about 60,000t with a growth rate of 30%. The consumption growth in the industries of cosmetics, machinery, electrics, etc., was fairly fast, nevertheless the consumption of textile-purpose silicone oil product had a drop. The output of silane coupling agent was greatly increased to nearly 70,000t mainly due to: (1) rapid development of downstream compound...
material market of coupling agent; (2) significantly recovered operation rate for manufacturers due to the greatly dropping price of raw material.

Upon the great achievement it shall also be clearly recognized that, after over ten years’ sustained and rapid growth, domestic silicone consumption market is now in face of urgent pressure of transformation. It is mainly presented by two aspects: (1) Suffering the impact of financial crisis, the consumption growth rate of silicone dropped to nearly 10% creating historical new low record in 2009. The drive of export to silicone consumption in China was apparently decreased, and the main growth drive is internal demand. The silicone consumption structure is now renovating from export reliance type to internal demand drive type. (2) Suffering the impact of downstream industrial structure regulation, the number of new rising silicone consumption fields domestically gradually increase, and the application of silicone in the industries of green energy, auto, and daily chemicals, etc., had a prompt growth. According to consumption structure characteristics, electrical and electronic industry has become the No.1 downstream consumption industry of silicone in China, and the consumption proportion of textile and building industries had a stable drop.

According to statistics of CRCSI, the top five industries of silicone material consumption in China are respectively: electronics & electricity, building, industry additive, textile and daily chemicals. Therein, the electronics and textile industries, which highly rely on export, account for a proportion of over 40%. Furthermore, in terms of other export industries, it can be concluded that, nearly 1/3 of silicone consumption of China at present relies on export-oriented industries.

Taking electronics and textile industries as example, from Asian Financial Crisis (1998) to the period before China suffering impact of global economic crisis of 2008, export amount of electronic products (estimated as export quantity of high and new technology and product) was increased by 19.5 times; export amount of textile industry also increased by 3.5 times, in spite of the impact from quota and other trading barriers. The annual growth rate of electronics industry and textile industry were 32% and 15% respectively. In the same period, China’s silicone consumption growth was about 6 times with annual growth rate of about 22%. Considering that there was only ten years’ application and promotion of silicone in domestic textile industry, it can be concluded that, the textile and electronic information industries are the main drive force to promote the consumption of silicone, wherein, the consumption drive of electronic information industry is far above the textile industry.

**Complicated situation of export-oriented industry**

Although China’s silicone market maintained a high speed growth during and after a few years of Asian Economic Crisis (1998), it does not mean that, the domestic industry also has the same excellent performance in this financial crisis. It has following three causes:

1. The export market of textile and electronic information industry is mainly concentrated in developed countries, while competitors are mainly the developing countries and regions such as ASEAN, South Asia, and Latin America, etc.. During Asian Economic Crisis of 1998, China suffered some impact, nevertheless, it was Southeast Asia suffering a heavy strike instead of western developed countries (impact to such countries was very small). In 2001, China formally entered WTO, which created a good opportunity for rapid development of textile and electronics industries. During this economic crisis, the economy of developed countries suffered a heavy strike, but the impact to developing countries was fairly small and even indirect, this would directly exert influence to the recovery of export-oriented industries of China such as electronics and textile.

2. The foreign trading environment of China at present is much worse than other countries which once carried out national construction by relying on foreign trade. With a large national scale, China suffers the repugnance from other countries. As a consequence, the foreign trading environment is worsened. In 1980s, when Japan had a serious trading friction with USA, the living standard of Japanese had nearly reached the western level; the small and developed economic entities such as South...
Korea and Taiwan (depending on export) caused little alarm and attention of developed countries during their development process. In 2009, when USA and Europe deeply fell into difficulties of economic crisis, China’s total export amount accounted for 9% of global level, and became No.1 in the world ahead of Germany. This incurred besieging of developed countries with fear. At present, per capita income of China is only 1/20 of developed countries, but the pressure of the threat from exchange rate and trading sanction is nothing less than Japan during the Square Agreement period in 1985. Under the circumstances, China’s foreign trade development space shall encounter more limitation, and its economic development shall be forced to face the pressure of transformation even the condition is not yet matured.

3. The exchange rate and labor cost are the most direct factors affecting foreign trade. From 1999 (after Asian Economic Crisis) to 2007, exchange rate of USD to RMB was slowly increased to 1:7.8 from 1:8.3, and this period was just the fastest development period of electronic and textile industry; the demand of silicone, especially the demand of HTV market had a high speed growth. Since 2007, the RMB has risen by about 17% accumulatively. Nevertheless, it still became the object of malicious attack from developed countries such as USA, thus its development in the future may not be optimistic.

The labor cost factor also affects development of such industries. Textile industry is now in face of strong competition from countries with low labor cost like India, and its development space has been stagnated or shrunk. As in China most electronic products are produced by OEM, and in recent years labor cost has nearly risen by 1 time, like Foxconn, were forced to moved to middle and west regions with fairly low labor cost. If the labor cost in these regions is further increased, even the OEM mode may also be eliminated.

In addition, the consumption habit and technical progress also impacted the utilization of silicone material. For example, the touch screen mobile phone substitutes the traditional keyboard mobile phone, volume of notebook computer is further reduced, and demand of desk computer market is shrunk, etc.. The above mentioned all change the consumption structure of silicone downstream market. Generally speaking, silicone consumption for individual movable electronic device shall be invariable, and the consumption growth shall only rely on extension of market.

Internal demand— foundation of future growth

In order to fight against the economic crisis, China successively issued a lot of economic incentive plans from the next half year of 2008, to stimulate the domestic consumption and drive the development of household appliances, auto, building, etc.. This directly supported the silicone consumption market. Although export of textile and electronics industries had a drop of over 10%, total consumption of silicone had a rise of 10%, and this highlighted the importance of internal demand growth to the industry.

With the improvement of people’s living standard in China, per capita disposable income of urban population rose to nearly USD2,500 in 2009 from USD700 in 1999. In the same period, annual per capita silicone consumption of China rose to 300g from 50g. The data shows that, the growth curve of urban per capita disposable income is more coincided with that of per capita silicone consumption counted as per urban population. It means that the rich crowd has fairly stronger consumption capability to silicone material, and the domestic growth mainly comes from...
urban area.

At present, global silicone consumption structure differs greatly from that of China, and this is related to China’s living standard and industrial structure. Through comparing Fig. 1 and Fig. 3 it can be seen that, when compared with general situation of the world, China’s silicone consumption proportion in the fields of electronics, electrics and textile is apparently higher; while in the fields of daily chemicals, building and traffic transportation it is lowered by 2-3 times.

Taking Japan as an example, in 2009, the main silicone consumption market in turn were daily chemicals, building, auto, electronics & electrics, coating and surface treatment material, textile and papermaking. The per capita consumption of silicone material of Japanese in the fields of daily chemicals, building, auto and electronic product was about 100g, 95g, 80g, and 80g respectively; while that of China was about 15g, 55g, 10g, and 90g in the same period. Considering the large number of daily chemicals, auto and electronic products exported in Japan, it can also be seen that there is a huge gap of silicone consumption structures between these two countries.

At present, China is marching on the way to middle developed countries. The resident consumption level is increasing, the large scale infrastructures are successively built up, and transformation of industrial structure is speeded up, all of which shall stimulate the new growth of internal demand market. The main growth points shall include:

1. The industries of daily chemicals, building, auto, etc., with close relation to consumption level of residents. Taking auto industry as example, in 2009, newly added auto output and sales quantity of China was 5 million, and the auto output and sales was as high as 14 million, with a YoY growth of nearly 50% ranking first in the world. It is predicted that in 2010, auto output of China shall be 17 million with a YoY growth of over 20%. In 2009, possessed quantity of auto was as high as 63 million, with a YoY growth of 11 million. It is predicted that in 2010, it may increase to 75 million. According to study and estimate of CRCISI, the mean utilization quantity of silicone material used in middle and high level homemade auto, including fluorocarbon silicone rubber and coating, is 0.8-1.0kg per auto, which is higher than the statistics of 0.3kg concluded by rubber circle. In 2009, China’s silicone consumption for auto industry, including auto maintenance market, was about 19,000t. In 2010 it may increased to 23,000t, and this shall become the new growth point of silicone market.

2. The strategic supporting industries which promoted by China as key points. For example, recently, Chinese government has clearly proposed seven strategic new industries such as high level equipment manufacturing, new energy resource, new material, new energy auto. This provides a broad development space for silicone industry. Taking solar energy as an example, in 2008 China’s silicon wafer cell output was about 2GW, in 2009 it was increased to 3.5GW. The consumption of silicone sealants (bounding the back of silicon wafer cell) was increased by nearly 1 time, to about 5,000t. It is predicted that in 2010, China’s solar cell may reach 5GW, and the adhesive consumption shall continue its growth trend. If LED and wind power equipment industries are included, in 2010 the consumption of silicone material in new energy industry shall break through 10,000t. If silicon wafer cell industry follows this development speed, in 2010 China’s solar cell output shall break through 20GW in 2010, and this shall directly bring about consumption of silicone sealant by 70,000-80,000t.

3. The key is to concern about the specific silicone material and intermediate which are not yet produced domestically but promising. For example, the silicone special monomer used in the specific work condition satisfying demand of high level equipment manufacturing industry, the refined intermediate product of silicone used in the pharmacy industry, and the inorganic nanometer and organic silicone material used for high level building protection, shall embrace the fast growth of demand following rapid maturation of domestic market. Warn against raw material excess

If there is no great change of consumption structure, namely no new large-scale consumption markets emerge, China’s stage
At present, silicone consumption in the market of USA, Japan and Europe is all saturated. The data of CRCSI shows that, before financial crisis, per capita silicone consumption of USA, Japan and Western Europe was respectively 1.1kg, 0.8kg and 0.7kg. From 1999 to 2008, the annual growth rate of silicone market was respectively 2.3%, 1.1% and 2.2%. Nevertheless the year of 2009 suffered impact of financial crisis, and these main markets saw an apparent drop trend. According to estimate of SRI, the silicone consumption of USA, Japan and Western Europe respectively dropped by 6%, 15% and 14%. It is predicted that Japan will not go back with the consumption level of 2008 until 2014. It shows that, at present the per capita consumption of developed countries under this consumption structure has reached the utmost limit level, i.e., 1kg per person per year.

Although China had a growth on silicone consumption even during financial crisis period, it is unlikely for her to catch up with developed countries on annual per capita silicone with that of 1kg. As the world resource and environment condition cannot support another 1.5 billion population to enjoy the same living standard as that of the 1.5 billion population in developed countries.

According to report of Financial Times of UK on Oct. 13: “If Chinese living standard is as same as American, the daily output of petroleum in the world must be increased by 20 million barrels to 105 million barrels. That is to say, each year additional 1 billion tons shall be extracted, and the output of corn and meat must be increased by 2/3 to 4/5”, and this is inconceivable.

China has a huge population. Assuming that through building up resource saving society, China achieves per capita income is equivalent to that of developed countries in 2030, but per capita resource consumption level is only 40% of existing level of these countries (the newly added energy consumption is equivalent to two times of USA current level, or that of all developed countries), it can be estimated that the per capita silicone consumption upper limit of China is about 400g. Assuming that in 2030 China’s population reaches 1.5 billion, without regard to export, it can be estimated that actual silicone consumption of China shall reach the stage utmost limit of 600,000t after 20 years, which is about 2 times of actual consumption domestically at present. In consideration of recovery of export and drive of internal demand, China is estimated to consume 470,000-480,000t of silicone in 2010. Even if the export is taken into account, the domestic consumption may not break through 600,000t before 2015. As China may export some fundamental raw material in 2030 and export some products in the form of auto and electronic products. Assuming that the available export volume of silicone in China is about 200,000t, in 2030, the apparent consumption of silicone in China shall be about 800,000t.

As to capacity, till the end of 2009, the methyl chlorosilane capacity (which had been put into production) was 980,000t/a. In 2010 it is estimated to be newly added by 700,000-800,000t/a. According to existing capacity extension plans of enterprises domestically, it is predicted that in 2012 China’s methyl chlorosilane capacity shall be over 2.5 million t/a, which is equivalent to 1.25 million t/a of polysiloxane and is 2 times of the peak consumption level in China in 2030. If the overseas units are also of normal production, and there is no other countries driving the demand of silicone, after 2012, nearly 60% of newly-completed capacity of China would have to be shutdown, and the remaining ones shall be plunged to price campaign.

Therefore it is suggested that the industry circles at home and abroad would reinforce the cooperation to avoid the worst situation.

Firstly, enhance the research and publicity on risk of excess capacity, so that the enterprise can understand the severe situation at present, and no more blindly building up silicone monomer units. At present some enterprises are still planning to construct new monomer unit, and this shall be resolutely avoided.

Secondly, reinforce the study on future consumption structure of silicone market at home and abroad, and comprehensively refer to experiences from other countries, especially developed countries. During the period of market transformation the new market opportunity shall be seized to extend the downstream consumption market of silicone as far as possible.

Thirdly, the domestic/overseas enterprises shall pay attention to cultivation and excavation of new rising markets. At present, the growth of silicone consumption in the new rising regions such as India, Southeast Asia, Latin America, is prompt, but there is no local production of raw material, if these regions continue to maintain the high speed growth in the future, it may have great significance to relieve the heavy pressure of capacity in China.

Invitation Letter

8–9th Dec. 2010 Chengdu, Jinniu Hotel

Sponsor

Organizer

Co-organizer

Speakers (In no particular order)

More speaker and attendee, please wait!

Greetings to Ms./Mr.,

Along with the flourishing oversea PV market in 2010, many domestic polysilicon plants are put into production including Ledian Tianwei and Ordos polysilicon, etc. Due to the booming trend of overall PV industrial chain, the supply of products such as silicon wafers, silicon cells and modules and so on is hard to meet the demand. Meanwhile, the price of polysilicon is picking up evidently.

On the whole, the domestic polysilicon industry has been polarizing which also indicates the forthcoming integration phase of the industry. At this key period of the PV industry, how can the industry find the correct way out, how should the government support and what are the advanced and matured technologies?

In order to solve above-mentioned issues, we will hold the 3rd (2010) World Polysilicon & PV Industry Summit on 8-9th Dec. 2010 in Chengdu, Sichuan province. The conference is sponsored by China National Chemical Information Center (CNCIC) and is organized by China Research Center of Silicon Industry (CRCSI). On the occasion, enterprise management, government officials, distinguished experts and scholars, both at home and abroad, will gather together to deeply explore the development strategy of the PV industry.

CNCIC sincerely invite you honored company to attend "the 3rd (2010) World Polysilicon & PV Industry Summit".

Best regards,
Yours faithfully,
CNCIC

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**Agenda**

**Dec. 8th**

**Morning**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Details</th>
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<tbody>
<tr>
<td>14:00</td>
<td><strong>Check In</strong></td>
<td>Please pick up delegate card, conference handbook, conference data CD, etc.</td>
</tr>
<tr>
<td>14:20</td>
<td><strong>Opening &amp; Speech</strong></td>
<td>President of China National Chemical Information Center (CNCIC)</td>
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<td><strong>Principal Sponsors</strong></td>
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<tr>
<td></td>
<td><strong>Topic A Tendency of Industrial Development</strong></td>
<td>Low Carbon Era—How Can PV Industry Innovate and Get a Win-Win Future?</td>
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<tr>
<td>14:50</td>
<td>Influences of Global Economy Trend on China Silicon Industry Development</td>
<td>Along with the warming global economy, PV markets of North America and Europe are hoping to totally start up which is leading to the rising price of polysilicon. What are the influences of this situation on China’s silicon industry?</td>
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<tr>
<td>15:20</td>
<td>Development of World’s PV Industry Creates Opportunity for China</td>
<td></td>
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<tr>
<td>15:50</td>
<td><strong>Tea Break</strong></td>
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</tr>
<tr>
<td>16:10</td>
<td>Policy Orientation of China Polysilicon Industry</td>
<td>Ministry of Industry and Information Technology announced to the public on Aug. 8th the list of 2,087 enterprises with backward production capacity. These enterprises shall be closed before the end of September this year. According to the China [2009] 38 files set, backward production capacity of polysilicon enterprises are facing eliminating in 2011, what the policy orientation would be?</td>
</tr>
<tr>
<td>16:40</td>
<td>Status of PV Power Industry in China Energy Strategy</td>
<td>According to China’s Energy Strategic Plan System, the 4 decades before 2050 is the transforming period of Chinese energy system. At that time the clean energy will account for 50% of the overall energy consumption, then what will be the role of PV system in the clean energy?</td>
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<tr>
<td>17:30</td>
<td><strong>Cocktail Party</strong></td>
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<tr>
<td>18:30</td>
<td><strong>Dinner Party</strong></td>
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<tr>
<td>20:00</td>
<td><strong>Special Technique Exchanging Meeting</strong></td>
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### Dec. 9th (Hall #1)

**Topic B Technique Seminar of Polysilicon Industry**

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<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker/Company</th>
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<tbody>
<tr>
<td>08:30</td>
<td>Best in class polysilicon technology, GCL Solar Energy Technology Holdings Limited</td>
<td>VP, Mr. Russ Hamilton</td>
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<tr>
<td>09:00</td>
<td>How vacuum solutions are helping to reduce cost in silicon manufacturing, Oerlikon Leybold</td>
<td>CEO, Mr. Andreas Widl</td>
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<tr>
<td>09:30</td>
<td>Dry recycling system for chlorosilanes and HCI, Dalu Industry</td>
<td>VP, Mr. Yue Han</td>
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<tr>
<td>10:00</td>
<td>Tea Break</td>
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<tr>
<td>10:20</td>
<td>Progress of metallurgical process, Elkem Solar AS</td>
<td>VP, Sales &amp; Marketing, Mr. Torgeir Ulset</td>
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<td>10:50</td>
<td>Disproportionation technology, LXE</td>
<td>VP, Mr. Mark Dassel</td>
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<td>11:20</td>
<td>Breakthroughs of silane decomposition process, General Research Institute for Nonferrous Metals (GRINM)</td>
<td>Professor, Mr. Zhang Chun(tbc)</td>
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<td>12:00</td>
<td>Buffet Lunch</td>
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<tr>
<td>14:00</td>
<td>Progress of alkoxysilane-based process, Wuhan University Silicone New Material Co.,Ltd.</td>
<td>General Manager, Mr. Liao Jun</td>
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<tr>
<td>14:30</td>
<td>How Siemens process gas chromatograph improve polysilicon quality, SIEMENS</td>
<td>Product manager, Mr. Yang Fei</td>
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<td>15:00</td>
<td>Solutions of high output, low energy consumption polysilicon plant, Schmid</td>
<td>President, Mr. Alexander Berg</td>
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<td>15:30</td>
<td>Tea Break</td>
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<tr>
<td>15:50</td>
<td>Discussion on difficulties of polysilicon technology, Sichuan Yongxiang Poly-silicon Co.,Ltd</td>
<td>General Manager, Mr. Yi Zhengyi</td>
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<tr>
<td>16:20</td>
<td>Technology breakthroughs on fumed silica from STC, Guangzhou GBS High-Tech &amp; Industry Co., Ltd. (GBS)</td>
<td>Chairman, Mr. Wang Yuelin</td>
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<td>16:50</td>
<td>New methods on STC utilization (tbc), CDI Corp.</td>
<td>Mr. Andy Johnson</td>
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<td>17:20</td>
<td>Application of FBR Technology, Sunnyside Technologies, Inc</td>
<td>General manager, Mr. Steve Chu</td>
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<td>18:30</td>
<td>Buffet Dinner</td>
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<tr>
<td>20:00</td>
<td>Introduction meeting on new technologies of Polysilicon</td>
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### Dec. 9th (Hall #2)

**Topic C Development of PV Industry**

<table>
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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>08:30</td>
<td>Topic (tbc)</td>
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<tr>
<td>09:00</td>
<td>Integrate polysilicon-PV value chain, improve company competitiveness, LDK Solar</td>
<td>President, Mr. Tong Dongxue (tbc)</td>
</tr>
<tr>
<td>09:30</td>
<td>Challenges and prospects of thin film solar cell, BESTSOLAR</td>
<td>President, Mr. Gao Shichong</td>
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<tr>
<td>10:00</td>
<td>Tea Break</td>
<td></td>
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<tr>
<td>10:20</td>
<td>Progress on high efficiency thin film solar cell, QS Solar</td>
<td>Chairman, Mr. Sha Xiaolin</td>
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<tr>
<td>10:50</td>
<td>Topic (tbc)</td>
<td>VP, Mr. Chen Wenjie</td>
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<tr>
<td>11:20</td>
<td>Analysis on China’s PV industry in the era of post-financial-crisis, ENF (tbc)</td>
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<tr>
<td>12:00</td>
<td>Buffet Lunch</td>
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<tr>
<td>14:00</td>
<td>Grid parity for solar power generation, GCL Solar Energy Technology Holdings Limited</td>
<td>VP, Mr. Russ Hamilton</td>
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<td>14:30</td>
<td>Development approach of TianWei thin film technology, Baoding TianWei SolarFilms Co., Ltd.</td>
<td>GM, Mr. Ma Wenxue</td>
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<td>15:00</td>
<td>Status &amp; prospect of silicon solar cell manufacturing technology, Trina Solar</td>
<td>VP, Mr. Huang Qiang</td>
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<td>15:30</td>
<td>Tea Break</td>
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<tr>
<td>15:50</td>
<td>Progress on equipment of thin film solar cell manufacturing, Oerlikon</td>
<td>President, Mr. Wang Jun</td>
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<td>16:20</td>
<td>SG silicon, solar cell &amp; module, Canadian Solar Inc.(Suzhou)</td>
<td>Director, Mr. Chen Genmao</td>
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<td>16:50</td>
<td>Application of silicones in PV industry, Dowcorning</td>
<td>Senior engineer, Cao Songjie</td>
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<td>17:20</td>
<td>New detection technology of silicon PV cell, Tainergy Tech Co., Ltd</td>
<td>President assistant, Mr. Yang Dayi</td>
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<td>18:30</td>
<td>Buffet Dinner</td>
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<tr>
<td>20:00</td>
<td>Introduction meeting on new technologies of PV industry</td>
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Participation Fee

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<tr>
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<th>Standard business room</th>
<th>Deluxe standard business room</th>
<th>Business suite</th>
<th>Business suite in lotus building</th>
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<td>USD1280/person</td>
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1. The participation fee includes cost of sessions, dinners, coffee/tea, conference documents, and English/Chinese interpretation service.
2. Delegates who give presentations will get free passes.

Hotel Fee

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<th>Single business room</th>
<th>Standard business room</th>
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Registration Form

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Hotel Address: Jinniu Hotel, No.2 Jinquan Str. Jinniu District Chengdu Sichuan Province, China

Requirement: Room type ______________________, Dec. ___th to ___th.

Schedule: On________arrives in Chengdu and on________goes back.

Rhodia celebrates 30 years of presence in China

Rhodia is this year celebrating its 30th anniversary of presence in China. Today, China is spearheading Rhodia’s development in the Asia-Pacific zone - a part of the world that Rhodia is targeting for growth. The Asia-Pacific zone currently accounts for 28% of the Group’s sales and 21% of its workforce.

“China benefits from one of the highest potentials for economic growth. With 30 years’ experience in this market, an efficient industrial network and a dedicated research & development hub, Rhodia has all the key assets it needs to take full advantage of this source of new growth”, said Jean-Pierre Clamadieu, Chairman and CEO of the Rhodia Group.

The Group’s activities in China are concentrated in three sectors: automotive, with silicas for tires, engineering plastics and catalysis technology; cosmetics and detergents, with specialty surfactants, a market segment where the Group’s front-ranking positions will be further strengthened by the acquisition of Feixang Chemicals; electronics, with rare earth-based formulations. The Group is also developing its expertise in China in the field of renewable sources of energy.

Chinese new energy companies’ IPOs are sought after in the US

Chinese polysilicon dealer, Daqo New Energy Co., Ltd., one of Chinese polysilicon dealer, launched its IPO on NYSE on October 7 (local time). On the first day of IPO, the company’s opening quotation was USD9.98, 5.1% higher than the offering price, and then hit USD10.48 for one time. Daqo New Energy is the second new-energy environmental concept company to land on NYSE within a week of the successful IPO of Ming Yang Wind Power.

The successful IPO of Ming Yang Wind Power and Daqo New Energy not only sent a signal that the US capital market is recovering recently but also proved that Chinese new energy companies are sought after and once again drew attention among the American investors, according to Yang Ge, the chief representative of NYSE Beijing Representative Office Yang Ge.

October 1, Ming Yang Wind Power was listed on NYSE and successfully raised USD350 million, marking this year’s largest IPO in the whole US capital market including NYSE, American Stock Exchange and NASDAQ. Daqo New Energy issued 8 million ADS shares (American Depository Receipts) at a price of USD9.50 per share for total financing of USD76 million.

Since 2006, a number of Chinese private companies in the field of new energy like Suntech, LDK and Yingli Energy first knocked to open the door of NYSE and the Chinese new energy companies appeared in the US capital market for the first time and became popular among American investors, indicating their development potential in this field. Their success not only set a good example for the following Chinese new energy companies but also paved the way to the US for Chinese private companies.

Jiangsu Hongbao enters polysilicon industry

Jiangsu Hongbao Co., Ltd. announced its plan to establish Jiangsu Hongbao Photovoltaic Co., Ltd. in Zhangjiagang Economic Development Area of Jiangsu province to manufacture and distribute crystalline silicon wafer and modules in response to the growing market demand for solar cell.

The new company will build a 300MW crystalline silicon wafer plant and 100MW silicon modules plant, which will produce 32 million pieces of 6.5” mono-crystalline silicon wafer and 58 million pieces of 8” polysilicon wafer. The approved total investment is RMB803.2 million, of which RMB175 million will come from shareholders of Hongbao and the remaining from the new company. When put into full operation, this project is capable of producing 300MW crystalline silicon wafer and 100MW modules a year.

EVONIK silica products were marked up worldwide

Evonik recently announced its plan to mark up its precipitated silica products, fumed silica, specially oxides and flating agents worldwide by up to 8% from October 1, 2010, in response to the mounting cost pressure due to legislations, R&D, technical service, logistics and production.

Shanghai, October 20, 2010

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News Flash
Chinese silicon metal price climbs slightly once again

It is said that the price of silicon metal in some districts of China is still climbing slightly, and the main cause of such rise is the active domestic market despite the recent export shrinkage.

According to a silicon metal manufacturer in Hunan province, its current quotation of silicon metal 3205# was RMB15,200/t and it sold portion of silicon metal products at a price of RMB15,000/t to traders. The source noted that most of silicon metal plants domestically have low inventory level and all produce by order. The silicon metal price is unlikely to drop, according to the source’s estimates.

A silicon metal manufacturer in Yunnan province said its current EXW price of silicon metal 3303# is RMB14,500/t, RMB200 higher than the previous price. This factory currently maintains a low inventory level while the silicon metal products on the port are in large quantity due to the export shrinkage.

Guodian Ningxia Solar 2500t/a polysilicon project commissioned

On Sep 18, the first phase of 2500t/a polysilicon project of Guodian Ningxia Solar Energy Co., Ltd. was put into operation in Huinong, Ningxia.

This RMB5 billion two-phase project incorporates a full package of foreign-made advanced production process, with planned annual output of 5,000 tons of polysilicon. The first phase of this project kicked off on October 28, 2008, and the first polysilicon product came off line on September 7, 2010, with rod diameter and density meeting the high-quality criteria and purity of over 9N. The environmental friendly design of this project addresses the potential pollution problems in polysilicon industry and substantially achieves zero emission. When the project was put into full operation, Huinong will become China’s largest polysilicon producing base, capable of supplying polysilicon for production of 0.5 million kW solar cells.

Guodian Group is a leader in China’s power industry, with solid financial strength and high-end technical capabilities to develop new energy and new materials. Through two years’ construction, the first phase of 5,000 t/a polysilicon plant project was successfully commissioned in Sep 19, contributing significantly to accelerated development of photovoltaic industry and greener way of economic development in Ningxia province.

Zhongneng’s technological renovation project approved by NDRC

National Development and Reform Commission (NDRC) recently approved, on principle, the proposal of Jiangsu Zhongneng Polysilicon Technology Development Co., Ltd. to renovate its existing production line. This USD454 million project involves technical renovation of its existing polysilicon production line using self-developed advanced polysilicon production process, specifically, route improvement and process optimization for such critical processes of the existing three phases of production line as reduction, distillation and gas treatment and hydro chlorination. After the renovation, the overall power consumption per kilogram polysilicon output will reduce from 180 kwh to 120kwh and the cost will from USD70/kg to USD25/kg, reaching a world-leading level. It is estimated that the polysilicon output this year will exceed 16,000 tons without additional installation after the project is completed, accounting for more than 50% of the national total.

Foxconn and Yingli to co-invest into polysilicon in Shanxi

According to Datong News, both Foxconn Group and Yingli Group made preliminary decision to join hands with Datong Coal Group to build a 27,000 t/a polysilicon plant and a 1 GW/a polysilicon solar cell project in Datong city. The first phase of the polysilicon project will involve a total investment of RMB26.6 billion and produce 6,000t of polysilicon per year, while the first phase of the polysilicon solar cell project will cost 200 million dollars and produce 200 MW solar cell modules a year. So far, Datong city government has reached initial agreement with the two companies on siting, infrastructure and public utilities for the project.
September 29, 2010, a groundbreaking ceremony for a world-class fumed silica expansion project took place grandly in Xinghuo Industrial Park of Jiujiang, Jiangxi.

This 43 million dollar project, which is being implemented by Cabot BlueStar Chemical (Jiangxi) Co., Ltd., a joint venture between Cabot (China) and BlueStar Corporation, involves capacity expansion of the existing fumed silica plant and construction of another new plant and is scheduled to be put into operation in 2011. Then the capacity of the plant will increase from 5,000 t/a to 15,000 t/a, hopefully 20,000 t/a in the long term.

Cabot BlueStar Chemical works with BlueStar Xinghuo Silicone Plant to build an integrated recycling value chain of silicone business, thus driving sustainable development of the industry. Cabot BlueStar’s fumed silica project uses methyl trichlorosilane, a byproduct from monomer production of the plant, as the raw material, while returning the HCl generated from production of fumed silica to Xinghuo silicone plant for use as raw material for synthesis of methyl chloride and subsequently for production of silicone monomer, thus realizing recycling of resources. As a result, the reutilization rate of chlorine can reach as high as 99.9%.

World’s largest silicon metal plant will be built in Ganzi Prefecture

Atlantic Silicon Company of Spain Weilamier Group will build the world’s largest silicon metal plant and auxiliary hydropower station in Kangding County of Ganzi Prefecture. This €1.06 billion euro project is the largest Spanish industrial investment ever made in China.

Chemical-grade silicon metal plant as part of this project will be put into operation in January 2011, with expected annual output of 100,000 tons. The world’s largest solar-grade silicon metal plant will start operation by the end of 2011, with the capacity of 10,000t/a. An integrated water resource development project has been launched for Lijiu River Basin of Kangding coun-

Wacker starts up new Chinese production plant

WACKER, officially inaugurated its new silicone-polymer plant at Zhangjiagang (China) on Oct 20, 2010. The plant manufactures not only intermediates, but also downstream silicone products, including fluids. Completing WACKER’s supply chain in China, the plant is an integral part of Zhangjiagang’s silicone production system and represents an investment of some €30 million.

“Our new silicone-polymer facility at Zhangjiagang is another milestone toward optimally satisfying soaring customer demand on China’s growth markets,” explained Carlos Weise, president of the WACKER SILICONES division. “Our Chinese business is generating double-digit growth, clearly outperforming the world market,” he emphasized. “At the same time, the new plant will help us provide top-quality products and solutions that are made locally. As a result, our customers will be able to meet their own customers’ needs even more effectively. Through our efforts, we are supporting growth in many of China’s key industries.”

WACKER has produced silicones in China since 2004 for use in many challenging applications, including in the automotive, construction and electronics sectors. In 2009, WACKER posted sales of over €730 million in China, including Taiwan. The Munich-based chemical company has been present in China with own sales offices since 1995.
TRONY sees its share price down on the first day of listing

TRONY, the first specialized solar silicon membrane maker across Taiwan strait, was listed on Hong Kong Stock Exchange on October 7, with opening quotation of 5.85 HKD, 30% higher than the offering price of 4.5 HKD. However, the closing price is only 5.07 HKD the same day, with a 13.33% drop. The first day of listing did not witness bullish trend. This seems to highlight the wait-and-see attitude of investors towards this company.

The company was founded in 1993 and provides over 200 kinds of solar modules for use in off-grid application systems such as solar household application system, solar illumination products and solar consumer application system, building integrated photovoltaic (BIPV) application system and solar power stations.

Thanks to the wide application of its products and multiple sources of orders, the company was more resistant to the impact of the 2009 financial crisis than other new entrants. But the company’s failed IPO attempt in the US as a result of unfavorable environment forced the company to go public in Hong Kong market.

It is reported that the total business income of the company in 2009 (from July 1, 2008 to June 30, 2009) was RMB542 million and that of 2010 grew to RMB1.351 billion, indicating a growth rate of 150% and annual compound growth rate of 122.6% over the past three years. 84.4% of its business income comes from domestic market, with the remaining from Hong Kong, Thailand and other countries. The addition of a 70 MWp production line in July 2009 increased the company’s total capacity to 115MWp.

DJSilicone Shanghai production site starting operation

In order to further improving the quality and efficiency of our service, shorten the delivery period, DONEJUE SILICONE (SHANGHAI) CO., LTD (“SHANGHAI DONGJUE”) invested by Dongjue Group, with an annually 15,000 tons capacity of silicone compound production site had been formally on operation in September, 2010.

Together with Dongjue Group’s another production site in China -DONGJUE SILICONE (NANJING) CO., LTD (“NANJING DONGJUE”), Dongjue Group, with total capacity of 60,000 tons of silicone compound, will afford full range of silicone rubber products, technical support and after-sale service for both mainland China and overseas customers.

Shanghai Dongjue will implement the Dongjue Group’s unified marketing and management policy which is consistent with that of NANJIN DONGJUE, that is, the unified production brand, the unified production logo, the unified sales policy and the unified market management.

Schmid GmbH polysilicon cooperation agreement signs in Henan

October 2, the contract signing ceremony for the first phase of 7,000 t/a polysilicon production line jointly built by Sanmenxia Dijiu Mining Co., Ltd. of Henan province and Schmid GmbH took place in Beijing. Schmid will design, supply and install technical equipment to the debugging standard before delivering the installed equipment to Dijiu Mining.

It is said the Schmid’s polysilicon production technology enjoys global leadership and is energy efficient, cost effective and environmental friendly. This polysilicon project involved total investment of RMB1.1 billion and began construction on June 18, 2009.

Schmid GmbH will sign a long-term strategic technological cooperation agreement with Dijiu Mining on construction of Sanmenxia Photovoltaic Industrial Park of Recycling Economy, which is planned to become a high-tech polysilicon industrial park dealing with solar silicon cells, polysilicon, photovoltaic glass and solar power generation within three or five years.
Rubber undersupply will remain in next five years

October 14, Li Shiqiang, the general manager of Shanghai branch of Sri Trang Agro-Industry Plc, said the global undersupply of natural rubber will remain unchanged at least before 2015 and 2010 will be the starting point of a decade during which agricultural produces especially natural rubber will be revaluated for higher price.

According to him, the continuous price rise of rubber futures after the National Day holiday was due to three reasons: strong fundamental, significant depreciation of USD against RMB and inflow of enormous hot money.

“Natural rubber is in extremely unbalanced supply and demand situation, and the inventory level of either manufacturers and dealers or Shanghai Futures Exchange is at the historically low given the global value chain,” said Li.

The dollar depreciation of over 15% and the rampant currency liquidity resulting from quantifiable relaxation policy of the Federal Reserve are international contributor to the price hike of rubber futures.

“The prosperous commodity market and inflow of enormous hot money into natural rubber industry is one of the drivers behind the recent price hike.”

Li believes natural rubber is financially-favored due to its limited sources, tight supply, vulnerability to inclement weather and speculation proneness.

“It is predicted that the natural rubber will remain as the focus of hot money and a large stream of fund will flow into natural rubber futures market,” said Li.

The current growth rate of natural rubber supply is no more than 5% compared with corresponding period of last year, while the growth rate of demand is several percentage points higher than that of supply. Li added that 2010 marked the beginning of expansion of global tire industry and Europe and the US joined China in rapidly expanding their capacity worldwide, resulting in about 39% increase in car output and leading to dramatic growth in tire demand.

Mr. Li attended the conference held by ANRPC in October. “Considering the information from the conference, the rubber undersupply situation will continue at least into 2015,” said Li.

Wacker silicone raises prices for fumed silica products

Wacker Silicone will mark up its fumed silica products under the trademark of HDK® worldwide from October 15. This markup is applicable to all supplies under the current, future and existing sales contracts and varies from a product variety to another, within a range of up to 10%. This markup is implemented in response to the mounting costs, especially in terms of production, EHS, R&D, packaging and logistics.

Rhodia inaugurates a new silica plant in China

Rhodia’s Chairman & Chief Executive, Jean-Pierre Clamadieu, together with Tom Benner, President of Rhodia Silica, today inaugurated a new high-performance silica plant in Qingdao (China’s third largest seaport in Shandong province), in the presence of the Chinese authorities.

Certified by major tire manufacturers worldwide and marketed under the brand name Zeosil®, Rhodia’s Highly Dispersible Silica is used principally in the production of Energy efficient tire. Rhodia’s technology decreases the tread’s rolling resistance, resulting in a five to seven percent reduction in fuel consumption by light vehicles.

Located on a seven-hectare site, this 72kt plant adds more than 30 percent of additional capacity to Rhodia’s global highly dispersible silica production network and with it the ability to respond to an anticipated growth in volumes.

“We provide our customers with a unique technology and the corresponding volumes required to meet the increasing regulatory demands for tire labelling around the world”, commented Tom Benner, adding “the site will enable us to profit fully from Asia’s significant development potential and reinforce our leadership position in this market”.

Operations of fumed silica plants worldwide in 2010

Under the influence of the global economic crisis, the average load rate of silica abroad was about 75% in the first half of 2010, indicating a downward trend. The average plant load factors of foreign companies in China are as follows: Cabot 95%, Wacker 80% and Tokuyama 75%. The average load rate of domestic plants was about 70%, with a limited number of companies seeing 90% load factor such as Shenyang Chemical. Other companies ran at relatively low plant load factor, some of which operated even below 60%.
A groundbreaking ceremony for the USD270 million α-Si film cell project of Lianxiang (Shandong) Photovoltaic Technology Co., Ltd. was held on October 13 in Jining. This project, once in full operation, will produce 70 MW α-Si film cell a year.

According to Lianxiang, the company’s α-Si film cell products have a photoelectric conversion rate of over 10%, a world-leading level, and boast low production cost and good high temperature performance, representing the trend of future development of solar cell. As a photoelectric energy, α-Si film cell is widely used in photovoltaic power station, construction and automotive industries.

According to general manager of Lianxiang Zhou Guohui, silicon consumption of α-Si film cell is only about 1% of that of crystalline silicon cell and the energy consumption is significantly reduced in the solar cell manufacturing process. Furthermore, per unit area total generating capacity of α-Si cell is about 10% higher than that of average crystalline silicon cell because the former has lower requirements for light ray and better response to weak light.

As downstream industry of α-Si cell, many α-Si cell solar power stations have been built and put into operation in Jining in recent years. October 13, the 18 MW first phase of 30 MW Jining Huahan Photovoltaic Power Station was commissioned and connected into the grid. On the same day, cornerstone was laid for a 30 MW α-Si cell solar power station in Zoucheng of Jining city.

It is said that Taiwan-based United Macroelectronics Corporation, the investor of this power plant, is the world’s second largest silicon semiconductor manufacturer with world-leading semiconductor chip manufacturing technology. The company started deploying its LED and α-Si cell value chain in Jining last year. Currently, this Taiwanese company has 13 subsidiaries in Jining with total investment of over USD800 million.

DMC production and distribution of some plants Oct. 14

The latest DMC price of BlueStar Xinghuo Silicone is RMB24,600/t (VAT included), which stays firm. Under normal operation, the company faces no pressure from DMC inventory with a huge number of orders pouring given the normal plant operation of the company, absence of pressure from DMC inventory and a huge number of orders pouring recently.

DMC price of Shandong Group is RMB23,500/t. The company currently maintains a low level of inventory with smooth shipment.

Tangshan Sanyou Silicon’s latest DMC quotation is RMB23,500/t, which is relatively firm given the large number of orders coming in and relatively low inventory level. The company’s annual output is around 60,000t.

Jiangsu Taizhou Meilan’s latest DMC price is around RMB23,500/t, almost at the same level as the previous week. The company said its plant is operating normally with low DMC inventory and acceptable sales performance. The company produces about 15,000t of DMC a year.

The latest DMC quotation of Jiangsu Hongbo Chemical is RMB23,800/t, indicating a stable price level. The company currently operates normally and can hardly meet the market demand with a limited quantity of shipment.

Shandong Dongyue’s latest DMC quotation is about RMB24,000/t, which is nearly the same as the previous period and appropriately discountable for contractual buyers. The sales performance is desirable and there is no pressure from inventory level. The company produces about 60,000 tons a year, some of which are for internal use.

Shandong Jinling does not offer its DMC price due to out of stock situation. The company’s annual DMC output is 45,000t.
Zhangjiagang on its way to become a world-class silicone-producing base

At the 4th Global Silicone Business Conference held by China National Chemical Information Center (CNCIC), Zhang Wei, deputy mayor of Zhangjiagang city noted the city has defined silicone industry as one of prioritized emerging industries. With its abundant silicone monomer resources, the city will further extend the downstream value chain that is characterized by high added value, high level of technology and high return on investment, in a bid to build a world-class and domestically leading silicone industrial base.

He further added that totally independent of fossil fuels such as oil, silicone industry is a new material industry that meets the requirements for upgrading conventional industry. Zhangjiagang has easy access to raw materials, convenient communications and favorable government policy necessary for development and extension of silicone industry. As Dow Corning and Wacker’s 400,000 t/a silicone monomer plant project is about to be commissioned in the middle of this month, Zhangjiagang will become the largest silicone monomer supplier in China and even the whole world.

It is said Dow Corning’s silicone monomer capacity in Zhangjiagang in the next few years will take up about 30% of the national total, while Wacker’s fumed silica capacity in the city will account for 15% of the national level. As domestic silicone consumer market is mainly concentrated in Yangtze River Delta region and Pearl River Delta region, of which the former consumes about 50% of the national total, the geographic location of Zhangjiagang in the center of Yangtze River Delta region and the low distribution cost and rapid response to market demand give the city remarkable competitive edge.

According to deputy director of Zhangjiagang Municipal Development and Reform Commission Liu Yi, if all output from the 400,000 t/a silicone monomer project when in operation is consumed locally, about 500,000 t of high-added-value downstream products will be produced each year, making it possible to double the output value in the short term to RMB20 billion. The city has set up a RMB1 billion investment fund in support of such emerging industries as silicone, lithium battery and intelligent power grid.
**Product Innovation**

**Dow Corning launches new silicone sealant**

To meet the various requirements of the latest design trend and technical characteristics, use of modern glass wall has become prevalent. Glass walls using silicone sealant brings more natural lighting and better thermal insulation for builders and building owners, allowing companies to improve their competitiveness by reducing manufacturing cost. Dow Corning’s newly-launched silicone sealant improves the structural strength of windows while making possible use of steeper and finer frame design, thus winning the favor of downstream users.

Silicone structural assembly technique, which is widely used in assembling of building glass walls, can provide highest design flexibility to change the urban profile worldwide while enhancing the performance and service life of buildings. Structural glass wall using Dow Corning silicone sealant can transfer the load on frame to glass while allowing the movement between glass and the frame due to different thermal expansion coefficient, thus attaining larger surface area of glass. In addition, depending upon different design schemes, structural assembly technique can also improve the window’s thermal insulation and various protective characteristics.

**Wacker launches UV-activated silicone elastomer**

Wacker GmbH recently launched a kind of UV-activated silicone elastomer called POWERSIL UV, which is suitable for use in medium and high-voltage insulation technology. Compared with conventional silicone elastomer that is cross linked through heating, the crosslinking of UV-activated silicone elastomer is triggered off by exposure to UV ray before self-hardening under room temperature.

Wacker’s UV cross linking technology has two remarkable advantages: extraordinarily rapid cross linking process, and no emission of any decomposition products at the time of hardening. This technology can process silicone elastomer in a flexible and cost effective manner.

**Momentive launches multiple coating additives**

At the 15th China International Coating Expo (China Coat 2010) recently held at Guangzhou International Expo Center, Momentive Performance Materials launched varieties of high-performance coating additives, including CoatOSil 2812 and CoatOSil 2816 silicone additives, CoatOSil MP 200 silane and CoatOSil DSA 6 and CoatOSil DSA 10 friction modifiers. Inheriting the excellent tradition of 70 years’ technical breakthrough of the company, these newly-launched products can significantly improve the quality, performance and effect of coatings.

CoatOSil DSA 6 and CoatOSil DSA 10 friction modifiers are siloxane-based resin microballs used to improve the effect of coatings and enhance the smooth and soft contact performance of coatings. Compared with conventional inorganic superfine, CoatOSil DSA series friction modifiers have smaller specific gravity and can reduce the friction coefficient of coating system while providing high thermal resistance and corrosion resistance. Meanwhile, the newly-launched CoatOSil DSA 10 friction modifier can increase the thickness of coating system.

CoatOSil 2812 silicone additive can make coating system more smooth as well, and its unique advantage can be fully reflected in the production process of pre-polymer: when CoatOSil 2812 silicone additive interacts with standard monomer, the former can sufficiently integrate the characteristics of silicone to form the main chain of polyurethane coating system.
The outlook for silicon metal

CRU  Jorn P. De Linde

Situation of World Silicon Metal Market

The silicon metal market is recovering from a serious downturn. The rebound has been relatively swift, but due to the severity of the downturn, silicon metal prices and non-Chinese consumption remain substantially below 2008 levels. Looking back at the years prior to 2009, certain developments stand out, notably the establishment of a number of new silicone operations in Asia and also the emergence of the solar sector as an important component of silicon demand. On a general note, the last decade in many respects revolved around China, reflecting the country’s position as the leading source of silicon metal supply and also, directly and indirectly, as a main driver of global demand.

Since the beginning of the 21st century, the demand and the production of silicon metal has risen much more rapidly in China than in the West. The difference in performance was even more pronounced in 2009, when silicon metal demand outside of China dropped by more than 30%. As a result, apparent silicon consumption in the West actually experienced a net decline over the past decade as a whole, falling from 1.064 million tonnes in 2000 to around 1.033 million tonnes last year. Figure 1 shows the net change in silicon demand and production relative to 2000 in China and Western countries.

Due to the massive build-up of Chinese supply, Western silicon metal production advanced only moderately between 2000 and 2008, achieving a net gain of 35,000 tonnes. Over the same period, effective Western production capacity grew even less, posting a cumulative increase of around 2.3%. (Non-Chinese capacity actually peaked in 2005.) As a result, average capacity utilisation rates stayed relatively high, especially from 2004 through 2008, and limited spare capacity existed outside of China, making the market susceptible to supply disruptions.

This situation changed dra-
matically in 2009. In response to the severe contraction in demand, Western silicon production fell sharply and the average capacity utilisation rate plunged. Due to reduced international demand and shrinking profitability, silicon production in China also dropped substantially last year. As a result, the global production of silicon metal plummeted by more than 25% compared to 2008, although the distribution was almost unchanged. The distribution of global silicon metal output in 2008 and 2009, respectively, is shown below in Figure.2.

International silicon metal prices reached a peak in the first half of 2008, but subsequently dropped sharply due to the slump in demand. However, since the third quarter of 2009, international prices have bounced back strongly and have since remained at a relatively high level by historical standards.

**Demand Prospect of Silicon Metal**

Although apparent Western silicon metal consumption dropped by more than 30% in 2009 compared to 2008, demand has advanced rapidly since the middle of last year. In the second half of 2009, demand increased by nearly 65% compared with the depressed level experienced during the first half of the year. Consumption gains now are moderating, but the forces that propelled global demand steadily higher for much of the past decade remain largely intact.

Looking ahead, the growth rate of global consumption is expected to remain in the order of 5%~6% annually, broadly in line with the historical trend. However, the dynamics of growth (by end-use sector as well as geographical region) are changing for the following reasons:

1. The importance of the solar sector continues to increase; 2. While prospects differ considerably by region and consumption segment, the growth in total western silicon metal demand is moderating; 3. Underpinned by major expansions of polysilicon and, especially, silicone production capacity, China now is accounting for the majority of increase in global consumption (see Fig.3);

The solar-grade silicon sector will gain more and more importance. However, the polysilicon industry in China and elsewhere is facing several specific issues, such as large variations in operating and financial performance, lack of access to advanced technologies for many new entrants and reliance on government subsidies and incentives.

**Chinese Silicon Metal Industry**

**Supply**

The last decade witnessed a major expansion of silicon capacity and production in China. By 2008, China accounted for more than half of global output, up from a share of around 29% at the beginning of the decade. The rapid growth in Chinese silicon production was underpinned by a large increase in exports, which more than doubled between 2000 and 2008. China met almost 45% of Western silicon demand in 2008, an all-time high, compared to just 24% in 2000.

Although China is the world’s leading producer of silicon metal, the local industry faces some big challenges, especially in the areas of structural adjustments and the adoption of more environmentally-friendly technologies. In contrast to the West, where five companies account for more than three-quarters of total supply, the Chinese industry remains very fragmented, characterised by a large number of small enterprises. Moreover, the size of individual furnaces is much smaller than it is in the West, and Chinese operations suffer from limited access to low-cost, high quality raw materials and also low process efficiencies.

**Export**

In 2008, exports absorbed nearly 70% of total Chinese production. This share dropped to around 57% last year. Led by Japan, other Asian countries typically have accounted for more than 60% of total Chinese exports, except in 2008, when shipments to the United States, Canada, Brazil and the European Union rose substantially. Trade restrictions currently limit Chinese silicon metal exports to the United States and Europe. (The antidumping duty in the EU decreased from 49% to 19% in June 2010.)

Table 1 shows the market share of Chinese silicon metal in the United States, EU-27 and Japan.
Prospect

In the next few years, Chinese manufacturers of silicon metal face big challenges to adjust their operations to ensure financial viability and to comply with government policies and regulations. Measures involve the elimination of small-scale furnaces and inefficient capacity, the cancellation of preferential policies and stricter environmental regulations. To remain cost-competitive, silicon metal producers must ensure access to affordable electric power, high-quality raw materials and advanced process technology.

Longer-term, the level of Chinese exports principally will be determined by the evolution of local capacity and production and by the growth in domestic silicon demand. Most likely, Chinese silicon metal export growth will gradually slow down, and the domestic consumption is expected to exceed the export volume by 2013.

Summary

Over the next 5 to 10 years, key characteristics of the global silicon metal market will include:

1. Rapid growth in global demand, driven in large part by the chemical (silicone and solar) sector, but with important differences by sector and region;
2. Substantial capacity expansion, both to meet incremental demand and to replace existing high-cost/obsolete capacity;
3. Rising Chinese production costs due to more expensive electricity and raw materials, higher transportation cost, and a stronger yuan;
4. Lack of a major source of low-cost silicon metal outside China;
5. Convergence of international silicon metal price; and
6. A continued gap between Chinese domestic and export prices.

[This article is based on the presentation given by Mr. Jorn P. De Linde in Sep 2010]

Table 1 Market share of Chinese silicon metal in different areas

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<td>1. USA</td>
<td>Norway 23%</td>
<td>China 83.4%</td>
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<td>2. Brazil</td>
<td>Brazil 7.0%</td>
<td></td>
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<tr>
<td>3. South Africa</td>
<td>France 21%</td>
<td>Norway 2.6%</td>
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<tr>
<td>4. Australia</td>
<td>China 12%</td>
<td>South Africa 1.5%</td>
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<tr>
<td>5. Canada</td>
<td>Germany 7%</td>
<td>Australia 1.2%</td>
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</tr>
<tr>
<td>8. China</td>
<td>0.3%</td>
<td></td>
<td></td>
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<tr>
<td>Total Top 5</td>
<td>91%</td>
<td>85%</td>
<td>96%</td>
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Silicone Fluids

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<th>Code</th>
<th>Name</th>
<th>CAS Number</th>
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<tbody>
<tr>
<td>BSF202</td>
<td>Methyl Hydrogen Silicone Fluid</td>
<td>63148-57-2</td>
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<tr>
<td>BSF202HT</td>
<td>Hydride Terminated PolyDimethylsiloxanes</td>
<td>70900-21-9</td>
</tr>
<tr>
<td>BSF203SM</td>
<td>Low Molecular Weight Hydroxy Silicone Fluid</td>
<td>70131-67-8</td>
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<tr>
<td>BSF3001</td>
<td>Vinyl Silicone Fluid</td>
<td>68083-19-2</td>
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<td>BSF3002</td>
<td>Vinyl Silicone Fluid</td>
<td>68083-18-1</td>
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<tr>
<td>BSF1000</td>
<td>Tetramethylcyclotetrasiloxane</td>
<td>2370-88-9</td>
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<tr>
<td>BSF1004</td>
<td>Octamethylcyclotetrasiloxane</td>
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<td>Octamethyldisiloxane</td>
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<td>Methylvinthylcyclotetrasiloxane</td>
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<td>Divinyltetramethyldisiloxane</td>
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<td>Tetramethyldisiloxane</td>
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<tr>
<td>BSS4208</td>
<td>Heptamethyltrisiloxane</td>
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Silicone Silanes

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<tr>
<td>BSS4005</td>
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<tr>
<td>BSS4007</td>
<td>Tetraethoxysilane</td>
<td>78-10-4</td>
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<td>Methyltriethoxysilane</td>
<td>2031-67-6</td>
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<td>Methyltrimethoxysilane</td>
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<td>BSS4026</td>
<td>γ-(2,3-Epoxypropoxy) propyltrimethoxysilane</td>
<td>2530-83-8</td>
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<tr>
<td>BSS4126</td>
<td>3-(2,3-Epoxy propoxy) propyltriethoxysilane</td>
<td>2602-34-8</td>
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<tr>
<td>BSS4027</td>
<td>γ-Methacryloxypropyltrimethoxysilane</td>
<td>2530-85-0</td>
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<td>BSS4033</td>
<td>N-β-(Aminoethyl)r-Aminopropyltrimethoxysilane</td>
<td>1760-24-3</td>
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<td>BSS4035</td>
<td>N-β-(Aminoethyl)r-Aminopropyltrimethoxysilane</td>
<td>3069-29-2</td>
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<td>BSS4039</td>
<td>γ-Aminopropyltriethoxysilane</td>
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<td>BSS4049</td>
<td>Mercaptopropyltrimethoxysilane</td>
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<tr>
<td>BSS4051</td>
<td>Mercaptopropyltriethoxysilane</td>
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<td>Octyltrimethoxysilane</td>
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<tr>
<td>BSS4066</td>
<td>Octyltrimethoxysilane</td>
<td>2943-75-1</td>
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<td>BSS4214</td>
<td>3-Glycidoxypropylmethyldimethoxysilane</td>
<td>65799-47-5</td>
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<tr>
<td>BSS4127</td>
<td>3-Glycidoxypropylmethyldiethoxysilane</td>
<td>2897-60-1</td>
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<td>Dodecytrimethoxysilane</td>
<td>3069-21-4</td>
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<td>BSS4212</td>
<td>Dodecytriethoxysilane</td>
<td>18536-91-9</td>
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<tr>
<td>BSS4199</td>
<td>Methylvinyltrimethoxysilane</td>
<td>16753-62-1</td>
</tr>
</tbody>
</table>

Silicone Rubber

Silicone Resin

China Bluestar International Chemical Co., Ltd.

No.19 Beisanhuan East Road, Chaoyang District, Beijing China
TEL: 86-10-64442824  FAX: 86-10-64442475 Email: cbsic@vip.sina.com

China Bluestar International Chemical Co., Ltd (CBSIC), a subsidiary of China National Bluestar (Group) Corporation, is a company specialized in international trading and cooperation. The company mainly deals with the import and export of products and raw materials, as well as technology and equipment needed for the Group industries.

With 50 million RMB as its registered capital, CBSIC mainly handles with trade of products, processing with supplied materials, importing of technology and equipment, overseas investment and undertaking international EPC projects.

CBSIC has over 60 staffs representing, who are professional in foreign trade, chemical and mechanical industries, as well as translation of multi-lingual languages. The company has 15 business departments and turnover in 2004 reached 200 million USD.

Silicone Department as a sole department of CBSIC is mainly deal with silicone products, in both domestic and international market.
Major silica producers gather in Asia for expansion

As the auto industry and auto tire industry grow rapidly, Asian market demand for silica is exploding. As a result, many major silica makers recently announced their plans to make additional huge investment in silica production.

New tire regulation triggers off huge demand

Rubber industry is a major consumer market for silica, accounting for over 70% of the total consumption of silica. Rubber processing sector is also the most promising market for silica.

“The world demand for fuel-efficient tires is increasing fast, especially in Europe, US, Japan and South Korea where tire labeling regulation has been enacted to force tire makers to blend more high-dispersion silica into their formula. We estimate that the market demand for high-dispersion silica will grow at an annual average rate of 9%,” said Tom Banner, president of Rhodia Silica business division. Rhodia Zeosil high-dispersion silica is used in production of green tires, which can reduce tire rolling resistance by 25%, lower lightweight vehicle’s fuel consumption by 5% or 7% and reduce CO₂ emission by 5% or 7%.

The new Rhodia plant in Qingdao, which will increase the company’s global production capacity of high-dispersion silica by 30%, is a response to this growing market demand.

According to NHTSA data, replacing carbon black with silica as reinforced material will reduce the tire rolling resistance by 5% or 10%. Both NHTSA and Rubber Manufacturers Association (RMA) have publicly proposed that not-yet-compliant companies should use silica in place of carbon black in order to improve product performance.

On the other hand, as high-performance synthetic rubber will be used more in conjunction with silica, the demand for silica will also grow at a rate of about 10%.

China and India lead the demand growth

In recent years, Asian auto industry and tire industry have been soaring while the US and Western Europe have been approaching the state of saturation, therefore, “Asia will become the largest market for...
high-dispersion silica in 2015, with its demand growth rate much higher than the global average of 9%, reaching 15% or higher. China will take up 40% of the Asian market, thus becoming the world’s largest single market,” said Sun Lihong, general manager of Rhodia Silica Asia.

In 2010, a new round of investment mania in tire industry emerged worldwide, especially in Asia. In the past 12 months, almost all world-renowned tire producers announced their plans to expand their capacity through new or reconstruction projects. Rough statistics show that the total investment excluding Chinese tire makers exceeds USD8 billion, mostly in Asia centered on China and India, where the percentage approaches 50%. It is estimated that China absorbs the largest amount of investment of USD3 billion.

Huge-investment projects flood into China

October 22, Evonik announced its plan to invest about 50 million euros to increase its global precipitated silica capacity by 25% in the next four years. Currently, Evonik produces precipitated silica at its ten plants in eight countries, and this expansion plan will be implemented on the existing plants in Asia and Europe, which, once completed, will increase its production to 1 million t/a. Rhodia built its new plant in Shandong province, the home of rubber industry in China. October 20, Rhodia Fine Chemical Additive (Qingdao) Co., Ltd.’s high-performance silica plant was unveiled, the largest investment project of Rhodia in China that involves total investment of 50 million euros and design capacity of 720,000 t/a. September 29, Cabot BlueStar Chemical (Jiangxi) Co., Ltd., a USD43 million joint venture between Cabot and BlueStar, was inaugurated at Xinghuo Industrial Park, Jiujiang city, Jiangxi province. The first phase of the project is expecting to be completed in the next half of 2011, increasing the company’s fumed silica capacity from 5,000 t/a to 15,000 t/a; the second phase will increase the total capacity to 20,000 t/a. When completed, this plant will become the world’s largest fumed silica manufacturing plant.

In addition, Zhangjiagang fumed Silica Plant phase II, a joint venture between Wacker and Dow Corning that commenced in last October, is well underway, scheduled to be completed in 2011. The total investment involved in this new plant amounts to tens of millions of euros.
Online Databases at CHEM.CN

CHEM.CN provides a variety of information sources of chemical market in China for global chemical players:

- Daily chemical news
- Directory of 23,000 Chinese chemical producers
- Price data of 1,000 chemical raw materials
- Monthly output statistics of 200 major products in the chemical industry
- Monthly import & export statistics of 2,000 HS codes

For more services at CHEM.CN, please visit:
http://www.chem.cn/help/help_2_06.htm

For subscription:
http://www.chem.cn/Subscription/Subcription1.aspx

Database of CPPC
Database of Chemical Products and Producers in China (DBCPPC) is the most comprehensive buying guide for chemical makers, importers and distributors to source 31,000 chemicals from 23,000 Chinese producers.

http://www.chem.cn/info/Publication/CDROM.aspx

Download a demo
http://www.chem.cn/Demo/DBCPPC.zip

Contact
Overseas Business Unit
China National Chemical Information Center

ATTN: Ms. Ellie Xu, Mr. Arthur Zeng
8/F Tower B, Huaxin Mansion
33 Anding Rd., Beijing 100029, China
Tel: +86-10-6444 5553, 6444 4194  Fax: +86-10-6443 7137
Email: xulili@cheminfo.gov.cn, zengyu@cheminfo.gov.cn
Website: http://www.chem.cn
Related Trade Data

Article Description: Siloxane in Primary Form Tariff Item (HS Code) 39100000

Import Volume (2009.9-2010.8)

Export Volume (2009.9-2010.8)

Import Price Trend (2009.9-2010.8)

Export Price Trend (2009.9-2010.8)

Import Sources in Aug 2010

Import Distribution from Each Customhouse Quay in Aug 2010

Export Volume (2009.9-2010.8)

Export Price Trend (2009.9-2010.8)

Export Destinations in Aug 2010

Export Distribution from Each Customhouse Quay in Aug 2010

Oct 25th, 2010
Article Description: Silica Tariff Item (HS Code) 28112200

Import Volume (2009.9-2010.8)

Import Sources in Aug 2010

Import Price Trend (2009.9-2010.8)

Import Distribution from Each Customhouse Quay in Aug 2010

Export Volume (2009.9-2010.8)

Export Destinations in Aug 2010

Export Price Trend (2009.9-2010.8)

Export Distribution from Each Customhouse Quay in Aug 2010
Article Description: Silicon Metal Tariff Item (HS Code) 28046900

Import Volume (2009.9-2010.8)

Import Price Trend (2009.9-2010.8)

Import Sources in Aug 2010

Import Distribution from Each Customhouse Quay in Aug 2010

Export Volume (2009.9-2010.8)

Export Price Trend (2009.9-2010.8)

Export Destinations in Aug 2010

Export Distribution from Each Customhouse Quay in Aug 2010
Article Description: Polysilicon Tariff Item (HS Code) 28046190

Import Volume (2009.9-2010.8)

Import Price Trend (2009.9-2010.8)

Import Sources in Aug 2010

Import Distribution from Each Customhouse Quay in Aug 2010

Export Volume (2009.9-2010.8)

Export Price Trend (2009.9-2010.8)

Export Destinations in Aug 2010

Export Distribution from Each Customhouse Quay in Aug 2010
### Conference and Report Scheme of CRCSI (2010)

**Coming events of CRCSI are listed. For more information, please contact:**

*Brant Bai*
E-mail: baihq@cheminfo.gov.cn  
Tel: +86-10-64435260

*(You will get the semimonthly CSI in 2011 for free after you subscribe the annual report.)*

<table>
<thead>
<tr>
<th>Conference Events</th>
<th>Time</th>
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<tbody>
<tr>
<td>The 3rd World Polysilicon &amp; PV Industry Summit</td>
<td>8~9th Sep. 2010</td>
</tr>
<tr>
<td>The 5th Silicone Fine Chemicals Conference</td>
<td>Apr. 2011</td>
</tr>
<tr>
<td>The 5th Global Silicone Business Conference</td>
<td>Sep. 2011</td>
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**Annual Report**

<table>
<thead>
<tr>
<th>Annual Report</th>
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<tr>
<td>Annual Report of China Fumed Silica Market in 2009</td>
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<tr>
<td>Annual Report of China Silicon Metal Market in 2009</td>
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<tr>
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<td>Annual Report of China Siloxane Market in 2009</td>
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<tr>
<td>Annual Report of China Silane Coupling Agent Market in 2009</td>
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<tbody>
<tr>
<td>China Silicon Industry Whitebook</td>
<td>October</td>
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</tbody>
</table>

**We will release China Silicon Industry Whitebook in October. For details, feel free to contact:**

*Judy An*  
E-mail: anj@cheminfo.gov.cn  
Tel: +86-10-64435260

**Annual Report**

- Annual Report of China Fumed Silica Market in 2009
- Annual Report of China Silicon Metal Market in 2009
- Annual Report of China Silane Coupling Agent Market in 2009

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Thanks for your feedback!