# BASF in Greater China Report 2010

BASF



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BASF

# **BASF GROUP 2010**

### Million €

	2010	2009	Change in %
Sales	63,873	50,693	26.0
Income from operations before depreciation and amortization (EBITDA)	11,131	7,388	50.7
Income from operations (EBIT) before special items	8,138	4,852	67.7
Income from operations (EBIT)	7,761	3,677	111.1
Income before taxes and minority interests	7,373	3,079	139.5
Net income	4,557	1,410	223.2
Earnings per share (€)	4.96	1.54	223.2
Adjusted earnings per share (€)	5.73	3.01	90.4
EBITDA margin (%)	17.4	14.6	-
Cash provided by operating activities	6,460	5,693	13.5
Additions to long-term assets <sup>1</sup>	5,304	5,972	(11.2)
Excluding acquisitions	2,565	2,536	1.1
Research and development expenses	1,492	1,398	6.7
Amortization and depreciation <sup>1</sup>	3,370	3,711	(9.2)
Segment assets (as of December 31) <sup>2</sup>	48,626	40,707	19.5
Personnel expenses	8,228	7,107	15.8
Number of employees (as of December 31)	109,140	104,779	4.2

<sup>1</sup> Intangible assets and property, plant and equipment (including acquisitions)

<sup>2</sup> Intangible assets and property, plant and equipment, inventories and business-related receivables

### **BUSINESS DEVELOPMENT 2010**

BASF achieved record sales and earnings in 2010. The chemicals business in particular benefited from the strong economic recovery in 2010, which was more dynamic than we had initially anticipated. In the first half of the year, demand was additionally driven by inventory restocking in key customer industries. There were temporary supply bottlenecks for some chemical products. Higher raw materials costs could largely be passed on to customers. In this favorable market environment, margins improved for numerous products. Compared with 2009, sales increased by 26% to €63,873 million. Income from operations improved by 111% and amounted to €7,761 million.

### **BASF GROUP 2010**

- Record sales and earnings achieved in 2010
- Cognis acquisition strengthens portfolio with specialty products
- Outlook 2011: BASF aims to significantly increase sales and earnings



# **BASF'S SEGMENTS AT A GLANCE**

### **CHEMICALS**



In the Chemicals segment, we supply products to customers in the chemical, electronics, construction, textile, automotive, pharmaceutical and agricultural industries as well as many others. Furthermore, we ensure that other BASF segments are supplied with chemicals for the production of downstream products. Our portfolio ranges from basic chemicals, glues and electronic chemicals for the semiconductor and solar cell industries, to solvents and plasticizers, as well as starting materials for products such as detergents, plastics, textile fibers, paints and coatings, and pharmaceuticals.

Million €	2010	2009	Change in %
Sales	11,377	7,515	51.4
Income from operations (EBIT)	2,310	735	214.3
1 Inorganics: 11% 2 Petrochemicals: 67% 3 Intermediates: 22%	 6 	€11,3 Millior	1

### **PLASTICS**



The Plastics segment includes a broad range of products, system solutions and services. We offer a number of engineering plastics for the automotive and electrical industries as well as for use in household appliances and sports and leisure products. Our styrenic foams are used as insulating materials in the construction industry and in packaging. Our polyurethanes are extremely versatile: As soft foams, for example, they improve car seats and mattresses, and as rigid foams they increase the energy efficiency of refrigerators.



### **PERFORMANCE PRODUCTS**



Performance Products lend stability and color to countless everyday items and help to improve their application profile. Our product portfolio includes vitamins and food additives as well as ingredients for pharmaceuticals and for hygiene, home and personal care items. Other Performance Products improve processes in the paper industry, oil and gas production, mining and water treatment. They can also enhance the efficiency of fuels and lubricants, the effectiveness of adhesives and coatings, and the stability of plastics.

### Key data

Key data			
Million €	2010	2009	Change in %
Sales	12,288	9,356	31.3
Income from operations (EBIT)	1,345	(150)	
1 Dispersions & Pigments: 26% 2 Care Chemicals: 22%	5 0		1
3 Nutrition & Health: 12	2%	€12,2	88
4 Paper Chemicals: 14	% 4	Willion	
5 Performance Chemicals: 26%		3	2

### **FUNCTIONAL SOLUTIONS**



In the Functional Solutions segment, we bundle system solutions and innovative products for specific sectors and customers, in particular for the automotive and construction industries. Our portfolio comprises automotive and industrial catalysts, automotive and industrial coatings and concrete admixtures as well as construction systems such as tile adhesives and architectural coatings.

Key data	: :	:	Change
Million €	2010	2009	in %
Sales	9,703	7,115	36.4
Income from operations (EBIT)	457	107	327.1
1 Catalysts: 52% 2 Construction Chemicals: 22% 3 Coatings: 26%		€9,7( Million	03

### **AGRICULTURAL SOLUTIONS**



Our crop protection products guard against fungal diseases, insects and weeds and they increase quality and secure crop yields. Our research in plant biotechnology concentrates on plants for greater efficiency in agriculture, healthier nutrition and for use as renewable raw materials.



### **OIL & GAS**



As the largest German producer of oil and gas, we focus our exploration and production on oil- and gas-rich regions in Europe, North Africa, South America, Russia and the Caspian Sea region. Together with our Russian partner Gazprom, we are active in the transport, storage and trading of natural gas in Europe.

### Kev data

Key data			
			Change
Million €	2010	2009	in %
Sales	10,791	11,356	(5.0)
Income from operations (EBIT)	2,334	2,289	2.0

€10,791

Millior

1 -- Exploration & Production: 35%

2 -- Natural Gas Trading: 65%

# **BASF in Greater China - Report 2010**

Sustainability is an integral part of our strategy. This report therefore combines our financial, environmental and social performance in one publication. We document our achievements and provide solid examples of how sustainability contributes to the success of our stakeholders and our company.

"BASF in Greater China – Report 2010" is published in 2011, the third publication since 2009. The report supplements the global reporting of BASF by adding specific country information about our Greater China operations, comprising mainland China, Hong Kong and Taiwan.

This report contains information on BASF Group and BASF in Greater China. The information contained on the financial position and financial performance of BASF Group is based on the requirements of the German Commercial Code as well as on International Financial Reporting Standards (IFRS), according to which the BASF Group Consolidated Financial Statements are prepared. Our data collection methods for environmental protection and safety are based on the recommendations of the European Chemical Industry Council (CEFIC). In the area of emissions and energy, we report on approximately 98% of all emissions from our Greater China production sites. The emissions of joint venture companies are included pro rata based on our stake. Information on work-related accidents is compiled at our production and administrative sites. Accidents at joint venture sites are compiled and reported in total. In the reporting year 2010, we continued to improve the data collection on environmental protection and safety. In these areas, data processing systems were optimized and the data collection frequency was increased.

Local sales figures in this report include sales from all BASF Group companies to customers being located in Greater China. Sales from former Cognis companies to customers in China are included as of December 7, 2010. Employee numbers refer to employed by BASF Group companies (including former Cognis) as of December 31, 2010. Emissions data and workplace incidents from Cognis companies are not included in this report for the year 2010.

The period under review is the year 2010. Information available up to the editorial deadline of May 1, 2011, has been included. To the best of our knowledge, there are no binding national regulations on this kind of corporate report in China. BASF in Greater China will take into account upcoming local requirements to continuously develop this report further.

The report is printed in English and simplified Chinese. Both versions can be downloaded from our website.

### www.greater-china.basf.com

More information about BASF in Greater China

### www.basf.com/report

More information about BASF's global report 2010

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# ABOUT BASF GROUP

BASF is the world's leading chemical company – The Chemical Company. With around 109,000 employees, six Verbund sites and approximately 390 additional production sites worldwide, we help customers and partners in almost all industry sectors and countries around the world to be more successful. Our portfolio ranges from oil and gas to chemicals, plastics and specialties such as crop protection products. In 2010, BASF posted sales of €63.9 billion and income from operations of €7.8 billion.

### We operate on a global scale

BASF was founded as the Badische Anilin- & Soda-Fabrik in 1865 by Friedrich Engelhorn, to produce synthetic textile dyes from coal tar. Today, the company has subsidiaries in more than 80 countries across all regions of the world. BASF is a European Company, a Societas Europaea (SE), and is headquartered in Ludwigshafen, Germany. The Ludwigshafen site is the largest integrated chemical complex in the world. It is also the largest 'Verbund' site in the BASF Group, interlinking production plants intelligently to save resources and energy. BASF operates five further Verbund sites in Belgium, China, Malaysia and North America.

### We create chemistry

As the world's leading chemical company, we play a decisive role in shaping the future. We combine economic success with social responsibility and environmental protection. Acting sustainably and striving continually for innovation are therefore core elements of our business activities. Since 2008, BASF has been the only industrial company worldwide to regularly publish a comprehensive

corporate carbon footprint. We contributed our know-how to the development of a standard for reporting greenhouse gas emissions along the value-adding chain (the Greenhouse Gas Protocol's Scope 3 standard). For the first time in 2010, our reporting takes into account this draft standard and includes emissions from the oil and gas business. We also recalculated how our climate protection products reduce our customers' carbon emissions: A total of 322 million metric tons of  $CO_2$  emissions are avoided (2008: 287 million metric tons). We aim to continuously increase this contribution to climate protection.

The innovative chemistry of BASF is the driving force for many industries and provides an important impetus for new products, technologies and processes. In 2010, BASF had more than 9,600 employees in research and development worldwide and around 1,900 research collaborations with universities, institutes, startup companies and industrial partners. In 2010, we invested nearly €1.5 billion in research and development projects.

Our approach helps us to find answers to global challenges such as climate change, resource conservation, health and nutrition, housing and mobility. This is our contribution to a better future for us and for coming generations. As we like to say, we don't just make chemicals, we create chemistry.

www.basf.com

More information on BASF

### HEADQUARTERS OF THE BASF GROUP

The heart of the BASF Group is BASF SE headquartered in Ludwigshafen, Germany. With its over 160 chemical production plants, several hundred laboratories, technical centers, workshops and offices, it is the largest integrated chemical complex in the world.



### **OUR STRATEGY** Strategies for value-adding growth

### 💻 basf.com/strategy

As the world's leading chemical company, we aim for long-term, profitable growth. To achieve this, we are committed to operational excellence, innovation and investment in growth markets. Our actions are guided by sustainable development.

Our guidelines summarize how we intend to achieve our corporate goals and to establish and implement our values within the company.

### We earn a premium on our cost of capital

The prerequisite for long-term success is earning a premium on our cost of capital. Earnings before interest and taxes (EBIT) after cost of capital is our key performance and management indicator.

## We help our customers to be more successful

We want to recognize what our customers will need tomorrow. As a reliable partner, we work with customers to develop solutions that will meet their individual needs and strengthen their competitiveness. To do this, we operate where our customers are - in all the world's important markets.

## We form the best team in industry

We want to recruit, support and retain the best employees. That is why we invest in our employees' development and help them balance work and family life. With our Diversity + Inclusion initiative, we promote teams that create value with their different backgrounds and experiences.

## We ensure sustainable development

For us, sustainable development means combining economic success with environmental and social responsibility. We have anchored sustainability in our corporate strategy and organization: With sustainable products and services, we create competitive advantages for both BASF and our customers.

# **ON TRACK TO 2020**

An interview with Dr. Martin Brudermüller, Vice Chairman of the Board of Executive Directors of BASF SE, responsible for Asia Pacific

### How did BASF perform in Asia Pacific last year?

I am very proud that the Asia Pacific region was a very strong contributor to our record year for BASF in 2010! For the first time, we broke both the €10 billion sales and the €1 billion EBIT mark in the region.

## What progress has BASF made towards its Asia Pacific Strategy 2020 goals?

We are making excellent progress.

- With our Industry Target Groups and Customer Target Groups, we have already identified around €600 million in additional sales potential by 2012.
- To ensure we can create innovations for Asia, from Asia, around 500 BASF employees at 12 sites in the region now work in research and development. In particular, 2010 marked the groundbreaking of our first Innovation Campus Asia Pacific, which will be located in Shanghai.
- To help us expand our local production, we have invested €2.4 billion in facilities in Asia Pacific over the past five years. And we have announced major new investments across the region.
- We have already achieved €90 million in annual savings through our Asia Pacific Site Optimization project.

## How does BASF develop its employees to meet the 2020 goals?

Employees are at the heart of our strategy. During the past year we have launched a package of career development initiatives to ensure we can both recruit and retain the best team in industry. These initiatives include the establishment of the BASF Asia Pacific Institute for Corporate Leadership, the upgrading of our career development program, and the launch of a formalized mentorship program. In particular we aim to further develop international career opportunities for our top local employees.

## What is the role of Greater China in BASF Asia Pacific Strategy 2020?

Greater China is one of the growth engines of Asia Pacific and we have contributed to the healthy development of the national chemical industry by bringing state-of-the-art global standards in production, environment, health and safety to China.

Our world-scale MDI plant in Chongqing broke ground in April 2011 and it will become the nexus of an industry hub for western China. In addition, further expansion plans of our Nanjing joint venture are under consideration with our partner Sinopec and we have new facilities under construction in various parts of China.

We also see a growing innovation strength in China. With our new Innovation Campus in Shanghai, we want to tap into this potential, further strengthening our leading position.

### **BASF ASIA PACIFIC STRATEGY 2020**

- Growth of two percentage points above market
- Earn premium on cost of capital
- 70% of sales to be manufactured locally in Asia Pacific
- Headcount to increase by at least 5,000
- Investments of €2.3 billion planned between 2011-2015
- Efficiency improvements to save €150 million annually by 2012



### **BASF Asia Pacific Strategy 2020**

Through 2020, BASF aims to grow on average two percentage points faster than the Asia Pacific chemical market each year. To meet this ambitious goal, which would double regional sales by 2020, the company has developed the BASF Asia Pacific Strategy 2020. This strategy is based on a combination of growth and new business initiatives.

In Asia Pacific, BASF will organize its sales efforts around key industries in order to grow faster than the market. The company has established an initial set of industry target groups where it intends to become a preferred supplier, including the automotive, construction, packaging, paints and coatings, and pharmaceuticals industries.

We will increase our headcount by at least 5,000 from approximately 15,000 which were employed at the end of December 2009. At the same time, we will double the number of employees in research and development between 2009-2020, especially at our two major R&D clusters in China and India. In our two challenging growth markets, China and India, we have set up dedicated recruitment centers to help us hire the talents we need.

BASF plans to generate 70% of regional sales from local production, investing €2.3 billion between 2011-2015. Simultaneously, we aim to create further efficiency improvements that are expected to save €150 million annually by 2012, for example, by debottlenecking production and by exploiting technical synergies.



Dr. Martin Brudermüller Vice Chairman of the Board of Executive Directors of BASF SE responsible for Asia Pacific

### **BASF IN ASIA PACIFIC 2010**

Sales (by location of customer)

# €12.5 billion €1.3 billion €2.3 billion



EBIT

**Investment Plan** 2011 - 2015

Employees 2010

# 16,000

# **GROWING AND THRIVING WITH CHINA**

Letter from the Greater China Country Board

Dear Stakeholders,

2010 was an exceptional year for BASF globally and growth in Greater China was outstanding. We stayed close with our partners and customers during the difficult times and sustained our investment in development and innovations. We have completed the integration with the former Ciba operations and started a similar process with Cognis, further expanding our portfolio for our customers. Our commitment to strong partnerships and business innovations has enabled us to move quickly to embrace the economic rebound.

BASF has contributed to the recovery of the local economy with innovations and investments. We have continued our investment plans in China with new plants for water treatment in Nanjing, for dispersions in Huizhou, and a polyurethane system house in Tianjin. Also, we have committed to exploring the further expansion of our Nanjing Verbund joint venture with projects collectively totaling up to \$1 billion. We began the construction of our MDI project in Chongqing, which will become a nexus of industrial development in western China.

At the same time, we help local industries, automobile and construction in particular, with innovative solutions that improve energy efficiency and enhance environmental measures.

Our Asia Pacific Strategy 2020 has effectively guided our organization through the crisis. In China, as a growth engine in this region, we have continued investing in

research and development to serve local customers with intelligent and tailor-made solutions. We broke ground on the Innovation Campus Asia Pacific in Pudong, Shanghai, in 2010. The Innovation Campus will be a hub for regional innovations and product development that cultivates local research capabilities and provides a platform among industry experts, scientific communities and government authorities.

At the Expo 2010 in Shanghai, BASF provided various innovative solutions, with a strong focus on common challenges faced by cities around the world and strives to find solutions for harmony between urbanizations and sustainable development. Among them, the Hamburg House, equipped with insulating materials and eco-friendly interior paint from BASF, maintains a constant indoor temperature at 25°C all year around without consuming any electricity from the National Electricity Grid. It presents one of the best practices of urbanization and demonstrates the positive impact of chemistry. In addition, we brought the Magic Map Show with the BASF Kids' Lab to the Expo 2010, where more than 2,500 children participated. The "Germany and China - Moving Ahead Together" initiative had its finale at the Expo in Shanghai and BASF again participated as an "Official Partner".

BASF has maintained its commitment to sustainable development in Greater China. We continued our successful "1+3" project in order to raise standards in our value chain including suppliers, partners, and customers.

People remain at the core of BASF's success. Our human resources strategies and employee development initiatives

### **BASF GREATER CHINA COUNTRY BOARD**

BASF established the Greater China Country Board in 2008. It focuses on three specific areas, namely corporate, business and markets, and manufacturing and technology, represented by the Country Board Members.

### **JOHNNY KWAN**

- Originally from Hong Kong
- Chemical Engineer, 15 years with BASF
- Chairman of the Greater China Country Board
- Finance and Controlling, Human Resources, Legal, Government and Scientific Liaison, Corporate Communications, Corporate Social Responsibility



**Dr. Zheng Daqing** Member Greater China Country Board

Johnny Kwan Chairman Greater China Country Board Dr. Karl-Heinz Böhning Member Greater China Country Board

have won the recognition of external experts. "Diversity + Inclusion" has become one of the core competences through which we strive to create a friendly and learning culture for our employees. We expanded our GROW graduate program to provide career development opportunities for young people.

BASF will continue to accompany our customers and partners in Greater China through the continued recovery of global and local markets.

We look forward to working even closer with our partners in Greater China to create chemistry for further prosperity.



Johnny Kwan

Dr. Zheng Daqing

Dr. Karl-Heinz Böhning

### **Dr. ZHENG DAQING**

- Originally from Dalian, Liaoning Province
- Chemical Engineer, 15 years with BASF
- Member of the Greater China Country Board
- Business and Market, Procurement, Supply Chain Management

### Dr. KARL-HEINZ BÖHNING

- Originally from Fulda, Germany
- Chemist, 27 years with BASF
- Member of the Greater China Country Board
- Production and Technology, Responsible Care<sup>®</sup> Management

# **OUR HISTORY IN GREATER CHINA**

Milestones in a long-term engagement

### Entering China: 1885 – 1990

Our history in China dates back more than 125 years. In 1885, the company began selling textile dyes to the then Imperial China. In 1913, shortly before the First World War, China already accounted for 14 percent of BASF global sales. After the war, the company started to diversify its China business into indanthrene dyes and fertilizers. Later, BASF decided to have a permanent representation in order to successfully operate in the Chinese market. In the 1950s, the company chose Jebsen & Co. to represent it as its sole agent for trade in China.

BASF's first direct investment in Greater China was realized in Taiwan in 1969, when BASF invested in the manufacturing firm Cheng Kuang Chemical Industrial Co. Ltd. and established the wholly-owned trading company Teh Hsin Dyes and Chemicals Co. Ltd. Cheng Kuang became BASF Taiwan in 1984 and merged with Teh Hsin in 1988 to form a sole BASF entity in Taiwan.

In 1982, BASF decided to conduct business in China directly and established BASF China Ltd. in Hong Kong with responsibility for selling BASF products there and in mainland China. Sales offices subsequently opened in Beijing, Shanghai and Guangzhou.

Over the years, business in mainland China grew steadily which made direct investment a promising option as well. In 1986, BASF established its first joint venture in China: Shanghai Gaoqiao BASF Dispersions Co. Ltd. which produces styrene-butadiene dispersions for coating paper and carpets.

### Deepening engagement: 1990 - 2000

In 1994 and 1995, several additional joint ventures started operations: Shanghai BASF Colorants and Auxiliaries Co. Ltd. (today BASF Auxiliary Chemicals Co. Ltd.), BASF Shanghai Coatings Co. Ltd., BASF Vitamins Co. Ltd., Shenyang, and BASF JCIC Neopentylglycol Co. Ltd. (today BASF PJPC Neopentylglycol Co. Ltd.), Jilin. In 1998, BASF Polyurethanes (China) Co. Ltd. was established in Guangzhou.

China became an even more important economy which led BASF in 1995 to base its East Asia regional headquarters in Hong Kong. In 1996, BASF established its holding company BASF (China) Co. Ltd. in Beijing in order to integrate BASF's operations in mainland China.

### Major investments and reorganization: 2000 – 2004

BASF signed its largest single investment in the history of the company in 2000. BASF and China Petroleum & Chemical Corporation (Sinopec) established the BASF-YPC Co. Ltd. joint venture to build a Verbund site in Nanjing which involved an investment by both partners of US\$2.9 billion. In 2003, at the Shanghai Chemical Industry Park in the suburb of Caojing, BASF Chemicals Co. Ltd. laid the cornerstone for the world's largest integrated production facility for polytetrahydrofuran, marketed under PolyTHF, and tetrahydrofuran (THF). One year later, two more groundbreakings followed: Shanghai BASF Polyurethane Co. Ltd. and Shanghai Lianheng Isocyanate Co. Ltd., together with joint venture partners – Huntsman Polyurethanes and other Chinese partners.

After the businesses in mainland China and Taiwan were

### YESTERDAY

BASF's history in China dates back more than 125 years. Innovative chemical solutions laid the foundation for BASF's success right from the beginning. Only 20 years after the company's foundation in Germany in 1865, BASF started doing business in China by trading textile dyes, one of the most important chemical products of the time.



integrated in the Greater China sub-region, and managed from BASF China Ltd. in Hong Kong in 2001, we relocated both the headquarters of the Greater China sub-region and the Holding Company to Shanghai three years later in order to concentrate our activities and management in one place. An acquisition in the field of electronic materials added two more plants in Shanghai and Taiwan.

### Growth and integration 2005 - 2010

In 2005, the BASF-YPC Co. Ltd. Verbund site in Nanjing started production. Only one year later, the partners BASF and Sinopec signed an agreement to expand the joint venture. Ground was broken in September 2009. The expansion will increase the cracker capacity to 740,000 tons. Ten new plants will be built and three existing ones expanded.

In 2005, the THF and polytetrahydrofuran site in Shanghai's Caojing started operations. A year later, commercial production of methylene diphenyl diisocyanate (MDI) and toluene diisocyanate (TDI), precursors for polyurethanes, were launched there as well. In June 2007, BASF Polyurethanes Specialties (China) Co. Ltd. was inaugurated, comprising a regional polyurethane technical research and development center, a system house and thermoplastic polyurethanes production.

Since 2007, production facilities in Greater China were expanded through our acquisitions in the fields of water-based resins, catalysts, construction chemicals, specialty chemicals and care chemicals. One example of these specialty chemicals plants is in Kaoshiung, Taiwan, producing Tinosorb<sup>®</sup> S, a most advanced UV filter for sunscreen protection. Effective 2008, the company formed the BASF Greater China Country Board. Since 1999, BASF in Greater China maintained an average annual growth rate of around 20%.

### **Future perspectives**

Currently, BASF is expanding its Pudong site. In December 2010, ground was broken on a new Innovation Campus for the Asia Pacific region which will open in 2012. Moreover, the BASF Greater China head office will be relocated to the Pudong site from downtown Shanghai.

In order to serve the growing market of western China, BASF will build a large MDI plant in Chongqing. The plant will have an annual production capacity of 400,000 tons. The project broke ground in April 2011, and commercial operation is scheduled for 2014.

BASF's polyurethanes division is building two additional state-of-the-art system houses in Tianjin and near the MDI plant in Chongqing, respectively. Together with the two existing BASF system houses in Shanghai and Nansha, they will form an all-inclusive Polyurethane service network extending to all geographical corners of China.

In September 2010, BASF decided to establish a world-scale production base for water treatment and paper chemicals in Nanjing. BASF is also investing in a dispersions plant in Daya Bay Petrochemical Industrial Park in Huizhou, Guangdong Province, China. The new plant will produce dispersions for the adhesives and paper industry as well as industries like coatings, construction, printing and packaging to support customers in the region.

### TODAY

Greater China accounts for nearly half of BASF's business in Asia Pacific. BASF's Pudong site in Shanghai (right) is currently under expansion and will ultimately become one of the major sites outside Germany. In 2010, Greater China was BASF's third largest market globally after Germany and the United States.



# **STRONG LOCAL PRESENCE**

**Major sites in Greater China** 



### DEVELOPMENT OF SALES IN GREATER CHINA (by location of customer)

billion €				
	D	2	4	6
2010				5.8
2009			4.1	
2008			4.2	
2007			4.4	
2006		3	8.6	

### **BASF PRODUCTS**

BASF's business in Greater China includes products such as petrochemicals, inorganics, polymer dispersions, polyurethanes, engineering plastics, coatings, finishing products for the textile and leather industries, electronic materials, intermediates, catalysts, construction chemicals, paper chemicals and care chemicals. As the number of consumers in China rises and the country develops into an international manufacturing and technology hub, it is becoming even more important to supply customers from a reliable local source. That is why BASF has invested €3.8 billion in China since 1990 (€5.8 billion with partners) to build a locally competitive production, marketing, sales and technical service network in China.

### Nanjing: Expansion of Integrated Petrochemical Site

BASF-YPC Co. Ltd. is jointly operated in Nanjing by BASF and China Petroleum & Chemical Company (Sinopec) as an integrated petrochemical Verbund site. The successful Verbund concept intelligently links production plants on one site via a network of pipes. This saves logistics costs for transporting chemicals, raw materials and energy and allows waste from one process to be used as raw material for another process. The main products ethylene and propylene are the raw materials for chemical industry.

In addition to the currently undergoing expansion with a \$1.4 billion investment, both partners have signed a Memorandum of Understanding (MoU) in December 2010 to jointly explore even further expansion of BASF-YPC. The projects under consideration will extend the value chains. The new investments under consideration collectively total approximately \$1 billion.

### Shanghai: A technological hub with various facilities in Pudong and Caojing

BASF operates several factories and technical centers at its Pudong site which will soon also host its new Innovation Campus Asia Pacific and the Greater China headquarters. The Pudong site will ultimately be one of the major global sites of BASF. BASF Auxiliary Chemicals Co. Ltd. produces engineering plastics and specialty chemicals such as amino resins, pigment preparations, leather and textile chemicals, coolants, as well as dispersions. Next door, BASF Polyurethanes Specialties (China) Co. Ltd., which opened in 2007, operates a System House that develops individual polyurethane solutions for each customer, a production plant for thermoplastic polyurethanes (TPU) and a technical research center. Polyurethanes are widely used in the automotive and construction industries or in footwear, among others.

At Shanghai Chemical Industry Park in Caojing, BASF has established two joint ventures with Huntsman and several Chinese partners. Since 2006, they produce methylene diphenyl diisocyanate (MDI) and toluene diisocyanate (TDI) which are key polyurethane components. At the same site, BASF Chemicals Co. Ltd., founded in 2002, produces polytetrahydrofuran (PolyTHF), a major raw material for the production of spandex fibers, and polyisocyanate (Basonat) for the coating and furniture finishing industry as well as precious metal solutions for automotive catalysts.

Chongqing: Chosen site for a new world-scale MDI plant BASF plans to build an MDI plant in Chongqing, western China's biggest metropolis, investing approximately RMB 8 billion (€860 million). The project broke ground in April 2011. It will be located in the Changshou Economic & Technological Development Zone and will have an annual production capacity of 400,000 tons of MDI and will also produce nitrobenzene and aniline. BASF and Chongqing authorities aim to start operation by 2014.

### **NEW VERBUND SITE EXPANSION PLAN**

On December 17, 2010, Dr. Martin Brudermüller, Member of the Board of Executive Directors of BASF SE, responsible for Asia Pacific (now Vice Chairman of the Board of Executive Directors of BASF SE), signed an MoU with Dr. Wang Tianpu, Vice Chairman and President, China Petroleum & Chemical Corporation (Sinopec) to jointly explore the further expansion of their integrated petrochemical joint venture, BASF-YPC Co. Ltd.



# **GLOBAL INITIATIVES DRIVE GROWTH**

Integration of Ciba and Cognis into BASF

In 2010, BASF completed the process of integrating the businesses and functions of recently acquired company Ciba into the Group's structures and completed the acquisition of Cognis. As a result, the integrated operations and sites drive further growth in Greater China.

### Ciba

The integration of Ciba, acquired in April 2009, was fully completed in the first quarter of 2010. Together with former Ciba's business, BASF is becoming a leading supplier of paper chemicals. BASF also became the world's second-largest provider of raw materials for the coatings and paints industry. Ciba's plastic additives business extended BASF's portfolio to cover important product segments such as UV stabilizers and antioxidants, making BASF the world leader in plastic additives.

There are four former Ciba sites in Greater China, with 1,100 employees, in Qingdao, Shangdong, Zhenjiang, Jiangsu, Shanghai as well as Kaohsiung, Taiwan. These sites are now all integrated into the BASF Greater China organization.

### Cognis

In December 2010, BASF globally completed the acquisition of Cognis Holding GmbH. With the purchase of Cognis, BASF will achieve a leading position in personal care ingredients, strengthen its leading position in value-added products for home care, establish a strong position in human nutrition and further strengthen its position in pharma excipients. BASF will also be able to offer customers of the Performance Chemicals and Dispersions & Pigments divisions as well as customers of the specialty monomers unit within the Petrochemicals Division an even more attractive portfolio. The acquisition will in particular expand the BASF portfolio with products based on renewable raw materials. Completion of the structural integration is targeted for the end of 2011. BASF plans to maintain all Cognis sites in China.

Cognis has had around 5,500 employees worldwide, among them some 300 at sites in Shanghai, Guangzhou, Zhuhai, Hong Kong and Taipei. They were welcomed by BASF executives and staff in December 2010 around the world with interactive sessions.

### **INTEGRATION TO BASF FAMILY**

At the welcome event in Jinshang, Shanghai, former Cognis employees were invited for a constructive dialogue to express their concerns and thoughts about integration-related issues. A "listen, understand and work together" approach aims to smoothly make them active members of the BASF family.



# **RESEARCH AND DEVELOPMENT**

Innovations made in Greater China

### **Custom-made innovations in China**

China is playing a major role for BASF in its pursuit to expand its research and development (R&D) activities in Asia Pacific in order to provide innovative products and solutions to customers throughout the region. Currently, the major R&D facilities are located in Shanghai, Taoyuan (Taiwan), Nansha (Guangdong Province) and Beijing. Our R&D teams in Greater China serve all major industries in Asia Pacific including automotive, construction, paints and coatings, packaging, home and personal care, textile and leather, electronics, paper, nutrition and health. The BASF portfolio covers the entire range from product development, testing, approval and registration to application technology development.

In 2010, several new solutions and products were developed or commercialized at the R&D Center of BASF's Polyurethanes division in Pudong, Shanghai. For example, the center contributed to the development of a low-emission, low-odor car seating system for the auto industry through the use of different polyols and additives. The system was first commercialized in Asia Pacific in 2010.

2010 saw the successful product launch of Elastollan<sup>®</sup> Soft, the softest thermoplastic polyurethane (TPU) ever produced and launched globally. The idea was generated in Japan and the research was completed in Shanghai in 2009, and later filed for a development patent in China. Elastollan<sup>®</sup> Soft is purely an Asian innovation. The product features excellent mechanical properties, potentially applicable for various industries such as footwear, construction, electronics, sports and leisure sectors.

In the construction sector, the center developed a new

kind of flame-resistant spray foam called "B1 spray foam", meeting the need of high flame retardancy for building insulation. The spray foam was first presented in May 2010. The center also developed a new, environmentally-friendly solution using water as blowing agent for special insulation foams for Liquid Natural Gas (LNG) carriers.

### **Innovation Campus in Shanghai**

In December 2010, BASF broke ground on its new Innovation Campus Asia Pacific in Shanghai. From 2012 onwards, several hundred scientific and technical professionals will develop new products and solutions for industries such as construction, automotive, footwear, and cosmetic in the Asia Pacific region. New polymer research teams will be established which will drive these product development activities jointly with the respective business teams and their customers. The Innovation Campus in Shanghai will be tightly integrated into BASF's global R&D community, with close connections to other R&D sites in Asia as well as to the strong R&D teams in Europe and the US.

### **BASF Sino-German Research and Development Fund**

The BASF Sino-German Research and Development Fund was established in 1997 with the main objective to enhance the R&D strength of BASF in Greater China, as well as to forge collaboration with the Chinese scientific community. By the end of 2010, about RMB 100 million (€11 million) has been invested in the Fund. The Fund had estabilshed 163 research projects with 75 Chinese research groups in the fields of advanced material science, nanotechnology, organic synthesis, industrial catalysts, industrial biotechnology, plant science and chemical engineering and technology.



On December 20, 2010, BASF broke ground on a new Innovation Campus Asia Pacific in Shanghai. The Innovation Campus, with a total investment of about €55 million, including both the new Innovation Campus as well as the new Greater China head office, is expected to open in 2012.



### **EMPLOYEES** Commitment and relationships

One of BASF's strategic guidelines is to form the best team in industry. We regard our employees as our most valuable asset. As of December 31, 2010, BASF in Greater China had about 6,980 employees from almost 30 countries. In exploring each employee's skills, experience and competencies, the company offers a broad platform for their future growth. BASF has been certified as one of "China's Top Employers® 2011" by the Corporate Research Foundation (CRF) Institute in recognition of our accomplishments in human resources management (see page 35).

### **Programs for students and graduates**

BASF's GROW Program is a part of the company's Strategy 2020 for Asia Pacific. It aims to recruit, train and develop talented, passionate and enthusiastic graduates from all over China by offering customized training and job rotation to lay a solid foundation for career development. Under this program, new recruits experience various positions within the company, including guidance and mentoring for 18 to 24 months each. Since the commencement of the program in 2007, BASF has continuously recruited fresh graduates from universities throughout China, even during the economic crisis. In 2011, the program will continue to expand.

BASF also conducts regular Campus Talk sessions at China's major universities. During these sessions, senior executives of BASF introduce the company's diversified career opportunities, comprehensive training and development programs and its commitment for sustainable development in China. The Campus Talk series for 2011 graduates started at Shanghai's prestigious Fudan University in October 2010, attracting 700 students from five local universities. This series covered talks in eight cities in Greater China.

### **Diversity + Inclusion**

Today's business world is more diverse and dynamic than ever before. The same is true for our workforce. In order to remain the world's leading chemical company, BASF's business and its employees need to become a true reflection of the dynamic and diverse world in which we live. Therefore, the company is now embedding "Diversity + Inclusion" into our corporate culture. A series of activities have been rolled out in Greater China in 2010 to help enhance our understanding of "Diversity + Inclusion", and to encourage all our colleagues to apply those principles during their daily work.

### Integrated career development program

BASF employees are a very diverse group of people, with different career goals, motivations, dreams and interests. What we all have in common, however, is a need for the right support, training and opportunities from the company when it comes to our career. Getting this right is vital to BASF's goal of having the best team in the industry.

The year 2010 was successfully wrapped up with the roll-out of a range of new integrated career development initiatives. These initiatives aim to improve career development opportunities for our employees as well as to support our business expansion targets. Among these initiatives is a global project which will introduce an

### **GRADUATES MEET BASF**

BASF held its first Campus Talk for 2011 graduates on October 14, 2010, at Fudan University, attracting about 700 students from five universities in Shanghai. This was the first of a series of talks in eight cities across China to attract potential candidates for BASF's graduate trainee program.



Number of employees of BASF in Asia Pacific and Greater China (as of December 31, 2010)

	2006	2007	2008	2009	2010
Asia Pacific	12,800	13,300	13,700	14,800	16,000
Greater China	5,500	6,000	6,300	6,400	6,980

enhanced career development dialogue process between employee and manager.

Moreover, a new program will be rolled out to help strengthen the professional skills and qualifications of our managers, as required by the business.

All these initiatives have been designed to work together to support the growth and development of our workforce in Asia Pacific.

### Family programs

BASF cares about employees and their family members. Our "Global Family" program is an international holiday exchange opportunity created for employees' children aged from 14 to 19. BASF host families in different countries exchange children for two weeks, so the kids experience living overseas during their summer vacation. In 2010, 14 teenagers from Shanghai and Nanjing took part in the program and exchanged with their counterparts from Germany, Belgium and the United States.

Additionally, through BASF's Open Day program, families of employees can get to know more about the company's operations in Greater China and the safe environment of the BASF work place. Such actions help to build stronger ties among the families of employees and BASF.

#### **Employee safety and health**

Following BASF's global safety & health directives and guidelines, BASF in Greater China implemented measures to protect its employees, in addition to the full compliance with China's legal requirements. In 2010, we promoted and monitored safety at work through risk assessments, safety rules, seminars, training courses and audits. Based on a global "Safety Champion" initiative, we improved our employees' safety awareness relating to both themselves and others via the C.A.R.E. initiative (see page 31).

www.greater-china.basf.com

### **GLOBALIZATION AT BASF**

Our Global Family program creates chemistry between BASF and the families of our employees. The program gives young people a glimpse of the diverse world they live in and raises their interest and respect for different cultures.



# **ENVIRONMENT AND SAFETY**

**Continuous improvements in energy efficiency** 

BASF has clearly defined environmental protection and safety in its corporate guidelines and regards these fields as important management responsibilities. With globally applicable standards, we set out clear rules and ensure our employees constantly adhere to our values in the workplace. Due to the engagement of external suppliers and service providers we extend the impact and benefits of our environmental protection measures along the value chain beyond BASF sites.

### **Global corporate carbon footprint**

Since 2008, BASF has been the only industrial company worldwide to regularly publish a comprehensive corporate carbon footprint. We also contributed our know-how to the development of the new global Scope 3 Standard initiated by the Greenhouse Gas Protocol, a decade-old partnership between the World Resources Institute and the World Business Council for Sustainable Development. We took this new standard into account during our global 2010 reporting for the first time, and thus included emissions from the oil and gas business. We also recalculated how our climate protection products such as insulation materials, fuel additives and industrial catalysts reduce our customers' carbon emission on a global level: a total of 322 million metric tons of  $CO_2$  equivalent was avoided in 2010 (2008: 287 million metric tons).

### **Greenhouse gas emissions**

In 2010, emissions of greenhouse gases from BASF's chemical operations in Greater China totaled 1.93 million metric tons (2009: 1.99 million metric tons). Emissions per ton of product were further reduced in 2010. Some emission reductions were achieved through BASF's proprietary catalysts, which increase efficiency in

decomposing nitrous oxide among other benefits. BASF sites across Greater China took actions in cutting greenhouse gas emissions, through measures including modified processes or heat exchangers as well as upgraded lighting or air conditioning systems. Moreover, two BASF sites in Shanghai and Kaohsiung, Taiwan, have installed photovoltaic power facilities to increase the use of alternative energy.

#### Greenhouse gas emissions



### Emissions to air

We also monitor emissions of air pollutants which include inorganic compounds such as carbon monoxide (CO), sulfur oxides (SO<sub>x</sub>), nitrogen oxides (NO<sub>x</sub>) or ammonia as well as dust or non-methane volatile organic compounds (NMVOC). In 2010, emissions to air from BASF's chemical

### **Emissions to air**





<sup>1</sup>CO<sub>2</sub>e is the abbreviation for CO<sub>2</sub> equivalent. This unit enables comparison of various greenhouse gases such as nitrous oxide, methane, carbon dioxide, etc.

operations in Greater China totaled 1,182 metric tons (2009: 1,164 metric tons). This slight increase is mainly due to the increase of production volumes. Based on our principle of continuously reducing air emissions, we improved several off-gas treatment facilities, for example by launching a Catalytic Thermal Oxidation System for treating volatile organic compounds (VOC).

**Total electricity consumption** 









### Water supply



### Energy

In 2010, total energy consumption of BASF sites in Greater China rose, mainly due to production increases. Electricity consumption totaled 875,172 MWh (2009: 856,734 MWh) and steam consumption totaled 4,630,474 metric tons (2009: 3,874,034 metric tons). Fuel consumption for the central energy supply increased, from 2,287,504 MWh in 2009 to 2,365,279 MWh in 2010.

However, energy consumption per ton of product at BASF in Greater China slightly decreased, despite major maintenance activities at BASF-YPC Co. Ltd. for two months during 2010. BASF is constantly taking steps towards its long-term goal of further reducing the specific energy consumption per ton of product.

### Water

BASF strives to gradually reduce water consumption and reuses as much water as possible. In 2010, BASF used 12.7 million cubic meters of water in Greater China (2009: 11.9 million cubic meters). This increase is mainly due to the increase of production volumes and several construction projects. BASF uses water for cooling and cleaning as well as to produce its products. Sites have taken measures to save water in 2010 like waste water reuse projects and improved vacuum pumps for cooling circulation systems. Regarding water used for production, we keep it stable between 2010 and 2009 despite the increase of production volumes. The water for cooling amounted to 704.8 million cubic meters. Thanks to the recirculation of water, resources can be saved. The higher difference between our water supply and the cooling water amount, the more we use our resources efficiently and protect the environment.





### **Emissions to water**

Owing to higher production volumes and an extension of our product range, emissions of organic substances to water in Greater China – measured in chemical oxygen demand (COD) – rose to around 565 metric tons in 2010 (2009: 434 metric tons). Emissions of nitrogen were 25 metric tons (2009: 18 metric tons), while those of heavy metals were 0.3 metric ton (2009: 0.1 metric ton). At the same time, BASF continued to work on reducing emissions. In 2010, we expanded our waste water pretreatment facility in Qingdao and installed one sanitary waste water treatment facility in Kunming.

### Waste

In 2010, BASF's production in Greater China generated 68,012 metric tons of solid waste (2009: 59,349 metric tons). The increase was due to higher production volumes and more waste from construction projects. The recovery rate decreased from 71% in 2009 to 64%, mainly due to more non-recoverable waste generated from our extended product portfolio in 2010, and to new regulations on the classification of waste. BASF only disposes waste after all recovery and recycling options have been exhausted.



### **Product Stewardship**

Our highest priority is to ensure that our products pose no risk to people or the environment when they are used responsibly and in the manner intended. We inform our customers and the public about the properties of our substances with the help of a global database containing constantly updated environmental, health and safety data on our substances and products. Safety data sheets on all our chemical sales products are available in Chinese. Our global and local emergency hotline network provides information around the clock. If required, we train our customers in the safe use of our products.

BASF also supports the Global Product Strategy (GPS) of the International Council of Chemical Associations (ICCA). GPS is establishing global standards and best practices to improve the safe management of chemicals. In 2010, BASF took a leading role in creating ICCA's new Chemical Information Search portal which includes relevant information on many chemical products. During Shanghai Expo 2010, BASF participated in a joint event organized by the United Nations Institute for Training and Research (UNITAR) and ICCA to share our GPS knowledge with Expo visitors.

### **Audits**

Regular audits help us to ensure consistent high standards at BASF in Greater China in all areas of environmental protection, health and safety. The requirements for the inspections are defined in our BASF Group Directive Responsible Care<sup>®</sup> Audits which include procedures to be followed if standards are not met. We audit our sites and companies in which BASF is a majority shareholder. Our internal audit system complies with standards for external auditing procedures (ISO 9001 and OHSAS 18001). In Greater China, 19 BASF production sites are certified with the ISO 14001 standard for sound environmental management.

### Safety and emergency response

With regard to the safety of all our chemical plants, BASF uses a five-step system of reviews during design, planning and construction of new plants in order to avoid malfunctions (or hold-ups) such as product spillages, fires or explosions. With the help of a risk matrix, we assess possible risks in our



### **EMISSIONS TO WATER**

plants according to estimated probability and potential impact, using the information gained to develop appropriate protective measures. In 2010, we developed the concept for a new BASF Group Directive on Emergency Response. It standardizes regional management plans that specify how to act when incidents occur. In 2010, we also adopted our new global Group Directive Occupational Safety. It standardizes requirement profiles and thus makes it easier to integrate newly acquired sites.



**BASF in Greater China** 

Report 2010





Globally, we strive to reduce our lost time injury rate per million working hours. In 2010, the lost time injury rate at BASF in Greater China was 0.5 per million working hours (2009: 0.6 per million working hours). For companies contracted to work at BASF sites in Greater China, the lost time injury rate was 0.4 per million working hours (2009:



0.0 per million working hours). No work-related fatality was recorded in 2010.

### **Chemical transportation safety**

BASF's rules and measures for transportation safety include the delivery, storage and distribution of chemicals between all our sites, suppliers and customers. If an incident occurs despite our preventive measures, we provide swift assistance. Our transportation safety advisers subsequently evaluate all information in order to prevent such accidents in the future. Product spillages during transportation are reported, investigated and assessed as well. We also inspect all trucks entering and leaving a BASF site.

In 2010, BASF in Greater China initiated a Safe Forklift Operation Training at most sites, supported by an external consultant. More than 250 operators were trained, and there was no forklift accident in 2010. Moreover, BASF organized an on-site cargo lashing training program, teaching employees proper loading and securing of packed goods.

### Logistics service provider audits

BASF regularly audits its logistics service providers. In 2010, BASF in Greater China audited them using tools recognized industry-wide, such as the Safety Quality Assessment System, Warehouse Safety Assessment and Chemical Distribution Institute-Tank farm schemes. If our standards are not met, we make sure the relevant logistics companies introduce the necessary measures.

### Raw material supplier assessment

We also evaluate all new and existing suppliers on the basis of environmental protection, occupational safety and social standards. Risk matrices and on-site audits help us to identify potential high-risk suppliers. If our audits reveal the need for improvement, we agree on corrective measures and offer assistance. If conditions are not met, we are prepared to stop procurement from the respective supplier.

### **GLOBAL SAFETY CONCEPTS**

Global safety and security concepts serve to protect our employees and neighbors as well as our property, products, processes and information. At the same time, we prevent production stoppage and environmental damage.

### ENERGY & CLIMATE PROTECTION BASF takes action

### 💻 basf.com/future/climate



Thanks to new intermodal transportation terminals, such as this one in Antwerp, BASF can transport more goods by rail rather than road.

# **Protecting the climate together**

BASF products offer a variety of solutions for climate protection and energy efficiency.

Climate protection is an issue that affects us all. That is why we are committed to ambitious global climate protection. We help by offering products and system solutions that conserve resources. Furthermore, we are continuously reducing emissions along our value-adding chain. In 2010, logistics played a large role in this.

Intermodal transportation terminals reduce emissions: When shipments are transported by rail instead of by road, the carbon dioxide (CO<sub>2</sub>) emissions from freight transport can be reduced by up to 65%. We take advantage of this potential particularly at our large Verbund sites. In March 2010, we inaugurated the new intermodal transportation terminal in Antwerp, Belgium. It is a joint venture of BASF, HUPAC and Inter Ferry Boats. This new logistics terminal has an excellent connection to the rail network and helps to make the transport of containers with our products or deliveries to our sites more environmentally friendly. Thanks to the new terminal, 150,000 fewer trucks are estimated to be on the road per year. This will save about 30,000 metric tons of CO<sub>2</sub> annually. At our BASF site in Ludwigshafen, we also started the expansion of the intermodal transportation terminal, which should be completed in 2012. This will raise the capacity of our transshipment facility from 300,000 to 500,000 loading

units per year, increasing the reduction in  $CO_2$  emissions from 45,000 metric tons to 70,000 metric tons.

**Reducing greenhouse gas emissions:** We are constantly working to reduce greenhouse gas emissions in our production. In 2010, BASF greenhouse gas emissions totaled 25.2 million metric tons worldwide (2009: 31.1 million metric tons). BASF's proprietary catalysts that we installed in 2009 were a major factor in the reduction of emissions. These catalysts are used in several plants at the Ludwigshafen site to more efficiently decompose the greenhouse gas nitrous oxide (N<sub>2</sub>O). Ahead of schedule, we have already reached the goal we set ourselves of reducing greenhouse emissions per metric ton of sales product by 25% by 2020. We are therefore working on new goals for the reduction of greenhouse gas emissions, which we will introduce in 2011.

Products for climate protection: We spend around one third of our research and development expenditures on developing new energy efficiency and climate protection solutions. For example, as an associated partner in the Desertec Industrial Initiative, we are contributing our expertise in chemistry to making solar and wind power generation in the desert regions of North Africa and the Middle East more efficient. We already offer our customers numerous products that help prevent emissions. In 2010, we generated sales of around €7.7 billion (or 12% of sales) with our climate protection products - product groups that when used avoid at least twice as much carbon dioxide as is emitted during their production and disposal. The insulation materials, fuel additives, industrial catalysts and many other products we sold in 2010 enabled CO<sub>2</sub>e\* emissions that occur from the use of houses, cars and various industrial processes to be reduced by 322 million metric tons. We aim to continuously increase this contribution to climate protection.

**New corporate carbon footprint:** Since 2008, BASF has been the only industrial company worldwide to regularly present a comprehensive corporate carbon footprint.

In 2010, we recalculated the reduction in emissions from the use of our climate protection products as well as the recording of emissions along the value-adding chain. For the first time, we included emissions from the oil and gas business and took into consideration emissions that arise when our customers burn oil and gas produced by BASF's subsidiary Wintershall. Our calculations take into account the draft of the new Greenhouse Gas Protocol standard. The standard was developed under the leadership of the World Business Council for Sustainable Development and the World Resource Institute, which we participated in.



### HOUSING & CONSTRUCTION BASE takes action



"We are committed to provide high performance admixture to the customers to improve the concrete durability and energy efficiency during the placement process." Yang Jianving, Senior Manager, Admixture System Product Segment, BASF Construction Chemicals (China) Co. Ltd.

# **Sustainable building**

BASF's construction solutions benefit business, society and the environment.

With our products for sustainable housing and construction, we aim for a combination of economic, social and environmental benefits. Construction projects in Greater China showcase how construction materials and system solutions from BASF can save money and protect the environment.

BASF admixture supports a solid foundation for China's tallest building: BASF supports China's fast-growing construction industry by supplying its advanced concrete admixtures. These additives allow construction to continue in very hot or very cold temperatures by delaying or accelerating the hardening of concrete. They can also modify the viscosity of concrete, reduce concrete shrinkage, and increase its final strength and durability.

BASF was awarded supply of the concrete admixtures to the Shanghai Tower which will soon be China's tallest building. The company's Rheoplus<sup>®</sup> 325, powered by Super Retention Technology (sureTEC) and Smart Dynamic Concrete (SDC) technologies, was selected for the raft foundation. sureTEC allows producers to maintain control over concrete workability between the batching plant and the placement site for two hours or more, while SDC is a new generation of highly flowable concrete designed for faster placement process and higher concrete durability. SDC is made possible by the use of Rheomatrix<sup>®</sup>, an advanced viscosity modifying admixture (VMA). Shanghai Tower's foundation slab was 6 meters deep and 121 meters in diameter – roughly 1.6 times the size of a standard football field. 61,000 m<sup>3</sup> of concrete needed to be poured within 60 hours, and 450 ready mix trucks supplied concrete from 6 different batching plants. This means that maintaining outstanding concrete workability was extremely important. The use of SDC with Rheomatrix<sup>®</sup> inside significantly facilitated the concrete placement. The long time span of this pour and the massive volume of concrete placed have resulted in a new world record.

Other than the foundation slab, BASF continuously contributes to the upper concrete structure construction of Shanghai Tower. BASF's advanced shrinkage reducers combined with Rheoplus<sup>®</sup> 325 have been used to reduce the cracking risk potential which is commonly associated with high-rise construction.

### Sustainable construction materials from BASF for

**Expo 2010:** BASF has provided a range of its advanced construction chemical materials to various venues at the World Expo 2010 in Shanghai. For example, the company contributed eco-friendly interior paint, NORBIN<sup>™</sup> R1, and panels made of BASF's Finestone<sup>®</sup> solution using Neopor<sup>®</sup>,

an innovative thermal insulation material to the energy-efficient Hamburg House. High workability concrete admixture Rheoplus<sup>®</sup> 325 enabled the construction to be done in a relatively short time for the China Pavilion. At the Theme Pavilion, which showed a number of exhibitions tailored to the Expo's motto "Better City, Better Life" and was designed to accommodate large numbers of visitors, BASF's flooring solutions were used to withstand the high traffic load of visitors. Mastertop®100, a dry shake floor hardener with high impact resistance and dustproof properties, was applied in the exhibition area to create a durable and easy-to-clean floor. Another outstanding building is the Expo Performance Center with its spaceship appearance. In order to support this distinctive structure, pillared with many steel pipes, BASF supplied Glenium® ACE 308, an innovative concrete admixture. This admixture allowed the contractor to pump Self Consolidating Concrete (SCC) into the pipes where manual vibration was impossible (see page 29).

### BASF provides chemistry to China's emerging high-speed railway network: BASF is contributing

innovative solutions to support China's goal to become a world leader in high-speed railway development. According to its ambitious plan, China will build a total of around 20,000 km of high-speed railway lines by 2020. By then, more than half of the world's total length of high speed rail lines will be in China. Rail authorities have set stringent standards and requirements for the construction of the rail lines, stipulating the application of state-of-the-art technology to ensure the safety and comfort of its passengers and the durability of the structures.

BASF's Styrodur<sup>®</sup> C extruded polystyrene (XPS) boards were widely used in a number of high speed passenger dedicated line projects such as the Jing-Hu (Beijing-Shanghai), the Shi-Wu (Shijiazhuang-Wuhan), the Jing-Shi (Beijing-Shijiazhuang) and the Hu-Hang (Shanghai-Hangzhou) lines. XPS boards are an effective load bearing and elastic cushioning layer under the slab track to reduce vibration and noise. BASF has been the leading supplier to the famous 1,318 km-long Beijing-Shanghai Line, covering almost half of the total 26,000m<sup>3</sup> project scope.

BASF's Elastotrack<sup>™</sup> is a ballast binder and has been a brand new technology for China. It has been supplied to major passenger lines including Wu-Guang (Wuhan -Guangzhou) and Hu-Hang lines. It reduces the occurrence of flying stones and dust, prevents pulverization and provides a smoother ride of the train.

BASF has also contributed a system solution to the Hubei section of the Shi-Wu line. The package includes BASF's high standard polyurea waterproofing system solutions (branded as Masterseal®) that extend the railway bridge deck life, Styrodur® 5000 CS cushioning layer under the slab track, and BASF's adhesives Conipur® M867F which ensure a durable solution for the installation of geo-textile fabric and XPS boards to the waterproofing layer.







"BASF's innovative technologies and abundant variety of products can help us enhance our product quality and sharpen our competitive edge." Li Zhongbing, Vice Minister of Material Department, Automotive Engineering Research Institute, Chery Automobile Co. Ltd.

# **Solutions for mobility**

BASF is helping to make eco-friendly vehicles for daily use.

As one of the world's largest auto markets, China encourages the development of clean and fuel efficient vehicles in an effort to sustain continued growth of the country's automotive industry. BASF's products, expertise and solutions enhance comfort, increase performance, reduce fuel consumption, improve safety and decrease emissions. They help car makers and suppliers to develop even more sustainable business.

Better performance and weight reduction for cars with BASF's Ultramid<sup>®</sup>: BASF provides various packages of automotive solutions to manufacturers in the car industry which help them to reach their goals of safety and weight reduction of their vehicles, as well as to produce environmentally-friendly cars.

BASF supplies a number of products made from our Ultramid<sup>®</sup> polyamid series to China's automotive sector. We do not only help our Original Equipment Manufacturer (OEM) customers realize their goal of making vehicles lighter, but also achieve a better performance of the engines and cars.

For example, one of BASF's key customers, Chery, uses BASF's advanced plastic air intake manifold (PAIM), made from Ultramid<sup>®</sup> for its latest A3 model which has a 1.6L natural intake gasoline engine with variable intake system. The device's key function is to evenly distribute the combustion mixture to each intake port in the cylinder head, and thus optimizes the efficiency and performance of the engine. Therefore, a PAIM helps the engine to reach very high power and torque. Together with a partner, BASF developed the first VIS PAIM device of this kind locally in China. The device helps to save fuel cost and provides for a performance better than a gasoline direct injection engine with equivalent displacement.

Another successful application is BASF's oil pans made from another variety of Ultramid<sup>®</sup> for Beijing Foton Cummins Engine Company. They are the first commercialized plastic oil pans in China and are installed in light utility vehicles with 2.8L and 3.8L 4-cylinder diesel engines. The oil pan is a reservoir at the bottom of the crankcase, holding lubricant oil during its circulation through the engine.

**Competitive materials for China's auto parts sector:** In September 2010, BASF was honored as one of the "Top 10 Most Competitive Enterprises in Materials and General Parts" during the "Top 100 Most Competitive Auto Parts Suppliers Award 2010" event. The award was published by Gasgoo.com, the largest automotive B2B marketplace in China, and the China International Auto Parts Expo trade fair, supported by the Ministry of Commerce. BASF was the only chemical supplier among the 100 companies awarded.

According to the judging panel, BASF was selected among over 900 auto parts and materials suppliers because the company not only provides a broad portfolio of technology solutions to the automotive industry, but also continuously drives for innovation and localization of its R&D to meet the evolving needs of local customers.

### **BASF's Shanghai plant produces 10 millionth**

emissions control catalyst: BASF's catalysts division is the world's leading supplier of environmental and process catalysts. It develops unique proprietary catalyst and adsorbent solutions. Moreover, BASF, is also the market leader for mobile emissions catalysts in Asia. These include cost-effective regulatory compliance solutions for light-duty gasoline and diesel engines, heavy-duty diesel engines, motorcycles or small engines.

In 2010, the BASF Shanghai Mobile Emissions Catalysts facility celebrated its tenth anniversary. At the same time, it also produced its 10 millionth catalyst. As of March 2010, catalysts produced at BASF's Shanghai plant have removed more than 18 million tons of pollutants from China-manufactured vehicles.

China's vehicle market is growing rapidly. In 2010, sales of light duty and heavy duty diesel vehicles in China increased to 15.6 million and 2.4 million respectively, according to J.D. Power and Associates. In addition, an optimistic forecast remains for 2011. Meanwhile, China's regulations for exhaust gases are becoming stricter which create high demand for efficient catalysts. For example, Stage IV standard – comparable to the Euro IV standard – is being phased in since early 2008 for light duty and starting January 1, 2012, for heavy duty vehicles in China, while the Stage III standard for motorcycles is scheduled to be implemented during 2011.

After its successful debut at the Beijing Olympics in 2008, BASF-enabled emission control technology has equipped new buses in Nanjing and Hangzhou since early 2011. The buses are powered by Euro IV engines from diesel manufacturer Yuchai and equipped with a Selective Catalytic Reduction emission-control solution from BASF. Compared to a Stage III-compliant bus, a Stage IV bus can reduce nitrogen oxides emissions by 30 percent and particulate matter emissions by 80 percent. More Chinese cities are expected to start using Stage IV buses over the coming years.

BASF has invested more than €50 million to expand the Shanghai facility over the years. BASF's Asia Pacific headquarters for Mobile Emissions Catalysts was relocated to the site, and state-of-the-art research and development (R&D) capabilities as well as engine labs were added to develop cost-effective solutions that contribute to cleaner air quality in China.



### HEALTH & NUTRITION BASE takes action

### basf.com/future/nutrition



In Brazil and many other countries in the world, staple foods such as oil and flour are fortified with the essential vitamin A from BASF.

# **Solutions for health**

### Worldwide, BASF products help improve health and nutrition.

The global population is growing and constantly aging. In the future, more and more people will need food and health products. Our expertise not only helps to support agricultural production, it also makes us a reliable partner for customers in the personal care and pharmaceutical industries, as well as for human and animal nutrition and for non-profit organizations.

Fighting malnutrition: Vitamin A deficiency is a serious problem in more than 70 countries around the world. The World Health Organization (WHO) estimates that approximately 140 to 250 million children under five years of age are suffering from vitamin A deficiency worldwide. People affected with it can go blind and are more susceptible to infections because of their weakened immune system. The human body gets vitamin A from food – a problem for people living in emerging and developing countries. They cannot afford expensive food like high-fat fish and meat which contain vitamin A. Instead, they nourish themselves mainly with cheap staple foods such as oil and flour. Nutrients such as vitamin A can be added to these foods in a process known as food fortification. BASF's Food Fortification Team operates programs in more than 30 countries. This also includes the "Strategic Alliance for the Fortification of Oil and Other Staple Foods" (SAFO) - a

public private partnership between BASF and Germany's Gesellschaft für Technische Zusammenarbeit. SAFO has been helping people by enriching the typical staple foods of their country with nutrients at an affordable price in Bolivia, Brazil, Tanzania, Indonesia, Cambodia and Uzbekistan.

Better absorption of medical active ingredients: BASF helps its customers in the pharmaceuticals market to be successful. Soluplus<sup>®</sup> is an excipient to help make drug substances more soluble, thus improving bioavailability. In a special process, Soluplus is added to the drug substances and the combination is mixed and melted at high temperatures. The process yields what are called solid solutions, enabling poorly soluble drugs to be administered in tablet form, making them bioavailable.

**Research cooperation with Harvard University:** The formulations of active ingredients are also the focus of the BASF Advanced Research Initiative at Harvard that we established with the university in 2007. One of the research topics is the development of nanoformulations for a range of active substances, especially those that are not readily soluble in water. Nanoformulations have the function of releasing the active substance at a target area where it should take controlled effect. Another project aims at developing a better understanding of how biofilms develop. These films, consisting of various associated microor ganisms, are invisible to the naked eye and can pose a serious health risk in hospitals, industrial settings or the home. Therefore, it is important to understand how their formation can be influenced and prevented.

**Products to combat malaria:** For decades, BASF has been active in fighting malaria, a disease that kills around one million people annually. Our most important contribution is Interceptor®, a mosquito net coated with the insecticide Fendona®. Just a very small dose of the active ingredient used to coat the nets kills the disease-carrying mosquitoes. The amount used on the nets is safe for vertebrates and humans. A further benefit of the nets is that

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they remain effective even after being washed more than 20 times. The WHO has recommended Interceptor since the end of 2006. The most important customers are international aid organizations. Interceptor nets are just one way to prevent the spread of malaria. BASF also offers Fendona as a spray for interior walls as well as the larvicide Abate<sup>®</sup>, which can kill mosquito larvae in standing water. In addition, we are researching a new generation of products to fight malaria.

### Action plan for fighting malaria



Interceptor® nets offer protection, especially at night, from mosquitoes that spread malaria. They are treated with Fendona®, an insecticide that kills mosquitoes on contact.



(2) The insecticide Fendona® is applied to interior residential walls by trained professionals. The mosquitoes die after touching the treated walls.



(3) Residential areas can be protected when standing water is treated with the larvicide Abate<sup>®</sup> to prevent mosquito larvae from developing.



BASF is a partner with various aid organizations that are trying to put an end to malaria and improve health systems in the affected countries.



(5) Mosquitoes are becoming immune to the existing active ingredients. BASF is therefore working on a new generation of products to combat Malaria.

# **BASF AT EXPO 2010 IN SHANGHAI**

Chemistry for sustainable urbanization of the future

BASF has an important role to play in fostering sustainable urbanization by offering intelligent solutions from the world of chemistry to help address issues such as efficient housing and mobility or climate change. From May to October 2010, The World Expo in Shanghai, under its theme "Better City, Better Life", was a platform for countries, cities and organizations to share their ideas for more eco-friendly cities and lifestyles. There, BASF presented various innovative solutions, with a strong focus on common challenges faced by cities around the world. Although Expo 2010 has since closed its gates, our projects, designs and activities will continue to show how BASF creates chemistry with cities, families, and future generations in China and globally.

### **BASF** at the German Pavilion

The German Pavilion was one of the most popular pavilions and attracted more than four million visitors. It won the gold award in the category "Theme Development" by the International Exhibitions Bureau. At the German Pavilion, BASF displayed a variety of innovative exhibits which are designed to help create a more comfortable as well as a more sustainable futuristic way of life.

It showcased Micronal<sup>®</sup> PCM which is BASF's formaldehyde-free microencapsulated latent heat storer. This so-called phase change material manages indoor temperature by reversibly changing from solid to liquid, thereby saving electricity and maintenance costs. BASF's Organic Photovoltaic (OPV) slides showcased applications of certain organic materials – for example polymers – which can function similarly to semiconductors. In the future, OPV may be able to drastically reduce energy

### HAMBURG HOUSE - URBAN BEST PRACTICE

BASF is an official sponsor of the Hamburg House, located at the Urban Best Practices Area of the Expo Park. With BASF's advanced products and solutions, the Hamburg House can maintain a constant indoor temperature at 25°C all year around without consuming any electricity from the National Electricity Grid. costs for consumers through their less expensive production processes and ultra thin nano meter-scale material layers in the device stack. BASF also presented PURE, a concept shoe made of 100% polyurethane, and a cantilever chair called MYTO, made entirely of the engineering plastic Ultradur<sup>®</sup> High Speed, which has an extraordinary flowability. The chair was designed by acclaimed German designer Konstantin Grcic.

### **BASF at German-Chinese House**

The German-Chinese House at the Expo was the final station of the bilateral national initiative "Germany and China – Moving Ahead Together" which was launched in Nanjing in 2007 and later traveled to five major cities in China, before reaching Shanghai. This popular joint project of the Chinese and German governments had promoted the partnership between the two countries, with sustainable urbanization as the overarching topic. BASF was an Official Partner of the project. For its centerpiece, the "German-Chinese Promenade", BASF designed a pavilion which presented tangible examples of solutions, such as a low-energy-apartment. The German-Chinese House at the Expo was made of eight-meter-long bamboo culms from Yunnan province in southwest China. Interactive touch screens in the structure introduced a range of BASF solutions for the automotive and construction industries.

As part of "Germany and China – Moving Ahead Together", BASF and the German Goethe Institute hosted a symposium called "Environmental Friendly Waste Management in Urban Cities" in September 2010. The symposium featured speakers from the Chinese Ministry of Environmental Protection, the Shanghai Environmental



Protection Bureau and the Biodegradable Materials Group. Experts from BASF took part in talks on composting and the use of biodegradable bags for efficient and effective management of organic waste. A panel discussed the topic "What it takes to manage organic waste effectively".

After the Expo, the German-Chinese House has found a new home at the Hangzhou International Urban Exposition Center, which is part of the Hangzhou government's efforts to protect and use old industrial buildings. There, it continues to serve as an example of modern architecture and creative design that combines traditional materials like bamboo with the latest construction technologies.

### **BASF at Hamburg House**

The Hamburg House, in the Expo's Urban Best Practices Area, is the first certified passive house in China. This means the house can maintain a constant indoor temperature at 25°C all year round without consuming any electricity from the National Electricity Grid, and without the use of air-conditioners or heaters. The high ecological standards were adapted to the climatic conditions in Shanghai and are now used as a reference. To support the Hamburg House, BASF provided its Finestone® solution using Neopor®, an innovative thermal insulation material, along with the eco-friendly interior paint NORBIN™. Insulating panels made of Neopor®, a BASF innovation, provide an insulating effect up to 20 percent higher than conventional expandable polystyrene panels and are thus more eco-efficient. Insulation products made of Neopor® are already a common feature in wall and roof insulation applications in many passive houses around the world. BASF's decorative paint NORBIN™ R1 Interior is featured

with non-detectable volatile organic compounds and therefore meets high requirements for eco-friendliness by ensuring safety for painters during the construction period, as well as for users and visitors to the buildings. The Hamburg House attracted around 500,000 visitors and remains a permanent building at the Expo Park.

BASF also provided its advanced and sustainable building materials to a number of other Expo buildings such as the China Pavilion and the Theme Pavilion, which are both permanent structures as well (see page 23).

### **BASF** at the Dock Theatre

Together with the producers behind Sesame Street, Kids' Lab presented the interactive "Magic Map Show" at the Dock Theatre near Huangpu River at the Puxi site of the Expo. With plenty of singing and dancing, the live show aimed at encouraging children to appreciate and take care of the environment. Sesame Street characters Big Bird, Elmo, Cookie Monster and others took the children on a journey to five continents to learn about the world we live in. Children also had the chance to enter the stage to participate in an interactive and fun chemical experiment called "Recycling Dirty Water" to learn how to produce clean water from used water at Kids' Lab (see page 33). Set against a backdrop of Expo, the 40-minute show was staged 332 times, attracting over 112,000 visitors. More than 2,500 children participated in the experiment.

During Chongqing Week at the Expo in August, eight children of migrant workers from Chongqing were invited to visit and join the Kids' Lab at the Dock Theatre. The children, who live in Chongqing, enjoyed spending a four-day tour with their parents who are working in Shanghai.

### MAGIC MAP SHOW - KIDS' LAB

The Magic Map show featured an interactive session inviting children at the Dock Theater at the Expo Park to discover the "magic" of the water cycle through an interactive chemistry experiment, "recycling dirty water" offered by BASF Kids' Lab.



# SUSTAINABILITY MANAGEMENT

Commitment to BASF's global values and standards - "1+3" as an innovative model

Sustainability management helps us enhance our existing business, create new business opportunities and minimize risks. BASF is a founding member of the United Nations Global Compact. We have established instruments to ensure that internationally recognized standards are observed at all our sites and that all our employees are familiar with and act in accordance with our global requirements for environmental protection, health protection and safety as well as labor and social standards.

### **Responsible Care® management**

BASF has entrenched the values and ideas of the global Responsible Care<sup>®</sup> concept into its Responsible Care<sup>®</sup> Management System which now forms the framework for environmental protection, safety and security at the company. Binding global directives define the requirements, responsibilities and assessment methods for the implementation of these standards at BASF. We regularly conduct audits to monitor our performance and have set ourselves ambitious goals in these areas. When we acquire companies, we integrate them quickly into our sustainability management systems. We ensure that new employees are familiar with and always act in accordance with BASF's internal requirements for environmental protection, health and safety (EHS).

### Compliance

At BASF, binding standards of conduct ensure that our values are permanently established in day-to-day business activities. Our Chief Compliance Officer manages global implementation of the compliance program with the help of around 100 Compliance Managers worldwide. New employees at BASF receive mandatory compliance training. In 2010, more than 41,000 employees participated in compliance training worldwide and 43 workshops on

compliance were conducted in Greater China. Our external Group-wide hotlines enable employees to anonymously seek advice regarding personal conduct as well as report incidents in the company that they consider dubious.

### "1+3" project

BASF believes sustainability should involve the entire value chain. In 2006, BASF initiated a project called "1+3", which mobilizes and supports its business partners along its supply chain in China to improve their sustainability by enhancing performance in environmental protection as well as health and safety management. Launched under the platform of the China Business Council for Sustainable Development (CBCSD), a coalition of leading Chinese and foreign enterprises operating in China. To date, more than 120 local and international companies in China are participating in the project.

"1+3" means that one CBCSD member company such as BASF teams up with three types of business partners – customer, supplier and logistics service provider – and guides them towards best practices in sustainability. Having successfully cooperated with 6 partners in the first round in 2008, BASF completed another project cycle, this time with 12 partner companies in February 2011. Partners have made achievements in their environment, health and safety (EHS) and production management, particularly in the fields of environmental protection, transportation safety, and emergency response. BASF's partners are now spreading the concept along their own value chain.

Through the "1+3" project, BASF not only strengthens long-term strategic collaboration with its partners, but also reduces the risk down in the supply chain by raising awareness of sustainability and enhancing core competitiveness of the participating companies.

### INNOVATIVE BUSINESS MODEL FOR SUSTAINABILITY

"The '1+3' project is an innovative business model for sustainable supply chain management. It can be easily applied to other industries in China and to other countries as well. Since there is a dominant percentage of SMEs (small and medium enterprises) in China, it is pragmatic and has fundamental significance for China's sustainable development. BASF teams up with its business partners and endeavors to promote CSR implementation along its supply chain by sharing its best practices and offering tailor-made solutions. It has made remarkable contributions in driving a sustainable and inclusive society in China. "

### Zhai Qi,

Executive Secretary General, China Business Council for Sustainable Development

# **RESPONSIBLE CARE INITIATIVES**

Safe conditions for BASF and its workforce in Greater China

BASF is a founding member of Responsible Care®, which is the chemical industry's global voluntary initiative under which companies, through national associations, work together to improve their environmental, health and safety (EHS) performance. Through the sharing of information and a rigorous system of checklists, performance indicators and verification procedures, Responsible Care® enables the industry to demonstrate how its EHS performance improves over the years.

### New office C.A.R.E. campaign

At BASF, C.A.R.E. stands for Communication, Awareness, Responsibility and Excellence. The campaign was established as a method to achieve 100% safety for our employees at all times. It was first launched at the Pudong site in Shanghai in 2008 and has since been expanded to production sites in Caojing and Jinqiao (Shanghai) as well as Nanjing, Nansha, Guilin, Taiwan and other places in Greater China. More than 3,000 employees and contractors have participated in this campaign over the last two years.

In September 2010, BASF kicked off the new office C.A.R.E. campaign which focuses on ergonomics, information protection, as well as office and travel safety. The office C.A.R.E. campaign has since been expanded to other offices in Greater China including Beijing, Guangzhou, Hong Kong and Taipei. Its idea is to first raise awareness about hazards, and then take measures to achieve a safe and comfortable office environment. More than 1,000 office employees participated in the kick-off events. The campaign will continue in the coming years to strive for 100% safety in office areas.

### Ambulance service at BASF's Pudong site

Due to the ongoing expansion of our Pudong site in

## EFFECTIVE EMERGENCY RESPONSE SYSTEM

To ensure safety levels remain high, an ambulance equipped with modern and advanced medical devices is now on standby at BASF's Pudong site, providing 24-hour medical service to all staff at the site. Shanghai, and in order to further align the levels of prevention and readiness with BASF's global standards, reviews are taken in close cooperation with our experts from BASF Occupational Medicine and Health Protection Department in Germany. To ensure that safety levels remain high, an ambulance has been on continuous standby as of August 2010. It provides a 24-hour medical service to all staff at the site. The ambulance is equipped with modern medical apparatus for most urgent medical needs. In addition, it has antidotes for chemical toxins, tailored to the chemicals used and produced at the plants. In case of an emergency, the ambulance will be called to the accident scene to immediately assist site clinic physicians in providing immediate and efficient medical rescue and evacuation services to anyone injured.

#### **Emergency response**

BASF actively promotes the initiatives of Responsible Care<sup>®</sup> in Greater China. For example, 12 BASF wholly-owned and joint venture companies in the Yangtze River Delta have jointly adopted an Offsite Emergency Response Plan under which they now share resources in case of emergencies. Moreover, BASF runs an emergency network covering 16 cities in Greater China which provides instant support for traveling employees in need.



# **CORPORATE SOCIAL RESPONSIBILITY**

Fostering sustainable development along the supply chain

BASF took the initiative to engage partners actively within processes and initiatives in order to contribute substantially to a sustainable development in China. We aim to motivate our partners by experience as well as public recognition like the CSR China Honor Roll. To date, more than 900 applicants have participated.

Driven by the success of the "1+3" Corporate Social Responsibility (CSR) project (see page 30), BASF, together with China WTO Tribune, a magazine under the Ministry of Commerce with focus on CSR issues, has launched the "Golden Bee" concept and founded the Golden Bee CSR Council in 2008. This is to recognize companies with outstanding achievements in the CSR field, and an annual CSR China Honor Roll is awarded. One thing very special about the Honor Roll is that the winners are not allowed to pursue the laurel again in the following two years, in order to create opportunities for more companies to join the hive of Golden Bees. Through this platform, BASF aims to engage more bee-like companies in China, especially among small and medium-sized enterprises (SMEs) which account for more than 99% of enterprises in China.

To date, the Golden Bee CSR Council has awarded 90 bee-like companies from over 900 applicants. A further 90 companies were shortlisted. Seven of BASF's "1+3" CSR project partners have been recognized or shortlisted, including Huafeng Group, Liby, Far East, Zhenjiang Baohua, Qilu Huaxin, Qiming Pharmaceutical, and KPT Spandex.

### **Golden Bee Banking Declaration**

One of the highlights of the latest China CSR Honor Roll

award ceremony in 2010 was a joint Banking Declaration by seven Golden Bee banks, including Bank of China, Industrial and Commercial Bank of China, and Standard Chartered Bank. Initiated by BASF and China WTO Tribune, the declaration called on financial institutions to give privileged Ioan and financing services to responsible SMEs, and especially Golden Bee SMEs.

### Golden Bee spreads to Europe

During the launch ceremony of the CSR initiative Enterprise 2020 in October 2010 organized by CSR Europe, Johnny Kwan, Chairman of the BASF Greater China Country Board and Vice Chairman of China Golden Bee Council, presented the CSR activities in China and the Golden Bee concept to the audience of some 450 experts from over 50 global companies and 30 leading international organizations in Brussels, Belgium.

Honeybees extract honey for themselves while simultaneously spreading pollen during this process. In this way, they fertilize themselves and benefit others. This mutually beneficial process is perceived as a positive drive for sustainability in almost all cultures. BASF's Golden Bee concept therefore uses the analogy of honeybees which co-exist harmoniously in nature.

## BASF GOLDEN BEE CONCEPT SPREADS TO EUROPE

At a key CSR event in Brussels, Belgium, Johnny Kwan, on behalf of BASF in Greater China and China Golden Bee Council, helped co-develop a vision for CSR.



# **FOCUS ON EDUCATION**

Regular programs and school rebuilding after earthquake disaster

### BASF Kids' Lab - fun with chemistry

BASF Kids' Lab is an interactive chemistry laboratory concept that children can conduct small chemical experiments and learn about the world of chemistry in a fun-filled and safe environment. Since its launch in Greater China in 2002, more than 113,000 children have participated in Beijing, Nanjing, Shanghai, Chongqing, Guangzhou, Shenyang, Wuhan, Hong Kong and Taipei. At our 2010 BASF Kids' Lab in Greater China, children conducted experiments like "Recycling of Dirty Water" where they learned about how chemistry can contribute to preserving the environment. The same experiment was also included into an interactive show during the World Expo 2010 in Shanghai (see page 29).

### The Goodwill Teacher program

Since 2005, BASF's Goodwill Teacher program has supported activities such as "Intellectual Assistance to the Disabled", initiated by the Shanghai Huangpu Association of the Disabled. BASF employee volunteers take turns teaching weekend English lessons. Since 2006, BASF has also granted a "Shanghai Municipal Welfare Fund for the Disabled – BASF Scholarship" to support students whose parents are disabled. Some of the more than 180 beneficiaries of this program are now taking action themselves to return the goodwill they received by organizing volunteer work to support the community.

As an extension of the "Goodwill Teacher" program, BASF held a specially designed 'Run for Charity' event during the 2<sup>nd</sup> BASF Sports Day in November 2010. All the money raised was donated to the Shanghai Huangpu Association for the Disabled.

### Scientific collaboration for higher education in China

For many years, BASF has been sponsoring scientific research and students in China. So far, more than 1,920 undergraduates and postgraduates at 15 universities have received different kinds of BASF scholarships. Through the BASF Sino-German Research and Development Fund (see page 13), BASF has also supported many research projects and symposiums.

Since 2001, 20 young scientists were awarded the BASF Youth Innovation Prize – in cooperation with the Chinese Chemical Society, and 18 scientists were sponsored to attend academic conferences in Germany, the United States, Japan or France. The company also sponsors regular industry summer camps in China as well as the "BASF Cup" Beijing Chemical Engineering Contest which supports universities in cultivating more young talents for the chemical industry.

### **BASF** rebuilds Yongquan Village School in Sichuan

Two years after the devastating earthquake in China's Sichuan province, BASF has supported the rebuilding of a second school in the affected area. The destroyed Yongquan Village School was rebuilt over the summer of 2010 with structures and materials that are earthquake-resistant, energy-efficient and environmentally-friendly. Several thousand BASF employees in Germany took part in a fundraising initiative by the BASF Social Foundation for the reconstruction of Yongquan Village School, which now houses 120 pupils.

### BASF KIDS' LAB PILOT PROGRAM ON WATER

Children of BASF employees in Shanghai experienced first-hand new water-related experiments as part of the global BASF Kids' Lab pilot program that was specifically designed for the International Year of Chemistry 2011.



### **RECOGNITION** Prizes and awards



### DOW JONES SUSTAINABILITY WORLD INDEX

BASF shares listed in the most important sustainability index for ten years in a row

BASF shares were again included in the Dow Jones Sustainability World Index (DJSI World) in 2010. BASF received particular recognition for its risk and crisis management, its environmental reporting and its climate strategy.

CARBON DISCLOSURE PROJECT

### **CARBON DISCLOSURE PROJECT**

Carbon Disclosure Leadership Index and Carbon Performance Leadership Index

In 2010, BASF again achieved the top ranking in the materials sector in the Carbon Disclosure Leadership Index. BASF was also named to the new Carbon Performance Leadership Index, which assesses the performance of companies in managing climate change.



### WORLD'S MOST ADMIRED COMPANIES 2010

BASF named as the most admired chemical company

The U.S. business magazine Fortune again ranked BASF as the most admired chemical company in the world. BASF took first place in the following categories: product and service quality, global competiveness and quality of management.



### BEST CORPORATE CITIZENSHIP AWARD

For the sixth successive year, BASF was laurelled with the "Best Corporate Citizenship Award" in 2010 from the 21<sup>st</sup> Century News Group, one of China's leading media groups. BASF was recognized for its efforts to create transparency through continuous reporting and open dialogue with all stakeholders. The company was also honored for its commitment to and excellent performance in fostering a sustainable and inclusive society.



### **BASF HONORED FOR ITS EFFORTS**

During the anniversary of the World Earth Day on April 22, 2011, BASF was recognized as one of China's top 100 green companies. BASF ranked sixth among a total of 30 listed multinational companies and became one of 16 companies have been honored continuously since the ranking was established four years ago. BASF received the award specifically for its "1+3" project to spread the principles and practices of sustainability along its supply chain.

### **OUR RESPONSIBILITY FOR SUSTAINABLE DEVELOPMENT**

With the rise of globalization, economic conditions have changed fundamentally. As a globally committed company, our stakeholders expect our decisions and conduct to serve as models for sustainable development. As a founding member of the United Nations Global Compact, we are voluntarily committed to the implementation and advancement of internationally recognized principles on human rights, labor standards, environmental protection and fighting corruption.



## AWARD FOR EXCELLENT CORPORATE SOCIAL RESPONSIBILITY REPORTING

In 2010, BASF received the "Excellent Corporate Social Responsibility Report of Multinational Companies in China" award for the second year in a row. This award, the first of its kind in China, is presented by the *China WTO Tribune*, a magazine under the Ministry of Commerce which focuses on research and development of CSR issues in China. It recognized the "BASF in Greater China – In Brief 2009" report as a role model for CSR reporting, as it provides an open and transparent platform to communicate with stakeholders. In particular, the jury praised the innovative practice and influence of the "1+3" project.



### FORTUNE GLOBAL 500 FOR OUTSTANDING CONTRIBUTIONS TO CHINA

In December 2010, the Chinese newspaper Southern Weekend ranked BASF sixth among Fortune Global 500 enterprises for their contributions in China in 2010. BASF was recognized for its outstanding performance in economic, social, and environmental aspects as well as for its long-term commitment and contribution to sustainable development. BASF has been the highest-ranked chemical company in this list for four years in a row. 2011 011.011

### **CHINA'S TOP EMPLOYERS® 2011**

BASF has been certified as one of "China's Top Employers<sup>®</sup> 2011" by CRF Institute. The Netherlands-based CRF Institute of the Corporate Research Foundation, one of the world's leading research institutions in the field of human resources, leadership and strategy, had researched the quality as an employer of 450 top organizations in China according to their training and development, career opportunities, compensation, benefits and working conditions, and company culture. Only 30 organizations were certified for the year 2011.



### **CBN GREEN MANAGEMENT AWARD**

In November 2010, *China Business News*, one of China's leading business media groups, unveiled the winners of the "Love of Green – Annual Green Awards" in Shanghai. BASF was awarded the "Green Management Award" for its long-term commitment to sustainability and its strategic approach to fight climate change. Among other aspects, the jury acknowledged BASF's ambitious climate protection goals.

### **INNOVATIONS FOR SUSTAINABILITY**

"Driving the transformation of economic development is the main task for China's 12<sup>th</sup> Five-Year Plan (2011-2015). As the first industial company worldwide to appoint a Chief Climate Protection Officer, BASF is committed to sustainable growth, and plays a key role in leading the sustainable development of the entire industry through its continuous innovations in both technology and business solutions. I hope BASF can keep up its sustainable journey with prosperity."

### **Qin Shuo**

General Manager, China Business Network Editor in Chief, China Business News

# **BASF IN THE REGIONS**

Sales 2010: €63,873 million; EBIT 2010: €7,761 million



### **NORTH AMERICA**

Sales of companies based in North America rose by 41% to €13,246 million or 34% in local currency terms. Nearly all segments posted considerable gains in sales volumes and sales compared with the previous year. Income from operations in 2010 reached a new record of €1,107 million, representing an increase of €604 million over the previous year.

### SOUTH AMERICA, AFRICA, MIDDLE EAST

For companies based in South America, Africa, Middle East, sales were far above the 2009 level, increasing by 31% to  $\epsilon$ 3,829 million thanks to the substantial economic recovery. In local currency terms, sales were 19% higher than 2009. Compared with 2009, income from operations declined by  $\epsilon$ 104 million to  $\epsilon$ 177 million. This was due to one-time expenses for valuation adjustments on receivables related to long-term supply agreements.



### EUROPE

Sales of companies based in Europe grew by 16% compared with the previous year to reach €35,156 million. Sales increased in nearly all segments thanks to improved demand. The Oil & Gas segment posted a decline sales owing to lower natural gas prices. At €5,206 million, income from operations was more than twice as high as in the previous year.

### **ASIA PACIFIC**

Sales of companies based in Asia Pacific increased by 46% to €11,642 million, or 35% in local currency terms. Sales increased in all segments, particularly in our chemicals business. We posted record income from operations, which rose by €768 million to €1,271 million thanks mainly to higher volumes.

### TEN-YEAR SUMMARY BASF Group

### Ten-Year Summary (million €)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sales and Earnings <sup>1</sup>										
Sales	32,500	32,216	33,361	37,537	42,745	52,610	57,951	62,304	50,693	63,873
Income from operations before depreciation and amortization (EBITDA)	4,142	5,105	5,110	7,685	8,233	9,723	10,225	9,562	7,388	11,131
Income from operations (EBIT)	1,217	2,641	2,658	5,193	5,830	6,750	7,316	6,463	3,677	7,761
Income from ordinary activities	609	2,641	2,168	4,347	5,926	6,527	6,935	5,976	3,079	7,373
Extraordinary income	6,121	-	-	-	-			-	-	-
Income before taxes and minority interests	6,730	2,641	2,168	4,347	5,926	6,527	6,935	5,976	3,079	7,373
Income before minority interests	5,826	1,599	976	2,133	3,168	3,466	4,325	3,305	1,655	5,074
Net income	5,858	1,504	910	2,004	3,007	3,215	4,065	2,912	1,410	4,557
Capital expenditures and depreciation <sup>1</sup>										
Additions to property, plant and equipment and intangible assets	3,313	3,055	3,415	2,163	2,523	10,039	4,425	3,634	5,972	5,304
Thereof property, plant and equipment	3,037	2,677	2,293	2,022	2,188	4,068	2,564	2,809	4,126	3,294
Depreciation and amortization of property, plant and equipment and intangible assets	2,925	2,464	2,452	2,492	2,403	2,973	2,909	3,099	3,711	3,370
Thereof property, plant and equipment	2,307	2,012	1,951	2,053	2,035	2,482	2,294	2,481	2,614	2,667
Number of employees at year-end	92,545	89,389	87,159	81,955	80,945	95,247	95,175	96,924	104,779	109,140
Personnel expenses <sup>1</sup>	6,028	5,975	5,891	5,615	5,574	6,210	6,648	6,364	7,107	8,228
Key data <sup>1</sup>										
Earnings per share (€) <sup>2,3</sup>	4.86 <sup>4</sup>	1.30	0.81	1.83	2.87	3.19	4.16	3.13	1.54	4.96
Cash provided by operating activities <sup>5</sup>	2,319	2,313	4,878	4,634	5,250 <sup>6</sup>	5,940	5,807	5,023	5,693	6,460
EBITDA margin (%)	12.7	15.8	15.3	20.5	19.3	18.5	17.6	15.3	14.6	17.4
Return on assets (%)	3.1	8.4	7.4	13.2	17.7	17.5	16.4	13.5	7.5	14.7
Return on equity after taxes (%)	36.64	9.3	6.0	12.9	18.6	19.2	22.4	17.0	8.9	24.6
Share <sup>2</sup>										
Year-end price (€)	20.88	18.04	22.29	26.50	32.36	36.93	50.71	27.73	43.46	59.70
Dividend per share (€) <sup>2</sup>	0.65	0.70	0.70	0.85	1.00	1.50	1.95	1.95	1.70	2.20
Number of shares as of December 31 (million) <sup>2,7</sup>	1,166.8	1,140.6	1,113.3	1,080.9	1,028.8	999.4	956.4	918.5	918.5	918.5

<sup>1</sup> Starting in 2005, the accounting and reporting of the BASF Group have been prepared in accordance with International Financial Reporting Standards (IFRS). The previous year's figures have been restated in accordance with IFRS. The figures for the years up to and including 2003 were prepared according to German GAAP.

<sup>2</sup> In the second quarter of 2008, we conducted a two-for-one stock split. The previous years' figures for earnings per share and number of shares have been adjusted accordingly.

<sup>3</sup> Adjusted for special items and impairment of intangible assets, earnings per share were €5.73 in 2010 and €3.01 in 2009.

<sup>4</sup> Including extraordinary income

<sup>5</sup> Includes the change in reporting from 2009 onward of the effects of regular extensions of U.S. dollar hedging transactions

<sup>6</sup> Before external financing of pension obligations

7 After deduction of shares earmarked for cancellation

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# The Responsible Care<sup>®</sup> initiative contributes to sustainability

Sustainable development is anchored in BASF's corporate strategy. For us, environment, health, safety and security are central elements of sustainable business management. Responsible Care combines these in the chemical industry's initiative and is an important part of BASF's sustainability management.

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