

# Innovation is in the DNA of Dow

## 创新是陶氏化学的DNA

—— Interview with Yoke Loon Lim, the President for Greater China of The Dow Chemical Company

—— 访陶氏化学公司大中华区总裁林育麟先生

□本刊记者 彭彦钧 刘新洁

陶氏化学是全球知名的集特种化学、高新材料、农业科学、塑料等业务于一体的美国巨型跨国公司，发展至今的一百多年来，陶氏通过在材料、聚合物、化学和生物科学等领域的创新和创造价值，全力解决当今世界的诸多重大挑战，满足人类的诸多需求：新鲜的食物、更加安全和可持续的交通方式、更清洁的水、更高的能源效率、更耐用的基础设施、不断提升的农业生产效率等。陶氏以其一体化、市场驱动型的业务组合，为全球 175 个国家和地区的客户供种类繁多的高科技产品和解决方案，应用于包装、基础设施、交通、消费者护理、电子、农业等高速发展的市场。2016 年，陶氏全球营业额高达近 480 亿美元，在 34 个国家和地区运营 189 个生产基地，产品系列达 7000 多种，拥有员工五万六千多名。



国本土化企业的四十年。四十年来，陶氏在中国市场稳步增长，并不断地实现着跨越式发展。目前，大中华区已经成为陶氏全球第二大国际市场，近些年规模也不断扩大，近五千名员工分布在十七个生产基地，十个业务中心，2016 年实现了双位数增长。

在中国迎接改革开放四十周年之际，本刊记者在上海陶氏的亚太总部，也是除美国本土以外最大的一体化研发中心——张江高科技园区设立的上海陶氏中心采访了陶氏化学公司大中华区总裁林育麟先生。

林育麟先生在陶氏 2009 年并购罗门哈斯时加入陶氏。之前自 2007 年起，他担任罗门哈斯涂料业务东南亚区总经理。2010 年起他兼任陶氏新

加坡总裁。2011 年，林育麟先生被任命为陶氏涂料材料业务亚太区商务总监，2012 年起兼管陶氏亚太区高新材料业务，2015 年底，正式担任陶氏大中华区总裁，在一个多小时的采访中，林育麟先生为本刊记者详细介绍了陶氏在华取得的发展成就以及成功要素。

在经历了中国经济大环境的考验以及愈来愈激烈的市场竞争磨砺后，陶氏不仅做到了逆势发展，顺势而为，近些年还创造了两位数的增长速度。陶氏四十年来在华成功发展的背后究竟蕴藏着怎样的核

心竞争力以及战略眼光？记者在采访陶氏大中华区总裁林育麟先生后找到了答案。

“陶氏所具有的核心竞争力以及与其他公司相比最大的差异就是整体创新能力以及对市场的了解程度。可以说，创新就是陶氏的 DNA，我们有很强的研发能力，速度快，可以把测试时间缩到最短。我们成立了客户创新中心，每年最少 30 次和客户一起进行头脑风暴，和客户一起激发出创新的火花，不仅可以了解目前市场的需求，还可以展望未来的需求。我们理解市场、研发创新的能力以及一体化解决方案都能以本地化的生产提供给客户，并能把我们的技术优势发挥到各个方面，再加上我们有十七个生产基地，可以把这些创新变成产品第一时间提供给市场，这是其他公司很难做到的。当然仅靠几个沿海城市建立业务中心还不足以了解整个市场。我们从 2012 年开始，每年开设一个新业务中心，比如 2015 年我们在乌鲁木齐建立了业务中心，这样就更加了解当地需求；我们在新疆与当地建设兵团建立战略合作，克拉玛依市政府也非常重视，找来当地上百家企业与陶氏配合，寻求合作意向。我们不仅和直接客户接触，也和非直接客户接触，对终端市场的需求也更加了解。凭借着整体创新能力以及对市场的了解，陶氏在过去的业务增长做的很好，我们对中国市场有很大的信心。”大中华区总裁林育麟先生分析说。



心竞争力以及战略眼光？记者在采访陶氏大中华区总裁林育麟先生后找到了答案。

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在采访中，“创新”两个字时常被林育麟先生所提起，中国政府提出的“十三五规划”、“中国制造 2025”都是宏大的发展战略，其核心是中国创新，将加速中国从世界制造大国到制造强国的转变。同前些年相比，陶氏更加注重创新，如今上海陶氏中心已经成为陶氏在中国的创新大本营，也是陶氏除美国本土以外全球最大的一体化研发中心。每天，这里的 700 多名科学家，80 多个世界一流的实验室为陶氏不断创造着引领市场的新产品。目前，



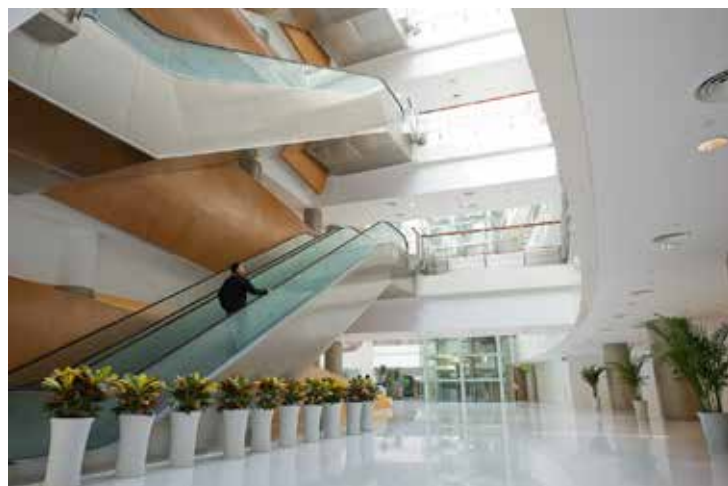
陶氏已经在成都、哈尔滨、武汉、乌鲁木齐等地建立业务中心，以加强陶氏的本地化服务能力。2016 年，陶氏在中国又投资新建了两家工厂，一家是位于四川成都成眉石化园区的涂料材料工厂，建成后将生产环保型、高性能的涂料材料，用于绿色建筑、能效、环保等领域；另一家位于江苏张家港，生产环保除草剂产品。今天，陶氏的科学家正根据市场需求，在推动化学、物理、生物学研究的跨界组合，帮助中国应对所面临的各种难题，同时陶氏以创新的可持续解决方案为中国经济从中国制造向中国智造的转变贡献着自己的一份力。

一个成功的企业首先要有高屋建瓴的发展战略，要有未雨绸缪的战略眼光，正是这些先机的战略的指引才能让后续的具体实施措施落地，那么陶氏在中国的业务发展、市场发展策略有哪些，以及如何支持中国的“十三五”发展重点，如何在城镇化发展、绿色发展、安全发展等方面提供解决方案呢？

林育麟先生分析说：“从中国市场来看，长期保持增长是毫无疑问的，中国是世界第二大经济体，我们有很多的产品都符合最终消费者直接需求，我们具体策略可以概括为六个字‘增长、创新、人才’。增长是指不仅要在沿海城市得到增长，更要延伸到二三线城市，怎么把陶氏五千多名员工更好地分散到全国来支持业务发展这点很

重要，并不是每一个跨国公司都能有这样的能力来到中小城市发展。同时我们增加产能，要有足够的生产能力来满足市场需求。刚才提到的核心竞争力中的“创新”也是我们发展战略之一。未来，中国对创新的需求会越来越高，政府不仅需要外商来投资生产，更需要外商提供的是高价值的产品，我们的产品正好符合了中国市场的需求，与中国“十三五”的经济与社会发展重点高度契合。目前，我们在能源领域、产业的转型与升





级、食品安全、清洁水资源、空气净化等领域都能够提供解决方案，这些大方向正是中国政府所需求的。我们的战略之三是人才，怎样去提供更好的发展环境让人才有更好的发展舞台，秉承怎样的人才培养理念，这些都是陶氏非常重视的。陶氏的文化公开、透明、平等。此外，我们的理念是让人类生活更美好、追求不断创新，这些价值理念已经渗透到每一个员工，员工以这些理念为准则，更好地服务客户、服务市场。我们虽然是外资企业，但我们已把自己看成是国内公司，为本地提供解决方案。陶氏的科学家想的是怎样解决当地需求，不论从反应速度、效率、专业，都能以最好的服务提供给市场。”

林育麟先生结合陶氏化学大中华区的发展现状，向记者阐述了陶氏的发展战略，可以看出，陶氏紧随中国发展节奏，找到中国市场所需，特别是在能源效率、城镇化发展、环境保护和食品安全方面，陶氏不断找到新的解决方案。目前，陶氏在中国的业务已锁定五大重点市场：能源、交通、基础设施建设、体育、家居与个人护理。陶氏一直在中国持续投资，不断加强在中国本地的创新能力、制造能力及运营网络，更好地服务于中国市场。正如采访中，林育麟先生多次强调的那样，目前中国市场营销的都是陶氏能提供的，过去两位数陶氏业务增长正是中国市场所需最好的证明。



不仅做好企业，陶氏还积极承担起环保和企业社会责任。环保是陶氏的核心理念，林育麟先生为本刊记者总结了陶氏环保的三个十年规划。“第一个十年规划是1995年到2005年，我们的目标是减少对生产给地球留下的足迹，即不污染当地生产产地，从而间接提升整个区域对环保的标准；第二个十年规划是2005年到2015年，我们总结为手迹，就是不仅生产产地不污染，产品应用方面也不会污染环境；第三个十年规划是2015-2025，我们称为蓝图，即通过跨界合作，重塑商业在可持续发展中的作用，带动整个大环境，实现长期的可持续发展。我们从研发产品、性价比、产品成分等都有很优异的表现，比如说在汽车市场，我们在轻量化设计、

支持新能源等方面都是强项，在健康食品、包装材料等方面也有非常领先的解决方案。”可以说，中国政府正倡导的更高水平的技术和创新、工业升级与环境保护发展国策，这些都为陶氏这样的奉行环保理念并且产品始终走在环保前沿的行业领军企业带来了更多发展机会。与此同时，作为可持续发展领先企业，陶氏还积极履行社会责任，陶氏与非营利教育机构“青年成就组织中国部”共同实施了“我们的城市”可持续发展教育选修课程，自2007年以来受益学生已经超过45万名。陶氏还在天津和黑龙江省科技馆开设“陶氏化学实验室”，展示化学相关的科学原理，提供安全的化学实验，鼓励未来更多学生对化学感兴趣。同时陶氏还持续赞助支持中国化学奥林匹克竞赛，鼓励学生向化学领域有更好的发展。

在一个多小时的访谈里，创新始终是提及频率最高的词汇。无疑，创新研发将是陶氏在中国最重要的投资内容，以满足中国市场对先进技术的需求并帮助中国应对挑战。在采访快要结束的时候，林育麟先生介绍了与当今市场息息相关的三种新产品，一是时下最为热门也是受到市场欢迎的共享单车，陶氏为摩拜单车提供了更轻量化的设计和轮胎的材质，减少了维护量也提示了骑乘体验；二是与工业产品链条对接，陶氏通过和海尔合作，把净水组件装置用到洗衣机，让洗衣用水更清洁并减少用水量达30%以上；三是来自于并购后的道康宁技术，在汽车和建筑方面应用最为先进的硅基技术。林育麟先生说，创新就是陶氏的DNA，每年都会有17亿美金用于研发，陶氏能成功，能获得可持续发展靠的就是创新。

相信，在中国工业化、现代化、智能化进程中，陶氏必将还会发挥更加积极的作用，正如林育麟先生分析的那样，中国正在实施城镇化建设，在2030年之前还将会有五亿人口进入城市生活。未来，在减少污染、提高能效、获得更多清洁水资源、空气资源、食品资源等问题上，陶氏都将有更为优异的表现，而我们也更有理由憧憬，凭借陶氏在中国本土的研发力量，陶氏也将能很好应对和满足这些需求。陶氏化学一直在与中国经济同行，与中国市场共赢！

Dow is a world-renowned giant American multinational company specializing in specialty chemistry, high-tech materials, agricultural science and plastics. For more than 100 years, Dow has worked through materials, polymers, chemistry and bioscience and other areas of innovation and value creation, to address many challenges of today's world to meet needs of mankind: fresh food, safer and more sustainable modes of transport, cleaner water, higher energy efficiency, more durable infrastructure, and improving agricultural productivity. Dow offers a wide range of high-tech products and solutions for customers in 175 countries and regions worldwide by its integrated, market-driven business portfolio applied to rapidly developing markets such as packaging, infrastructure, transportation, consumer care, electronics, agriculture, etc. In 2016, Dow's global turnover reached to nearly 48 billion US dollars. Now it operates 189 production bases in 34 countries and regions, producing more than 7,000 products with more than 56,000 employees.

The history of Dow's entering into the Chinese market should be traced back to 1930s, and in late 1970s, the Chinese market officially opened to the outside world. In 1979, Dow established its first office of Chinese Mainland in Guangzhou. If counted by then, the last 40 years is a period of Dow's flourishing, a period of foreign funded enterprise growing together with the Chinese market, and a period of



Dow gradually growing into a localized enterprise. In the last 40 years, Dow realises steady growth in the Chinese market, and is continuously achieves leap-forward development. Now Greater China has become Dow's second-largest international market in the world. There are more than 5,000 employees in 17 production base and 10 offices. In 2016, it has achieved double-digit growth.

In the occasion of China's 40th anniversary of reform and opening-up, Multinationals in China has an interview with Yoke Loon Lim, the President for Greater China of The Dow Chemical Company at Shanghai Dow Center in Zhangjiang High-Tech Park - the headquarters of Dow in Asia Pacific as well as the largest integrated R&D center outside of the United States.

Lim joined Dow in 2009 when Dow aquired Rohm and Haas. From 2007 to 2009, he was the general manager of the paint business department of Rohm and Haas Southeast Asia.



From 2010, he doubles as the president of Dow Singapore. In 2011, he was appointed as the business director of Dow Coating Materials Asia Pacific, and from 2012, he began to double worked on Dow Asia Pacific's Advance Materials Division. At the end of 2015, he was formally appointed as the president of Dow Greater China.

After experienced the challenge of the overall situation of Chinese economy as well as more fierce market competition, Dow achieves double-figure growth in recent years. What is the core competitiveness and strategic vision behind the success of Dow's success in China for forty years? After the interview with Lim, we found the answers.

"Compared with the other companies, Dow's core competitiveness and the biggest difference are the integral innovation ability as well as the understanding of the market. We can say that innovation is the DNA of Dow. We have strong R&D capability, which can greatly shorten the test time. We established customer innovation center. Every year, we carry out at least 30 brainstorm sessions with our customers to inspire the spark of innovation, which can help Dow understand the demand of the market. The ability of understanding the market, innovation and total solution can be provided to our customers by our localized production. We can make full use of our technical advantage in every aspect. Besides, we have 17 production bases, which can turn these ideas into products and put forward to the market immediately. This may take longer for other companies. Of course, only with offices in several coastal cities we can not understand the whole market. From 2012, we established a new office every year. For example, we established a new office in Urumqi to serve local market. Our established strategic partnership with the Xinjiang Construction Corps, and Karamay municiple government also attaches great importance. They found hundreds of local enterprises to seek cooperation with Dow. We contact with not only our direct customers but also indirect customers, so that to have a better understanding of end markets. Be virtue of innovation ability and the deepened understanding of the market, Dow reaches a good growth in the past years. We are confident about the Chinese market." Lim analyzes.

In the interview, Lim mentioned the word "innovation"





for many times. The "13th Five-year Plan", "Made in China 2025" are great development strategies put forward by Chinese Government, whose core is the innovation will accelerate the transformation of China from a manufacturing country to a manufacturing power. Compared with last few years, Dow now pays more attention to innovation. Now the Shanghai Dow Center has become the supreme innovation hub of Dow in China, which is also the largest integrated R&D center outside the United States in the world. Everyday, there are more than 700 scientists in more than 80 world-class laboratories creating leading products for Dow. Now Dow has established offices in Chengdu, Harbin, Wuhan and Urumqi to strengthen the local service ability. In 2016, Dow has built two production lines in China. One is a paint material factory in Chengdu Chengmei Petrochemical Park in Sichuan, which will produce eco-friendly and high performance paint material for fields like green building; the other is in Zhangjiagang Jiangsu, which is to produce environment-friendly herbicide products. Today, Dow's scientists are delivering innovations through cross-border combination of chemistry, physics and biology to help China cope with the challenges it faces, while contributing to China's on-going economic transformation.

A successful enterprise must operate from a strategically advantageous position and have a strategic vision. Then what are the strategies of trade and marketing of Dow in China, and how does Dow support the priorities of the "13th Five-year Plan" and provide solutions for sustainable urbanization?

Lim says: "From the perspective of China, a long term growth is unquestionable. China is the second-largest economy in the world. We have many products that meet our consumers' demands. Our specific strategy can be summarized as three words 'growth, innovation, people'. Growth means that we should not only develop in coastal cities, but also in second and third tier cities. It is very important that how to allocate our resources to better support the huge market. Not every multinational company can have such ability to develop in inner-land markets. Meanwhile we expand our production capacity. We must have enough capacity to meet the growing market demands. Innovation, which is of the core competitiveness as I just mentioned. In the future, the demand

for innovation of China will become higher. The government needs business not only to invest, but also to provide high-value products. Our products meet demand of the Chinese market as well as the priorities of '13th Five-year Plan'. Now we provide solutions for the transformation and upgrade in energy sectors, food safety, infrastructure and environment protection. Those general directions are exactly the Chinese Government needs. The third of our strategy is people. Dow commits to providing better development opportunities for talents. The culture of Dow are open and fair. Besides, our mission is to advance human progress with continuous innovation, which is well accepted by every employee, and they uphold this concept to serve Dow customers and markets. Dow is a multi-national enterprise, but we take us as a local company, providing solutions to Chinese customers. Dow's scientists focus on how to tackle the local challenges. Whether from the reaction speed, efficiency, professionalism, we are able to provide the best service to the market."

Lim explained to reporters the growth strategy of Dow Chemical Greater China. It can be seen that Dow is following the pace of development in China to find new opportunities, especially in the energy efficiency, urbanization, environment protection and food safety. Now Dow has determined to focus on five key markets in China: energy, transportation, infrastructure, packaging and consumer care. Dow's investment



in China continuously strengthens its innovation capability, manufacturing capacity and operation network. As what Lim has emphasized in the interview, now what the Chinese market needs is exactly Dow can provide. The double-figure growth in the past few years of Dow in China is the best proof.

Dow not only focuses on its growth, but also actively practices the commitment in sustainability and corporate social responsibility. Sustainability is the core of Dow strategy globally. Lim summarizes Dow's three ten-year sustainability plans. He says: "In the first decade, namely 1995-2005, our goal was to reduce the waste of production, that is not to pollute the production area by leaving less footprint, so that to indirectly promote sustainability in the entire area; the second ten-year



plan, namely 2005-2015, we summarized as 'handprint', that is, not only operate with less footprint, but innovate sustainable solutions that benefit human life and society; the third ten-year plan is from 2015-2025, we call it 'blueprint', that is, through cross-sector cooperation to reshape the role of business in sustainable development. We do well in R&D, operation and innovation. For example, in automobile market, we are good at fields like lightweighting design, supporting new energy; we also have leading solutions in healthy food and packaging materials." So to speak, the national policies for higher technology innovation, industry upgrade and environment protection that are advocated by Chinese Government bring more business opportunities for leading enterprises that commit to sustainability such as Dow. At the same time, as a leading role in sustainability, Dow is also actively fulfilling social responsibility. Dow partnered with non-profitable organization - "Junior Achievement China" in implementing sustainability-themed "Our City" courses among elementary students, which has benefited more than 450,000 students since 2008. Dow also establishes Dow Labs in science and technology museums in Tianjin and Heilongjiang, displaying the principles of chemistry, providing safe chemical experiments, so that to inspire the interest of science among students. Dow also



sponsors the Chinese Chemistry Olympiad, to encourage students to achieve academic excellence.

During the interview, the word "innovation" is frequently mentioned. Undoubtedly, innovation is the most important strategic element for Dow in China. At the end of the interview, Lim introduces three new solutions that are closely related to the local market. The first is applied on the sharing bicycles, which is very popular nowadays. Dow provides Mobike with lightweighting design and tyre material, which reduce the maintenance but improve the

riding experience. The second is collaboration with value chain captains. Through the cooperation with Haier, Dow applies the water purification component to the washing machine, which enables the water to become clean and be reused while



reduces water consumption up to 30%. The third is the Dow Corning technology obtained after the merger, which allows Dow to apply the most advanced silicon-based technology in automobile and building areas. Lim says, innovation is in the DNA of Dow. Every year more than 1.7 billion dollars are invested in R&D. The success and sustainable development of Dow lies in the innovation.

We believe that with the continuous development of China, Dow will play more active role in business world. Just as what Lim analyzes, now China is experiencing rapid urbanization, there will be more than 500 million people entering into the cities by 2030. In the future, Dow will continue to focus on areas such as reducing pollution, improving energy efficiency, obtaining safe water, clean air and fresh food. We also have reasons to foresee that with its leading R&D capabilities, Dow will better meet these demands. Dow goes with the Chinese economy all the time, and will seek win-win with the Chinese market.