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Agenda

会议议程

U.S.-China Standards and Conformity Assessment Cooperation Program (SCACP)
The United States Trade and Development Agency (USTDA)

Sino-U.S. Air Purification Technology Seminar

Time： 9：30 to 12:00am, September 17， 2014

Venue: China International Exhibition Centre (Meeting Room, Building No.5)

Organizers： Commercial Service, U.S. Embassy in China；China Air Purification Expo

Agenda

09:30 - 09:35 Welcome speech (Mr. Jay Biggs, Commercial Officer, US Embassy in China)

09:35 – 09:40 Opening remarks (Ms. Verinda Fike, Country Manager, U.S. Trade Development Agency)

09:40 - 09: 55 China Air Purification Testing and Standard (Ms. Deng Gaofeng, Director of Low Carbon Building Research Center, China Academy of Building Research)

09:55 - 10:15 US Air Purification Standards/Certification (Mr. Wayne Morris, Vice President, Technical Operations and Standards for AHAM)

10:15 - 10:30 China Air Purifier technologies and market trend （Dr. Xu Qiujian, Environmental Testing Center, Tsinghua University）

10: 30 - 11:55 US Air Purification Technologies (6 U.S. companies)

- 10:30 - 10:45 Oransi (Speaker: Mr. Peter Mann, President, Oransi)
- 10:45 -11:00 Purafil (Speaker: Mr. Ash Dhokte, Marketing Director, Purafil)
- 11:00 - 11:15 Dais Analytic Corporation (Speaker: Mr. Tim Tangredi, President & CEO, DAIS)
- 11:15 - 11:30 Honeywell (Speaker: Mr. Dino Asvaintra, Vice President, BD and Strategy, Honeywell)
- 11:30 - 11:45 Broan-nutone (Speaker: Mr. Toby Ma, General Manager, Broan China)
- 11:45 - 12:00 HealthWay (Speaker: Chirag Patel, Applications Engineering Manager, Commercial Engineering Application Division, HealthWay)

12:00 Closing (Mr. Jay Biggs, Commercial Officer, U.S. Embassy in China)

China International Exhibition Centre

Address: No.6 North Third Ring Road East, Beijing, China

Tel：010-84600000

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美国贸易开发署(USTDA)
中国-美国标准与合格评定合作项目(SCACP)

中美空气净化技术研讨会

会议时间： 9:30 - 12:00, 2014 年 9 月 17 日

会议地点: 中国国际展览馆 5 号馆会议室（老国展, 北三环东路 6 号）

主办单位：美国驻华使馆商务处；中国空气净化展组织方

会议日程

09:30 - 09:35 欢迎辞（ Jay Biggs 先生, 商务官，美国驻华大使馆）

09:35 - 09:40 开幕词 （Verinda Fike 女士，区域经理，美国贸易发展署）

09:40 - 09:55 中国空气净化器标准及检测（邓高峰女士，中国建筑科学研究院低碳建筑研究中心主任）

09:55 - 10:15 美国空气净化标准及检测 （Wayne Morris 先生, 美国家电协会（AHAM）技术与标准副总裁）

10:15 - 10:30 室内空气净化技术分类、技术发展趋势及市场动态（徐秋健博士，清华大学建筑环境检测中心空气室技术负责人）

10: 30 - 11:55 美国空气净化技术详解 (美国公司名单如下)

- 10:30 - 10:45 Oransi （演讲人: Mr. Peter Mann, 总裁, Oransi)
- 10:45 - 11:00 Purafil (演讲人: Mr. Ash Dhokte, 市场总监, Purafil)
- 11:00 - 11:15 Dais Analytic Corporation (演讲人: Mr. Tim Tangredi, 总裁, DAIS)
- 11:15 - 11:30 Honeywell (演讲人: Mr. Dino Asvaintra, 副总裁，商业发展与策略, Honeywell)
- 11:30 - 11:45 Broan-nutone (演讲人: Mr. Toby Ma, 总经理, 百朗中国)
- 11:45 - 12:00 HealthWay (演讲人: Chirag Patel, 应用工程经理，商业工程应用部，HealthWay)

12:00 闭幕词（Jay Biggs 先生, 商务官，美国驻华大使馆）

中国国际展览馆（老国展）

地址： 北京市北三环东路 6 号

联系电话：010-84600000

传真：010-84600213/84600996

Sponsor and Organizer Overview

主办单位介绍

U.S.-China Standards and Conformance Cooperation Program

Sponsored by the U.S. Trade Development Agency (USTDA) and coordinated by the American National Standards Institute (ANSI), the **U.S.-China Standards and Conformance Cooperation Program** (SCCP) provides a forum through which U.S. and Chinese industry and government representatives can:

- Cooperate on issues relating to standards, conformity assessment, and technical regulations;
- Foster the relationships necessary to facilitate U.S.-China technical exchange on standards, conformity assessment, and technical regulations; and
- Exchange up-to-date information on the latest issues and developments relating to standards, conformity assessment, and technical regulations.

Beginning in 2013, ANSI will coordinate 20 workshops over a 3-year period in China under the SCCP. The workshops will cover a wide range of sectors, as proposed by interested U.S. private-sector organizations. Workshop topics will be chosen in coordination with relevant industry associations, ANSI, and USTDA.

To learn more about the U.S.-China SCCP or to express interest in sponsoring or participating in a workshop, please visit our website at:

www.standardsportal.org/us-chinasccp

FOR MORE INFORMATION
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美中标准与合格评定合作项目

由美国贸易发展署 (USTDA) 提供资助、 美国国家标准协会 (ANSI) 负责协调的美中标准与合格评定合作项目 (SCCP) 在以下几个方面为美国和中国相关行业和政府代表提供了一个论坛：

- 在标准、合格评定以及技术法规等领域的合作;
- 为促进美中在标准、合格评定以及技术法规等领域的技术交流建立必要的联系;
- 及时交流关于标准、合格评定以及技术法规等领域的 最新议题和发展情况的相关信息

根据 SCCP 项目规定，从 2013 年开始的三年内，ANSI 将在中国协调举办20场研讨会。根据美国私营业界相关组织的建议，研讨会内容将覆盖不同的行业和领域。研讨会的主题将由相关行业组织、ANSI 以及 USTDA 协调选定。

欲了解该项目的更多情况或有意赞助或参与该项目，请访问下列网站：

www.standardsportal.org/us-chinasccp

了解其他信息，请联系

Ms. Madeleine McDougall

项目经 理

美国国家标准协会(ANSI)

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American National Standards Institute (ANSI)

As the voice of the U.S. standards and conformity assessment system, the American National Standards Institute (ANSI) empowers its members and constituents to strengthen the U.S. marketplace position in the global economy while helping to assure the safety and health of consumers and the protection of the environment.

The Institute oversees the creation, promulgation and use of thousands of norms and guidelines that directly impact businesses in nearly every sector: from acoustical devices to construction equipment, from dairy and livestock production to energy distribution, and many more. ANSI is also actively engaged in accrediting programs that assess conformance to standards – including globally-recognized cross-sector programs such as the ISO 9000 (quality) and ISO 14000 (environmental) management systems.

ANSI has served in its capacity as administrator and coordinator of the United States private sector voluntary standardization system for more than 90 years. Founded in 1918 by five engineering societies and three government agencies, the Institute remains a private, nonprofit membership organization supported by a diverse constituency of private and public sector organizations.

Throughout its history, ANSI has maintained as its primary goal the enhancement of global competitiveness of U.S. business and the American quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems and promoting their integrity. The Institute represents the interests of its nearly 1,000 companies, organization, government agency, institutional and international members through its office in New York City, and its headquarters in Washington, D.C.

美国国家标准协会（ANSI）

American National Standards Institute（ANSI——美国国家标准协会）是由公司、政府和其他成员组成的自愿组织，负责协商与标准有关的活动，审议美国国家标准，并努力提高美国在国际标准化组织中的地位。ANSI 是 IEC 和 ISO 的 5 个常任理事成员之一，也是 4 个理事局成员之一，参加 79%的 ISO/TC 的活动，参加 89%的 IEC/TC 活动。ANSI 是泛美技术标准委员会（COPANT）和太平洋地区标准会议（PASC）的成员。

美国国家标准学会（American National Standards Institute: ANSI）成立于 1918 年。当时，美国的许多企业和专业技术团体，已开始了标准化工作，但因彼此间没有协调，存在不少矛盾和问题。为了进一步提高效率，数百个科技学会、协会组织和团体，均认为有必要成立一个专门的标准化机构，并制订统一的通用标准。1918 年，美国材料试验协会（ASTM）、与美国机械工程师协会（ASME）、美国矿业与冶金工程师协会（ASMME）、美国土木工程师协会（ASCE）、美国电气工程师协会（AIEE）等组织，共同成立了美国工程标准委员会（AESC）。美国政府的三个部（商务部、陆军部、海军部）也参与了该委员会的筹备工作。1928 年，美国工程标准委员会改组为美国标准学会（ASA）。为致力于国际标准化事业和消费品方面的标准化，1966 年 8 月，又改组为美利坚合众国标准学会（USASI）。1969 年 10 月 6 日改成现名：美国国家标准学会（ANSI）。

美国国家标准学会是非赢利性质的民间标准化组织，是美国国家标准化活动的中心，许多美国标准化学协会的标准制修订都同它进行联合，ANSI 批准标准成为美国国家标准，但它本身不制定标准，标准是由相应的标准化团体和技术团体及行业协会和自愿将标准送交给 ANSI 批准的组织来制定，同时 ANSI 起到了联邦政府和民间的标准系统之间的协调作用，指导全国标准化活动，ANSI 遵循自愿性、公开性、透明性、协商一致性的原则，采用 3 种方式制定、审批 ANSI 标准。

ANSI 现有工业学、协会等团体会员约 200 个，公司（企业）会员约 1400 个。领导机构是由主席、副主席及 50 名高级业务代表组成的董事会，行使领导权。董事会闭会期间，由执行委员会行使职权，执行委员会下设标准评审委员会，由 15 人组成。总部设在纽约，卫星办公室设在华盛顿。

Oransi LLC

Oransi LLC, a US-based high-end air purifier manufacturer, was founded by Mr. Peter Mann. It has become a leading brand in the US after over 10 years of development.

Oransi air purifiers are Made-in-USA and imported from USA. They have the following advantages: most effective, hospital-grade filters with an over 99.99% efficiency level; advanced custom German EC motor which are quieter at the same air flow but more powerful, more durable, and use up to 90% less energy; environmentally friendly and creating no ozone; simple design, elegant appearance, and focusing on function with no redundant features.

With our proprietary technology, we provide a complete solution for severe air pollution issues in China. Our Erik, EJ, and ED air purifier models can highly effectively filter out PM2.5 as well as formaldehyde, ozone, smog, smoke and combustion gases.

The CADR of our products has reached the highest standards in both US and China. We have received UL, California Environmental Protection Agency, Energy Star, and Green Tech certificates.

With its good reputation in the US, Oransi has served a variety of customers including industrial organizations, government agencies, educational institutions, hospitals, and individual consumers.

Oransi has entered the Chinese market. Chinese consumers have started and will continue to enjoy using the Made-in-USA, high-end, high effective Oransi products. We have received very positive comments from those Chinese consumers who are using Oransi products, including "useful", "easy to use", "effective", "simple appearance", etc. These comments will continue to encourage us to develop effective and high-quality air purification products that suit the indoor environment in China.

Contact Information:

US Contact: Oransi LLC
Address: 1600 Barton Springs #6409 Austin, TX 78704
Tel: (888)281-3948

China Contact: Oransi (Beijing) International Trade Co., Ltd.
Address: Floor 3, B008, Room A056 No.118B, Jianguo Road, Chaoyang District, Beijing 100022
Tel: 400-665-9677
Email: info@oransi.cn
http://www.oransi.cn http://www.oransi.com

Oransi LLC

奥兰希（Oransi），美国专业高端空气净化器生产商，由皮特•曼先生（Mr. Peter Mann）创建和领导。经过10多年的发展，奥兰希已经成为美国领先的高端空气净化器品牌。

奥兰希空气净化器为美国制造，原装进口，其核心优势包括：美国最有效的医用级过滤网，过滤有效率可达 99.99%以上；德国定制的一流 EC 电机和风扇；风阻小，吸附力强，输出更多洁净空气，舒适风量下更安静，节能降耗(耗电量可节省 90%)，高效运行，经久耐用；不产生臭氧，不给环境造成二次污染。设计简单，外形优雅，专注净化功能。

以我们专有的技术和完整的解决方案，奥兰希 ERIK、EJ、ED 空气净化器系列能够高效去除 PM2.5，以及甲醛、苯、有害化学气体、烟气、臭氧和异味等。

CADR 值达中美国家行业最高标准，获得 UL，美国加州能源局 CARB， 绿色技术 Green Tech， 能源之星 Energy Star 权威机构认证。

奥兰希（Oransi），在美国以良好的市场口碑服务于各大商业用户、政府部门、教育机构、医疗机构和消费者市场。

奥兰希现已全面进入中国市场，中国消费者已经并将继续享受纯正美国制造的高端、高效的奥兰希系列产品带来的非凡体验。我们已经得到了那些使用奥兰希空气净化器的中国用户的好评，如”管用”，“好使”，“效果不错”，“外观简洁”，“没土味了”等这些实在的评价，将鼓励我们继续开发适合中国室内环境的高品质友好生态空气净化解决方案。

联系方式：

美国联系：Oransi LLC
地　　址：1600 Barton Springs #6409 Austin, TX 78704
电　　话：(888)281-3948

中国联系：奥兰希（北京）国际商贸有限公司
地　　址：北京市朝阳区建国路乙118号京汇大厦3层A056室
电　　话：400-665-9677
Email：info@oransi.cn
http://www.oransi.cn　http://www.oransi.com

Improve your health

Problem:

Air pollution is a major environmental health concern. Even short-term exposure increases the risk of cardiovascular and respiratory health issues.

Solution:

Purafil introduces the PuraBreeze. This unique air purifier combines a PM-2.5 rated HEPA filter, a gaseous filter, and a microorganism filter, all in one. It is the only air purifier designed to eradicate smoke, dust, pollen, dander, other allergens, odors, and more than 230 irritant gases such as formaldehyde, carbon dioxide, ozone, and sulfur dioxide. The PuraBreeze also removes pathogenic bacteria and fungus from the air you breathe.

Benefits:

- Add comfort
- Sustain a healthy life
- Make breathing easier
- Reduce respiratory infections
- Nurture your world

AFFILIATIONS

Member: ASHRAE, USGBC, ASTM, IEST, ITRS, ISA, ISO, IAQA, TAPPI, A&WMA, AWWA, WEF

Affiliation: SEMI, AFS, NAFA

Certification: ISO, UL, cUL, CE, CCC and Guangdong Detection Center of Microbiology

Our factory is located near Atlanta, Georgia, United States of America

Purafil® is a registered trademark

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{Life. *Breathe it in.*}

an SKF Group brand SKF

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Phone: +1 770 662 8545 www.purafil.com
Product pictures/renderings for illustration purposes only.

PuraBreeze

A better quality of air, for a better quality of life.

At Purafil, our passion and purpose is to improve the lives we touch.

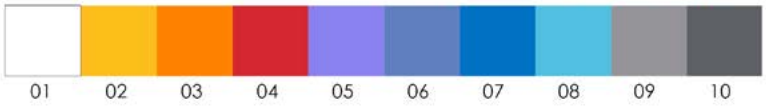
Since 1969, we lead the industry in providing world-class air quality solutions. At Purafil, caring for people is at the heart of what we do. Every day, we are proud to protect thousands of people throughout seventy countries with our chemical filtration systems. We are inspired to create a better world.

Our expertise and experience allow us to design revolutionary air purifiers. We experiment with and explore materials, processing them, learning about inherent properties, air flow and technologies. Every day, our obsession for understanding and constant experimentation leads us to offer you a better quality of life.

PuraBreeze Technology

- ✓ 99% dust/particle removal
- ✓ 99% gaseous contaminant removal
- ✓ 99% bacteria and fungus removal
- ✓ Removes 4 times more formaldehyde than activated carbon filters

10 colors to match your lifestyle



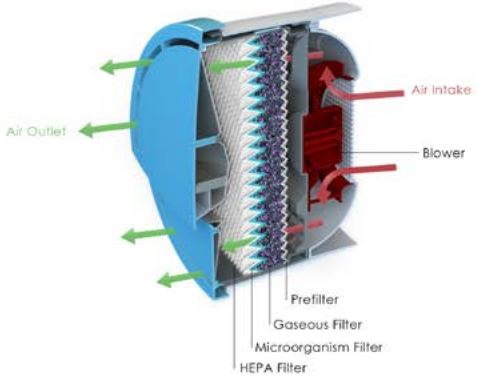
Features:

- Removes 99.97% of dust at 0.3 microns *
- Removes 99.9% of odors and harmful gases **
- Removes pathogenic bacteria and fungus ***
  - o Escheria coli (E. coli) at 99.97%
  - o Staphylococcus aureus at 75%
  - o Klebsiella pneumoniae at 99.96%
  - o Candida albicans at 98.87%
- Removes 4 times more formaldehyde than activated carbon filter according to the ASTM International Standards D6646
- Gaseous filter made in the United States
- No maintenance
- Compact
- Visually appealing
- UL, cUL, CE, CCC and Guangdong Detection Center of Microbiology certified
- Mounted on wall or on a stand
- Quiet
- 4 speeds adjustable with infrared remote control

Specifications:

- Weight - 4 kg (10 lb.)
- Diameter - 33 cm (13 in.)
- Height - 20 cm (8 in.)
- Air Flow Range: 170 cmh (100 cfm)
- Air Exchange: 3 times per hour
- Power Input Range: 120 watts
- Room size: 23.3 m² (250 ft.²)
- HEPA filter: Merv 17 (H12, EU12)
- Patented gaseous filter
- Certified microorganism filter
- Patent pending on design

*EN Standard 1822-3:2009
** ASTM Standard D 6646
*** JIS Standard L 1902:2008



改善您的健康

问题：

空气污染是一个主要的环境问题。每一次暴露于污染的空气中，即使是短暂性的，都会增加患心脑血管和呼吸性疾病的风险。

解决方案：

Purafil为您打造了PuraBreeze这款产品。这个独特的空气净化系统集PM-2.5净化系统HEPA，气态净化系统，以及微生物净化系统为一体。这也是唯一一款设计用于同时清除烟雾，灰尘，花粉，毛屑， 其他各种致敏原，气味，以及诸如甲醛，二氧化碳，臭氧及二氧化硫等等其他230种刺激性气态污染物的空气净化机。本产品还能够清除空气里的致敏细菌和真菌。

好处：

- 增加舒适度
- 保持健康生活
- 使呼吸更加顺畅
- 减少呼吸性感染
- 呵护您的环境

合作机构

成员：ASHRAE，USGBC，ASTM，IEST，ITRS，ISA，ISO，IAQA，TAPPI，AAWMA，AWWA，WEF

附属：SEMI，AFS，NAFA

证书：ISO，UL，cUL，CE，CCC 及广东微生物检测中心颁发的证书

我们的工厂位于美国乔治亚州亚特兰大市

注册商标：Purafil®

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{美好生活，从呼吸开始}

an SKF Group brand SKF

Purafil Inc. 位于美国乔治亚州多拉维尔市 Weaver路2654号，
邮编30340联系电话：+1 770 662 8545 www.purafil.com

PuraBreeze

纯净空气，美好生活

在Purafil，我们的宗旨是提高您的生活质量。

始建于1969年，我们是全球空气质量解决方案的行业领导者。在Purafil，以人为本是我们企业的宗旨。每天全球有70多个国家数以万计的人群通过使用我们提供的化学过滤系统从而免受污染的侵扰，这使我们倍感自豪。我们致力于创造一个更好的世界。

我们有着丰富的经验和专业水准用以设计革命性的空气净化装置。我们研发、处理以及试验不同的材料，以便认识他们固有的特性，气流以及应用技术。每天我们都持续实验，不断加强对科技的理解，这都使我们能够为您提供更好的生活质量。

PuraBreeze科技

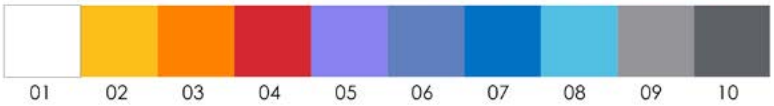
✓99% 清除尘土和颗粒物

✓99% 清除污染气体

✓99% 清除细菌和真菌

✓本产品能够清除的甲醛量是活性炭过滤器的4倍之多。

10种颜色选择，匹配您的生活方式



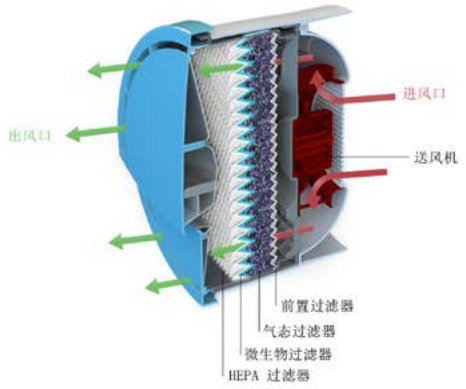
产品特征：

- 清除99.97%直径超过0.3微米的灰尘*
- 清除99.9%的气味和有害气体**
- 清除致敏细菌和真菌***
  - o 清除99.97%的清除99.97%的大肠杆菌
  - o 清除75%的金黄色葡萄球菌
  - o 清除99.96%的克雷伯氏肺炎菌
  - o 清除98.87%的白色念珠菌
- 根据ASTM国际标准D6646,本产品能够清除的甲醛量是活性炭过滤器的4倍之多。
- 气态过滤器为美国制造
- 无需养护
- 设计紧凑
- 外形美观
- 本产品得到多家机构的认证，包括UL，cUL，CE，CCC和广东微生物检测中心
- 本产品可安装在墙壁或支架上
- 运行过程无噪音
- 4档风速，红外线远程遥控

具体参数：

- 重量：4千克（10 磅）
- 直径：33厘米（13英寸）
- 高度：20厘米（8英寸）
- 气流范围：170 立方米/小时（100立方英尺/分）
- 气流交换：3次/小时
- 输入功率范围：120瓦
- 净化能力空间范围：23.3平方米（250平方英尺）
- HEPA净化系统：Merv 17 (H12, EU12)
- 专利气态净化系统
- 经过认证的微生物过滤系统
- 设计专利申请中

*欧洲标准 1822-3:2009
**ASTM美国材料实验协会标准D 6646
***日本工业标准 L 1902:2008



德仕安公司

可以移动分子的材料

来自德仕安公司突破性纳米材料家族的商业化产品 – Aqualyte™ 及其应用被证实可以在革命性新一代的空气能量回收，能量储存和水处理产品中提供无与伦比的性能表现。

China Joint Venture Company:
SOEX (Beijing) Environment Protection and Technology Co. Ltd.
Rm.7205, Building 7, Chaolai High-Tech Zone,, Laiguangying West Road,
Chaoyang District, Beijing 100012 +86 138 0129 7763
www.dais-china.com

Dais Analytic Corporation
11552 Prosperous Drive, Odessa, FL USA 33556
+1 (727) 375-8484 X206

www.daisanalytic.com • info@daisanalytic.com

Dais 公司生产的纳米级材料及其突破性应用，致力于满足全球范围内市场对于节能、储能、水处理等.

Aqualyte

Aqualyte 膜产品材质说明:
纳米结构高电荷密度电解质膜

主要技术特性:
密闭性（无孔渗透，无堵塞、污染）
高选择性（只允许水分子通过,其他物质和气体均不能通过）
水分子传输速率高
可商业化生产，成熟的供应链

节约能源 & 洁净的空气

ConsERV

ConsERV 是荣获四次奖项的全热回收通风系统（ERV）
产品无运动部件、可靠性高、气流间可做到零泄漏率
效率高达 70%、不产生冷凝水，无细菌，霉菌滋生
产品允许用户缩小通常情况下所需的暖通空调系统规模以节省投资资本和运行成本
可有效降低能源消耗，并减少二氧化碳的排放量, 可享受节能补贴（商业）

NanoAir

NanoAir 利用无制冷剂加热／制冷循环技术在摒弃可产生碳氟化合物的传统制冷剂的同时可降低能源消耗及二氧化碳排放达 50%
通过采用温度和湿度独立控制颠覆了基于传统工艺和碳氟化合物制冷的空调过程(原型) *

水处理产品

NanoClear

NanoClear 是一个高效的革命性产品，它可将生活污水，海水，苦咸水，工业废水处理到比传统工艺洁净一千倍以上的超纯净水（ppb 等级）
材料本身耐污染，在处理废水时无需高效过滤和化学预处理
系统配置非常灵活，可模块化应用
可去除重金属，医药化合物，磷酸盐，硝酸盐等
可以轻松处理高 TDS 的水，回收量高达 90%（原型) *

储能产品

NanoCap

NanoCap 原型是一种具有强劲发展潜力的储能技术，利用 Aqualyte 材料和工艺制成的产品，其储存能力可远远超过今天的最好的电池和超级电容 [1]
其关键指标已通过 GE 全球研发中心和佛罗里达大学的测试，如材料的击穿电压，介电常数与体积电阻率 [1]
NanoCap 将代替液体燃料来加速取代通过电动马达驱动的内燃机
高能量密度产品可用于“智能电网”，而低能量密度可用于消费类电子产品（原型) [1] *

1 内容可随口更改，恕不另行通知

** 通过提供 Dais.*

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www.dais-china.com

2014-09-07

AEROSPACE

Honeywell Aerospace mechanical and electrical product offerings are used today on virtually every commercial and defense-related aircraft platform. We invent and integrate thousands of products and services that deliver safe, efficient, productive, and comfortable experiences worldwide. Key technologies include:

- Runway safety
- Flight safety
- Air Traffic Management
- In-flight connectivity
- Propulsion
- Precision guidance
- Predictive intelligence
- Wheels and brakes
- Logistics services

AUTOMATION AND CONTROL SOLUTIONS

Honeywell environmental controls, life safety, security, sensing, scanning, and mobility products, as well as building and process solutions, are at work in homes, buildings, industrial facilities, and public and private utilities around the world. Key technologies include:

- Home comfort and safety solutions
- Building control systems and energy management
- Energy Savings Performance Contracts
- Control systems for continuous process industries
- Environmental and combustion controls
- Smart grid/Demand response
- Scanning and mobile computers
- Fire alarm systems and gas detection
- Personal protective equipment
- Alarm systems, access control, video, and remote services
- Automatic identification and data collection
- Remote health monitoring

PERFORMANCE MATERIALS AND TECHNOLOGIES

Honeywell is a global leader in process technology for the oil and gas industry as well as the development and production of high-purity, high-quality performance chemicals and materials. Our technologies can reduce emissions, stop bullets, enable the production of cleaner, more efficient fuels, increase capacity in oil refineries, speed drug discovery, and protect medicines. Key technologies include:

- Process technology, equipment, catalysts, and services for oil and gas processing
- Low-global-warming-potential refrigerants
- Specialty films and additives
- Specialty chemicals
- Advanced fibers and composites
- Nylon materials and ammonium sulfate fertilizer
- Electronic materials and chemicals
- Renewable transport fuels, heat, and power

TRANSPORTATION SYSTEMS

Honeywell Transportation Systems provides world-class technologies and solutions to automakers, their suppliers, and consumers. Our turbochargers offer a no-compromise solution for fuel efficiency and emissions compliance while still enabling increased horsepower and torque. Key technologies include:

- Gasoline, diesel, hybrid, and fuel cell turbochargers
- Medium and heavy-duty truck turbochargers
- Off-highway heavy-duty equipment turbochargers
- Braking materials and brake pads for passenger cars and commercial vehicles (Friction Materials divestiture announced in January 2014)

Honeywell

WE'RE ADDRESSING SOME OF THE WORLD'S TOUGHEST CHALLENGES

Energy Efficiency

With nearly half of our product portfolio linked to energy efficiency, Honeywell is well-positioned to address the world's energy challenges.

- Demand response
- Energy Savings Performance Contracts
- Turbochargers
- Low-global-warming-potential refrigerants
- Programmable thermostats and remote home management

Clean Energy Generation

Traditional energy sources are finite, but the demand for energy is expected to double by 2030. Honeywell solutions enable energy from new sources such as natural oils, wind, and solar while addressing global concerns regarding climate change and greenhouse gas emissions.

- Green fuels for transportation, power and heat
- Natural gas processing technology and equipment

Safety & Security

At home, at work or traveling, safety and security are always a priority. Honeywell personal protective equipment and security technologies can help keep an emergency from becoming a tragedy. Our security solutions for buildings, industrial facilities, and national defense protect us from emerging threats.

- Personal protective equipment
- Fire and gas detection devices
- Advanced in-flight and on-the-ground avionics
- Home and business security systems
- Industrial biometric security technologies
- Ballistic protection materials management

Expanding Global Wealth Per Capita

The global middle class is expected to grow from 1.8 billion to almost 5 billion people by 2030. This trend requires solutions that support growing infrastructure and improve quality of life. Honeywell solutions play an important role as more people drive cars, travel by air, own homes, and establish new communities.

- Air Traffic Management
- Turbochargers
- Refining and petrochemical production technologies
- Critical Infrastructure Protection

Customer Productivity

Honeywell helps our customers be better, faster and more efficient. Our solutions effectively manage home comfort and security from remote locations, keep passengers in touch everywhere they fly, and provide employees in the field with the tools that will help them work smarter.

- OneWireless mobile control room in industrial facilities
- In-flight communications and productivity solutions
- Mobile computing
- Barcode scanners

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美国百朗公司

全屋净化，全球领先
我们不仅在制造产品，更在创造产业！
1932 年，美国人 Henry L.Broan 研制了一款安静、高效的厨房通风设备，命名为 Motordor®，这一举措成就了今天的百朗-纽通（Broan-Nutone）集团。从局部通风换气产品到全屋新风系统，Broan 突破传统，锐意创新，成长北美最大的家居换气类设备的生产商和销售商之一，产品市场占有率世界领先。

立足美国，面向世界
百朗-纽通集团总部位于美国威斯康辛州的哈特福德，是北美最大的家居换气类设备的生产厂商，在全球三大洲九个国家设有十八家工厂和分支机构，拥有全球最大的空气置换产品研发中心以及优秀的研发队伍和精良的生产设备。
精良的工艺与创新的技术也成就了百朗在全球市场的领先地位，百朗的换气扇和抽油烟机全球销量第一，同时其新风系统以其高效能、低噪音、性能稳定等特点在北美的市场份额稳居第一。百朗将面向未来，致力于改善室内空气环境，为用户创造健康和谐生活，引领全球空气置换领域新潮流。

百朗中国市场概况
百朗从 2005 年进入中国，建立起广东惠州生产基地及辐射全国的销售网络。百朗不断追求产品创新，从产品设计、研发生产、销售到售后服务，推行全面品质管理，建立了一整套完善的品质保证体系，公司已获得 ISO9001：2008 质量管理体系认证， 产品质量安全获得中国 3C 认证、美国 UL 认证、加拿大 CSA 认证、台湾 BSMI 认证以及澳大利亚 SAA 认证等认证，产品性能也获得美国 HVI 及节能 Energy Star 认证。
百朗进入中国市场后，积极参与中国人居环境建设，协助推进中国人居环境事业，与国内众多房地产开发商建立了良好的战略合作关系。百朗产品在中国凭借卓越的品质和良好的性能，极大地提升了生态居住品质，获得了越来越多的认可，先后为成都希尔顿酒店、天津皇冠假日酒店、北戴河海上音乐厅、碧桂园新总部大楼、西安地铁一、二号线等中国高影响力建筑提供产品与服务。

此外，百朗还积极推动中国新风行业标准的建设，并参与成立了中国新风协会等权威技术协会。2014 年 4 月，百朗公司通过全国暖通空调及净化设备标准化技术委员会的评估，成为其正式单位委员。秉承 Broan 八十二年的品质与专业精神，我们为您奉上高品质的产品，为您营造舒适健康的居室环境。

Broan 产品线：新风系统 管道风机 换气扇 浴暖宝 中央吸尘系统

更多 Broan 信息请登录：
Broan 中国官网 http://www.broan-nutone.com.cn 或 Broan 中国官方微博 http://weibo.com/broan
也可致电 4006-113-623

Breathing is involuntary. Breathing healthy is a choice.

We are committed to being a leader in indoor environmental solutions, to never stop seeking new and improved ways to maximize efficiency, respect our environment, and ensure our indoor air is as pure as it can possibly be.

HealthWay's philosophy is simple – the more people we educate about indoor air pollution and its solutions, the healthier our world will be.

Indoor air contains many chemicals, gases, synthetics and pollutants that did not exist 10 to 15 years ago. Just as we've taken measures to ensure the water we're drinking is free from contaminants, we need to be very concerned about the air we breathe.

For more than 30 years, HealthWay has provided the most effective technology to improve indoor air quality. Our innovations are used worldwide in numerous types of applications, from medical facilities and clean rooms to residences, hotels and cruise ships.

We are committed to being a leader in indoor environmental solutions, to never stop seeking new and improved ways to maximize efficiency, respect our environment, and ensure our indoor air is as pure as it can possibly be.

We breathe innovation.™

Expansive Product Line

2000 SC
Self-Contained | Independent Blower

700 CM
Ceiling Mount System

HW Deluxe
Professional DFS Air Filtration System

2000 IL
Inline System | No Blower

1200 SC
Self-Contained | Independent Blower

HW 10600-6
DFS Tabletop Air Filtration System

Resumé of a leader

Marriott · HYATT · Hilton · Cleveland Clinic · BAODAO Healthcare 北京寶島婦產醫院

Duchess College Beijing · BMW · HARVARD UNIVERSITY · IBM · 中華郵政

FBI · DBS · 復旦大學 · MAYO CLINIC · Texas Instruments

Corporate Headquarters

3420 Maple Ave., Pulaski, New York 13142 USA
Toll Free: 1-800-843-3860 • Int'l: 1-315-298-2904
healthway.com

Presentation

演讲文稿

室内$PM_{2.5}$浓度限值及检测方法介绍

邓高峰
中国建筑科学研究院
低碳建筑研究中心

2014年9月17日 北京

- 1 $PM_{2.5}$来源与危害

1、PM2.5颗粒物来源与危害

2、室内空气质量标准要求

3、室内PM2.5颗粒物净化技术

4、室内颗粒物净化技术评价研究

$PM_{2.5}$颗粒物来源

$PM_{2.5}$颗粒物危害

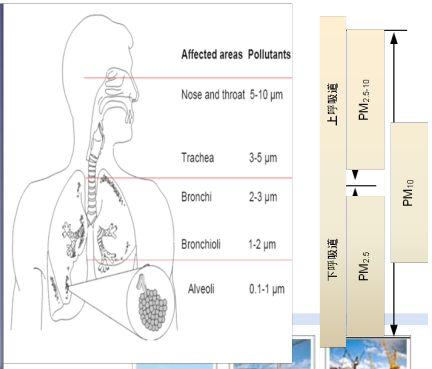
- 可吸入颗粒物（PM_{10}和$PM_{2.5}$）健康效应

➢呼吸道系统疾病：哮喘、支气管炎、肺癌等

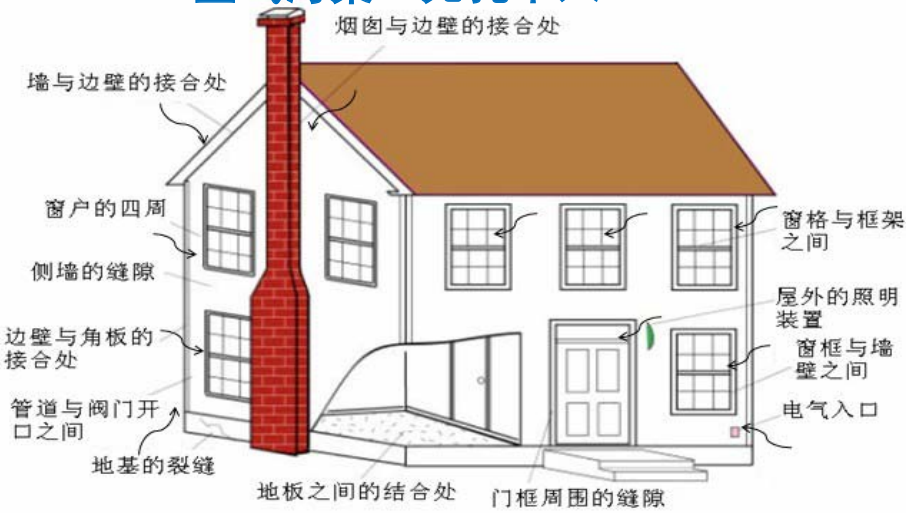
➢心脑血管疾病：心肌梗塞、心绞痛等

➢治病毒素搭“顺风车”进入体内，引起癌变

➢$PM_{2.5}$是世界公认的头号无形杀手。根据世界卫生组织对空气污染造成的疾病负担的评价，每年有超过两百万人过早死亡归因于城市室外和室内空气污染。



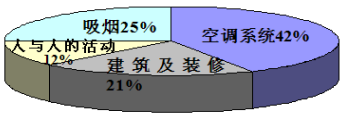
空气污染　无孔不入



中国环境监测总站数据

室内空气污染物种类及来源

按污染物种类分类	举例
可吸入颗粒物	PM_{10}、$PM_{2.5}$
微生物污染物	细菌、真菌、病毒
气态污染物	甲醛、苯系物、TVOC、二氧化硫、二氧化氮、恶臭



• 2 室内空气质量的相关标准要求

中國建築科學研究院 China Academy of Building Research

GB/T18883 -2002 室内空气质量标准

● 适用于办公和住宅建筑，其他建筑也可参照执行。

●涉及物理（4）、化学（13）、生物（1）和放射（1）四大类十九项指标。

●污染物浓度限量是依据对室内人员的卫生安全角度制定，污染源可能是多方面的，不仅包括建筑材料，还还包括家用电器、洗涤用品、厨房油烟、室外污染物的流入等因素。

化学污染物浓度限量

二氧化硫 SO_2	mg/m^3	0.50	1 小时均值
二氧化氮 NO_2	mg/m^3	0.24	1 小时均值
一氧化碳 CO	mg/m^3	10	1 小时均值
二氧化碳 CO_2	%	0.10	日平均值
氨 NH_3	mg/m^3	0.20	1 小时均值
臭氧 O_3	mg/m^3	0.16	1 小时均值
甲醛 HCHO	mg/m^3	0.10	1 小时均值
苯 C_6H_6	mg/m^3	0.11	1 小时均值
甲苯 C_7H_8	mg/m^3	0.20	1 小时均值
二甲苯 C_8H_{10}	mg/m^3	0.20	1 小时均值
苯并［a］芘 B(a)P	ng/m^3	1.0	日平均值
可吸入颗粒物 PM_{10}	mg/m^3	0.15	日平均值
总挥发性有机物 TVOC	mg/m^3	0.60	8 小时均值

中國建築科學研究院 China Academy of Building Research

GB50325 -2010民用建筑工程室内室内环境污染控制规范

●适用于新建、扩建、改建和装修的民用建筑工程室内环境控制

●将建筑分为两类，根据不类别不同提出不同要求

i类建筑包括住宅、医院、老年建筑、幼儿园、学校教室等

ii类建筑包括办公楼、商店、旅馆、书店、展览馆、体育馆、餐厅等

污染物仅包括建筑材料污染中的5种主要污染物：氡、甲醛、苯、氨和TVOC。

室内环境污染物浓度限量

污染物	Ⅰ类	Ⅱ类
氡（Bq/m3）	≤200	≤400
甲醛（mg/m3）	≤0.08	≤0.1（0.12）
苯（mg/m3）	≤0.09	≤0.09
氨（mg/m3）	≤0.2	≤0.2（0.5）
TVOC（mg/m3）	≤0.5	≤0.6

针对于建筑工程验收

中國建築科學研究院 China Academy of Building Research

GB 3095 -2012 环境空气质量标准

表 1　环境空气污染物基本项目浓度限值

序号	污染物项目	平均时间	浓度限值		单位
			一级	二级	
1	二氧化硫（SO_2）	年平均	20	60	$\mu g/m^3$
		24 小时平均	50	150	
		1 小时平均	150	500	
2	二氧化氮（NO_2）	年平均	40	40	
		24 小时平均	80	80	
		1 小时平均	200	200	
3	一氧化碳（CO）	24 小时平均	4	4	mg/m^3
		1 小时平均	10	10	
4	臭氧（O_3）	日最大 8 小时平均	100	160	$\mu g/m^3$
		1 小时平均	160	200	
5	颗粒物（粒径小于等于 10 μm）	年平均	40	70	
		24 小时平均	50	150	
6	颗粒物（粒径小于等于 2.5 μm）	年平均	15	35	
		24 小时平均	35	75	

各国或国际组织的标准要求

各国家或组织机构制定的大气PM_{10}和$PM_{2.5}$标准($\mu g/m^3$)					
国家机构	制定年份	PM_{10}		$PM_{2.5}$	
		日平均	年平均	日平均	年平均
中国	1996	150	100		
	2012	150	70	75	35
		50	40	35	15
美国	1997	150	50	65	15
WHO	2006	150	—	35	15
欧盟	2005	50	20	25	10
	2010	50	20	—	—

备注：GB3095-2012 将环境空气分为1类区和2类区，执行不同标准。

中國建築科學研究院 China Academy of Building Research

• 3 室内$PM_{2.5}$颗粒物控制技术

中國建築科學研究院 China Academy of Building Research

- 《建筑通风效果测试与评价标准》JGJ/T 309-2013，自2014年2月1日起实施。标准主要有如下四点：

1、首次规定了建筑室内$PM_{2.5}$浓度限值75 $\mu g/m^3$和测量方法；

2、规定了建筑通风模拟的边界条件、网格划分和收敛条件等；

3、规定了住宅排气道通风性能测试方法；

4、详细确定了室内换气次数和新风量的规定值和测量方法，并和新版暖通设计标准GB 50376相对应。

中國建築科學研究院 China Academy of Building Research

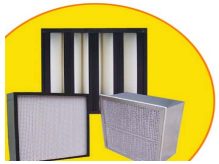
1、空调通风系统用空气净化装置

（1）各类不同规格空气过滤器；

（2）静电式空气净化器；

（3）等离子、负离子空气净化器；

（4）多种净化装置组合，例如：静电+袋式过滤器，板式粗效+静电，粗效+中效+高效等。



2、单体式空气净化器

• 4 室内$PM_{2.5}$颗粒物控制技术评价方法

3、带净化功能、热回收功能的新风系统

相关标准

- JB/T 7952-1995 空气净化器（已废止）
- GB/T 18801-2008 空气净化器
- GB/T 14295-2008 空气过滤器
- GB/T 13554-2008 高效空气过滤器
- JG/T 294-2010 空气净化器污染物净化性能测定
- GB 21551.3-2010家用和类似用途电器的抗菌、除菌、净化功能 空气净化器的特殊要求
- GB 21551.6-2010家用和类似用途电器的抗菌、除菌、净化功能 空调的特殊要求
- WS 394-2012 公共场所集中空调通风系统卫生规范

测试指标

测试项目	标准规范	指标	尘源	备注
PM_{10}一次通过净化效率	卫生规范 JG/T294	≥50% ≥50%	2-6um气溶胶 人工尘	计重法 计重法
PM_{10}增加量	GB 21551 卫生规范	≤0.07mg/m³ ≤0.02mg/m³		计重法 计重法
颗粒物净化效能	GB/T18801	分A到D级	香烟烟雾0.3um	计数法
颗粒物净化效率	JG/T294	≥50%	香烟烟雾0.3um	计数法
过滤效率	GB/T 14295 GB/T 13554	粗效4、中效3、亚高、高中高效、超高效A到F级	KCl气溶胶 人工尘 NaCl气溶胶 0.1或0.5um固态或气态气溶胶	计数法 计重法 钠焰法 计数法 目测烟缕

循环净化效果-环境舱法

1、针对家用空气净化器
2、评价对象为≥0.3微米的香烟粒子
3、测试时间为20min。
4、分别测试净化装置开启前后，舱内粒子的变化趋势，分别求出自衰减和总衰减系数，得出洁净空气量，除以功率即为净化效能
5、总衰减效率和自衰减效率之差即为循环净化效率

■实验室检测方法

一次净化效果-风道测试法

1、适用于通风系统用空气净化装置
2、尘源可以为液态气溶胶（DEHS）、气态气溶胶（KCl，NaCl）、人工尘（ASHRAE尘、SAE尘）
3、测试方法有计数法、计重法、钠焰法等

■工程现场检测方法

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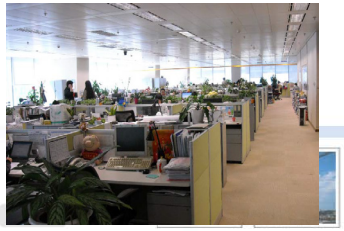
1、通风机组内空气净化装置净化效率检测

在空气净化装置上下游各设置一个或多个采样点，在通风机组正常工作情况下，分别检测上下游的颗粒物浓度，得出净化装置的效率。由于尘源为大气尘，所以测试以计重法为主，如果配合稀释器，也可以采用计数法。

2、室内外环境对比法

在室外选择一个或者几个有代表性地点作为参照点，然后选定室内房间中的采样点，将采样点的测试结果进行对比，从而评价净化设备对室内环境的净化性能。



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3、不同房间对比法

在同一建筑中，选择两个建筑类型、面积和通风情况相近的房间，在一个房间内安装空气净化装置，另外一个房间不安装，在两个房间室内设置采样点，关闭门窗。开启净化器前，测试两个房间内颗粒物浓度，然后开启净化器，一段时间以后，采用同一台设备，先后检测两个房间内颗粒物浓度，将两个房间内颗粒物浓度下降率测试结果进行对比，从而评价净化设备的净化性能。

4、净化装置开启前后对比法

选择有代表性房间，关闭门窗，在净化装置开启前检测室内颗粒物浓度，然后开启净化装置，每隔一段时间，检测一次颗粒物浓度，可以得出净化装置开启后不同时间的净化效果。

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■重点项目工程

地铁用空气净化装置的实验室检测　净化装置安装在空调机组后检测

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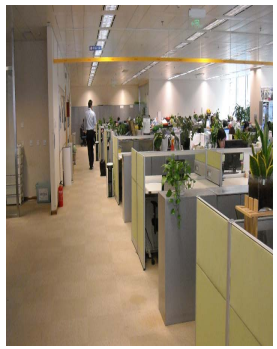
China Academy of Building Research



中海油大厦、华能集团大楼、中国人寿公司办公楼现场测试

中國建築科學研究院
China Academy of Building Research

谢 谢！

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Air Cleaners: Performance Testing in the U.S. Marketplace

Wayne Morris - VP, Technical Operations & Standards

September 17, 2014

U.S.-China Air Purification Technology Seminar

AHAM
ASSOCIATION OF HOME APPLIANCE MANUFACTURERS

Leadership ➢ Knowledge ➢ Innovation

AHAM

- Represents manufacturers who sell appliances in the U.S. and Canada
- Formed in 1967 as a merger of previous associations
- Membership is international
- Offices in Washington DC, USA, and Ottawa, Canada

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Greetings

- Gratitude to the organizers of the seminar and conference
- Greetings from the Association of Home Appliance Manufacturers in the United States

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AHAM

- 3 operating divisions
  - Major Appliances (white goods)
  - Portable Appliances (kitchen, home environment, personal care)
  - Floor Care Appliances (vacuums, carpet cleaners)
- Supplier Division
- Products used in the home

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Air Cleaners

Air Cleaners

Air Cleaners in the U.S.

- Very important category in the U.S.:
  - 17% ownership
  - Consumers often own multiple units
  - Most commonly used in living areas and bedrooms
  - Most likely a self-made purchase, not a gift
  - Heavily researched, doctor recommended
- Many brands in the marketplace

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Survey of consumers in U.S.

- Primary reason to purchase
  - 37% - improve indoor air quality
  - 25% - reduce allergy symptoms
  - 9% for general health reasons
  - 9% to reduce odors
  - 8% to reduce sinus problems
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  - 4% other

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Survey of consumers in the U.S.

- Most common household problems they are trying to solve: (multiple answers)
- 81% Dust
- 48% Pet dander
- 41% Pollen
- 33% Pet odors
- 27% Tobacco smoke
- 26% Musty/Moldy odors
- 25% Kitchen odors
- 5% Other

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- 5% Other

Air Cleaner Selection and Use

- Air cleaners are not a luxury item.
- 40% of purchasers see Energy Efficiency as very important
- Air Cleaners often used seasonally, not year around.
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Certification for the U.S. Market

Certification for the U.S. Market

AHAM Air Cleaner Certification Program in the U.S.

- AHAM has a unique place in the U.S. market
- Since 1988, AHAM has certified performance and now verifies performance and energy through the CADR program.
- AHAM is an EPA recognized verification program administrator for air cleaner ENERGY STAR testing.

- AHAM

Air Cleaner Certification & Verification

- AHAM uses third-party testing labs to complete certification and verification
- More than 25 manufacturers
- AHAM tests performance known as Clean Air Delivery Rate (CADR), reduction of tobacco smoke, dust, pollen

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- Test to American National Standard AHAM AC-1
- Perform ENERGY STAR verification (Dust CADR/ Watt)
- Displays all ratings and ENERGY STAR applicability on web site- www.cadr.org or www.ahamverifide.org

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Need to make information consumer relevant

- CADR excellent technical term.
- Important to translate CADR to something the consumer understands—room size.
- Studies done in 1980's verified that with 80% removal and limited air exchanges, CADR can be translated to square meters.
- Consumers understand their room size in meters ^{2}

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AHAM Verifide Brand

- AHAM Verifide brand used on multiple products – more than 15 million AHAM Verifide products in market per year
- Additional promotion and education for Air Cleaners coming

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ANSI AHAM AC-1 Standard

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AC-1 Standard

- The standard was developed in 1983-1985 by a consensus committee.
- It has been reviewed through the ANSI Committee and revised by AHAM every 5 years since 1985.
- Most recent ANSI Version is 2006
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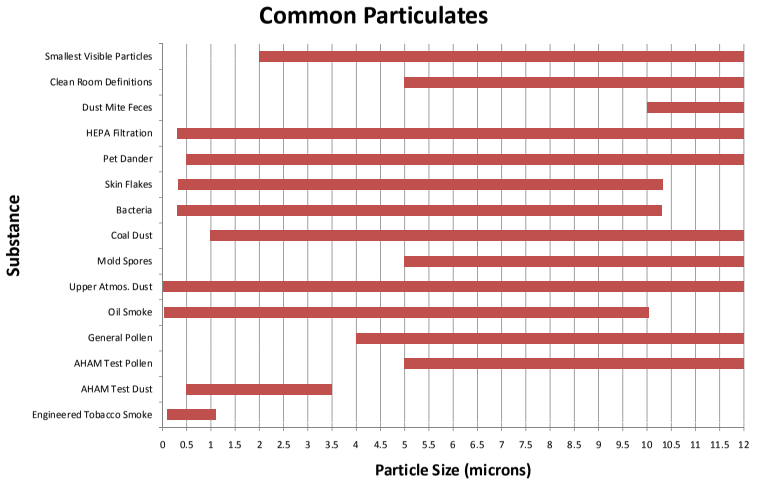

Clean Air Delivery Rate

- CADR is the amount of air without particulates, expressed in cubic feet (or cubic meters) per minute produced by a portable air cleaner under AC-1 test conditions. CADR= (particulate matter removal minus natural decay rate) multiplied by test chamber volume

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Important Elements of AC-1

- Represents particles from 0.1 microns to 30 microns
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Benefits of AC-1

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PM 2.5

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- PM 2.5 is within the range of AHAM Test Dust (0.5 to 3 microns)
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Other AHAM Standards

- AC-2-2006 (Rev.2008) Method for Sound Testing of Portable Household Electric Room Air Cleaners
- AC-3-2009 Method for Measuring Performance of Room Air Cleaners Following Accelerated Particulate Loading
- AHAM 7002-2014— Sustainability of Portable and Floor Care Appliances

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Better standards drive better decisions

- AHAM looks forward to working with the China National Committee on GB 18801
- We have much to learn from each other.

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Contact AHAM

- Cert@aham.org for questions about AHAM Certification

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Thank you for your attention

- Wayne Morris

Vice President, Technical Operations & Standards

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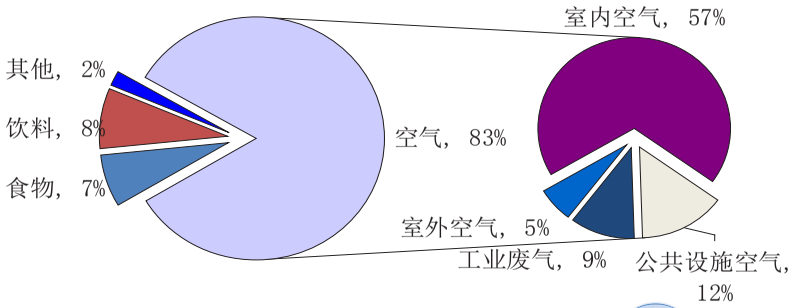
室内空气净化技术：
现状、发展趋势及市场动态

徐秋健 博士
清华大学 · 建筑环境检测中心
2014.09.17

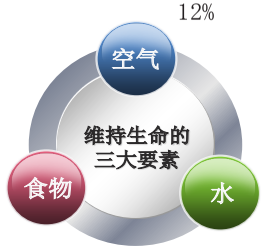
目录

1.室内空气净化的中国国情



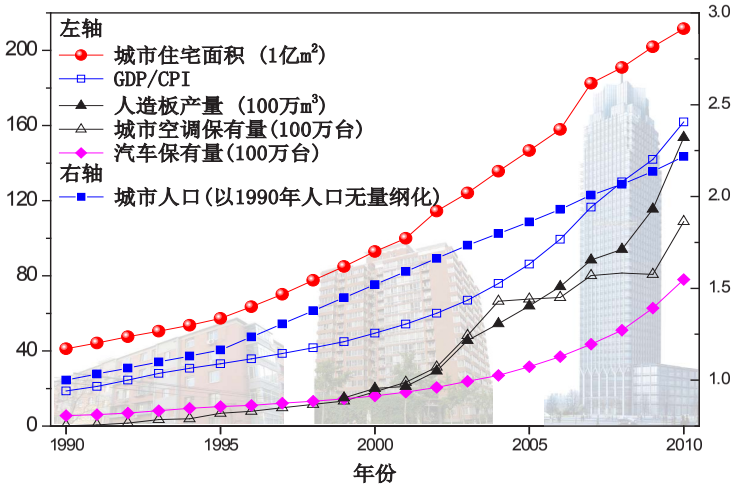
人体的物质摄取量（重量比）

成年人的空气摄入量：约15kg/天



与发达国家相比，中国对室内空气净化的需求更为迫切！

我国近20年来高速发展：环境巨变

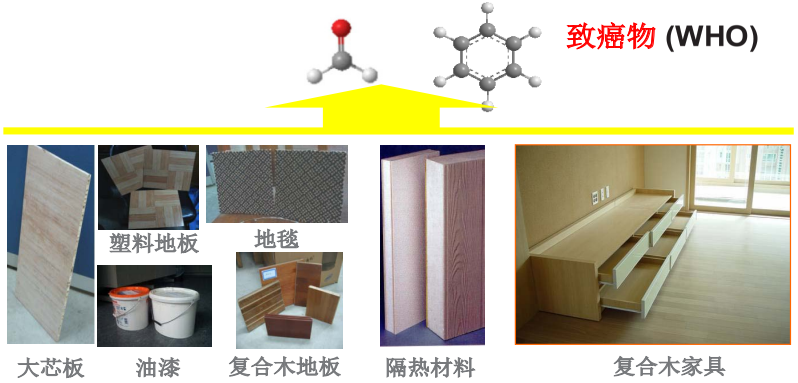


Zhang YP et al., *Environ. Health Perspective*. 2013

我国室内环境VOC污染严重

城镇新建建筑逾10亿平米/年

建材和木家具散发VOC：甲醛、苯、甲苯等



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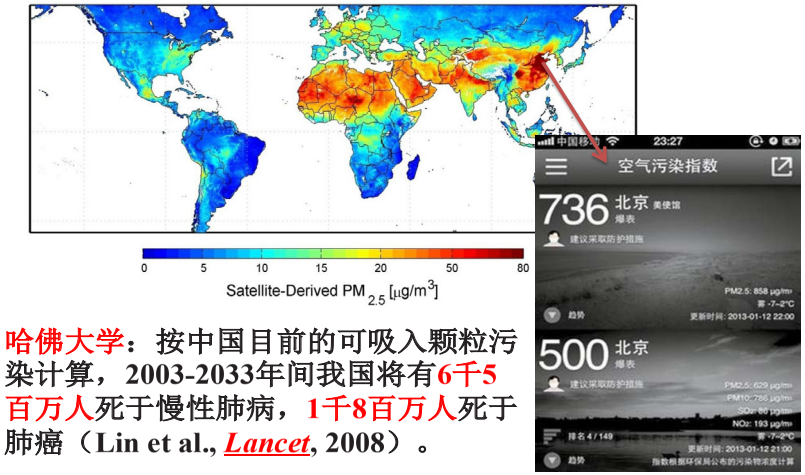
我国大气环境中可吸入颗粒物浓度全球居首！

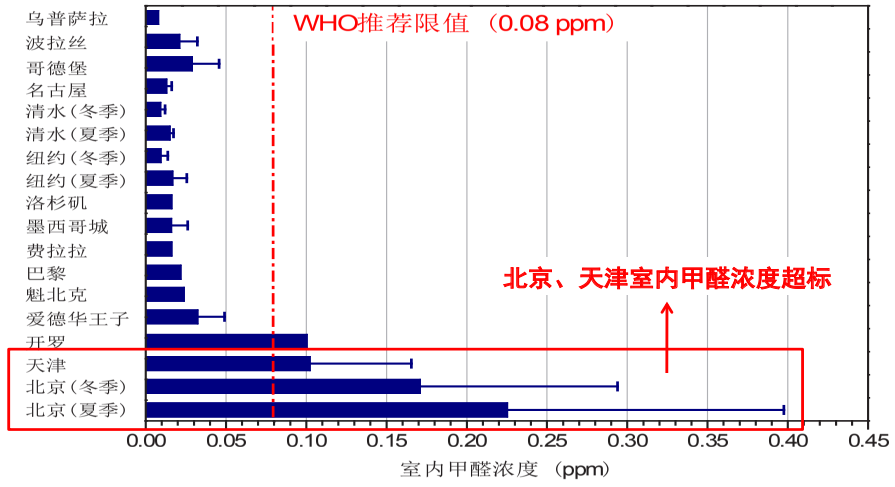
-室外PM2.5浓度高，殃及室内空气



哈佛大学：按中国目前的可吸入颗粒污染计算，2003-2033年间我国将有6千5百万人死于慢性肺病，1千8百万人死于肺癌（Lin et al., *Lancet*, 2008）。

图片来源：美国宇航局NASA: http://www.nasa.govtopicsearthfeatureshealth-sapping.html

室内甲醛浓度偏高

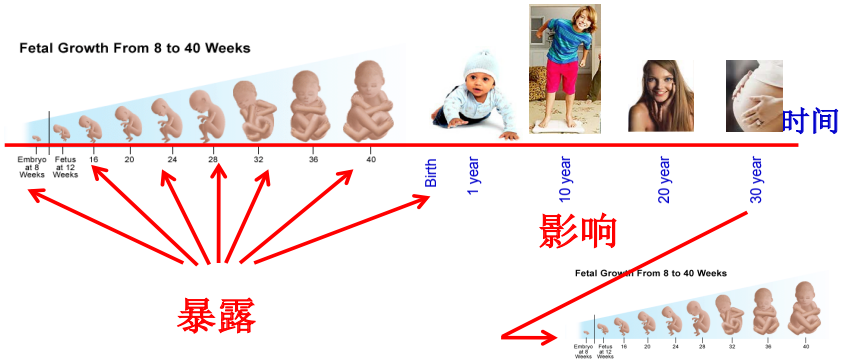


Zhang LP et al., Mutat Res.， 2009

室内半挥发性有机物(SVOC)污染加剧

几种主要的塑化剂、阻燃剂在我国的产量和消费量都位居世界首位!

遗传和代际效应不容忽视!



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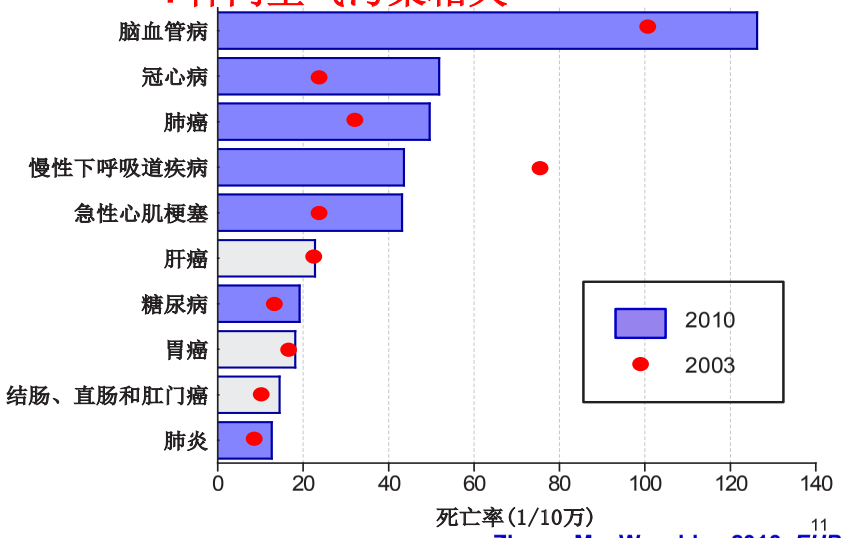
我国城市人口疾病死亡率前10 （2009年）

—— 7种同空气污染相关



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Zhang, Mo, Weschler, 2013, *EHP.*

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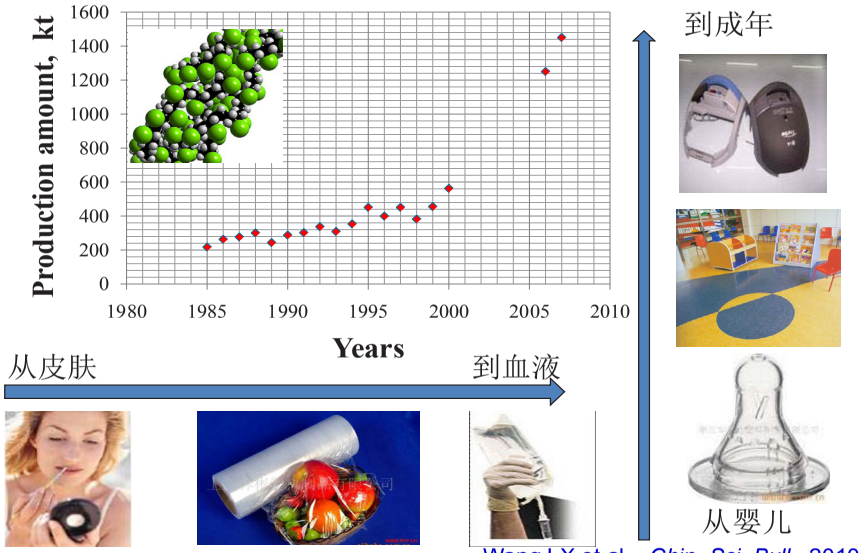
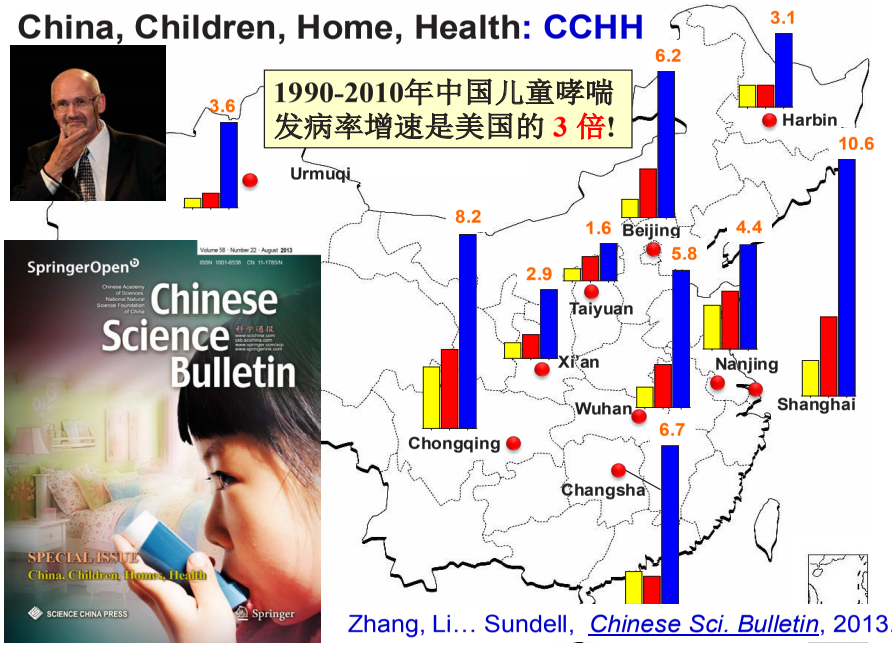
增塑剂(SVOC)产量世界第1



Wang LX et al., *Chin. Sci. Bull.*, 2010

China, Children, Home, Health: CCHH



Zhang, Li… Sundell, *Chinese Sci. Bulletin*, 2013.

室内空气净化的目标污染物

化学污染

甲醛、苯、甲苯、二甲苯、TVOC、苯并(a)芘
SO_2、NO_2、NH_3、O_3
SVOC（塑化剂DEHP、阻燃剂）

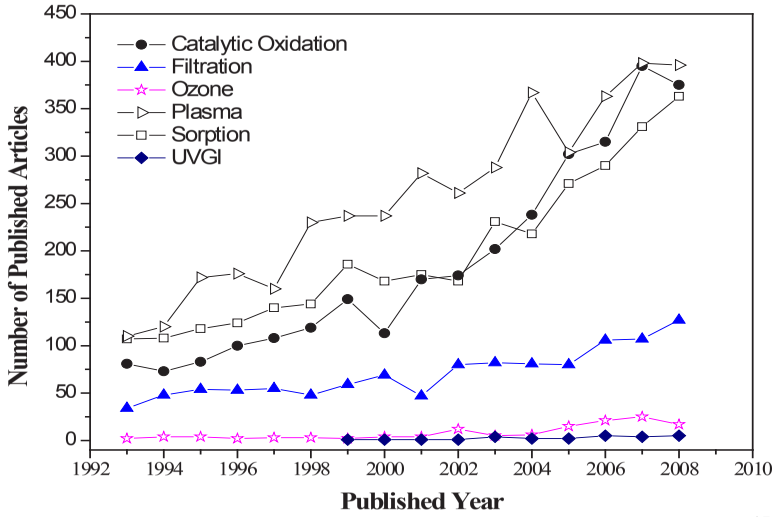
颗粒物污染

PM_{10}
$PM_{2.5}$，超细颗粒（UFP）

微生物污染

细菌
病毒（SARS，H7N9）

各种空气净化技术的研究论文数统计



Zhang, et al., *Atmos. Environ.*, 2011.

2. 现有空气净化技术概况

- 化学污染
  - 光/热催化氧化
  - 吸附
  - 等离子体
  - 其它（如生物酶分解）
  - ...
- 颗粒物污染
  - 过滤
  - 静电除尘
  - 负离子
- 微生物污染
  - 紫外杀菌（UVGI）
  - 臭氧

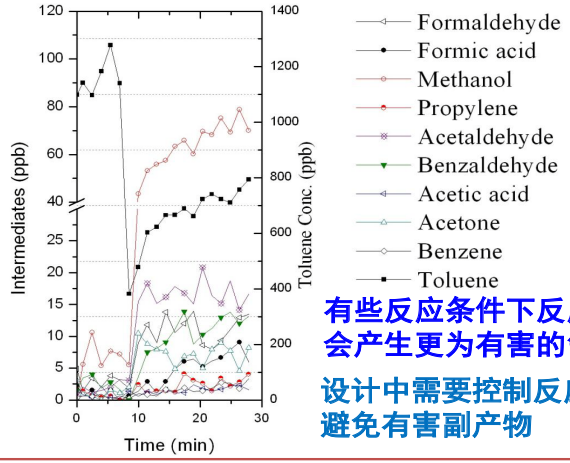
各种净化技术的特点

目前市场上大部分空气净化器

空气净化技术	适用污染物		特点
过滤	纤维滤材	颗粒物	需定期更换
吸附	多孔吸附	化学	需再生或定期更换
紫外	紫外杀菌	生物	需要足够的照射时间
催化氧化	光催化	化学、生物	消除化学污染，部分有副产物
	常温热催化		能有效消除甲醛
离子化	等离子体	颗粒物、化学、生物	产生的部分离子或O_3对人有害
	臭氧发生		
	负离子发生		
其他	植物净化	化学	效率较低

合理使用各种净化技术

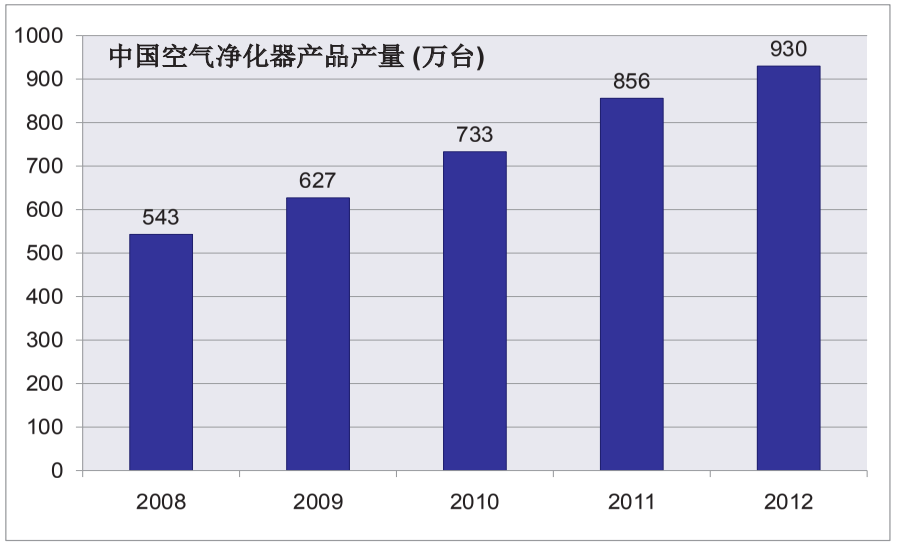
举例：光催化技术反应副产物评估



有些反应条件下反应不完全，会产生更为有害的气体

设计中需要控制反应条件，避免有害副产物

C_{ini}=1200ppb, T=24-26℃, RH=47-50%, 254nm, 0.43mW/cm²

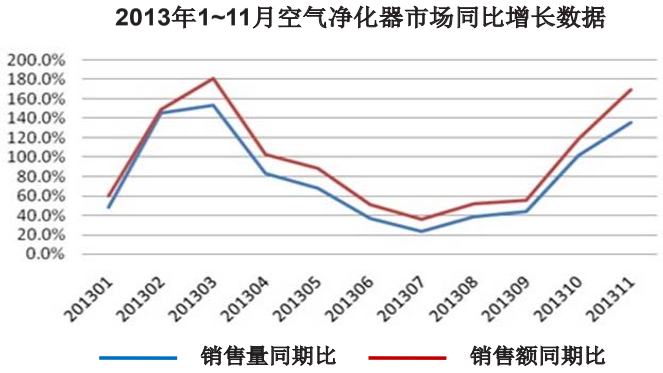


来源: 家电行业-慧聪网

3. 发展趋势及展望

- 唯有真正有效、无副作用的净化技术才会最终占领市场；
- 单一净化技术难以满足室内污染物的多样性，产品将更多体现多种技术融合；
- 市场细分，体现人性化、功能化设计；
- 空气净化产品的售后服务：如产品维护和模块。

空气净化器市场受室外环境影响



来源：中怡康监测

清华大学 建筑环境检测中心-空气室
Center for Building Environment Test Tsinghua University-IAQ

首页 | 关于我们 | 新闻动态 | 服务分类 | 仪器设备 | 专家

(2002)量认(国)字(FO583)号

空气净化器性能检测

部分品牌空气净化器性能检测结果举例

空气净化器	单价(元)	实际功率（W）	去除甲醛		去除颗粒物		
			洁净空气量CADR（m^3/h）	净化效能等级	洁净空气量CADR（m^3/h）	净化效能[$m^3/(h*W)$]	净化效能等级
A	——	48.5	53.6	A	154.8	3.2	A
B	4980	43.0	82.9	A	105.3	2.4	A
C D	9299	36.5	66.0	A	424.8	11.6	A
E	4999	41.6	64.1	A	184.3	4.4	A
F	2699	52.8	35.0	B	160.7	3.0	A
G	3980	42.0	66.2	A	-	-	-
H	1280	29.3	-	-	73.1	2.5	A
I	998	36.3	-	-	146.7	4.0	A
J	4500	37.0	37.3	A	-	-	-
K	4200	53.6			425	7,9	A

4. 结束语

1. 中国室内空气质量问题严峻，空气净化技术和产品需求迫切；

2. 国内外企业、研究单位需要加强合作，协同解决我国的室内空气质量问题。

谢谢！

www.tsinghua-iaq.com

清华IAQ检测、产品开发和技术服务团队成员， 2013年5月，于清华礼堂草坪前

oransi

Oransi and its proprietary filter solution from USA

奥兰希 ----来自美国专有的空气净化解决方案

演讲人：Peter Mann

President and Founder

Oransi LLC

oransi.cn | oransi.com

oransi

Our Story
奥兰希故事

oransi

The Complete Air Cleaner
完美空气净化器

oransi

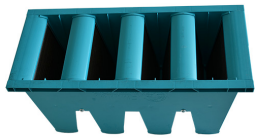
China Pollution: PM2.5 + Gases
中国的污染：PM2.5 +有害气体

Approach
污染解决方法

- We are different in that: 我们的不同之处：
  - We develop air purifiers that are complete solutions for each environment
    我们针对不同的环境开发具有完整解决方案的空气净化器
  - Have a process for continuous innovation to improve products
    我们通过创新来持续改进产品
  - Made in USA with latest technology & best components for better quality
    美国制造，最新的技术和最好的零部件保证最好的质量
  - Work with leading scientists in the US
    与美国顶尖科学家合作
  - Do not use ionizers or other components that could create ozone
    不采用离子发生器或其它产生臭氧的部件

Gases
各种有害气体

- Problem - Multiple gases in China and difficult to remove all with one solution
- 问题： 在中国，只用一种解决方案很难去除各种有害化学气体
- Filter Solution 过滤解决方案
  - Developed a proprietary solution with scientists from the USA that is effective for all key gases in China (formaldehyde, ozone, smog, smoke, combustion gases)
    与美国科学家一起开发专有的过滤解决方案，对中国的各种主要有害气体如甲醛、臭氧、雾霾、烟气特别有效
  - Treated Coconut Shell Activated Carbon works well in both dry and humid environment
    经过特别处理的椰壳活性炭，
    无论在干燥或潮湿的环境都有效
  - Does not require additional types of media
    不需要添加额外的介质



PM2.5 Particulates
PM2.5 污染颗粒物

- Filter Solution 过滤解决方案
  - HEPA developed in America 70 years ago with continued innovation
    HEPA滤网于70年前在美国发明并在不断创新
  - Use highest quality HEPA (H13 and H14 rating – hospital grade) for smallest, most harmful particulates.
    使用最高质量的H13和H14医用级HEPA滤网过滤最小和最有害的污染颗粒物
  - Amount of filter media:
    滤网介质用量： 14.3m^2 和 18.1m^2 (30 x 60 x 30cm)
  - High air flow
    强大空气流： (ED: 1000m^3/h Erik: 700m^3/h EJ: 560m^3/h)

Oransi Air Purifiers are ranked #1 by Clemson University Microbiology Lab

Highest Quality Components
最高品质的零部件

- Highest Quality Custom EC Motor
- 定制的最高质量EC电机
  - Quieter
    同样舒适风量下，更安静
  - More Reliable
    运行更可靠
  - Uses up to 90% less energy
    省电达90%

MADE IN USA

California Environmental Protection Agency Air Resources Board

ENERGY STAR

GREEN TECH

Customer Comments
用户评价

- China
  中国
  - “Useful”
    “管用”
  - “Effective”
    “有效果”
  - “Easy to use”
    “好使”
- USA
  美国
  - “Highly recommended”
    “高度推荐”
  - “The best purchase I ever made”
    “我做过的最好的购买“
  - “Life saving”
    “救了命”

In-Store Display – Yansha
高端百货店展卖– 燕莎（亮马桥店）

Entry Into China
奥兰希全面进入中国

- Oransi Beijing　奥兰希（北京）公司
- Shanghai service center　上海服务中心

- Use multi-distributor model　多个经销商商业模式
  - Reduce layers　扁平化
  - Motivate distributors　激励经销商

- Target market: high-end segments　目标市场 ： 高端
  - End users　终端用户
  - Schools, hospitals, hotels, etc　学校、医院、宾馆、企业等
  - Placement in several high-end department stores　高端零售卖场

Wangfujing Store in Xi’an
即将开业的王府井百货店专柜— 西安

oransi

Erik Air Purifier
Erik 空气净化器

oransi

Erik Air Purifier
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EJ Air Purifier
EJ 空气净化器

oransi

EJ Air Purifier
EJ空气净化器

oransi

Thank You!!
谢谢

an SKF Group company SKF

purafil

A better quality of air, for a better quality of life

At Purafil, our passion and purpose is to improve the lives we touch.

Since 1969, we lead the industry in providing world-class air quality solutions.

Every day, we are proud to protect thousands of processes, environments, and people throughout seventy countries with our air filtration systems.

Driven by innovation, we set industry standards with our air filtration systems.

Core activities

We protect people, processes and environment

Our patented products eradicate particles, gases, odors, from the air.

The benefits of our products include:
-removing odors
-improving comfort levels
-protecting people from pollution
-preventing corrosion
-increasing equipment reliability
-preserving artifacts
-increasing the shelf life of everyday consumables such as fruits, vegetables, and flowers

We are inspired to create a better world purafil

Our purpose is to improve the lives we touch purafil

History
Improving everyday life since 1969

2013 – Acquired by SKF Group(Year established: 1907 Turnover 2012: $10B Employees: 46,700)
2011 – Ninth manufacturing facilities support global demands
2005 – Acquired by Kaydon Corporation for expansion
1998 – Achieved ISO 9001 quality manufacturing certification
1996 – Distributed in 50 countries
1994 – Single source manufacturing status with addition of air monitor
1983 – Expanded internationally with patented products
1969 – Established as a private stand-alone manufacturer

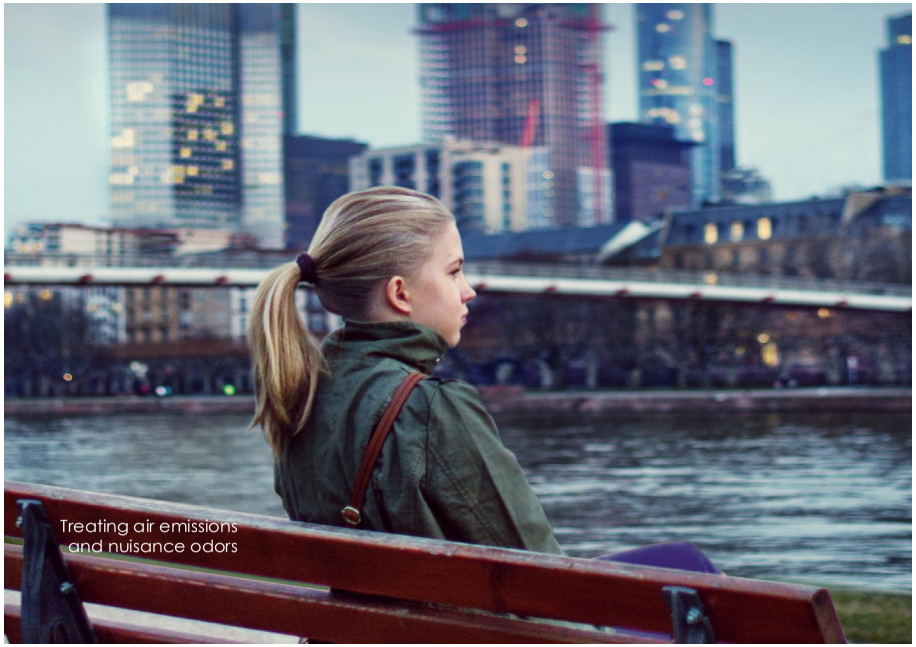
Vertical Markets
Customers served

Commercial & Residential
Medical
Industrial
Wastewater
Electronic


Improving comfort levels
Protecting people from pollution


Preventing corrosion
Increasing equipment reliability


Ensuring air quality
meets the most stringent
requirements


Treating air emissions
and nuisance odors

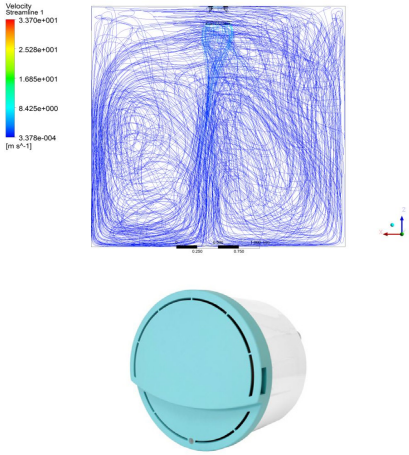
Product Category

Air Purifier

Air Purifiers AP-100

Specifications

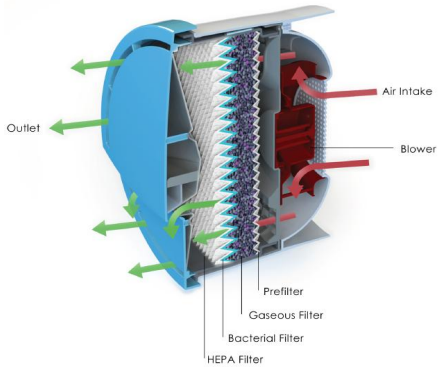
- Weight - 4 kg (10 lb.)
- Diameter - 33 cm (13 in.)
- Height - 20 cm (8 in.)
- Air Flow Range: 170 cmh (100 cfm)
- Air Exchange: 3 per hour
- Power Input Range: 120 watts
- Room size: 18 m2 (195 ft.2)
- Positive sealing HEPA filter: Merv 15
- Patented gaseous filter
- Certified microorganism filter
- Patent pending on design



Air Purifiers AP-100

Features

- Removes 99.97% of dust at 0.3 microns
- Removes 99.9% of odors & harmful gases
- Removes pathogenic bacteria & fungus
- Removes 4 times more formaldehyde than activated carbon filter according to the ASTM Standards D6646
- No maintenance, Compact, Quiet
- UL, cUL, CE, CCC
- Wall or floor mount



Monitor anywhere, anytime

Gas phase filtration

Patented technology

Air filtration of gaseous pollutants

Current Technology Vs. Next generation filtration

ACTIVATED CARBON	PURAFIL SP
Method of Action Physical adsorption Reversible process; can be a source of odors	Method of Action Adsorption and chemical reaction Irreversible process
Target Pollutants VOCs (ethyl benzene, dimethyl benzene), ozone Not effective against many criteria pollutants	Target Pollutants Formaldehyde, sulfur dioxide, nitrogen oxides Changes gaseous pollutants to harmless solids
Physical Properties Man-made product Non-toxic Combustible material Will support microbial growth if wet (high RH environment)	Physical Properties Engineered product Non-toxic, non-hazardous Non flammable (UL rated) Will not support bacterial or fungal growth

Purafil's proprietary media removes 4x more formaldehyde than standard activated carbon

purafil

Current pollutant challenge

We protect people, processes and environment

•Currently PM2.5 is the major pollutant of concern.
•As the EPA determined, Ozone, SO_2 , NO_2 , CO are equally harmful if not worse.

	API Levels		
City	SO_2	NO_2	O_3
Beijing	58-104 (0.058 - 0.176 mg/m3, 22 - 67 ppb)	52-111 (0.082 - 0.138 mg/m3, 44 - 73 ppb)	50-120 ppb
Shanghai	51-79 (0.051 - 0.079 mg/m3, 20 - 30 ppb)	102-103 (0.123 - 0.125 mg/m3, 65 - 66 ppb)	100-160 ppb
Guangzhou	58-63 (0.058 - 0.063 mg/m3, 22 - 27 ppb)		

•In almost 500 air quality monitoring sites located in seven cities, the levels of formaldehyde, methylbenzene and di-methyl benzene significantly exceeded the standard values.

Our purpose is to improve the lives we touch

purafil

Conclusion

Since 1969, we have set industry standards with our patented technologies for air filtration and air quality monitors.

Our presence is unrivalled; maintaining installations in 70 countries.

Many world renowned landmarks, business and industrial facilities trust our chemical filtration solutions to protect their most treasured assets including:

Historical chapels, Opera houses, National Museums, Hospitals, Embassies, Universities, International Airports, Luxury Resorts and Hotels, Green Office Buildings, International Stock Exchanges, Refineries, Pulp & paper Facilities, Municipal Water Treatment…and so many more.

We are inspired to create a better world

purafil

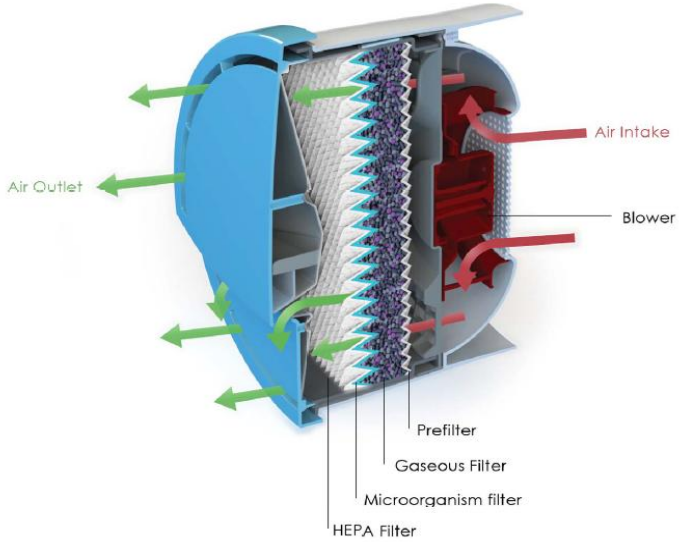
Affiliation

Key role in International Standard

- ASHRAE - – Technical Committees: SSPC 62.1, SPC 145P (Chair), TC 2.3, TC 9.8, TC 9.9, TC 9.11, TRG 4.1IAQP, TC 142
- ASTM - Technical Committees: D22.05, D28.04
- IEST - Working Groups: CC-008, CC-012, CC-035
- ITRS - Technical Working Groups: Yield Enhancement, Wafer Environment Contamination Control
- ISA - Technical Committee S71
- ISO - Technical Committees: ISO/TC 142, SO/TC 205, ISO/TC 209, Memberships on U.S. Delegations / U.S. TAG
- SEMI UL Classified - Global Facilities Committee - Standard: F21-1102
- US Green Building council

World-Class recognition

purafil



Dais Analytic Corporation + SoEX Beijing

"Energy Recovery Ventilation's Role"

ConsERV™ DAIS

ConsERV™
& Air Purification

High Efficiency
Energy Recovery Ventilation
"Letting Science do the Work"
让科学来解决问题

DAIS – The Company 公司

- Invented, commercializing uses of a disruptive "family" of nanomaterial membranes (**Aqualyte™**)
  - 18 patents and continuing to innovate…

  系列突破性纳米家族材料膜产品(**Aqualyte™**)被成功发明和商业化，拥有十八项专利并持续增长中…
  - **ConsERV** - HVAC Energy Recovery Ventilator (ERV)

  全热交换器通风机

- Dais + Beijing-SoEX: Joins technology + manufacturing/distribution
- In-Country Partner

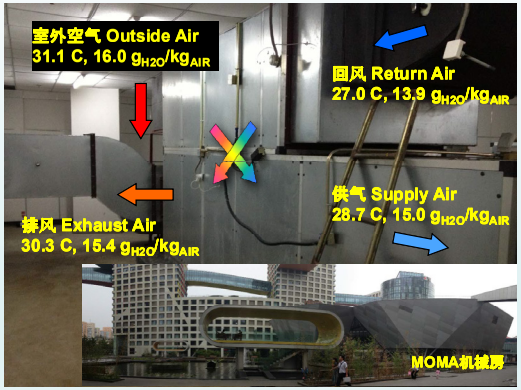
- Recognized in the industry for the development and use of nanotechnology materials

  世界知名纳米科技膜领导品牌

ConsERV™
What is Energy Recovery Ventilation?

- Energy Recovery Ventilation (ERV):
  - A piece of hardware generally installed in a Heating, Ventilating, and Air-Conditioning (HVAC) system's duct work
  - Manages the energy created by different moisture and temperature content of two air streams:
    - Stale exhaust air
    - Fresh, outdoor 'intake' air
- Increases the efficiency of the overall HVAC system
- Vastly improved Indoor Air Quality (IAQ)

ConsERV™ 通风能量回收 Energy Recovery Ventilation



Summary

北京MOMA住宅
MOMA Residence, Beijing
- 19.6 kW 峰值节省 peak savings
- 除湿量 14.6 kg/hr water removed
- 减排量 11.2 kg/hr CO_2 avoided
- **Less than 1 year system payback 回收时间少于一年**
- ConsERV avoids capital costs, lowers emissions, provides on going energy savings while offering unparalleled comfort.

降低系统投资，减少排放，在提供节能效果的同时提供无与伦比的舒适环境

Comparison – ConsERV v. Non ConsERV Product

	ConsERV	v.	Non-ConsERV
Transfer Material	• Solid nanotechnology composite material plastic polymer		• Resin treated paper
Core Construction	• Greater durability • Leak Testing: • AHRI and Pressurized • Industry leading 'Intumescent Fire-Block' UL923 Rating		• Unserviceable, perishable construction materials • Lower fire and smoke rating(s)
Operation	• No channel blockage during heavy latent, or freeze/thaw cycles • Little/no mold, mildew, fungus growth – ASTM G21 & G22 testing (Dow Chemical)		• Paper based product tends to deflect (increased pressure drop) under heavy latent or freeze/thaw cycles • Accumulated mold, mildew and fungus growth in ASTM G21 and G22 testing (Dow Chemical)

100% Outside Air unit with Packaged Rooftop Unit
100% 新风机与屋顶型独立机组

ConsERV OEMs

Thybar · INDUSTRIAS TOSI (COLDEX TOSI, TROPICAL, TOSI, JELLY FISH) · TRANE · ZAir

Awards and Certifications 奖项及认证

检 验 报 告

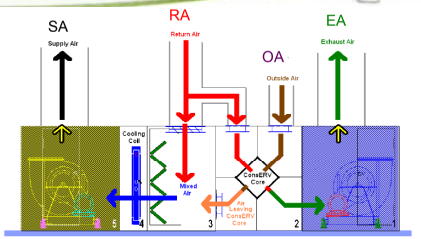
AHRI CERTIFIED · SWISS TESTING STS 179 · 2006 AHR Expo Innovation Awards · FEBRAVA · ASHRAE

Summary总结

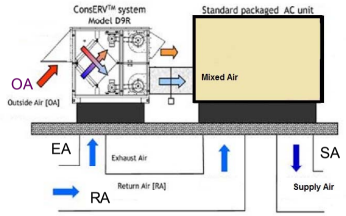
- Energy Recovery Ventilation
  - ConsERV – new, proven technology
  - No moving parts, high efficiencies, great ROI, operational benefits, & downsizing
  - Strong role in air purification: second of the equation
  - "Partnerships & People, Product & Planet"

"合作关系&人类，产品&地球"

Typical horizontal AHU 典型水平 AHU 机组



ConsERV with RTU with return air 独立ConsERV机组与RTU 配合使用



INTRODUCTION TO HONEYWELL AIR PURIFICATION

Dino Asvaintra
VP General Manager (Global High Growth Regions), Honeywell Connected Home

Honeywell

WE DEDICATE TO PROTECTING AND IMPROVING AIR QUALITY

- Generate clean energy for **aviation** based on **bio-fuel** tech
- Provide integrated solution of interior air quality and temperature / humidity control for **large passenger aircraft**
- Leverage **process control** tech to help **industrials** optimize processes and save energy / reduce emission
- Provide **personal protection equipments** across industries

- Provide impurities / pollutant removal solutions for **energy** sector, based on **molecular sieve and catalyst** tech
- Offer air purification materials for specialty industries (e.g., **medical**)
- Promote **turbo-charging** tech to improve energy efficiency and reduce energy emissions / consumption from **auto**
- Reduce auto decoration pollution via **specialty material** tech

Honeywell

WE ARE HONEYWELL

We helped man land on the moon.

Our equipment ensures the safety of almost every commercial airplane taking off and landing every single day.

Our performance materials and technology are widely used across industries.

We are the leader in gas detection, fire systems, personal protective equipment, building controls, home comfort and security, and scanning.

Our technologies and products are widely used in China's landmark buildings.

We are a global leading automotive turbo-charging technology provider.

图片来源NASA

Honeywell

WE SPECIALIZE IN INDOOR AIR QUALITY (IAQ) MANAGEMENT

Improving IAQ for 50+ Years… Leading Brand since 1980s

- Developed two-stage **Electronic Air Cleaning** tech in **1956** and continue to lead in this field
- Research partner of the **American Lung Association**
- Designated supplier of **NASA's** environmental control systems

Improving IAQ of Major Landmarks in China

Wangjing SOHO example

- **1st PM2.5 removal project** of its kind, based on strong HON tech
- Remove **95%+** of PM2.5 particles
- **To be expanded to other SOHO projects**

HON IAQ Solution Inside: Central / Beijing Govt, Beijing International Airport, Beijing Metro, etc.

Honeywell

IAQ SOLUTIONS – FULL-FUNCTION AIR CLEANER

F95S Full-function Air Cleaner

- **Four-layer filtration, removes >99% of PM2.5 particles, TVOC** (total volatile organic compounds) **and bacteria**
- Able to cover an area as large as **150m²**, CADR can reach **1,300-1,500 CMH**
- **Precisely real-time monitoring of PM2.5 levels**
- **Long maintenance cycle – worry-free**

Leading HON Technology Inside

- Backed by strong tech advantages in **turbo-charging**; Optimized by **aerodynamic** air distribution simulation design
- Air flow levels **2X** those of competing products at the **same noise level**
- **Superior CADR** and **large coverage**

Honeywell

IAQ SOLUTIONS – PORTABLE AIR CLEANER

From "Industrial" Style Air Cleaners…

To User Experience Focused Portable Air Cleaner for Chinese Homes

Fashionable, simple, "home" style

Auto-indicating filter status;

Easy to replace filters

Single press filter purchase;

Provide real time weather and air quality info

Honeywell

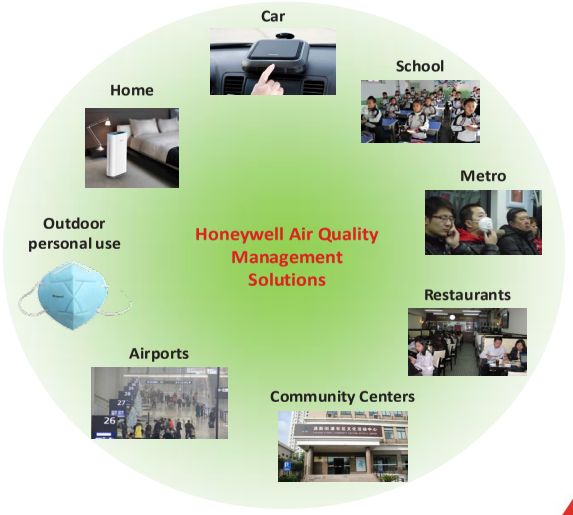
IAQ SOLUTIONS – FULL-FUNCTION AIR CLEANER

F95S Full-function Air Cleaner: Four-layer Filtration

- **4th layer: removes 0.3μm particles**
  - HEPA filter
- **3rd layer: odor, ozone and formaldehyde removal**
  - HiSiv™ filtration cartridges, incl. HON's activated catalyst and a special molecular sieve
  - **Proprietary and customized formula, more efficient**
- **2nd layer: bacteria removal**
  - Ultraviolet kills harmful bacteria and fungi
- **1st layer: PM2.5 removal**
  - HON-developed 2-stage Electronic Air Cleaning tech
  - Remove **99%** of PM2.5 particles, and majority of bacteria, virus, etc.

Honeywell

"HONEYWELL SPHERE" – CREATOR OF SAFETY



Protect Health and Safety of Chinese Consumers

Honeywell

我们是百朗
We are Broan

全屋净化，全球领先

GROWTH

杰西卡和史蒂夫的小女儿凯利患有先天性哮喘。

加拿大20%以上的家庭，其家庭成员患有呼吸道病症或过敏症。频繁接触灰尘、尘螨、宠物毛发、皮屑、香烟烟气等污染物和过敏原等都可能引起头疼、慢性疲劳、口鼻喉不适，还会加重哮喘、过敏症及其他呼吸道问题。

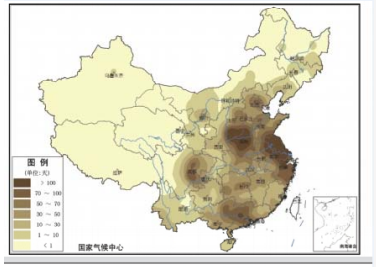
凯利的父母并没有购买便携式空气净化器，而是选择了一套更加彻底的全屋解决方案 —— **带有HEPA过滤的百朗新风净化系统。**

如此一来，他们通过过滤和换入新鲜空气的做法实现了对所有房间空气质量的控制。

选择全房空气净化解决方案---**选择百朗！**

解决方案
在北美

解决方案
为中国



2013年全国霾日数分布示意图

专门为提高整个居室空气质量而设计的HEPA精过滤净化和空气置换系统

GSHH3K1C
全屋健康型解决方案

- ●HEPA过滤系统
- ●室内循环净化功能
- ●高效新风交换热回收系统
- ●智能控制系统

HEPA高效过滤网
0.3微米的颗粒过滤效率达 99.97%
PM2.5 过滤效率达 99%
添加Ultra-Fresh FT-7（纳米银抗菌剂）
展开面积达2.7平方米，容量大

百朗致力于提供完美的室内空气质量解决方案

- 生活品质 Quality of Life
- 健康环保 Design for Environment
- 高效节能 Energy Efficiency
- 科技创新 Science & Innovation
- 空气系统管理专家 Integrated Air Solutions

百朗提供解决方案的领域

家居

商业场所

市政建设

交通运输领域等

北美洲
阿拉米达，加州
圣伯纳迪诺，加州
特卡特，墨西哥
克利班，德州
哈特福德，威斯康辛州
辛辛那提，俄亥俄州
哥伦布，俄亥俄州
米西索加，安大略，加拿大
德吕蒙维尔，魁北克，加拿大

欧洲
巴黎， 法国
佩鲁贾，意大利
安科纳，意大利
马切拉塔，意大利
札布热，波兰

亚洲
香港， 中国
惠州， 中国

奖项与认证

2011年美国ADEX产品设计奖

美国全球NAHB住宅技术创新奖

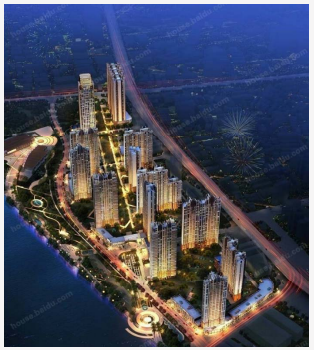
美国BUILDING PRODUCTS建筑最有价值的产品

全球客户

* Trademark logos are property of each company

中国样板项目介绍

广州珠光御景壹号



珠江边的高档精装洋楼。以“会呼吸的房子”“健康的家”为卖点，一期200套BROAN 高效过滤PM2.5新风系统。

中国样板项目介绍

顺德碧桂园

碧桂园总部大楼 80套PM2.5高效过滤新风系统

碧桂园盈翠峰 杨家自家别墅
40套PM2.5高效过滤新风系统

中国样板项目介绍

远洋公馆效果图

杭州远洋公馆共计600套Thino 系列新风系统

BROAN——致力于创造最健康的呼吸环境

Thank You


HealthWay – We Breathe Innovation
HealthWay – 呼吸的革命
US / China Air Purification Technology Seminar
中-美空气净化技术研讨会
September 17, 2014


HealthWay
Global Distribution 全球销售网络
HealthWay Headquarters | Pulaski, New York
HealthWay总部 | 美国纽约柏拉斯凯
U.S. / 美国
Canada / 加拿大
Mexico / 墨西哥
Bahamas / 巴哈马
Bermuda / 百慕达
Aruba / 阿鲁巴岛
U.K./英国
Sweden / 瑞典
South Korea / 南韩
China / 中国
Hong Kong / 香港
Spain / 西班牙
Ukraine / 乌克兰
Italy / 意大利
Greece / 希腊
Turkey / 土耳其
Belarus / 白俄罗斯
South Africa / 南非
India / 印度
U.A.E. / 阿联酋
Japan / 日本
Russia / 俄国
Ireland / 爱尔兰
Singapore / 新加坡
Thailand / 泰国
Taiwan / 台湾
Malaysia / 马来西亚
Australia / 澳大利亚


HealthWay
Global leader in Indoor Air Quality Solutions since 1981
1981在美国成立
解决室内空气质量问题
的全球先驱


Particulate Matter
空气悬浮颗粒
(0.002 – 1000 microns)
(0.002 – 1000 微米)

Gaseous Contaminants (VOC's)
气态污染物(挥发性有机化合物)

Paints / 油漆
Solvents / 溶剂
Aerosol Sprays / 喷雾
Cleansers / 洗涤剂
Air Fresheners / 空气清新剂
Nail Polish / 指甲
Furniture / 家具

Expansive Product Line
多元产品线

Commercial - Medical Grade
商用机系列 – 医疗级设备

Residential - Portable product
家用机系列 – 可移动设备





Resumé of a leader | 部分顾客名录

万豪酒店连锁 | 凯悦酒店连锁 | 希尔顿酒店连锁 | 克里夫兰医院 | BAODAO Healthcare 北京寶島婦產醫院

德威学院 | 宝马中国 | 哈佛大学 | IBM | 台湾中华邮政

美国FBI联邦调查局 | 台湾DBS银行 | 清华大学 | 梅奥诊所 | 德州仪器

Vertical Markets | 纵向市场






- Healthcare 医疗系统
- Cruise Ships 邮轮
- Fitness Centers 健身中心
- Education 学校
- Entertainment 娱乐场所
- Residential 住宅
- Clean Room 无尘室
- Corporate 公司
- Day Care 日托中心

HealthWay – We Breathe Innovation
HealthWay - 呼吸的革命

US / China Air Purification Technology Seminar
中-美空气净化技术研讨会

September 17, 2014

Registered Attendee List

注册参会人员名单

No.	Organization	Name	Position
1	中国建筑科学研究院 China Academy of Building Research	邓高峰	低碳建筑研究中心主任Director of Low Carbon Building Research Center
2	清华大学建筑环境检测中心 Environmental Testing Center, Tsinghua University	徐秋健	空气室技术负责人
3	中国疾病预防控制中心环境所 Chinese Center For Disease Control And Prevention	戴自祝	研究员
4	京东家电采销部JD	王涛	总监
5	京东家电采销部JD	张立新	
6	京东家电采销部JD	刘道之	
7	美华认证有限公司UL	张斯光	Standard manager
8	美华认证有限公司UL	Simon	UL environment business director
9	中国环保产业协会CAEPI China Association of Environmental Protection Institute	杜磊	项目官员，国际合作处
10	圣美盛华 Sheng Mei Hua Sheng	刘威	经理
11	Kaz, Inc	Peter Zhou	项目开发
12	Kaz, Inc	Patrick Cheng	市场部
13	中国家用电器研究院China Household Electric Appliance Research Institute	岳京松	洗涤性能研究所/清洁技术学会国际部部长
14	中国家用电器研究院/国家家用电器质量监督检验中心China Household Electric Appliance Research Institute	刘开	国家质检中心综合检验部
15	美国家电协会AHAM	Wayne Morris	技术与标准副总裁
16	奥兰希Oransi	Peter Mann	总裁
17	奥兰希Oransi	万顺兰	中国区总代
18	北京金安名正科技有限公司Beijing DOPOWER Co., Ltd	林为民	副总经理
19	天津市先导倍尔电气有限公司（ Tianjin Xiandao Bell Electric Co., Ltd)	李明志	副总经理 Vice General Manager
20	中国五金交电化工公司	纪一军	常务副总经理
21	Marinevision Resources Co., Ltd 中阳致远贸易（北京）有限公司	柴海芳	总经理
22	北京一商集团有限责任公司商贸分公	谢征	销售总监
23	北京一商集团有限责任公司商贸分公	赵静	
24	四川奥希斯环保科技有限公司	刘波	总经理
25	四川奥希斯环保科技有限公司	刘宁	技术部经理
26	济南国群商贸有限公司	丁秀瑞	总经理
27	济南国群商贸有限公司	常伟	
28	Purafil	Ash Dhokte	市场总监

29	Purafil	于庆黎	中国区销售经理
30	Dais Analytic Corporation	Tim Tangredi	总裁
31	Dais Analytic Corporation	张Carrie	中国区总代
32	大同市启创新能源材料有限责任公司	马玉白	
33	大同市启创新能源材料有限责任公司		
34	大同市启创新能源材料有限责任公司		
35	大同市启创新能源材料有限责任公司		
36	北京捷迅卡斯特系统控制技术有限公		
37	霍尼韦尔Honeywell	Dino Asvaintra	副总裁，商业发展与策略
38	霍尼韦尔Honeywell	金峰	
39	霍尼韦尔Honeywell	王莉	Automation and Control Solutions
40	百朗-纽通Broan-nutone		
41	百朗-纽通Broan-nutone		
42	HealthWay	Chirag Patel	工程部经理
43	HealthWay	王子翰	全球营销总监
44	HealthWay's potential distributor	王军穗	总经理
45	HealthWay's potential distributor	尚卫东	总经理
46	HealthWay's potential distributor	周力军	总经理
47	HealthWay's potential distributor	段鸿飞	总经理
48	天祥Intertek Testing Laboratories	Ken Zhong	
49	天祥Intertek Testing Laboratories	Galen Chen	
50	安利Amway Corporation	Mr. Jacky Zhang	Senior Technical Regulatory Officer - Policy
51	安利Amway Corporation	Mr. Mai Dong	Senior Technical Regulatory Officer - Compliance
52	Blue Air	Ms. Karin Kruse	
53	US TDA	Ms. Verinda Fike	Country Manager
54	TEDA泰达	刘心怡	
55		孙宁	
56	US Embassy	Jay Biggs	
57	US Embassy	张江瑶	
58	US Embassy	王永峰	