FATMP-2012

先进纺织服装材料高层论坛

企业引领纺织科技创新

The 2012 Forum On Advanced Textile Materials And Processing

Industry Lead Textile Innovation

2012 年 10 月 22 日
中国 北京

Oct. 22, 2012
Beijing China

主办 | 北京服装学院
承办 | 材料科学与工程学院 服装材料研究开发与评价北京重点实验室
协办 | 北京纺织工程学会 化纤产业技术创新战略联盟

Organized By

School Of Materials Science and Engineering, Beijing Institute of Fashion Technology
Beijing Key Laboratory Of Clothing Materials R&D And Assessment

Coorganised By

Beijing Textile Engineering Society
Strategic Alliance for Technology Innovation in the Chemical Fiber Industry

论坛日程安排

Program of Fatmp 2012

2012/10/22

上午 8:30–11:40

时间	地点	内容 / 报告	主持人
8:30–8:45	贵宾室	校领导会见主要嘉宾	
8:45–9:15	科技报告厅	论坛开幕式 合影留念	朱光好
9:15–9:45		报告 1：盛虹股份差别化涤纶长丝 主讲人：江苏盛虹科技股份有限公司总工程师 梅锋	孙刚 教授
9:45–10:15		报告 2：依靠科技创新 加快转型升级 报告人：中国石化仪征化纤股份有限公司教授级高工 魏家瑞	
10:15–10:25		茶歇	
10:25–10:55	科技报告厅	报告 3：Chemical Management For Textile and Garment Supply Chain 报告人：Dr. Jane Jiang Technical Director of Softline Asia Pacific Global Softlines Development Office SGS Group	王训该 教授 澳大利亚迪肯大学
10:55:–11:40		报告 4：The Quest for Continual Growth in Textiles: Innovation Diversity and Organizational Resiliency 报告人：Dr. Arun Pal Aneja, Managing Director No é ton Policy in Innovation Greenville, North Carolina, USA	
11:40–13:00		中餐、休息	

2012/10/22

下午 13:00–16:30

时间	地点	内容 / 报告	主持人
13:00–13:30	科技报告厅	报告 5：High-throughput Melt Extrusion and Functionalization of Nano-/submicro-size Thermoplastic Fibers 报告人：Gang Sun, Professor Division of Textiles and Clothing University of California, Davis Davis, CA 95616, USA	李鑫 研究员 中国纺织科学研究院 副院长
13:30–14:00		报告 6：Innovation and Sustainability 报告人：Christine Cai Huntsman（China） Technical Resources Manager -- Great China/Korea/Japan	
14:00–14:30		报告 7：Color Inspiration & Garment Fashion 报告人：Ms. Lisa Gao Ms. Celine Huang DyStar (Shanghai) Trading Co., Ltd	
14:30–14:40		茶歇	
13:00–13:30	科技报告厅	报告 8：棉冷轧堆染色关键技术的研究与产业化及节能减排技改示范 报告人：华纺股份有限公司技术中心执行主任、高级工程师 李春光	魏家瑞 中国石化仪征化纤股份有限公司 教授级高工
13:30–14:00		报告 9：国内外聚酯专利状况及企业专利保护策略 报告人：邦信阳专利商标代理有限公司 专利审查副研究员 樊耀峰 博士	
14:00–14:30		报告 10：新一代聚酯纤维关键技术专利分析 报告人：李鑫 研究员 中国纺织科学研究院 副院长	
16:20–16:30		闭幕词	

报告人介绍 / 报告摘要

Introduction of Plenary Speakers and Lecture Abstracts

梅 锋　高级工程师

江苏盛虹科技股份有限公司

Feng Mei　chief engineer

Jiangsu Shenghong Science and Technology Co.,Ltd,

E-mail　meifeng201@163.com

高级工程师，江苏盛虹科技股份有限公司总工程师，党支部书记，盛虹集团企业技术中心副主任，ISO/TC38/SC23/WG6 工作组召集人。在科研方面，作为项目负责人承担了国家火炬计划项目 2 项，国家重点新产品计划项目 3 项；作为发明设计人的授权专利 11 项，参与国家、行业标准修制订 12 项。

Feng Mei is a senior engineer, chief engineer and Party branch secretary of Jiangsu Shenghong Science and Technology Co.,Ltd, deputy director of Shenghong Group Enterprise Technology Center, and he also is a convener of ISO/TC38/SC23/WG6 Working Group. In scientific research, he responses to 2 National Torch Plan projects and 3 National Key New Product Projects as a project principal. At the same time, as a inventor, he has 11 granted patents and participate in repairing and formulating 12 national and industrial standards.

报告摘要
Lecture Abstracts

盛虹股份差别化涤纶长丝
Differential Polyester Filament of Jiangsu Shenghong Co.,Ltd

江苏盛虹科技股份有限公司
江苏省吴江市盛泽纺织科技示范园
Chief Engineer, Jiangsu Shenghong Science and Technology Co. Ltd,
Textile Technology Area, Shengze Town, Wujiang City, Jiangsu Province,China

摘要 /Abstract

江苏盛虹科技股份有限公司为国家火炬计划重点高新技术企业，“盛虹”品牌获得中国驰名商标、国家产品质量免检、江苏省名牌产品、江苏省质量奖等诸多荣誉。公司产品差别化率达 80%，差别化产品主要包括：超细、吸湿排汗、中空保暖、有色、全消光纤维、PTT 纤维、ITY 系列、仿棉纱、半光高弹丝、阳离子高弹丝、阳涤高弹丝、全消光高弹丝、全消光阻燃低弹丝、海岛复合纤维、H-400、SPH、阳涤复合弹性纤维等。广泛应用在服装、家纺、汽车内饰、卫浴、仿真丝产品、起绒织物、洁净系列擦拭布等诸多领域。

Jiangsu Shenghong Science and Technology Co.Ltd is awarded as “State Torch Plan Key High-tech Enterprise” and has won the honourable titles of “ China Well-known Trademark ”, “National Inspection-exemption Products”、“Brand-name Products in Jiangsu Products”、“Quality Prize of Jiangsu Province”, etc. The differentiation rate of our products have reached 80%. The differential products include superfine fiber, perspiration and moisture absorption fiber, hollow fiber, colored fiber, Full Dull, PTT （Poly terephthalic acid 1-3 propylene glycol ester） fiber, ITY series, imitation cotton, semi-dull high-elastic fiber, cationic high-elastic fiber, cationic polyester high-elastic fiber, Dull Full high-elastic fiber, Dull Full flame-retardant low stretch fiber, sea-island composite fiber, H-400, SPH, cationic polyester composite high-elastic fiber ,etc. They are widely applied in apparel, home textile, automotive interiors, sanitary ware, polyester silk production, nap fabrics, clean series such as wiping cloth, and many other fields.

魏家瑞　教授级高级工程师

中国石化仪征化纤股份有限公司

Jiarui Wei　Professor-level senior engineer

China Sinopec Yizheng Chemical Fiber Co., Ltd.

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中国石化仪征化纤股份有限公司教授级高工。长期从事聚酯、涤纶纤维以及高性能纤维的生产和研究开发工作，先后担任过化纤厂副厂长、研究院副院长、公司科技开发部副主任等职，具有较为丰富的化纤生产、研究开发以及管理经验，被评为中国石化突出贡献专家。发表过论文 10 多篇，主持编著了《热塑性聚酯及其应用》一书。

Jiarui Wei is the Professor-level senior engineer in China Sinopec Yizheng Chemical Fiber Co., Ltd.. He is engaged in the production and research work of polyester, polyester fibers and high-performance fibers. He has served as the vice president of Academy and vice director in Chemical Fiber Factory as well as deputy director of technology development department. He was honored as the Talented People with Great Contributions in China Petroleum Chemical Corporation. Up to now, more than 10 journal papers and the book of Thermoplastic Polyester and Application were published.

报告摘要
Lecture Abstracts

依靠科技创新 加快转型升级

Industrial transformation and upgrading depending on Scientific and Technological innovation

中国石化仪征化纤股份有限公司

Sinopec Yizheng Chemical Fibre Company Limited

摘要 /Abstract

进入 21 世纪以来，随着聚酯工程技术和设备国产化的成功研发，中国聚酯产能扩张迅猛， 2011 年达到了 3284 万吨。在聚酯产能扩张过程中，民营企业异军突起， 2011 年产能达到 2560 万吨，占到全国聚酯产能的 78%，而国有及国有控股企业占国内市场份额日渐减小，仪征化纤的聚酯市场占有率已从 2000 年的 20% 下降到 2011 年的 5%。随着聚酯产能急剧扩张，产能过剩局面加剧，产品结构性矛盾逐渐突出，行业利润急剧减小，聚酯产业已逐步从量的竞争转移到技术、品种和质量的竞争。另一方面，聚酯和涤纶纤维的应用领域也在不断扩大。仪征化纤作为一家建厂时间较早、以聚酯为主业的国有控股企业，经受着来自民营企业和国外大公司独资或合资企业两方面的挑战，同时也面临着聚酯和涤纶纤维应用领域不断扩大所带来的机遇。

在挑战和机遇面前，仪征化纤加快实现由“做大做强聚酯主业”向“差异化、高附加值”的发展战略转变，通过科技创新，驱动企业产品结构和产业结构的转型升级。在产品结构上，坚持以市场为导向，以效益为中心，大力开发附加值高的聚酯专用料和差别化涤纶纤维新产品，拓展聚酯和涤纶产品新的应用领域，聚酯切片产品开发突出系列化、专用料化、功能化和绿色低碳特色，涤纶纤维产品开发突出细旦化、功能化、产业化和舒适时尚化特色。在产业结构方面，加快转型升级，一方面逐步向聚酯产业链上游发展，增强原料资源配套能力，另一方面积极稳妥地向高新技术纤维领域

With the development of polyester engineering technology and equipment, China's polyester production rapidly expands since the 21st century, which reached to 32.84 million tons in 2011. Polyester capacity expansion resulted in the sudden emergence of the private enterprises. The annual production capacity of these private enterprises in 2011 reached 25.6 million tons, accounting for 78% of the national production capacity of polyester, while the state-owned and state-holding enterprises increasingly reduced the share of the domestic market. The market share of polyester in Yizheng Chemical Fiber market decreased from 20% in 2000 to 5% in 2011. With the rapid expansion of polyester production capacity and the exacerbating of the overcapacity situation as well as the decrease of industry profit, the competition of polyester industry has been gradually transferred to the competition of technology, variety and quality. On the other hand, the application fields of polyester and polyester fibers are also increased. Yizheng Chemical Fiber as a polyester-based industry withstood the challenges from both private enterprises and large foreign companies and also acquired some opportunities from the expanding application fields of polyester and polyester fibers.

Facing the challenges and opportunities, Yizheng Chemical Fiber accelerated the variation of the development strategy from “the bigger and stronger polyester business” to “differentiation, high value-added”. Scientific and technological innovation drives the transformation and upgrading of product and industrial

进军，抢占未来发展的战略制高点，开展对位芳纶工业化技术开发，新建千吨级高性能聚乙烯纤维生产装置。在技术开发上加大新技术的应用，走内涵发展之路，不断提升现有生产装置的技术水平和控制水平，实现产业技术升级。在基础研究和前瞻性研究方面，加大对聚酯化学改性和物理改性技术、新型聚酯技术、特种纤维技术、生物质聚酯及纤维技术、新型催化剂技术、绿色低碳技术等领域的研究开发力度，努力开发拥有自主知识产权的专有技术和核心技术。

在科技创新过程中，按不同专业搭建目标一致、各有侧重、相互配合、优势互补的公司科技创新技术平台，整合研发资源，促进产学研结合，注重自主创新、原始创新和集成创新。在产品开发生产过程中，构建市场营销、研究开发、产品生产三位一　　体的紧密协作、快速反应的经营协调机制，组建高效有力的产品开发团队，坚持“储备一代、研发一代、推广一代、成熟一代”的产品开发思路，把握好基础研究、前瞻性研究、小试中试试验和工业化开发生产等几方面的节奏。在科技创新项目安排时，处理好科研投入与效益产出、科技投入风险和容忍失败、工业化应用开发和前瞻性应用研究、自主研发和合作开发等方面的关系。

通过持续的科技创新，公司开发了一大批具有较强市场竞争力的聚酯切片和涤纶纤维系列化产品，2011 年底聚酯切片及涤纶纤维品种牌号已达到 389 个，聚酯切片差别化率达到 85%，涤纶纤维差别化率达到 90%。通过持续的科技创新，公司向高新技术纤维领域稳步拓展，对位芳纶小试、中试研究取得了实质性进展，建成了 10 吨 / 年、100 吨 / 年的聚合和纺丝试验装置，实现了连续化稳定运行，成功开发建成了 300t/a 和 1000t/a 高性能聚乙烯纤维干法纺丝成套装置，实现了稳定生产。通过持续的科技创新，加强了新技术、新工艺、新材料和新装备的应用，公司投产 30 年的生产装置技术水平不断提高，装置一直保持经济稳定运行。通过持续的科技创新，公司形成了一批具有自主知识产权的专有技术和核心技术。

structure. During the process of technological innovation, the company technological innovation platforms with the same goal, mutual cooperation and complementary strengths were built according to the different professional structures. The aim is to integrate R & D resources, and to promote the university-industry collaboration. Independent innovation and original innovation as well as integrated innovation are emphasized.

Polyester chips and fibers with strong market competitiveness were produced through continuous technological innovation, which grades has reached 389 in the end of 2011, and the differential rate of polyester chips and fibers is 85% and 90%, respectively. The fields of high technical fibers were included in company products. The application of new technologies, new materials and new equipments were strengthened. Through continuous technological innovation, the company has owned a number of proprietary and core technologies with decision-making power of intellectual property.

蒋 红　纺织化学博士

SGS 集团

Jane Jiang　Regional Technical Director

SGS Global Softlines Services

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纺织化学博士，曾在中国东北和中部地区的多所大学教授纺织化学，长期从事纺织品及化学领域工作，对高分子材料的结构和性能，新技术的开发有深度的研究。负责并承担了一系列国家级、部、省级重点科技攻关项目，并成功申报多项专利项目，学术方面独具建树。公开发表科技类专业论文几十篇，获得过全国行业论文奖、省行业论文奖。随着中国纺织生产和零售业的快速发展，蒋红博士面向企业提供技术咨询服务，并在中国及海外举办过百场宣扬国内外标准及法规的研讨会，反响热烈。蒋红博士熟悉工厂的环境项目管理，如废弃化学品和固废管理，废水和气体的处理，以及清洁生产方法和实践。并且，为中国纺织服装企业在实施绿色供应链管理所存在的问题提供专业的指导性建议。

AATCC 技术委员会委员、指定全球培训师

AATCC 技术委员会委员、指定全球培训师

SDC 董事会增选委员、技术委员会委员、指定全球培训师

东华大学特聘研究生导师

辽东学院客座教授

中国纺织工程学会第 23 届标准测试专业委员会副主任委员

中国纺织环境委员会委员

中国合格评定国家认可委员会实验室认可评审员

美国能源工程师协会注册能源管理师

徐汇区拔尖人才

皮革行业“十一五”标准化工作先进个人

Dr. Jane Jiang is the Regional Technical Director of SGS Global Softlines Services. She received her Ph.D. from Donghua University in textile chemistry. With more than 15 years experience in internal & external factory audit, consulting in the textile chemistry industries. Jane has plenty knowledge of relevant Pre-requisite programs, industry codes of practice, legal requirements, industry guidelines and standards. She has the ability to identify and assess potential quality defect at all links in the green supply chain in textile industry, including chemical hazards, physical hazards, healthy hazards and environmental hazards, etc. Quickly and efficiently discover major and minor issues, determine causal factor, and communicate those issues to clients.

Jane holds extensive qualifications the Certificate of the ISO 14001 Environmental Management System Lead Auditor Course from IEMA, ISO 9001 Internal Auditor, Energy Manager (CEM?) from AEE, China National Accreditation Service for Conformity Assessment Accredited Auditor, AATCC Appointed Instructor, AATCC Technical Cmmittee Active Voting Member, SDC Appointed Tutor, Member of SDC Technical Committee, Specially-appointed Supervisor for postgraduate students of Donghua University.

报告摘要
Lecture Abstracts

纺织及成衣供应链的化学品管理
Chemical Management For Textile and Garment Supply Chain

SGS 集团

Global Softlines Development Office, SGS Group

摘要 /Abstract

时下消费者要求众多，他们希望购买更安全的产品并对环境效益进行整体分析。国际贸易的氛围驱使纺织业内品牌和零售商们考虑其行为的整体影响，并满足国内外法律法规要求。

近期的热点问题关于纺织品中有毒有害物质污染及其所造成的生态影响，引起了相关共鸣并使许多品牌面临了挑战，整个供应链中的服装和鞋类企业也开始意识到危害物管控的重要性。

本次演讲，您将获悉危害物质方面的信息，对于全球环境的影响，了解有关消费品和生态安全的全球法律法规，同时提供了在生产中如何控制管理有害有毒物质的解决方案。

Consumers nowadays have high expectations and want to purchase safer products as well as having a holistic approach to environmental benefits. The international business climate is driving brands and retailers in the textile industries to consider the full impact of their activities and to comply with the international and national regulatory policies. A recent hot case about the contamination of hazardous and toxic substances in textile products and its ecological impact has created great echoes and challenges to a lot of brands. This has created new challenges for apparel and footwear companies on managing the hazardous substances in the supply chain.

In this presentation, you will be aware of the hazardous substances and its global impact to the environment, and understand the related global regulations of consumer & ecological safety that your products need to comply with. Meanwhile, you will also have a better insight to manage hazardous and toxic substances upstream in production.

Dr. Arun Pal Aneja　博士

Noeton Policy in Innovation

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Dr. Arun Pal Aneja 在美国北卡罗来纳州立大学化工系获得博士学位，并在美国杜克大学富科商学院获得工商管理学硕士学位（MBA），目前担任美国 Noeton Policy in Innovation 公司的总经理。Noeton Policy in Innovation 作为一家具有欧洲背景的公司，其主营业务包括纺织产品的开发、生产，以及与之相关的商品贸易。Dr. Arun 作为该公司的技术负责人，对于高新技术的产业化具有丰富的经验。他在工业管理、研发、加工工程、纤维的制备和优化、合成膜和化工等领域有着超过 40 年的从业经历，在产品开发和成本控制领域得到了 DOE 和 Six Sigma 的认证。Dr. Arun 拥有超过三十余篇专利，并发表了多篇论文。他曾经在美国杜邦公司、印度信诚工业公司、美工孟山都公司等大型跨国企业任职。

Dr. Arun Pal Aneja is currently Managing Director at Noeton Policy in Innovation, a European based innovation and textile business strategy company focused on business excellence and understanding complex competitive environment and implementing new business models, rapid product development, process improvement, supply chain efficiency for sustainable growth and create a sustainable culture of initiative and entrepreneurship. He is a Global Technology Executive and Change Leader known for expertise in commercializing new technology for profitable growth while improving business quality. He has over 40 years industrial experience in management, research and development, process/product engineering, manufacturing and optimization in fibers, polymers, synthetic membranes and chemical industries with expertise of DOE and Six Sigma certification for product development and cost reduction. He is inventor of profitable processes and products and credited with over 30 patents and an extensive publication record. His previous work experience includes Senior Research Associate at DuPont Company USA; Chief Technology Officer, Polyester Sector, Reliance Industries Limited (world's largest producer of polyester) and Engineering Manager, Monsanto Company. He obtained his PhD in Chemical Engineering from North Carolina State University and MBA from The Fuqua School of Business, Duke University.

报告摘要
Lecture Abstracts

追求纺织品产业的持续增长：创新多元化和组织灵活性

The Quest for Continual Growth in Textiles: Innovation Diversity and Organizational Resiliency

Noeton Policy in Innovation, USA
The Swedish School of Textiles, University of Boras
Department of Material Science, Tampere University of Technology

摘要 /Abstract

全球市场激烈的竞争和纺织品原材料来源的波动性，使得企业不能允许自己在效率、创新和组织弹性上处于落后地位。本文旨在探索在过去的时间里与我们的生活息息相关的那些与纺织品有关的科学问题，是谁勾画了纺织品产业的梦想？又是哪家公司改变了我们的工业？此外，我们还研究了如何利用以往的经验去构筑一个未来纺织品产业的创新平台。

在今天，美国和欧洲的纺织品产业和纤维科学已经明显衰退，同十年前引领全球经济的局面相比有了巨大的差距。许多作为成熟的商业化产品的人造纤维现在处于低增长和低利润的边缘。造成目前不景气的原因来自多个方面，如全球范围内的成本压力，日益升高的客户期望值，多元化的客户背景，更短的流行周期和研发经费的减少等。未来将会是怎样的情况呢？我们又如何能改变目前的局面，重现昔日的辉煌并且将其保持下去呢？

使目前的困境雪上加霜的是，在这个飞速变化的时代里，企业组织的“健康”和发展过程始终遭受着不确定性所带来威胁。James Moore 在他的著作 << The Death of Competition >> (1995) 中将这种不确定性描述为一种市场、技术、劳动力和企业组织上的不可预测性变化。因此，为了能在瞬息万变的环境中生存和成功，企业开始追寻自身

The brutally competitive nature globally and raw material volatility of textile industry are some of the reasons why companies cannot afford to fall behind in efficiency, innovation or organizational resiliency. The present article seeks to explore the common thread and textile-related scientific views that changed our lives through the ages. Who were the textile dream weavers and the companies that transformed our industry? In addition we explore how we can use the teachings of these lessons to build novel platforms for innovations in textiles for the future.

Today, textiles and fiber science in US and Europe, from its once lofty perch in the global economy, stands in stark contrast to its preeminent position of just a decade ago. Its influence on the society as a whole has eroded enormously. Many of the synthetic fiber products that once fueled the rapid growth of the industry have become mature commodity products now characterized by low growth and lower profit margins. Intense global cost pressure, higher consumer expectations, a highly diverse customer base, shorter fashion cycles and reduced R&D spending have all contributed to the current malaise. What does the future hold and how can we reverse the trend to achieve and sustain the impressive credentials of the past?

To add to the current dilemma, organizational ‘health’ and growth processes are constantly threatened in this era of turbulence. James Moore, in his book ‘The Death of Competition’ (1995) describes this dynamics as a ‘co-

的灵活性。另一反面，多数的经理和学者认为创新可以保证企业能够有出色的表现，同时，近期的研究表明大多数具有灵活性的企业可以非常有弹性地设计创新的策略。这一点强化了企业对不同的产品、服务、加工、商业模式、技术和策略的搜索能力，进而使公司得到竞争上的优势，同时发展出新的知识和有创新性的表现以推动持续的增长。这也导致了企业在创新时需要遵循多重的策略，谨慎地提出新的想法用于保持自身增长。今后，想要在飞速发展的时代里有所作为，就需要更加倚重这种灵活性。

在这篇文章中，作者根据应用来源和活动能力评估了企业的创新能力，并将这两个判据归纳于一个“创新拓扑网络”中，这个网络可以通过二维的基体来展现，包括（1）发展所在的地点——来源于内部或外部的创新；（2）效能的增强——已经在使用的和全新的创新。创新策略的系统包括持续的创新（内部的），或者通过合并、收购、联合经营（拓宽企业所涉及领域）已有的资源，以及同时通过以上两种途径。此外还包括在内部培育出新的创新能力和在已涉及的领域之外寻求创新的突破口。

通过将美国杜邦公司及其200年的“创新和转变历史”的作为实际案例，该模型的正确性可以得到验证。从该研究出发，商业界和学术界可以提出新的观点，使企业具有独特的创新能力和组织上的灵活性，以保证业绩的持续增长。

evolving' one with unpredictable changes in markets, technology, workforces and organizations. Thus the drive for survival and success has translated, in recent times, to quest for resiliency – to survive and thrive in turbulences. On the other hand, most managers and academicians agree that innovation ensures superior organizational performance while recent research has shown that most resilient companies can dynamically orchestrate diverse innovation strategies. This has intensified the organization's search for differentiated products and services, processes, business models, technology, strategies etc. pushing firms to gain competitive advantage and also to develop new knowledge and innovation performances to drive sustainable growth. This has resulted in organizations to follow multiple innovation strategies and to prudently devise their innovation repertoire for delivering growth, hence, success in turbulent times emphasizing resiliency.

In this paper, the authors diagnose an organization's innovation in terms of the tendency to utilize its resources and dynamic capabilities, and streamline them along an 'innovation topology' viewed through a two dimensional matrix of (i) locus of development - innovation either internal or external to the organization, and (ii) performance enhancement - innovation either in use or being created newly. The portfolio of innovation strategies include sustaining innovation (internal) or through mergers and acquisitions (M&A)/joint ventures (JV) (by extending firm boundary) but using existing resources and capabilities in both cases; or radical/break-through innovations (creating new capacities internally) or disruptive/transformational innovation (exploring and creating new capacities beyond existing boundaries).

A case study approach is adopted using Du Pont Company with its unparallel 200 years of 'history of innovation and transformation' for validating the proposed model. This is seminal from both business and academic theory-building perspective for devising unique innovation repertoire and organizational resiliency for continual growth.

孙 刚　教授

加州大学戴维斯分校

Professor Gang Sun

University of California

加州大学戴维斯分校纤维和聚合物科学专业的教授。20 多年以来，他一直致力于生物抗菌纤维、聚合物及其纺织品的研究，并成功研究出多项可用于聚合物材料和纺织品领域的可再生生物灭菌技术。目前这些技术在世界各地的饮用水处理系统和再生抗菌纺织品领域得到应用。近年来，在美国国家科学基金会的资助下，他和课题组研究人员进行了一项有关医疗用纺织品，尤其是可重复使用医学材料的多学科交叉研究。在 DTRA/DOD 的资助下，孙刚博士和他的团队已经开发出一种高产量的热塑性纳米纤维的生产工艺，并用这些纳米纤维制备了一系列的具有生物和化学防护性的功能纤维材料。1997 年他获得了 NSF CAREER 奖励，2007 年获得 AATCC J.W. Weaver 最佳研究论文奖。孙刚博士已经出版了 150 多篇论文，并获得 15 项美国专利。同时他在 2007 年受聘为东华大学的长江学者讲座教授。目前，他还是 Open Textile Journal 杂志的主编。

Dr. Gang Sun is a Professor of Fiber and Polymer Science at University of California, Davis. He has been working on development of biocidal fibers, polymers, and textiles for over 20 years, and has developed several rechargeable biocidal technologies for polymeric materials and textile applications. These technologies are currently employed in drinking water treatment systems and rechargeable antimicrobial textiles throughout the world. In recent years, with financial support from the National Science Foundation, he and a team of researchers conducted a multidisciplinary study on medical use textiles, particularly reusable versus disposable materials. With financial support from DTRA/DOD, Dr. Sun and his team have developed a high throughput production process of thermoplastic nanofibers, and prepared a series functional nanofibrous materials for biological and chemical protective purposes by using these nanofibers. Dr. Sun was a recipient of NSF CAREER Award in 1997 and AATCC J. W. Weaver Best Paper Award in 2007. Dr. Sun has published over 130 peer-reviewed papers, and received 15 US patents. He is also a Changjiang Scholar Professor at Donghua University, Shanghai, China since 2007. Currently, he is the editor in chief of the Open Textile Journal.

报告摘要
Lecture Abstracts

纳米 / 亚微米尺寸的热塑性纤维的高通量熔融挤出和功能化

High-throughput Melt Extrusion and Functionalization of Nano-/submicro-size Thermoplastic Fibers

美国加州大学戴维斯分校

University of California, Davis

摘要 /Abstract

纳米纤维和纳米纤维膜在生物医学材料、过滤材料和防护纺织品等方面具有广泛的应用。然而，这些纳米纤维产品要做到高效制备以及具有特殊功能化还是一个挑战。当前，已经研制出一种通过双螺杆挤出机制备具有功能性的热塑性纳米纤维材料的方法。该方法可以同时做到即能高通量挤出生产，又能用化学方法实现纳米纤维的功能化。大部分的聚酯和聚烯烃能够通过该方法制备出纳米 / 亚微米尺寸的纤维。本次报告将会介绍制备纳米 / 亚微米尺寸的热塑性纤维的方法的发展状况，着重关注化学改性聚烯烃纳米纤维的制备，讨论化学改性聚烯烃纳米纤维膜的性能和潜在应用。

Nanofibers and nanofibrous membranes have found broad applications in biomedical materials, filtration media, and protective textiles. However, production of the nanofibers in high efficiency and with special functions has been a challenge. Recently, a process of using twin-screw extruder in manufacturing and functionalization of thermoplastic nanofibers has made both high-throughput production and chemically functionalization of nanofibers possible. Most polyesters and olefin can be produced to nano/submicro sized fibers during this process. This presentation will summarize the results in nano/submicro sized thermoplastic fibers produced from this process and focus on preparation of chemically modified polyolefin nanofibers. The properties and potential applications of the chemically modified olefin nanofibrous membranes will be discussed.

蔡晓松　技术资源部经理

Ciba/Huntsman

Christine Cai
Technical Resource Manager Huntsman Textile Effects
Ciba/Huntsman

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1997 年加入 Ciba/Huntsman 至今，在过去的 15 年中，在纺织染化部门担任过：中国区纤维素纤维技术推广，中国区技术推广经理—染料部，华东区销售经理，亚太区市场经理—纤维素/羊毛/涤纶/锦纶，中国区特殊纺织品销售经理，北亚区技术经理。加入 Ciba/Huntsman 之前，在针织厂从事多年染整技术工作，积累了大量的实践经验。

Since 1997, Christine Cai has been working in Ciba/Huntsman Textile Effects as: Technical Promoter-CEL EXH (China)□Technical Promotion Head -Dyes□E. China Sales Manager□Manager of Business Group (APAC)-CEL/Wool/PES/PA□Special Textile Sales Manager-China□Technical Resources Manager-N. Asia. Before join Ciba/Huntsman, Christine worked in a kintting mill as the technical manger in charge of Dyeing and Finishing for many years with a lot of experience.

报告摘要
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创新与可持续发展
Innovation and Sustainability

技术资源部经理

Technical Resource Manager Huntsman Textile Effects

摘要 /Abstract

报告分为三个部分：（1）介绍当今面临的挑战 / 需求 – 对于生产的影响；（2）亨斯迈的答案：成衣 / 家纺 – 可持续发展的解决方案；（3）生产力改善计划 – 技术资源。

The presentation includes: (1) Introducing today challenges/needs - Impact on Manufacturing;(2) Huntsman Answer: Apparel/Home Textiles-sustainable solutions; (3) Productivity Improvement Program-Technical resource.

黄秀蔚　业务管理与发展总监

德司达助剂部

Celine Huang

Head of Business Management & Developing Auxiliaries

1997 年中国纺织大学（现东华大学）染整专业毕业。先后在知名国际化工公司国内及国外任职，现负责德司达中国区助剂业务的发展。

Graduated from China Textile University (Dong Hua University) in 1997. Mayor in Dyeing & Finishing. Has been working in several well-known International Chemical Companies in mainland and overseas. Now take the responsibility of Business Management & Developing in China Area.

报告摘要
Lecture Abstracts

可持续发展的时尚之路
Sustainable & Fashionable

德司达助剂部业务管理与发展总监

Head of Business Management & Developing Auxiliaries

摘要 /Abstract

要满足可持续发展的要求，就需要在工艺缩减、节能减排上大做功夫，这也就意味着在时尚追求上降低要求吗？实际上恰恰相反，时尚的不断创新发展是能与可持续发展鱼和熊掌兼得的。但是怎样做呢？我们随时都有那么多的风尚观点但怎么知道它们是否符合可持续发展呢？我们有那么多的被广为模仿的时尚达人在博客和播客上大放异彩，他们知道那些亮点都是符合可持续发展的么？这些答案需由零售商以及产业上的每个环节的供应商提供或至少虑及。因此，任何化工公司做为纺织行业的一员，都应仔细考虑这个问题。德司达做为染料助剂化学品的领头羊，在生产和供应环节上的不断改进和研发致力于给出答案并寻求臻美。莱芙染料正是其中的一个方案。

Does Sustainable mean low requirement of Fashion if you think about process saving and energy saving etc.? Actually in the opposite, you can have Fashion but also Sustainable. But how can we make it happen? We have so many fashion ideas but are we sure that all of them are sustainable? We have so many fashion icons hot in blogs and twitters, do they know their fashion blings are sustainable? Those answers should be provided – or at least should be thought by Retailors and everyone in the industry. Therefore, as a part of textile industries , any chemical provides should take it in consideration. DyStar, leader of dyestuffs and chemicals producer and suppliers has answers and keeps contributions and innovations on this. Lava dye is one of those.

李春光　高级工程师

华纺股份有限公司技术

华纺股份有限公司技术中心执行主任，他撰写并发表论文 16 余篇，申请专利 8 项，其中发明专利 5 项，开发新产品 80 余项，并受邀做中国印染协会新产品和新技术方面的讲座。他被滨州市人们政府评为“全市科技工作先进个人”；滨州市国资委评为“优秀共产党员”；多次获得中国纺织印染行业协会的新产品开发表彰，参与国家科技支撑项目四项，2011 年参与开发研究并产业化的“棉型织物冷轧堆染色关键技术及产业化”项目获得国家科技进步二等奖。

报告摘要
Lecture Abstracts

棉冷轧堆染色关键技术的研究与产业化及节能减排技改示范

华纺股份有限公司 技术中心 山东，滨州

Head of Business Management & Developing Auxiliaries

摘要 /Abstract

简要介绍了对冷轧堆染色技术的设备、工艺、染料和助剂等进行了原始创新和集成创新，突破了冷轧堆染色的一系列关键技术并实现了产业化，研发了冷轧堆染色智能化装备，首次发现并实现了通过控制染液与布卷的相对温度保证产品质量；创立了全新的冷轧堆染色工艺体系，创新的打样方法具有快速、可靠、符样率高的特点，工艺配方数据库系统完整，发现了大小样配方修正规律，提高了工艺稳定性、可靠性和实际生产的快速反应能力，并建立了最佳工艺参数体系，将染色一次成功率从 70% 提高至 95%，同时研发了高溶解度、高稳定性的系列活性染料和冷轧堆染色专用助剂；冷轧堆染色技术完全不使用无机盐促染节水 15%、节能 30% 以上，节约染料 20% 以上，冷轧堆染色关键技术的突破和规模化应用，生产每万米染色布节水 18 吨、节电 350 度、节汽 5.1 吨，减少无机盐排放 200 公斤，减少 COD 排放 16.5 公斤。华纺股份，率先对高温设备进行了余热余压利用改造，年节标煤 1.8 万吨，经济效益与社会效益显著；率先建立印染行业数字化管控及在线监测技术，实现印染过程的网络全覆盖。

罗维新　高级工程师

华纺股份有限公司

华纺股份有限公司总工程师，山东省印染节能减排工程技术研究中心主任 , 东华大学化工与生物工程学院硕士研究生校外指导导师。他是中央企业劳动模范和山东省企业技术创新带头人获得者。他撰写并发表过 10 余篇论文，获得科技进步奖 20 余项，其中国家科技进步二等奖 1 项，专利 8 项，其中发明专利 4 项，并受邀做中国印染行业协会新产品和新技术成果鉴定专家。

樊耀峰　博士

邦信阳专利商标代理有限公司

Yaofeng Fan

Beijing Boss & Young Patent and Trademark Attorneys Co., Ltd.

理学博士，专利代理人，专利审查副研究员。先后获得2006 年天津市技术发明二等奖、2009 年纺织工业协会科技进步一等奖；已发表论文 13 篇，包括 8 篇 SCI 收录的科技论文（影响因子 1.0 以上）及 5 篇专利法相关论文（其中，1 篇在《中国知识产权报》上发表，1 篇在日本经济产业调查会的刊物上发表）。于 2007 年在国家知识产权局从事发明专利的实质审查工作，审结案件 400 多件，担任 10 名以上新审查员的导师及室主任助理，并从事多个专利法相关项目的研究工作；2012 年加入北京邦信阳专利商标代理有限公司从事专利代理工作，主要业务领域包括专利申请、专利复审、专利无效、专利侵权、知识产权调查、知识产权咨询、知识产权预警、知识产权战略、以及研发指导等。已代理上百件专利案件，主要专业领域包括化学、化工、材料、生物医药等。

Yaofeng Fan is a Doctor of science, patent agent, and patent examination associate researcher. He received the second grade prize of Tianjin technical invention in 2006, and the Technology Progress Awards of China National Textile and Apparel Council (First Grade) in 2009. 13 Papers has been published, including 8 SCI scientific papers (impact factor above 1.0) and five articles related to the patent law paper (Among them, one piece published in the Journal of China's Intellectual Property Rights, one in the Journal of the Japanese Economy Industry Survey). In 2007, as mentor of more than 10 new examiner and director assistant in the state intellectual property office, he engaged in the essence of the invention patent examination work. More than 400 pieces case were examined, and some projects about patent law were finished. In 2012, he joined the Beijing Boss & Young Patent and Trademark Attorneys Co., Ltd, of which main business areas include patent application, patent reexamination, the patent invalidation, patent infringement, intellectual property survey, intellectual property consulting, intellectual property rights early warning, the intellectual property rights strategy, and the guidance of development, etc. His main professional fields include chemistry, chemical engineering, materials, biological medicine, etc. Hundreds of patent cases were accomplished.

报告摘要
Lecture Abstracts

聚酯专利状况及企业专利保护策略

Landscape of Patents Relating to Polyesters and Corporation Patent Strategy

北京邦信阳专利商标代理有限公司

Boss & Young Patent and Trademark Law Office

摘要 /Abstract

在全球范围内，关于聚酯的专利（包括授权专利和专利申请）已经超过了一百万件，关于聚酯切片 / 纤维的专利也达到了五十万件左右。最近几年，关于聚酯专利的年申请数量较为平稳。这些专利主要集中在美国、日本等国家的大公司手中，例如杜邦、帝人、东丽等，并主要分布在聚酯纺丝、聚酯改性、新型聚酯等技术领域。因此，我国企业面临着较大的知识产权风险。

我国企业有必要建立合适的专利管理体系，完善专利管理机构，选择合适的专利战略，进而逐步形成合适的专利保护体系。我国企业应该在专利获取、维护、运用和保护等方面选择合适的策略。这样，让专利为企业创造价值。

In the whole world, there are more than one million patents (including granted patents and patent applications) relating to polyesters, and about five hundred patents relating to polyester slices/fibers thereof. In recent years, the annual quantity of application for patent relating to polyesters does not vary dramatically. Most of assignees of these patents are foreign corporations, such as DU PONT, TEIJIN and TORAY. These patents mainly relate to polyester spinning, polyester modification, novel polyesters and the like. Therefore, Chinese enterprises are facing high risk of patent infringement.

Accordingly, it is necessary for Chinese enterprises to establish suitable patent management system, perfect patent management department, select appropriate patent strategy, and thereby constitute appropriate patent protection system. In addition, Chinese enterprises should plan for the approval of application for patent, maintain of patent effectiveness, exploitation of patent, protection of patent right and the like. Our object is to make patents create values for the enterprises.

李 鑫　研究员

中国纺织科学研究院 副院长

Xin Li　Senior Researcher

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材料学博士，研究员，中国纺织科学研究院副院长。长期从事纤维的成形工艺及其结构机理研究，作为负责人和核心成员，主持和承担国家自然基金项目、“十一五”科技支撑计划、“十二五”科技支撑计划项目、中国石化委托技术开发项目等省部级以上重大科研项目 15 项。研究成果获省部级科技奖励 2 项，申报国家发明专利 10 余项。在核心期刊上作为第一作者和通讯作者发表学术论文 20 多篇，其中 SCI/EI/ISTP 收录文章 10 余篇。

Xin Li is a Doctor of material, Professor, and vice President of the China Textile Academy. He has long been studying the forming process of fiber and its structure mechanism. As the Chief Investigator and core member, he host and undertake more than 15 scientific research projects from National Natural Science Foundation, National Science and Technology Ministry during the Eleventh Five-year Plan and the Twelve Five-year Plan, and Sinopec authorized technology development projects, etc. Up to now, more than 20 journal papers including 10 papers collected in SCI/EI/ISTP were published and 10 patents were authorized. He won 2 provincial and ministerial science or technology awards.

报告摘要
Lecture Abstracts

新一代聚酯纤维关键技术专利分析

中国纺织科学研究院

摘要 /Abstract

新一代聚酯纤维是指实现产业化规模生产的，具有突出的高功能、高品质、低能耗和低排放等特征的聚酯及其纤维、非织造布、薄膜、片材和工程塑料。功能组分在线添加改性技术、大容量直纺装置侧线添加技术、纤维截面形态精确控制技术等是开发新一代聚酯纤维的关键核心技术，本报告综合新一代聚酯技术的国内外专利情况对相关技术的国内外发展趋势进行分析。

Advanced Polyester Fiber Materials is the industrial scale produced polyester and fiber materials, with prominent high-quality, multi-functional, low power consumption and low emission characteristics. The Manufacture technology of Advanced Polyester Fiber Materials focuses on the functional components on-line addition; the lateral line addition of large-capacity melt directly spinning device; the ultra fine and high profiled fiber spinning etc.This report summarizes the situation of domestic and foreign patents for Advanced Polyester Fiber Materials, and analyses the development trends of related technologies.