

# Conference Program

# World Conference on Fabric and Home Care

4-7 October 2016 | Shangri-La Hotel | Singapore

Reinventing for the New Normal  
**Are You Prepared?**



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<http://www.eventmobi.com/Singapore2016/>



Another quality meeting organized by **AOCS**®



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today and tomorrow,  
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**KaO**

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# Welcome!

As General Chair, and on behalf of AOCS, I'd like to personally welcome you to this important industry conference, which I believe has the most interesting and diverse program we have ever had.

In the long-standing tradition of AOCS Fabric and Home Care events, this second conference in Singapore will provide state-of-the-art perspectives on the technology, products, and business trends of the global fabric and home care business. We have a star-studded array of CEOs, high-level executives, and technical and business thought-leaders from corporations within and outside of our industry.

**Reinventing for the New Normal** reflects the need to discuss our commerce and technology decisions in light of the profound shifts that impact all businesses worldwide. The emergence of new business models, significant demographic trends, disruption of incumbents, new production, consumption and delivery systems, development and use of big data, and innovative sustainability concepts are just a few of the new developments we are all dealing with. While some of these concepts are known to us, the size, speed, and scope of these changes, and the multiplier effect of their combination—particularly those driven by advances in digital and biological technology—are generally accepted as historic. Some have even referred to this new synergy as the “4<sup>th</sup> Industrial Revolution.”

**Are You Prepared?** This program will offer solutions for this new business revolution with world-class speakers and authors, covering topics such as *Big Data*, *Design Driven Innovation*, *Disruptive Appliances*, *Circular Economy*, *the Death of Ownership*, *Frugal Innovation*, *Smart Homes*, and *Digital Strategies*.

We will also premier a new event, the **Executive Forum on Resources and Innovation**, featuring a Keynote Breakfast with Paul Polman, Unilever CEO. The Forum will address **Prospering in the New Normal of a Sustainable World**, with two other key presentations followed by a moderated discussion.

Finally, be sure to visit with the Exhibitors and view Technology Showcase presentations during the many networking events planned. These events will be ideal opportunities to interact with colleagues and to develop important connections with industry professionals from around the world.

I wish you a productive week in developing your business and an enjoyable experience as you soak up the ambience and beauty of Singapore and the Shangri-La Resort.

Keith Grime, General Chair  
President, JKG Consulting LLC, USA.



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Novozymes A/S.....	Cover 4

## Conference Organizer

P.O. Box 17190  
Urbana, Illinois, USA  
www.aocs.org

AOCS is the premier scientific association for the oil chemistry community and serves over 4,200 members from more than 90 countries worldwide. As an international professional organization, we provide current and emerging information and disseminate research results in oils, fats, lipids, proteins, surfactants, and related materials, through our meetings and publications.



# Executive Committee



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Senior Advisor, R&D  
Kao Corporation, Japan



**Technology Showcase Chair**  
**JOHN MCIVER**  
EyeNex, LLC, USA

*Save the Date!*

## Fabric and Home Care World Conference

**28–31 October 2018**

Boca Raton Resort & Club | Boca Raton, Florida, USA



Another quality meeting organized by **AOCS\***

# Thank You!

## World Conference on Fabric and Home Care Partners

AOCS and the Executive Committee greatly appreciate the support from these organizations to help promote the conference to a global audience. Please visit the Partners Display in the Island Ballroom Foyer to view materials from several of these organizations.

### CONFERENCE SPONSORS



Thursday Luncheon



Wednesday Happy Hour



Portfolio Bags



Badges and Notepads



Executive Forum on Resources and Innovation



Welcome Reception



Pens

### COOPERATING ORGANIZATIONS



### MEDIA PARTNERS





# Networking Events

*Make the most of your meeting experience!*

These are the ideal opportunities for face-to-face interactions with colleagues and to develop important connections with industry professionals from around the world. Visit with Exhibitors, view Technology Showcase presentations, and enjoy a variety of culinary specialties and refreshments.

All events take place in the Island Ballroom.

## Welcome Reception

**Tuesday | 4 October 2016**  
**18.00–19.30**

This event is included with registration. Additional tickets are available at the Registration Desk for US \$95.00.

## Happy Hour Reception

**Wednesday | 5 October 2016**  
**17.15–18.15**

This event is included with registration. Additional tickets are available at the Registration Desk for US \$95.00.

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## Luncheons

**Wednesday | 5 October**  
**12.10–13.30**

Both luncheons are included with registration. Additional tickets are available at the Registration Desk, based on availability, for US \$95.00 each day.

**Thursday | 6 October 2016**  
**12.10–13.30**

Sponsored by



## Executive Forum on Resources and Innovation Keynote Breakfast

**Friday | 7 October 2016**  
**8.30–10.00**

This event is included with registration. Additional tickets are available at the Registration Desk, based on availability, for US \$95.00.

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# Get THE APP!

*All of the conference information at your fingertips!*

<http://www.eventmobi.com/Singapore2016/>

**THE APP** is easy to load and even easier to use!  
It's accessible from smartphones, tablets, desktops, and laptops.

With **THE APP**, you can:

- ◆ Create your schedule
- ◆ Search presentations and abstracts
- ◆ Access presenter biographies
- ◆ View the registration list
- ◆ Connect with other attendees
- ◆ Submit questions for session discussions



Once **THE APP** loads on your device, hit the "share" (iPhone) or the "more" (Android) button if you want to add it to your home screen, then select "add to home screen", which will add it to the home screen of your device so you can refer to it easily.

*(Please note this is a web-based app, not an app available from your app store).*

**Need assistance? Stop by the Registration Desk and we'll be glad to help!**



# Schedule of Events

All events take place at the Shangri-La Hotel.

Tuesday   4 October 2016		
16.00–19.30	Registration	Island Ballroom Foyer
18.00–19.30	Welcome Reception	Island Ballroom


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Wednesday   5 October 2016		
7.30–18.15	Registration	Island Ballroom Foyer
9.00–12.10	Oral Presentations	Tower Ballroom
9.30–18.15	Exhibition   Technology Showcase	Island Ballroom
9.55–10.35	Refreshment Break	Island Ballroom
12.10–13.30	Luncheon	Island Ballroom
13.30–17.15	Oral Presentations	Tower Ballroom
14.40–15.20	Refreshment Break	Island Ballroom
17.15–18.15	Happy Hour Reception	Island Ballroom

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Thursday   6 October 2016		
7.30–17.15	Registration	Island Ballroom Foyer
9.00–12.10	Oral Presentations	Tower Ballroom
9.30–16.00	Exhibition   Technology Showcase	Island Ballroom
9.55–10.35	Refreshment Break	Island Ballroom
12.10–13.30	Luncheon	Island Ballroom
13.30–17.15	Oral Presentations	Tower Ballroom
15.05–15.45	Refreshment Break	Island Ballroom

Sponsored by  **BASF**  
The Chemical Company

Friday   7 October 2016		
<b>Executive Forum on Resources and Innovation</b>		
Sponsored by  <b>NOVOZYMES</b> Rethink Tomorrow		
7.30–10.30	Registration	Island Ballroom Foyer
8.30–10.00	Keynote Breakfast	Island Ballroom
10.00–10.30	Refreshment Break	Island Ballroom Foyer
10.30–12.15	Forum Presentations and Moderated Panel Discussion	Tower Ballroom



# General Information

## Attire

Business or Resort/Smart Casual

## Photography and Recording Policy

**In the Session Rooms:** No video recording, audio recording, or still photography is allowed, except by registered media, and offenders will be asked to leave the room.

**In the Exhibition Hall:** Video or still photography of exhibitors' booths or Technology Showcase presentations is not allowed, unless permission is granted by the exhibitor or presenter.

## Wi-Fi

Complimentary Wi-Fi is available in all meeting areas.

Network: Shangri-La  
No password required; just click "OK".

## THE APP

All of the conference information at your fingertips!

View online or download **THE APP** to your device: <http://www.eventmobi.com/Singapore2016/>

Once **THE APP** loads on your device, hit the "share" (iPhone) or "more" (Android) button if you want to add it to your home screen, then select "add to home screen", which will add it to the home screen of your device so you can refer to it easily.

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Wednesday, 5 October 2016 ▶ Tower Ballroom

# The Dynamic Future: What is the New Normal?

## MORNING

Chair: Keith Grime, JKG Consulting LLC, USA  
Co-chair: Per Falholt, Novozymes A/S, Denmark

9.00

**Introduction of Conference and Keynote.**

9.05

**Keynote: The New Standards of Innovation and Challenges in Modern Everyday Life**

Shailesh Jejurikar, President Global Fabric Care and Brand Building Organization, The Procter & Gamble Company, USA

9.35 **Keynote Q&A Discussion**

9.55

**Break/Dedicated Technology Showcase Presentations in the Exhibition Hall**

## Session I: Business and Market— The Financial and Commercial View

Chair: Keith Grime, JKG Consulting LLC, USA  
Co-chair: Masaki Tsumadori, Kao Corporation, Japan

10.35

**Introduction of Morning**

10.40

**Outside Looking In—Innovation “Cleans Up”**

Lauren Lieberman, Cosmetics; Household & Personal Care Equity Research Analyst, Barclays, USA

11.05

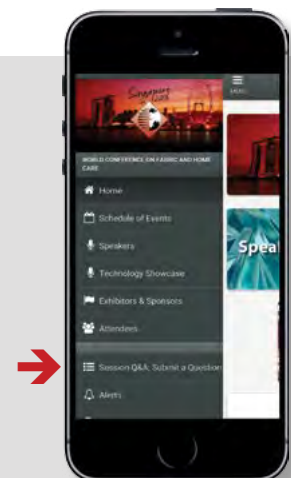
**Offering New Solutions with Laundry Detergents in Asia**

Katsuhiko Yoshida, Representative Director; Senior Managing Executive Officer; President, Consumer Products, Global; Kao Corporation, Japan

## Session Discussions

- ◆ Keynote presentations on Wednesday and Thursday will have dedicated discussion times.
- ◆ Each session will have a discussion time after the last presentation of the session.
- ◆ *Have a question?* Questions may be submitted via **THE APP** beginning at the start of each keynote/session throughout to the end of each keynote/session.
- ◆ Be sure to type in the speaker's name first, then your question to that speaker.
- ◆ You will want to make sure to download **THE APP** before the meeting starts so you are ready to submit questions!

View online or download **THE APP** to your device: <http://www.eventmobi.com/Singapore2016/>  
See the *General Information* section for instructions.





11.30



### Chocolate Cake or Headache? How Big Data is the New Knowledge Engine for Tomorrow

Mathieu Trépanier, CEO & Co-Founder, Tsquared Consulting Partners, Switzerland

11.55 **Q&A Discussion**

12.10

*Conference Luncheon in the Exhibition Hall*

## AFTERNOON

Chair: Gerard Baillely, The Procter & Gamble Company, USA  
Co-chair: Thomas Müller-Kirschbaum, Henkel AG & Co. KGaA, Germany

## Session II: Consumers in Flux—Are You in Touch and Relevant?

13.30

**Introduction of Afternoon**

13.35



### Winning Globally: Innovating Across the Lifespan—The New Imperative

Craig M. Vogel, Associate Dean for Research, College of Design, Architecture, Art and Planning, University of Cincinnati; President, Live Well Collaborative, USA

14.00



### Design Driven Innovation

Roberto Verganti, Professor of Leadership and Innovation, School of Management, Politecnico di Milano, Italy

14.25 **Q&A Discussion**

14.40

*Break/Dedicated Technology Showcase Presentations in the Exhibition Hall*

## Interested in Learning More?

### Roberto Verganti

Professor of Leadership and Innovation, School of Management Politecnico di Milano, Italy

**Overcrowded: Designing Meaningful Products in a World Awash with Ideas**—MIT Press, due 2016.

**Design Driven Innovation: Changing the Rules of Competition by Radically Innovating What Things Mean**—Harvard Business Press, 2009.

## Session III: Technology—The Changing Face of Fibers, Fabric, and Appliances

Chair: Manfred Trautmann, ManTra-Chem, Switzerland

Co-chair: Masaki Tsumadori, Kao Corporation, Japan

15.20



### Future Fabrics, Today: The Changing Face of Textile Innovation and the Implications for the Design and Care of Modern Clothes

Siegfried Winkelbeiner, CEO, Schoeller Textil AG, Switzerland

15.45



### Are You Ready for the New Textile Revolution? Look for Innovation Designed to Minimize Eco-impact

James Carnahan, Global Sustainability Manager, Archroma Singapore, Pte. Ltd., Singapore

16.10



### Technology Management Toward a New World of Washing

Masazumi Kikukawa, Executive Director, Executive Officer, Lion Corporation, Japan

16.35



### Zero Water, Zero Energy, and Zero Dirt—Disruptive Technologies and Their Pathway into Household Appliances

Tobias Kimmel, Professor, Cleaning Technology, University of Applied Science Niederrhein, Germany

17.00 **Q&A Discussion**

17.15

*Happy Hour Reception in the Exhibition Hall*



# Thursday, 6 October 2016 ▶ Tower Ballroom Disruption and Innovation— Challenges and Opportunities for Your Business

## MORNING

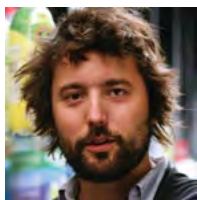
Chair: Keith Rutherford, Unilever R&D Port Sunlight, United Kingdom

Co-chair: Keith Grime, JKG Consulting LLC, USA

9.00

### Introduction of Keynote

9.05



**Keynote: Engaging Brands, Retailers, and Consumers in Recycling the Non-recyclable: Opportunities that Leverage the Circular Economy While Driving Sales**

Tom Szaky, Founder and CEO, TerraCycle, Inc., USA

9.35

### Keynote Q&A Discussion

9.55

*Break/Dedicated Technology Showcase Presentations in the Exhibition Hall*

## Session IV: Disruptive Business Models— Adapting to Change—Part I

Chair: Thomas Müller-Kirschbaum, Henkel AG & Co. KGaA, Germany

Co-chair: Per Falholt, Novozymes A/S, Denmark

10.35

### Introduction of Morning

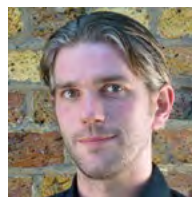
10.40



**Amazon—What is Going on Here?**

Torsten Pilz, Vice President, Global Specialty Fulfillment, Amazon

11.05



**Is the Death of Ownership the New Normal for the Home Care Industry? How the Circular Economy will Overturn Our Concept of Possession**

Ian Bell, Head of Home Care Research, Euromonitor International, United Kingdom

11.30



**Penetrating and Understanding Consumer and Market Insights to Develop Winning Business Models Adapted for Dynamic Developing Regions**

Stanislav Vecera, President and General Manager, The Procter & Gamble Company, Japan

11.55 **Q&A Discussion**

12.10

*Conference Luncheon in the Exhibition Hall*

## AFTERNOON

## Session IV: Disruptive Business Models— Adapting to Change—Part II

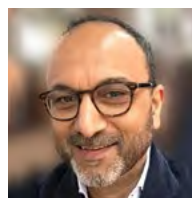
Chair: Andrés Jaffé, BASF SE, Germany

Co-chair: Manfred Trautmann, ManTra-Chem, Switzerland

13.30

### Introduction of Afternoon

13.35



**Sustainable Oleochemicals—Not Only a Vision**

Rahul Kale, Group Head of Oleochemicals & Biofuels, Wilmar International Limited, Singapore



14.00



**From Small to Big—A Business Model to Develop Smallholders for Sustainable Supply Chain Partners**

Nico Roozen, Executive Director, Solidaridad, The Netherlands

14.25



**The Rise of the Frugal Society: Co-innovating Faster, Better, Cheaper with Value(s)-Conscious Consumers.**

Navi Radjou, Innovation and Leadership Strategist, USA; Fellow, Judge Business School, University of Cambridge, United Kingdom

14.50 **Discussion/Q&A**

15.05

*Break/Dedicated Technology Showcase Presentations in the Exhibition Hall*

**Session V: The Digital Future is Here—Ready, Set, Go!**

Chair: Gerard Baillely, The Procter & Gamble Company, USA  
Co-chair: Keith Rutherford, Unilever R&D Port Sunlight, United Kingdom

15.45



**Deciphering the Code—Digital Strategies for Customer Success**

Frithjof Netzer, Senior Vice President, BASF 4.0, BASF SE, Germany

16.10



**Tipping the Scales of Bioinnovation**

Robert Blazej, Senior Manager, Head of San Francisco Unit, Novozymes, USA

16.35



**Intelligent Homes for a Smart Nation**

Sze Wee Tan, Executive Director, A\*STAR Science and Engineering Council (SERC), Singapore

17.00 **Q&A Discussion**

**Interested in Learning More?**

**Tom Szaky**

Founder and CEO, TerraCycle, Inc., USA

***Make Garbage Great: The Terracycle Family Guide to a Zero-Waste Lifestyle***—Harper Collins Publishers, 2015. (Co-authored with Albe Zakes.)

***Outsmart Waste***—Berrett-Koehler 2014.

***Revolution in a Bottle***—Portfolio 2009, 2013.

**Navi Radjou**

Innovation and Leadership Strategist, USA; Fellow, Judge Business School, University of Cambridge, United Kingdom

***Frugal Innovation: How To Do More With Less***—Economist Books, 2015. (Co-authored with Jaideep Prabhu, with a Foreword by Paul Polman, CEO, Unilever.)



Friday, 7 October 2016

# Executive Forum on Resources and Innovation

*with Moderated Panel Discussion*

## How Do You Prosper in the New Normal of a Sustainable World?

### ISLAND BALLROOM

8.30  
*Keynote Breakfast*

9.10  
**Introduction of the Keynote**  
Keith Grime, JKG Consulting LLC, USA

9.15  
**Keynote: Leading in a World of Exponential Change**  
Paul Polman, CEO, Unilever, United Kingdom



10.00  
*Refreshment Break in the Island Ballroom Foyer*

### TOWER BALLROOM

10.30  
**Introductions**

10.35  
**Green Chemistry: Driving Innovation to Commercialization**  
John C. Warner, President and Chief Technology Officer, Warner Babcock Institute for Green Chemistry, LLC, USA



11.00  
**Future of Water—Challenges and Opportunities for the Fabric and Home Care Industry**  
Asit K. Biswas, Distinguished Visiting Professor, Lee Kuan Yew School of Public Policy, National University of Singapore, Singapore; and co-founder, Third World Centre for Water Management, Mexico



11.25  
**Moderated Panel Discussion**  
Moderator: Patrick J. Donnelly, CEO, AOCS, USA



12.10  
**Closing Comments**

FRIDAY ▶ 7 OCTOBER 2016

Sponsored by



Rethink Tomorrow



# Technology Showcase

## Island Ballroom

- ◆ These virtual presentations are web-based, so you may view at any time from your own laptop, tablet, or phone.
- ◆ View online or download **THE APP** at: <http://www.eventmobi.com/Singapore2016/>.
- ◆ Viewing areas are also available within the Exhibition Hall.

## Technology Showcase Committee

**John McIver**, EyeNex, LLC, USA, Chair  
**Michael Dreja**, Henkel AG & Co. KGaA, Germany  
**Ole Kirk**, Novozymes A/S, Denmark  
**Scott Power**, DuPont Industrial Biosciences, USA  
**Hans Jürgen Scholz**, WeylChem, Wiesbaden GmbH, Germany  
**Nilesh Shah**, The Dow Chemical Company, USA

## Visit with the Showcase Authors\*

### Wednesday | 5 October 2016

9.55–10.35

#### Stand A

**Softness and Detergency Properties of Cationic Cellulosic Polymers in Two-in-One Liquid Laundry Formulation.** Nilesh Shah<sup>1</sup>, Jie Han<sup>2</sup>, Kathy Lichtenwald<sup>1</sup>, Steven Jin<sup>2</sup>, and Wai Kin Albert Lee<sup>2</sup>, <sup>1</sup>The Dow Chemical Company, USA; <sup>2</sup>The Dow Chemical Company, China

**Eco Friendly Ultra Concentrated Liquid Laundry Detergent.** Takahiro Okamoto and Megumu Ono, Lion Corporation, Japan

#### Stand B

**High Performance in a Compact Format.** Rainer Dobrawa, Kelly Zhang, Serena Shi, Jia Zhou, and Franz Weingart, BASF (China) Company Ltd., Shanghai, China

**Stability of Fabric Softeners Containing Polymers.** Rajan Panandiker and Travis Hodgdon, The Procter & Gamble Company, USA

14.40–15.20

#### Stand A

**Physicochemical Characterization of Sulphonated Methyl Esters (Palmfonate) via "Computer" Purification Approach.** Hui Xu, KLK OLEO, Malaysia

**From Technology Discrimination to Consumer Relevancy.** Nicolas Olmedo and Rodrigo Olmedo, CONSUMERTEC, Ecuador

#### Stand B

**Modification of Sodium Lignosulfonate Acid Using Diisocyanate into Surfactants.** Jessica See<sup>1</sup>, Yongjia Li<sup>2</sup>, Xijiang Yin<sup>1</sup>, Weng Kee Leong<sup>3</sup>, and Chunxiang Li<sup>1</sup>, <sup>1</sup>Singapore Polytechnic, Singapore; <sup>2</sup>Kunming University; <sup>3</sup>Nanyang Technological University, Singapore

**A Method for Quantifying the Additional Effects of Detergent Components on the Cleaning Power.** Masaru Oya, Akihiro Fujimoto, and Terumasa Tanaka, Yokohama National University, Japan

### Thursday | 6 October 2016

9.55–10.35

#### Stand A

**New Dispersant Polymers for Reduction of Spotting in Automatic Dish Detergents.** Scott Backer<sup>1</sup>, Severine Ferrieux<sup>2</sup>, Paul Mercado<sup>1</sup>, Taylor Pang<sup>3</sup>, and Eric Wasserman<sup>1</sup>, The Dow Chemical Company, USA; <sup>2</sup>The Dow Chemical Company, France; <sup>3</sup>The Dow Chemical Company, China

**Low Residue Soluble Unit Dose Films.** Thomas Yogan, MonoSol WSFD of Kuraray, USA

#### Stand B

**Novel Continuous Processing of Surfactants and Surfactant Intermediates.** Sanjay Trivedi, Technithon International Pte Ltd., Singapore and Technithon Technologies Pvt. Ltd., India

**Nymphal: Design for Safety or Future Proofing the Perfumer's Palette and Creativity.** Agnès Bombrun<sup>1</sup> and Philippe Poirier<sup>2</sup>, <sup>1</sup>Givaudan, Switzerland, <sup>2</sup>Givaudan, France

15.05–15.45

#### Stand A

**Improving Autodish Formulations with Novel Copolymers of Itaconic Acid.** John R. Shaw, Itaconix Corporation, USA

**Validating the Sustainability of Ingredients.** Stephen Johnson and Chris Sayner, Croda, UK

\* Underline identifies presenting author.



Enhanced Loop Reactor for Ethoxylation

## Leading technologies for detergent, surfactant and chemical industries



### SURFACTANTS

#### Anionics

- Sulphonation/ Sulphation
- Vacuum Neutralization
- Drying

#### Non Ionics

- Ethoxylation/ Propoxylation
- Alkanolamides

#### Amphoterics & Cationics

- Betaines
- Esterquats
- Aminoxides



### DETERGENTS

#### Powder

- Spray Drying Tower process
- NTD (non tower/ agglomeration) process

#### Liquids

- Batch / Continuous



### ORGANIC CHEMICALS

- Linear Alkyl Benzene
- Ethyl Alcohol
- Starch & Yeast
- Fatty Amines



### INORGANIC CHEMICALS

- Sodium Silicate
- Sulphuric Acid
- Sodium & Potassium Sulphate
- Zeolite
- Sodium Tripolyphosphate
- Single & triple Superphosphates
- Phosphoric Acid
- NPK
- PAC (Poly Aluminium Chloride)

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& Chemicals

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# The Exhibition

Discover the leading-edge business and technology solutions available to the fabric and home care industry! The Exhibition is the center for the conference activities and hosts the Welcome Reception, Happy Hour Reception, refreshment breaks, and two luncheons.

## Company Descriptions

### Ashland Inc. (204)

200 Pandan Loop, #07-01, Pantech 21  
Singapore 128388  
www.ashland.com

Ashland Inc. (NYSE: ASH) is a global leader in providing specialty chemical solutions to customers in a wide range of consumer and industrial markets. For home care, customers look to us for innovation in four major segments: fabric care, household, dishwashing, and institutional and industrial (I&I) cleaning. We supply dye-transfer inhibitors for laundry products. Our products improve cleaning performance in the kitchen and bathroom. We can improve fragrance delivery and we are developing new solutions for higher-performing, more environmentally-friendly dishwashing products.

### Buss ChemTech AG (100)

Hohenrainstrasse 12A  
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www.buss-ct.com

Buss ChemTech's non-ionic surfactant production technology is known for its operational safety, performance reliability and high product quality. It is employed at dozens of sites around the world for both specialty and commodity products by multi-national, regional and smaller producers alike. From engineering and key equipment packages to turnkey plants, Buss ChemTech can provide the scope of supply that fits your needs. Come see us!

### Center for Testmaterials BV (203)

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www.cftbv.nl

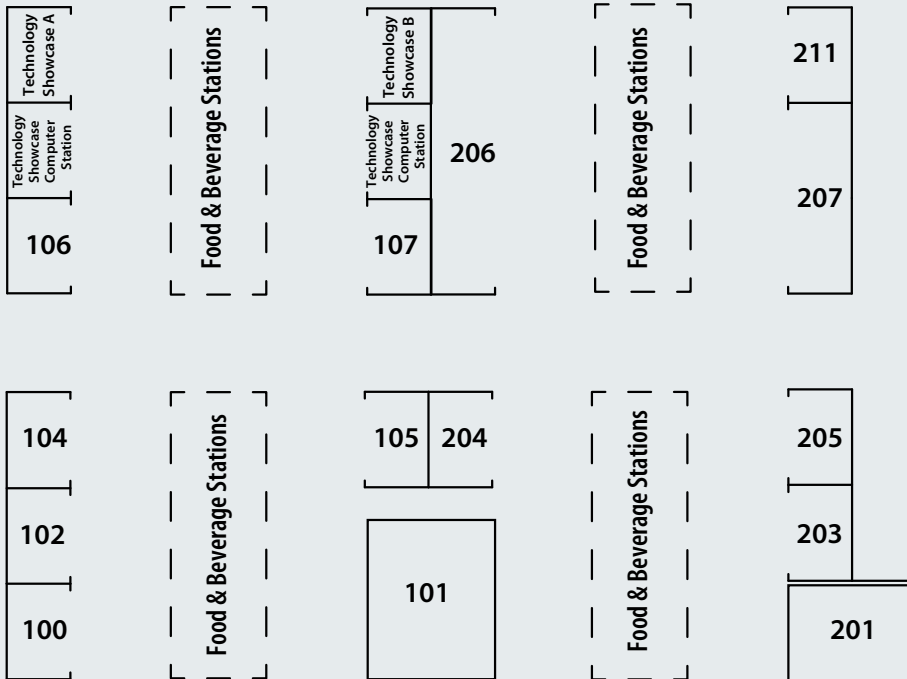
Testmaterials is the one-stop-shop for all

your needed testmaterials for detergent performance testing. We deliver our products worldwide from our factory in the Netherlands and we also supply materials produced by other suppliers. All the testmaterials sold in the industry are available through CFT. Next to the widest range of soiled testfabrics, we also offer (AISE) dyed fabrics, textiles for fabric care, whiteness testing and standardized testmaterials for dishwash testing and hardsurface cleaning.

### CONSUMERTEC (105)

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Quito, 170910, Ecuador  
www.consumertec.com

Create—Invent—Innovate: Experiment in consumer relevant terms. CONSUMERTEC provides the laundry industry with the first and unique integrated platform that combines in-vitro (dingy test fabrics) and in-silico experimentation (online software



## Exhibitors

- Ashland Inc. (204)
- Buss ChemTech AG (100)
- Center for Testmaterials BV (203)
- CONSUMERTEC (105)
- Croda Singapore Pte. Ltd. (104)
- Desmet Ballestra SpA (207)
- D-Labs (205)
- H&PC Today* / TKS Publisher (211)
- IIT Srl, Mazzoni LB Group (102)
- International Network of Cleaning Product Associations (INCPA) (206)
- KLK Oleo (101)
- Paramount Minerals and Chemicals Limited (106)
- Sensient Fragrances (201)
- Trivedi Groupe (107)





platform) to model and simulate consumer responses at real laundry scenarios concerning cleanliness and whiteness perception.

### Croda Singapore Pte. Ltd. (104)

1 Fusionopolis Link  
Nexus @ One North #06-05  
Singapore 138542  
www.croda.com

We are the name behind the high performance ingredients and technologies in some of the biggest, most successful brands in the world—creating, making, and selling specialty chemicals that are relied on by industries and consumers everywhere. Find out more about our sustainable, innovative ingredients for household and I&I cleaning.

### Desmet Ballestra SpA (207)

Via Piero Portaluppi, 17  
Milano, 20138, Italy  
www.desmetballestra.com

Desmet Ballestra SpA is the world leader in the design and supply of plants for anionic surfactants, non-ionic surfactants, and detergents. The company is a preferred technology supplier to all the major surfactant and detergent manufacturers worldwide, and has built no fewer than 1,800 plants in over 120 countries since it was founded in 1960.

### D-Labs (205)

32 Andretti Court  
Truganina, Victoria 3029, Australia  
www.d-labs.com.au

D-Labs provides complete end-to-end development and testing solutions for the household and industrial detergent markets. We can manage one or all aspects of your project. From ideation to market evaluation, product development, testing and claims support, to manufacturing and quality assurance. Throughout the product chain, we optimize performance and efficiency to deliver leading and competitive products on time.

### H&PC Today / TKS Publisher (211)

Viale Brianza 22  
Milano, 20127, Italy  
www.teknoscienze.com

H&PC Today accounts the innovations that the research brings to people in fields such as skincare, homecare, and wellbeing. The journal hosts both technical and opinion articles and regularly deals with topics like

## Schedule

### Tuesday | 4 October 2016

18.00–19.30	Welcome Reception	Sponsored by
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### Wednesday | 5 October 2016

9.30–18.15	Exhibition	
9.55–10.35	Refreshment Break	
12.10–13.30	Luncheon	
14.40–15.20	Refreshment Break	
17.15–18.15	Happy Hour Reception	Sponsored by

### Thursday | 6 October 2016

9.30–16.00	Exhibition	
9.55–10.35	Refreshment Break	
12.10–13.30	Luncheon	Sponsored by
15.05–15.45	Refreshment Break	

sustainable innovation and regulations. Monographic supplements to the journal focusing on specific selected topics of interest are regularly published along with the main issues of the journal. *H&PC Today* works closely with many associations in the sector and important university faculties. Providing accurate information on companies and its people is the link that keeps it all together.

### IIT Srl, Mazzoni LB Group (102)

Corso Sempione 212/bis  
Busto Arsizio (VA), 21052, Italy  
www.iit srl.it, www.mazzonilbgroup.com

IIT designs, manufactures, and supplies complete plants and equipment for the production of surfactants to the detergent, cosmetic, and chemical industries with proprietary innovative technologies. IIT is part of Mazzoni LB Group, the world leading supplier of plants and machinery to the soap, detergent and food industries with more than 200 employees and 5000 units implemented worldwide.

### International Network of Cleaning Product Associations (INCPA) (206)

American Cleaning Institute, 1331 L Street NW, Suite 650  
Washington, DC 20005, USA  
www.incpa.net

The International Network of Cleaning Product Associations (INCPA) is an informal coalition of trade associations located in various regions of the world that represent cleaning product formulators. The Network coordinates and actively engages in targeted efforts to better understand and address chemical management issues of international or cross-regional nature that affect the cleaning products industry. INCPA member organizations serve economies totaling 2.7 billion people, with the market value of their member companies' products totaling \$130 billion (USD). INCPA members are: Accord Australasia, American Cleaning Institute® (ACI), Asociación Nacional de la Industria de Cuidado Personal y del Hogar A.C. (CANIPEC), Brazilian Industry Association of Cleaning Products and Similar Items (ABIPLA), Canadian Consumer



Specialty Products Association (CCSPA), Consumer Specialty Products Association\* (CSPA), Indian Home & Personal Care Industry Association (IHPCIA), International Association for Soaps, Detergents and Maintenance Products (A.I.S.E.), Japan Soap and Detergent Association (JSDA).

### KLK Oleo (101)

Level 8, Menara KLK, No. 1, Jalan PJU 7/6, Mutiara Damansara  
Petaling Jaya, Selangor 47810, Malaysia  
[www.klkoleo.com](http://www.klkoleo.com)

Excellence in Oleochemicals—Established 25 years ago, KLK OLEO is a renowned global player in the manufacture and sales of quality, sustainable oleochemical products. Our world-scale, integrated oleochemical complexes are strategically located in Malaysia, Indonesia, China, and Europe. KLK OLEO's production portfolio ranges from basic fatty acids and glycerine, fatty alcohols and fatty esters, sulphonated methyl esters, surfactants to nutraceuticals, and cosmeceuticals range of vitamin E. Our products are used in diverse end-use applications: home care, personal care, pharmaceuticals, cosmetics,

toiletries, foods, beverages, flavors, fragrances, and in industrial chemical use such as lubricants, polymers, textile, leather, and the paper industries.

### Paramount Minerals and Chemicals Limited (106)

231, A-Z Industrial Estate, GK Marg, Lower Parel  
Mumbai, 400013, India  
[www.pmlindia.com](http://www.pmlindia.com)

Paramount is manufacturer of specialty chemicals such as: optical brighteners for detergents, paper and textile industries; polymer/anti-redeposition agent for laundry detergents and cleaning products; glycerol monostearate for cosmetics and food industries; and cationic guar gum for the personal care industry. We are certified for ISO 9001, ISO 14001 & OHSAS 18001.

### Sensient Fragrances (201)

Carretera Armilla Km 2,5  
Armilla, Granada 18100, Spain  
[www.sensient.com](http://www.sensient.com)

Our name communicates what we do:

enhance **SENS**ory experiences through specialized ingred**IENT**s. We manufacture and supply fragrance solutions for a wide variety of products used in fabric care, home care, fine fragrances, personal care, and oral care. We engineer the sweet smell of success through creative and technology platforms. Our mission is to create fully integrated fragrance solutions that boost the sensorial, emotional and functional benefits. We invite you to visit our stand for an unforgettable multi-sensorial experience.

### Trivedi Groupe (107)

Shiv Anand-A, 1st Floor, 372/374 S. V. Road, Goregaon (West), Mumbai 400104, India  
24 Sin Ming Lane, #06-98 Midview City, 573970, Singapore  
[www.trivedigroupe.com](http://www.trivedigroupe.com)

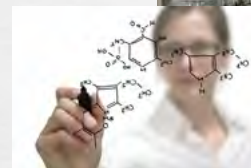
Trivedi Groupe (TG) is an established and experienced solution provider in the field of surfactants, pollution control systems, and edible oils. TG has a trading arm in Singapore for surfactants, specialties, and oleo products. This company carries out market research, product development, and offers a logistics and distribution hub in Singapore.



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[www.buss-ct.com](http://www.buss-ct.com)

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# Abstracts

(Abstracts appear as submitted and in order of presentation.)

**Wednesday | 5 October 2016**

## The Dynamic Future: What is the New Normal?

**Keynote: The New Standards of Innovation and Challenges in Modern Everyday Life.** *Shailesh Jejurikar, President Global Fabric Care and Brand Building Organization, The Procter & Gamble Company, USA*

The world's consumers are changing, and businesses serving consumers must understand the drivers that will transform our industries during the rest of this decade and beyond:

- Mass urbanization
- We're getting older
- The middle class is growing thanks to shifts in the global economic powers
- Climate change and resource scarcity
- Technological breakthroughs put consumers in the driver's seat

Over the next decade, success or failure for consumer goods companies and retailers will be measured by the speed and thoroughness with which we're able to adapt to change and innovate at all levels - global, national, local and personal. In these challenging times, many of the old rules and assumptions of our industries no longer apply. Consumer expectations are increasing while their tastes and preferences change at a dizzying pace.

## Session I: Business and Market— The Financial and Commercial View

**Outside Looking In—Innovation “Cleans Up”.** *Lauren Lieberman, Cosmetics; Household & Personal Care Equity Research Analyst, Barclays, USA*

While the past decade has seen the pace of global category growth falter, the pace of change has only picked up. Newly emerging consumer preferences, categories, players and distribution channels are challenging the traditional CPG playbook day in and day out. As an entity that is consistently under the public eye, how does one come out on top and deliver on shareholder expectations?

In laundry, while macroeconomic development and the tale of a rising middle class will long underpin relatively stronger growth rates in the emerging markets, it's important to remember that there is still growth to be had in developed markets. As we see it, innovation is the most impactful antidote to sluggish growth and there is tremendous opportunity ahead in a world where consumer preferences and needs are diverging. The end of one size fits all should plant the seeds of innovation. An analysis of key consumer trends redefining the Laundry industry reveals interesting examples of portfolio renovations that have managed to make a mark and yet others that are still testing out new concepts. In our view, change births opportunity for creativity and it is those companies that can profitably leverage innovation that will emerge the share winners.

**Offering New Solutions with Laundry Detergents in Asia.** *Katsuhiko Yoshida, Representative Director; Senior Managing Executive Officer; President, Consumer Products, Global; Kao Corporation, Japan*

Detergent's role has evolved along with consumer lifestyles and values, expanding from simply removing dirt and bacteria for individual hygiene to creating comfortable living environments to contributing to the sustainability of the world. What will be the next step in detergent's value progression? My presentation provides an answer by looking at an emerging social issue in Asia: population aging.

Economic growth in Asia has contributed to greater longevity, leading to an increase in Asia's senior citizen population. Care for the elderly in this region is traditionally undertaken by children and grandchildren, often without significant public funding or support. Though it can strengthen family ties, Asia's norm of home-based eldercare can also cause significant physical and psychological stress.

Products are already being developed, especially in rapidly-aging Japan, to alleviate the physical stress of eldercare. However, despite projected rapid population aging in Asia, innovation to ease the psychological stress of eldercare still lags behind. By responding to this unmet need and developing products that help both caregivers and care receivers live in an environment of positivity and human kindness, our industry can make a valuable contribution to society.

Through a case study of a detergent developed in Japan to eliminate one cause of psychological stress in eldercare, I highlight the growing importance of a new value dimension for detergent: the human and social. I conclude by sharing my belief that the fabric and home care industry must collectively re-imagine detergent's value dimension as we pursue social innovation for aging societies.

**Chocolate Cake or Headache? How Big Data is the New Knowledge Engine for Tomorrow.** *Mathieu Trépanier, CEO & Co-Founder, Tsquared Consulting Partners, Switzerland*

Big Data is providing new possibilities to innovate and to understand consumer and customer wants and needs, and to discover emerging trends and threats.

This talk will provide an 'outside-in' perspective on how specific Big Data initiatives are opening opportunities to both anticipate, and shape tomorrow's rules of the game in home and fabric care.

Among other areas, we shall be focusing on some of the latest advances in predictive and behavioural analytics.

## Session II: Consumers in Flux— Are You in Touch and Relevant?

**Winning Globally: Innovating Across the Lifespan—The New Imperative.** *Craig M. Vogel, Associate Dean for Research, College of Design, Architecture, Art and Planning, University of Cincinnati; President, Live Well Collaborative, USA*

One theme that is common to all ages is the search for “Flow,” the theory developed at the University of Chicago, states we are all seeking to find a balance between ability and challenge. The search for mental and physical wellness and a balanced life style is something everyone strives for. This search also applies to important underserved consumer segments (women 50-70, millennials, empty nesters, and consumers with disabilities) and industry should not ignore them anymore. Consumers today are either trying to keep up and optimize the face of rapidly changing technology and increasing information, or are finding ways to simplify and avoid it. So the challenge for all companies in the fabric and home-care industry today is clear, while everyone seeks a state of “Flow” they vary on how they want to achieve it.



We believe there are ways to navigate this new landscape and we have the future of innovation working on it in Cincinnati and Singapore. During the past decade P&G, the University of Cincinnati, and Singapore Polytechnic have developed a unique innovation ecosystem focused on human centered solutions to opportunities for healthcare and consumer companies. Interdisciplinary student teams, coached by faculty and expert advisors from member companies, use their talent and untainted view of the world to understand, conceptualize, and refine ideas using an iterative human centered approach. The Live Well Collaborative has been consistently taking chaos and delivering clarity to its member companies using design to solve the world's problems one project at a time.

**Design Driven Innovation.** *Roberto Verganti, Professor of Leadership and Innovation, School of Management, Politecnico di Milano, Italy*

We live in a world awash with ideas. Thanks to the web and to powerful ideation approaches such as open innovation, design thinking, or crowdsourcing, organizations have today easy access to an unprecedented amount of novel concepts. In this context, what organizations lack is not "one more idea", but the capability to make sense of an overabundance of opportunities. They need a new meaningful vision, i.e. a new lens and a new map that indicates which direction to go. Without a meaningful vision, organizations tend to select those ideas that better address existing problems, and disregard solutions with higher potential, regardless to the number of ideas generated.

How to create a new meaningful vision that customers love, and that our organization is passionate for? Visions have long been considered as a result of an invisible process occurring in the mind of individuals. However, Verganti's research shows that visions can also spur from an organizational process that can be planned and executed. In particular, leveraging on examples from projects conducted by organizations such as Nest Labs, Apple, Yankee Candle, and Philips Healthcare, Verganti will show that this process is significantly different than classic ideation approaches. First, instead of moving from the outside-in, it moves from the inside-out: it does not solicit early input from users and other outsiders, but it starts by engaging the internal organization. Second, instead of practicing the art of ideation, it requires to practice the art of criticism: the art that enables us to explicitly question existing assumptions and turn them into new bold interpretation. Taking a critical stance does not imply being negative, but going deeper, searching for contrasts between different perspectives, creating tensions, looking from a new vantage point, reshuffling things to find a new order. The speech describes how to practice the art of criticism through cases and methods, such as working with a sparring partner, or clashing visions within radical circles and with new interpreters.

## Session III: Technology—The Changing Face of Fibers, Fabric, and Appliances

**Future Fabrics, Today: The Changing Face of Textile Innovation and the Implications for the Design and Care of Modern Clothes.**

*Siegfried Winkelbeiner, CEO, Schoeller Textil AG, Switzerland*

We all know the popular saying, "fine feathers make fine birds". Besides protection, showing individualism and differentiation, future clothing will additionally influence stronger than ever personal performance, wellbeing and recovery rates.

The talk will highlight the various trends to new fabrics and technologies relevant for textile performance, based also on new yarn technology.

Special focus will be on the major trend to wearable technology in our clothing. Particularly in this field it will be important to think early about caring of textiles – as complete sets of new requirements are coming up.

We see trends to washable high fashion clothing as for example designed, produced and showcased by Gilles Decan. Taking into account the ongoing pressure on further reduction dry cleaning operations.

Even more intriguing will be the question: How do we care for clothing on man's flight to the Mars?

It is of high importance that clothing will become ever more environmentally sustainable. This can only be achieved by long lasting and recyclable fabric and knit constructions.

Here we see the trend of Cosmopolitan, Recycling, fibers out of bio mass and fibers out of waste materials.

The textile world is in a major state of change; our future clothing will be highly multi-functional, adapting to circumstances and absolutely sustainable in production, wearing and disposing. The enhancement and caring of this "second skin" will be a major opportunity for cleaning and care product providers – the challenges are best tackled in synergy – for example by the textile, electronics and chemical industry together.

**Are You Ready for the New Textile Revolution? Look for Innovation Designed to Minimize Eco-impact.** *James Carnahan, Global Sustainability Manager, Archroma Singapore, Pte. Ltd., Singapore*

We only have one planet and it is in our interests to conserve the natural resources that we borrow from our children. The planet will continue long after we have eradicated ourselves through a shortsighted view for short-term gains.

The textile manufacturing value chain is currently in a state of flux; pollution, dangerous labor practices and consumer health have all been highlighted by a number of concerned groups in recent years - and the industry has richly deserved the bad press as it has allowed these practices to continue unchecked and has turned a "blind eye" to the realities that are blighting the industry. Something has to change - a "business as usual" approach is no longer acceptable, but how to make fundamental change in an industry where "cost" is king?

Permanent change can only be made certain through systematic collaboration along the textile value chain; the development of common goals, a shared commitment to achieving those goals and an acknowledgment of the compromises that are required, these all play a part to embed change in textile manufacturing for the future.

It is not only our business practices that have to be substituted, but also our chemistry. How can we balance the cost of compliance with more sustainable production? This is where innovation holds the key — by taking a holistic approach to the manufacture of textiles we can address the total cost of production; introducing technologies that have been researched and developed that allow the reduction of resources requirements, whilst at the same time using chemistries which reduce toxicological and/or eco-toxicological impacts.

**Technology Management Toward a New World of Washing.**

*Masazumi Kikukawa, Executive Director, Executive Officer, Lion Corporation, Japan*

Since value provided by laundry detergents has been diversified, the variety of products with features focusing on various factors, such as fragrance, hygiene, convenience, safety, environment and so on, have been developed. Thus, consumer satisfaction has reached the relatively high level.

However, I believe we should keep our effort to strengthen the value based on the washing function which is the most basic one for laundry detergents when we think about the world of washing in future.

I think it is the important mission of technical management to provide a consumer with a washing performance really necessary at a perceivable level by applying the latest science and technologies.

In my presentation, I would like to discuss about two points; one is indispensable washing performance for detergents in future derived from consideration of consumer satisfaction, the latest washing technologies and analytical technologies. The other is the technology management for the creation of new detergent's value in future provided by the new washing performance.

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- New Ingredient for Toiletries

### Greener Footprint

- Resource Efficient •
- Sustainable •
- Eco-friendly



**Zero Water, Zero Energy, and Zero Dirt—Disruptive Technologies and Their Pathway into Household Appliances.** *Tobias Kimmel, University of Applied Science Niederrhein, Germany*

The last major change of washing technologies in the household sector took place in the 50s of the last century, when the process of washing and spinning was made automatic. In the meantime, many new ideas were tested, but the washing process is still as it was. Only slowly the horizontal axis machines gain market shares over the vertical axis washing machines, but the principle is the same: Water, detergent and laundry are mixed mechanically for about one hour to get a sufficient cleaning result. In recent years things started to move more quickly. A new washing process was developed that promised cleaning substantially without water. This would change washing drastically. Old machines would be replaced, textiles would have to adapt to the new cleaning technology. Is this the future?

Thursday | 6 October 2016

## Disruption and Innovation—Challenges and Opportunities for Your Business

**Keynote: Engaging Brands, Retailers, and Consumers in Recycling the Non-recyclable: Opportunities that Leverage the Circular Economy While Driving Sales.** *Tom Szaky, Founder and CEO, TerraCycle, Inc., USA*

Most products and packages that are not recyclable today are technically recyclable, but are not actually recycled because it costs more to collect and process them than their results are worth. This trend has recently been compounded by the fall in oil prices which has led to a global downturn in recycling rates. Learn the fundamentals of what makes something recyclable or not, how to render your product or package nationally recyclable today, even without redesigning it, and how doing so can drive award winning ROI to your brand and retail locations, by driving foot traffic, market share increase and incremental sales.

### Session IV: Disruptive Business Models—Adapting to Change—Part I

**Amazon—What is Going on Here?** *Torsten Pilz, Vice President, Global Specialty Fulfillment, Amazon*

Last year, we became the fastest company to ever achieve \$100Bn in sales. Amazon has grown organically into a meaningful business quickly without major acquisitions. What is going on here?

We possess a distinctive organizational culture which cares deeply about, and acts with conviction on, a small set of principles: Customer obsession rather than competitor obsession, eagerness to invent and pioneer, willingness to fail, the patience to think long-term, and professional pride in operational excellence.

We want to be a large company that is also an invention machine. We want to combine the extraordinary customer centric capabilities that are enabled by size and with the speed of movement, nimbleness, and risk accepting mentality that is normally associated with entrepreneurial start-ups. One area where we are especially unique is the acceptance of failure. Failure and invention are inseparable twins. To invent you have to experiment. Most large organizations embrace the idea of invention, but are not willing to suffer the string of failed experiments necessary to get there. Big returns often come from betting against conventional wisdom, and conventional wisdom is usually right.

One thing that is exciting about our current scale is that we can put our inventive culture to work on moving the needle on sustainability

and social progress. We reached 25% renewable energy use for Amazon Web Services last year, are on track to achieve 40% this year and are working on goals that will cover all of Amazon's facilities around the world, including the fulfillment centers. In addition, we continue to pioneer new programs for employees, Career Choice, Leave Share and Ramp Back are a few examples.

**Is the Death of Ownership the New Normal for the Home Care Industry? How the Circular Economy will Overturn Our Concept of Possession.** *Ian Bell, Head of Home Care Research, Euromonitor International, United Kingdom*

*"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete".* R Buckminster Fuller.

The advent of the circular economy by necessity will generate a huge amount of change for home care and associated industries; this will certainly be a threat to many established practices on the one hand, but also brings with it an array of opportunity for those willing to embrace change.

This will challenge our preconceptions regarding "possession" and "ownership"; these do not purely apply to consumers, consumption and products, but also to businesses, which may find that the area they have carved themselves out is less relevant in the new economic reality.

The future for home care will be much closer integration between appliances (hardware) and detergents (software), but also significant change to the relationship between consumers and manufacturers through a product's lifespan.

Rather than seeing the circular economy as a limitation, it is, in a sense, a chance to throw off the shackles of limitation and seemingly the only means by which we can continue to grow over the long term; continue to offer products which help consumers in their everyday lives without fundamentally impacting the opportunity to do the same for tomorrow's generation.

In order to do this, we need to make the current model obsolete and dispose of our current attitudes towards "possession" and "ownership", a new normal for the home care industry?

**Penetrating and Understanding Consumer and Market Insights to Develop Winning Business Models Adapted for Dynamic Developing Regions.** *Stanislav Vecera, President and General Manager, The Procter & Gamble Company, Japan*

Business models that deliver strong and sustained growth in developed markets are often inadequate when applied in developing regions. Designed for modern retail infrastructure and affluent consumer segments, these business models fail to respond to the dynamic consumer and market realities like in many of Africa's emerging economies.

Detergents need to solve a wide variety of soils and stains, to perform under varying water quality/temperatures, and of habits and practices. A critical challenge for every business model then would be to have the right product to meet these diverse needs. This include the packaging itself – it must meet the quality required to sustain aesthetic and function through sun and rain as the detergent is transported and displayed exposed to harsh environments and conditions.

The right product must also have the right sizing and pricing to match the purchasing power of the consumers and cash constraints of distributors and wholesalers.

The business model must then have a winning go-to-market proposition with the very high number of stores it needs to reach. Every supplier competes to get a share of the limited cash of each store so detergents, food, clothes and every other product become competitors.

Finally, the communication strategy needs to adapt to the socio-economic reality of the consumers, simple and easy to follow, and focused on addressing what is important to them.

These critical elements, drawn from consumer and market insights,



will need to come together to win in the challenging and fast changing markets of developing regions.

## Session IV: Disruptive Business Models—Adapting to Change—Part II

**Sustainable Oleochemicals—Not Only a Vision.** *Rahul Kale, Group Head of Oleochemicals & Biofuels, Wilmar International Limited, Singapore*  
Abstract not available at time of printing.

**From Small to Big—A Business Model to Develop Smallholders for Sustainable Supply Chain Partners.** *Nico Roozen, Executive Director, Solidaridad, The Netherlands*

Globally 40 % of the palm oil volume is produced by smallholders. Their yields are often far below potential. If they produce according to Good Practices, their yields could increase between 20 and 100 %. If such yield increases are realized at scale, we could produce sufficient palm oil to meet demand predicted for 2020. This would mean no further lands have to be converted and new land conflicts are avoided.

As Solidaridad, we work with partners in the palm oil supply chains to build sustainable and inclusive palm oil supply chains – from the fields to the place where it is consumed. We have piloted projects with players in all major producing regions. But we know our interventions need to gain scale in order to truly impact the global value chains. That's why we look for interventions that are financially self-sustaining.

By learning from many projects and pilots, we have been able to establish that it is possible to create such interventions in a financially self-sustaining way. But we also learned it doesn't happen out of itself. Concerted efforts by partners in the supply chain are needed to create such value. Our cooperation with Henkel is an example of such a partnership.

Together, with Henkel, we have been able to invest in the palm oil supply chain in Honduras, where 43% of palm oil is produced by smallholders owning less than 50 hectares. During the project, yield increases were realized between 15 and 30 %.

What you can learn:

- How can you contribute to sustainable and Inclusive palm oil-supply chains?
- How can you move from commitments on palm oil to real transformation of your supply chain?
- How can you ensure your palm oil supply chain does not exclude smallholders?

**The Rise of the Frugal Society: Co-innovating Faster, Better, Cheaper with Value(s)-Conscious Consumers.** *Navi Radjou, Innovation and Leadership Strategist, USA; Fellow, Judge Business School, University of Cambridge, United Kingdom*

A frugal society is emerging in our times, an inclusive and sustainable social ecosystem in which each individual is empowered to maximize his/her own and others' well-being and potential while creatively preserving resources for future generations. It shows that we can all live better with less—as consumers, workers, and citizens. In this brave new world, entrepreneurship and innovation become democratized as passive consumers evolve into powerful “prosumers”. Digital tools like 3D printing, peer-to-peer sharing platforms, and “circular” recycling models empower everyday citizens to share, make, and reuse goods and services themselves and co-build inclusive and sustainable communities. In this session, you will learn:

- Why and how societies worldwide are embracing “sustainable and responsible consumption”—and what this major shift means for businesses
- How the sharing economy, the Maker movement, and the circular economy will revolutionize business and society in coming decade

- How firms can create and market frugal products that integrate four core attributes: affordability, simplicity, sustainability, and quality
- How firms can engage value(s)-conscious “prosumers” to co-develop frugal solutions to effectively deal with mega-challenges such as climate change and extreme social inequality across the globe
- The new leadership qualities required to effectively lead an organization in a frugal society

## Session V: The Digital Future is Here—Ready, Set, Go!

**Deciphering the Code—Digital Strategies for Customer Success.** *Frithjof Netzer, Senior Vice President, BASF 4.0, BASF SE, Germany*

Customers expect more innovation, higher speed and relentless precision from their relationship with suppliers. Digital technologies offer all of that—if used right. BASF is creating chemistry through a targeted mix of those technologies.

Firstly, BASF uses modeling and simulation as a key to reduce innovation cycle time. Up to 80% of testing time can be reduced. Bottlenecks of equipment are diminished, hit rates of formulations increased. Internet of Things (IoT), cloud solutions and big data analytics enable this.

Secondly, speed in the interaction between customer and supplier increases by redefining organizational boundaries. Software solutions foster horizontal and vertical integration along the supply chain system and result in more efficient, speedy and precise planning and decision making. As a result inventory levels are cut back by double-digit numbers. Storage infrastructure is reshaped, assets can be redirected. Cloud infrastructure, IoT and mobile devices are combined and work with existing ERP systems within several weeks. The resulting ecosystem becomes more powerful in the market environment.

At the core of all this: the ability of teams who recognize the value of data and turn it into solutions for customers.

Examples from BASF's INNORATE™ process will be shown and project results are explained. The digital transformation steps of a large global company will be laid out and discussed, involving leadership and hands-on expertise.

**Tipping the Scales of Bioinnovation.** *Robert Blazej, Senior Manager, Head of San Francisco Unit, Novozymes, USA*

Explosive growth in internet services, software and data processing is enabled by the inherent scalability of the underlying technology architecture: Computing power scales exponentially as microchip transistor dimensions are reduced and the network effect of interconnect customers drives winner-take-all business models that are disrupting established media, service, and entertainment industries.

Similar principles of miniaturization and self-organization can be applied to biological assays to create scalable enzyme selection systems. Historically, advances in bioinnovation have been more characteristic of linear systems, where ever-increasing resources are required to make successive performance improvements. Recent breakthroughs in the manipulation of single DNA molecules combined with computer-aided decision making from massive data sets is creating an enzyme discovery infrastructure with inherent scalability. Novozymes is deploying massively-parallel single-molecule selection technologies to tackle fundamental enzyme activity challenges. Never-before-seen improvements in assay activity have been achieved by rapidly screening highly-diverse DNA libraries. These libraries are so large that they would require decades to screen using conventional approaches alone. New and differentiated product candidates can now be generated at unprecedented rates to feed development pipelines.



**Intelligent Homes for a Smart Nation.** *Sze Wee Tan, Executive Director, A\*STAR Science and Engineering Council (SERC), Singapore*

The aim of Singapore's Smart Nation initiative is to harness technology to improve lives of citizens, create more opportunities and build stronger communities. The term 'Smart' in Smart Nation has the vision of having people and businesses being empowered through increased access to data from all aspects. The term 'Intelligent' connotes the use of cognitive technologies that can analyse various data streams from smart machines, in our case around homes, to enable better and more meaningful living conditions. With a lot more connectivity, it will become possible to sense and understand more about the environment around us.

I will discuss a few technologies that have arisen in the area of intelligent home research, such as telehealth, Amazon and Google's home-based offerings, and some of the current research into smart and augmented cleaning solutions for homes. I will also touch on aspects of the Industrial Internet of Things (IIoT) that are relevant to domestic use. Finally, I will talk about some of the external drivers for the development and adoption of these next generation technologies, such as the strong push toward green and sustainable concepts, emergence of standards for connectivity and interoperability and benefits and threats associated with cybersecurity.

## Friday | 7 October 2016 Executive Forum on Resources and Innovation

*with Moderated Panel Discussion*

## How Do You Prosper in the New Normal of a Sustainable World?

**Keynote: Leading in a World of Exponential Change.** *Paul Polman, CEO, Unilever, United Kingdom*

Our industry today faces enormous threats and challenges. Global economic and geopolitical instability, extreme poverty, water scarcity, poor sanitation, youth unemployment, climate change – to name but a few. At the same time, we are experiencing a digital revolution that is rapidly changing the face of business.

None of us are immune to the impacts of these challenges. How we collectively address them as an industry will be a key determinant of future economic growth and human development. After all, there is no business case in enduring poverty, or failed societies. We are all responsible for bringing solutions to the table that enable us to better serve society in this fast-changing environment.

That's why the Sustainable Development Goals (SDGs) are so important. They have provided us with a much-needed framework to secure future economic and business growth by eradicating poverty in an inclusive way, while protecting the environment. They also offer the greatest economic opportunity of a lifetime.

But where issues are too big for us to solve alone, it makes sense for us to work together – both within the industry and with governments and NGOs. Our combined strength can be a powerful force for good. We have the opportunity to transform lives through our brands, transform business models through our companies, and transform whole markets and systems through industry-wide collective action. With the right commitment and leadership, we can set an example of what responsible business can achieve – and leave a positive and lasting legacy for generations to come.

**Green Chemistry: Driving Innovation to Commercialization.** *John C. Warner, President and Chief Technology Officer, Warner Babcock Institute for Green Chemistry, LLC, USA*

Nature creates materials of such exquisite structural complexity and diversity that humans may never be able to mimic them. Nature's elegance is even more astounding when one considers the fact that most chemistry in the biological world is carried out at ambient temperature and pressure using water, for the most part, as its reaction medium. For society to become truly sustainable, the way we manufacture, use and repurpose materials must change dramatically. This presentation will describe John Warner's entropic considerations of materials design and illustrate their application through recent R&D examples from the Warner Babcock Institute for Green Chemistry. Examples from pharmaceuticals, personal care, construction materials and textiles will be included.

**The Future of Water—Challenges and Opportunities for the Fabric and Home Care Industry.** *Asit K. Biswas, Distinguished Visiting Professor, Lee Kuan Yew School of Public Policy, National University of Singapore, Singapore; and co-founder, Third World Centre for Water Management, Mexico*

The current extensive floods in China, India and Louisiana; prolonged droughts in California, southern and eastern India, Ethiopia and Malawi; botched cost-cutting which poisoned the drinking water of Flint, Michigan; and extensive pollution of surface and groundwater within or near urban centres of the entire developing world, are some of the symptoms of consistent poor water management all over the globe, both in developed and developing countries. It is also the reason why at least 2.5–3 billion people in developing world do not have access to clean water which can be drunk straight from the tap without health concerns.

During the past decade, reference to water crisis has become a growth industry. Putting "water crisis" in Google brings 13.7 million results and the number is growing by tens of thousands each month. Yet, as any school kid knows, water is a renewable resource. It can be used, treated and reused, and this cycle can go ad infinitum with good management. In addition, water use efficiency in all sectors can be very significantly improved. Industry is no exception.

Industrial water management can be very significantly improved within the existing knowledge, technology, investment requirements and management practices. Fabric and home care industry is no exception.

Enlightened fabric and home care companies have made remarkable breakthroughs in their product manufacturing processes, supply chain arrangements and how their products are used, in terms of both quantity of water used and also their impacts on quality. The lecture will illustrate how leading fabric and home care industries like Procter & Gamble and Unilever have very successfully reduced their water footprints during the post-2000 period.

The world population is expected to increase from 7.4 billion at present to about 9.7 billion by 2050. With increasing awareness of constraints that water may impose, many companies have improved their water management practices remarkably, so that their long-term survival and growth are assured. Increasingly more and more companies are improving their water management practices.

Based on current trends, I am cautiously optimistic of the world's water future, within which most businesses, including fabric and home care industry, will play their roles successfully and responsibly.

## Technology Showcase Abstracts

*(as submitted by author)*

**Softness and Detergency Properties of Cationic Cellulosic Polymers in Two-in-One Liquid Laundry Formulation.** *Nilesh Shah<sup>1</sup>, Jie Han<sup>2</sup>, Kathy Lichtenwald<sup>1</sup>, Steven Jin<sup>2</sup>, and Wai Kin Albert Lee<sup>2</sup>, <sup>1</sup>The Dow Chemical Company, USA; <sup>2</sup>The Dow Chemical Company, China.*

Two-in-one liquid laundry formulation, which combines the functions of laundry detergent and fabric softener, delivers the convenience benefit, and fits product differentiation trend in fabric care market. In this





study, cationic cellulosic polymers with different nitrogen substitution levels, hydrophobic substitutions and molecular weights were applied in two in one liquid laundry formulations. The compatibility, softness and detergency properties of as-prepared two-in-one liquid laundry formulations were evaluated. Furthermore, the influences of nitrogen substitution level, hydrophobic substitution and molecular weight of cationic cellulosic polymers on the softness and detergency properties were investigated. In sum, this paper gives understanding on the molecular structure-performance relationship of cationic cellulosic polymers in liquid laundry formulation.

#### **Eco Friendly Ultra Concentrated Liquid Laundry Detergent.**

*Takahiro Okamoto and Megumu Ono, Lion Corporation, Japan.*

The global market share of liquid laundry detergent has been increasing. In the Japanese market, liquid laundry detergent has reached nearly 70% of market share. Among them, high surfactant content (>50%) liquids, so called ultra-concentrated liquids, have led the market growth.

We at LION have established an eco-friendly basic composition for the ultra-concentrated liquid detergents, taking advantage of the following features of Methyl Ester Ethoxylate(MEE), which we have been studying for many years.

1. Easy Compaction: The gelling region of MEE is obviously smaller than that of Alcohol Ethoxylate.
2. Single rinse possible: MEE gives a low residual amount of surfactant on clothes and defoaming characteristics.
3. Low environmental load: MEE is a green surfactant derived from plant oil.

Recently, we have developed a more eco-friendly formulation by combining MEE features and certain polymers. It shows high detergency even under a low mechanical force condition. As a result, it can fit to a stuffed washing. The other feature of the formulation is that it shows high detergency at a low temperature washing, or with shorter washing time. Therefore, it can be said to be suitable for a short washing cycle.

**High Performance in a Compact Format.** *Rainer Dobra, Kelly Zhang, Serena Shi, Jia Zhou, and Franz Weingart, BASF (China) Company Ltd., Shanghai, China*

The market for laundry detergents in Asia Pacific is evolving, with liquid formats growing faster than powder detergents. Within the category of liquid detergents, the trend is moving from standard liquid detergents to modern compact formats - concentrated liquid detergents, super-concentrated liquid detergents and liquid mono-dose.

While providing high cleaning performance such as stain removal, whiteness and anti-greying, compact formats specifically address a number of key consumer needs like convenience and ease of use.

#### **Antitrust Policy**

The American Oil Chemists' Society (the "Society") intends to strictly comply with the antitrust laws of the United States, all state governments, and any other relevant governing authority (the "Antitrust Laws"), and in furtherance of this intention, proclaims the following Antitrust Policy:

- I. The Society shall not be used in a manner which violates the Antitrust Laws, and members of the Society, in their capacity as representatives of the Society, shall not tolerate, encourage or participate in any activity which could reasonably be expected to result in a violation of the Antitrust Laws.
- II. This policy shall apply to all membership, board, committee and other meetings of the Society, and all events attended by individual members of the Society in their capacity as representatives of the Society.
- III. The Society recognizes that the Antitrust Laws make certain activities between industry participants unlawful, and the Society expressly prohibits participation in such activities at any event which the Society holds or sponsors, or by any member of the Society at any event in which such member participates as a representative of the Society. Such prohibited activities include the following:
  - A. Non-competition, territorial division, or operationally restrictive agreements;
  - B. Boycotting, blacklisting, or unfavorable reporting; or
  - C. Discussion of these and other prohibited matters, including the following:

Furthermore, they contribute to sustainability as well as to advantages for the manufacturer, by less weight, reduced packaging and savings in transportation costs.

Still, highly concentrated liquid products present challenges to the formulator, as key performance ingredients are not easily incorporated into formulations with high surfactant concentrations. BASF's ingredients combine high performance with easy formulation in super-concentrated liquid detergents and liquid mono-dose:

- Boosted cleaning whilst achieving compatibility in high surfactant concentration using a high performance polyethylene imine ethoxylate.
- Fast dissolution without the gelling at low temperatures, enabled by branched non-ionic surfactants.
- Increased fabric whiteness with optical effect products that have excellent solubility and stability in high surfactant environment.
- Long lasting hygiene and freshness in liquid detergents in the absence of bleach with hygiene solutions that ensure effective anti-bacterial protection of treated fabrics.

By meeting the formulation challenges of highly concentrated liquid detergents, BASF's key ingredients contribute to both sustainability and consumer preference for modern, compact laundry detergent formats.

**Stability of Fabric Softeners Containing Polymers.** *Rajan Panandiker and Travis Hodgdon, The Procter & Gamble Company, USA*

Liquid fabric softeners are comprised of cationic vesicles suspended in an aqueous medium. Cationic polymers are often added to tune rheology, suspend benefit agents and/ or stabilize the suspension. The choice of polymer has a strong impact on the phase stability and rheology of the suspension. This paper discuss the impact of polymer structure and properties to ensure a stable product that delights consumers over the entire shelf-life.

**Physicochemical Characterization of Sulphonated Methyl Esters (Palmfonate) via "Computer" Purification Approach.** *Hui Xu, KLIK OLEO, Malaysia.*

Scientists and developers working in the home care field have been actively formulating sulphonated methyl esters (Palmfonate) in many commercial products. However, the scope of the applications can be broadened if there were more fundamental understanding on their physicochemical properties, such as surface tension, critical micelle concentration (CMC) and adsorption properties. Although there are efforts to present these properties, the data published often differ, sometimes, by order of magnitude in the CMC values because of the presence of nonionic admixtures (unsulphonated methyl ester). KLIK OLEO is endeavouring to fully understand the properties and performances of

- i. Price, price fixing, price calculation, or price changes;
- ii. Costs;
- iii. Terms or conditions of sales;
- iv. Quote decisions;
- v. Discounts;
- vi. Product or service offerings; or
- vii. Production or sales volume, capacity or plans.

IV. In the course of any event in which activities or discussion threatens to border on a prohibited matter, any member, officer, director, employee or representative of the Society present at such event in such capacity shall request that the activity or discussion be terminated immediately, and if such termination does not immediately occur, such person shall seek recordation of the problem if appropriate, shall cease all participation in the event, and shall report the matter to the Society at the earliest possible opportunity.

V. A copy of this Antitrust Policy shall be given at least annually to each officer, director, member, representative, or employee of the Society, or any other party participating in the Society, and the Antitrust Policy shall be readily available at all membership meetings.



Palmfonate. By cooperating with Sofia University, a 'computer purification' method was developed to determine these parameters of the ionic surfactant and the nonionic admixture without actual physical separation. This method involves fits of the surface tension and conductivity data by a physicochemical model based on a system of mass-balance, chemical-equilibrium and electric-double-layer equations. It is a quantitative characterization of Palmfonate, Cn-SME for  $n = 12, 14, 16$  and  $18$  by determining their CMCs, surface tension isotherms and micellization, which further enable one to predict the adsorption, degree of counterion binding, surface electric potential, and effect of nonionic additives. For the first time, the systematic and quantitative study on the adsorption and micellization properties of Palmfonate has been achieved, which could become a basic reference. This is practically significant since it could allow customers to better understand the physicochemical properties of Palmfonate and the unintentionally associated nonionic admixtures, thus help them to formulate the final products.

**From Technology Discrimination to Consumer Relevancy.** *Nicolas Olmedo and Rodrigo Olmedo, CONSUMERTEC, Ecuador*

Consumer products business is really about winning positive consumer experiences created by fabric and home care products in a myriad of complex market scenarios. Today teams are urged to accelerate the pace of innovation, with different cost structures, in a different time frame. How to create, invent and innovate in world's consumer relevant terms?

Our approach was to combine a new generation of in-vitro dingy test fabric models with modern in-silico technologies that manage radiant energy stimuli and how they are processed by the visual brain system. Specifically we combined new understandings about actual "clean" garments, from the perspective of collisional fluorescence quenching under real source of illumination as well as recent understanding about how human vision works in wholly empirical terms.

The final result is a new capability to substitute practices focused on technology discrimination with a new platform to experiment, model and predict world's consumer visual responses at real laundry market realities. It includes among others: clean, soiled and stained dingy test fabrics according to twelve regional markets and six modalities of consumer cleanliness and whiteness perceptions each.

The development moves the field forward in two venues, by helping consumer understanding teams to correctly interpret consumer insights about actual benefit perceptions as well as by contributing technology innovation teams to focus technologies and product attributes, by providing a full map of solid grounded consumer's responses very upstream the creativity journey.

**Modification of Sodium Lignosulfonate Acid Using Diisocyanate into Surfactants.** *Jessica See<sup>1</sup>, Yongjia Li<sup>2</sup>, Xijiang Yin<sup>1</sup>, Weng Kee Leong<sup>3</sup>, and Chunxiang Li<sup>1</sup>, <sup>1</sup>Advanced Materials Technology Centre, Singapore Polytechnic, Singapore; <sup>2</sup>Department of Chemical Science & Technology, Kunming University; <sup>3</sup>School of Physical and Mathematical Sciences, Nanyang Technological University, Singapore*

Lignin is an organic substance which constitutes wood. It is a major waste product of the paper industry and is being burned as a low-value fuel, hence not fully utilizing its potential. Lignins also exhibit surface activity, and sodium lignosulfonate are used as anionic surfactants. However, the surface activity of sodium lignosulfonate shows that it is still not comparable to synthetic surfactants. Hence, this project aims to modify sodium lignosulfonate to make it more attractive to industries to incorporate the end product into their surfactants. This is done by reaction with sodium lignosulfonate with hexamethylene diisocyanate and isopropanol. The end products (1% wt) reduced the surface tension of water from 72 mN m<sup>-1</sup> to a surface tension of 54 mN m<sup>-1</sup>. The CMC value of the end product is 1.37 g L<sup>-1</sup>.

**A Method for Quantifying the Additional Effects of Detergent Components on the Cleaning Power.** *Masaru Oya, Akihiro Fujimoto, and Terumasa Tanaka, Yokohama National University, Japan*

We developed a method for calculating the additional effects of some kinds of detergent components on the detergency so as to numerically compare them with the effects of other components, washing time or washing temperature. The assumption is that both adhesion force of soils and removal force follow a normal distribution, and the latter distribution can be drawn on the chart of which horizontal axis is defined as the former. The mean value ( $\mu$ ) and the standard deviation ( $\sigma$ ) of the washing force distribution are used as indicators of cleaning power. Test fabrics were prepared by soiling cotton fabrics (5cm  $\times$  5cm) with iron(III) oxide, carbon black, some water soluble dyes or oily dyes. 5 pieces of the identical fabrics were washed with Terg-O-Tometer (1L SDS solution) for 5 min  $\times$  4 repetition without ballast cloth. The removal percentages were calculated by K/S values.

The values of  $\mu$  and  $\sigma$  represent the strength of the washing power and the removal mechanism.  $\sigma$  increases if the soil varies in the order of particulate soil, water soluble soil, oily soil (by solubilization), oily soil (by emulsification). As for the value of  $\mu$ , additive law can be observed because  $\Delta\mu(\text{mechanics} + \text{alkaline})$  came to be the same value of  $\Delta\mu(\text{mechanics}) + \Delta\mu(\text{alkaline})$ . We can also modify the deviation in the removal percentage by the differences in the condition of the test fabrics. We can expect this method can be applied to numerically expressing the additional effect of some surfactants, several builders and enzymes.

**New Dispersant Polymers for Reduction of Spotting in Automatic Dish Detergents.** *Scott Backer<sup>1</sup>, Severine Ferrieux<sup>2</sup>, Paul Mercado<sup>1</sup>, Taylor Pang<sup>3</sup>, and Eric Wasserman<sup>1</sup>, The Dow Chemical Company, USA; <sup>2</sup>The Dow Chemical Company, France; <sup>3</sup>The Dow Chemical Company, China.*

Dow Home Institutional and Personal Care has been developing and evaluating a series of acrylic polymers to act as next generation dispersants for automatic dishwashing formulations. The performance requirements for dispersants have changed significantly as classical phosphate-based formulations are being phased out due to environmental regulations in Western Europe. Currently, no single performance replacement for phosphates has been identified, and new materials and formulations are currently being developed at all levels of the market in order to meet this need. A series of terpolymers containing acrylic acid, AMPS, and a dicarboxylic vinyl monomer (maleic acid, itaconic acid) at specific ratios was prepared and tested in several ADW formulations under various conditions (temperature, water hardness, machine model). Several of the tested terpolymers provided exceptional spot reducing performance on glassware and stainless steel, regardless of other changes made to the formulation (dispersant type/loading, surfactant type/loading). This novel benefit would allow formulators to achieve maximum shine utilizing a dispersant alone, while optimizing the surfactant system for primary cleaning and other benefits.

**Low Residue Soluble Unit Dose Films.** *Thomas Yogan, MonoSol WSFD of Kuraray, USA*

The laundry detergent unit dose category has experienced tremendous growth and commands a market share of 15-20% in North America and Western Europe. To date, this growth has been driven by 1st generation unit dose films that provide convenience to consumers, prevent overdosing, and enable flexibility for detergent formulators via single and multi-compartment pouches.

While the future looks bright for the unit dose delivery format, some laundry detergent consumers complain about plastic residue on their clothes after use. The unit dose may not dissolve completely due to low exposure to water or low agitation, leading to the undesired residue.



We present 2nd generation unit dose films that dissolve more completely in low agitation conditions. This innovation is enabled by new water soluble chemistry developed by Kuraray and MonoSol. We expect these new films to increase consumer satisfaction and accelerate the growth of the soluble unit dose format in the laundry detergent category.

**Novel Continuous Processing of Surfactants and Surfactant Intermediates.** Sanjay Trivedi, Technithon International Pte Ltd., Singapore and Technithon Technologies Pvt. Ltd., India; part of the Trivedi Groupe

Technithon specializes in continuous process plants for water and oil soluble anionic surface active agents. The technologies and innovations by Technithon in 2015-16 include the following:

- 1) Manufacture of high active surfactant blends at concentrations above 90% in dry form: Manufacture of active surfactant blends have been evaluated at semi-commercial scale and the result indicates improved performance parameters and unique synergies which offer cost effective alternative for anionics used currently for fabric care products.
- 2) Production of sugar ester from Natural Alcohols (APG): Technithon has built a commercial plant for producing APG for C8-C14 natural alcohols. These products can also be made in dry form for ease of use.
- 3) Sulfonation process for oxidized bitumen: Oxidized bitumen derived from lube refinery bottoms offer an interesting range of surfactants suitable for improving the mobility control for drilling muds. Technithon's development work in this area has resulted in an order for a commercial plant in Saudi Arabia.
- 4) Continuous process for liquid phase sulfonation for aromatics and aliphatics using Sulfur trioxide as sulfonation agent and with Sulfur dioxide as solvent: Technithon has patented process for continuous sulf(on)ation of aromatic and aliphatics using mixtures of SO<sub>2</sub>+SO<sub>3</sub>.

The new process reduces the capex, has smaller footprints and is more energy efficient. The new process offers a sustainable solution for sulfonation technologies.

**Nymphaeal: Design for Safety or Future Proofing the Perfumer's Palette and Creativity.** Agnès Bombrun<sup>1</sup> and Philippe Poirie<sup>2</sup>,

<sup>1</sup>Givaudan, Switzerland; <sup>2</sup>Givaudan, France

See Program Addendum for abstract.

**Improving Autodish Formulations with Novel Copolymers of Itaconic Acid.** John R. Shaw, Itaconix Corporation, USA

Poly(sodium itaconate) has been used in the recent years as a cost effective and 100% sustainable alternative solution to phosphates, citric acid, and petroleum-based chelants such as EDTA and other amino acetates. We have recently improved this polymeric chelant through copolymerization for optimal performance in ADW formulas.

The novel copolymer has exceptional binding capacity for calcium and magnesium while remaining soluble during wash and rinse cycles with the combination of specific dispersants. The resulting combination offers excellent performance for filming and spotting scores in ADW tests. This polymeric chelant can be used at a reduced dosage, providing significant cost savings over recent advances in amino acetate chelants.

**Validating the Sustainability of Ingredients.** Stephen Johnson and Chris Sayner, Croda, UK

See Program Addendum for abstract.

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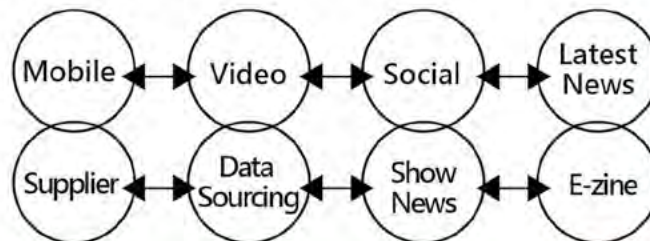
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## Biographies

■ = Committees | ■ = Wednesday | ■ = Thursday | ■ = Friday

### Executive Committee Biographies

#### ■ Keith Grime, General Chair, President, JKG Consulting LLC, USA

Keith retired from Procter & Gamble in 2007 as Vice-President of Corporate R&D, and then set up his own consulting company, JKG Consulting LLC. He consults with many corporations, ranging in size from venture to multinational, in the chemical and consumer products sectors and across many business categories. His consulting work focuses on R&D effectiveness and innovation strategy and its integration into business development strategies, including alliances and partnerships.

Keith is also an Adjunct Professor at Northwestern University, Evanston, Illinois, where he teaches Management of Product Innovation in the Master of Product Design & Development (MPDD) Management program at Northwestern's College of Engineering. He also teaches Innovation Management in the MPDD Executive Education program jointly with the Engineering School and Kellogg School of Management at Northwestern.

Grime has extensive experience in the fabric and home care business having spent many years as Vice-President of R&D in the global Fabric Care business at P&G.

He has been a member of the AOCS Board of Governors for AOCS from 2004 to 2012, holding several positions. He served as Vice-President, President and Past President from 2009 to 2012.

Keith is a frequent speaker at innovation forums and is no stranger to the World Conference on Fabric & Home Care. He has served as speaker on several occasions, has been a session chair, an Executive Committee member, co-chair and General Chair for the Montreux conference since 1992. He led the development of the Singapore conference and was the General Chair of the inaugural meeting in 2012. He is the General Chair in Singapore again at the World Conference on Fabric & Home Care in October 2016.

#### ■ Gerard Bailley, Vice President R&D, Global Home Care and P&G Professional, The Procter & Gamble Company, USA

Gerard Bailley is P&G's Vice President, Research & Development for Global Home Care and P&G Professional. Mr. Bailley leads the innovation program for this business unit, creating a portfolio of upstream products and initiatives that address unmet consumer needs. During his 30 year career, Mr. Bailley has also worked in R&D in Fabric Care, Oral Care, Corporate R&D (analytical, modeling, and simulation), and most recently Home Care. Prior to P&G, he graduated in France in Mathématiques, Supérieures & Spéciales from Lycee Descartes Tours, as well as in Chemistry from the Ecole Supérieure de Chimie Industrielle de Lyon.

In addition to his business unit responsibilities, Mr. Bailley also leads several upstream corporate technology platforms and the Chemistry Community of Practice that span across P&G. Externally, he is a member of the board for Living Well Collaborative, a non-profit innovation organization promoting the development of products and services for senior (50+) consumers. He also is a member of the board of the Consumer Specialty Product Association, a reputed industry agency that promotes the use and safety of consumer specialty products, and works with lawmakers and regulators. He is also a member of the AOCS board of directors. Mr. Bailley lives in Montgomery, Ohio, with his wife Susan, who also works at P&G, and their two sons Jean-Louis and Jean-Pierre.

#### ■ Patrick Donnelly, CEO, AOCS, USA

Patrick Donnelly, Ph.D., joined AOCS (American Oil Chemists' Society) as its Chief Executive Officer in 2012. Prior to this Dr. Donnelly worked for

over 20 years with, and for, major technology providers in the biotechnology, agrochemical and chemical sectors to advance science and regulatory policy. He began his career in Washington, DC as a Congressional Science Fellow working for the Agriculture Committee of the U.S. House of Representatives, and later served on the staff of the U.S. Senate Committee on Agriculture, Nutrition and Forestry. Dr. Donnelly holds an M.S. and Ph.D. in Reproductive Physiology from West Virginia University. He completed his undergraduate work in Resource Development majoring in animal science at the University of Rhode Island.

#### ■ Per Falholt, Chairman of the Board at DTU; Strategic R&D Consultant, Novozymes A/S, Denmark

Mr. Per Falholt has been a Consultant at Novozymes A/S since February 8, 2016. Mr. Falholt served as the Executive Vice President of Research and Development at Novozymes A/S. Mr. Falholt joined Novozymes in 1984 as a Research Chemist in the Enzyme pilot plant and served as its Chief Scientific Officer. Mr. Falholt was appointed Manager of the Detergent Enzyme Division in 1987 and as a Director responsible for the application and development of new products for the detergent industry in 1990. He joined the Enzyme Development and Applications division in 1995 as a Director for Application Technology II before moving to Raleigh to run the Enzyme Development and Application (EDA) unit in 1997. In 1999, Mr. Falholt was appointed as the Corporate Vice President with responsibility for EDA. In 2001 he was appointed Corporate Vice President of corporate research and development. Mr. Falholt serves as a Director of ARTS Biologics A/S and Asseco Denmark A/S. Mr. Falholt is a member of the Advisory Council of Emerald Technology Ventures AG and also serves as a Director of IT Practice A/S. He also worked at the Technical University of Denmark. Mr. Falholt received an M.Sc. in Chemical Engineering from Technical University of Denmark.

#### ■ Andrés Jaffé, Senior Vice President, Global Home & Personal Care Business, BASF SE, Germany

Andrés Jaffé was born in Caracas, Venezuela in 1958. In 1977, he studied electrical engineering at Simon Bolivar University in Caracas, Venezuela. He received a Master of International Management in 1988 from the American Graduate School of International Management in Phoenix, AZ, USA.

Jaffé has been with BASF for over 27 years, and held various positions in Marketing, Procurement and Internal Marketing & Sales Consulting within BASF before becoming Senior Vice President for the Global Key Account Management Organization Home and Personal Care Business in 2013.

Mr. Jaffé is married and has 5 children.

#### ■ Thomas Müller-Kirschbaum, Corporate Senior Vice President, Laundry and Home Care, Henkel AG & Co. KGaA, Germany

Thomas Müller-Kirschbaum is the global head of Research, Development and Technology for the Laundry and Home Care Business of Henkel. In addition, he oversees corporate global responsibilities for R&D and sustainability, both as chairman of the Henkel R&D Committee and as co-chair of the Henkel Sustainability Council. He is involved in various national and international research related functions, such as board member of the Research Committee at the Association of the Chemical Industry in Germany, as chairman of the committee of the Fraunhofer-Institute for Applied Polymer Research and as Honorary Professor for Innovation Management at the Niederrhein University of Applied Science, Germany. Thomas received his diploma in physics and his Ph.D. in natural science from the University of Cologne.



# Biographies

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## ■ Keith Rutherford, Vice President, R & D Homecare Discover Unilever R&D, United Kingdom

Keith Rutherford is Vice President for Unilever's Research & Development in 'Homecare Discovery'. He leads early stage innovation that seeks to improve people's lives by providing affordable sanitation & cleaning with much reduced effort and by bringing access to clean water through the businesses of Laundry, Household Care and Purified Drinking Water. He is based in Port Sunlight, UK and leads a global programme across Unilever's UK, India and China laboratories. His role involves building long term strategic partnerships with world class chemical, materials and biotechnology companies under Unilever's 'Partner to Win' programme.

Keith has worked internationally in several Research and Development roles for both Home Care and Personal Care including directing Unilever's global expansion of Laundry Liquids & Unit Dose and creating the technical foundation for Unilever's Sustainable Living Plan in Homecare. He is currently part of the Industry Advisory Board responsible for the formation of the UK's National Formulation Centre and is a member of the Board seeking to build the world's leading computer aided material science laboratory in the Materials Innovation Factory at Liverpool University. He previously co-chaired the European Cleaning Products Conference and was recently appointed to the Partnership Council of the Toilet Board Coalition. Keith's formal academic training is in Materials Science at the University of Cambridge where he also completed his doctoral research in the tribological behaviour of surface engineered materials and coatings.

He is both a Chartered Scientist and Engineer and was elected Fellow of the Institute of Materials Minerals and Mining in 2010.

## ■ Manfred Trautmann, President and CEO, ManTra-Chem, Switzerland

Manfred Trautmann is a German national, based in Hergiswil, Switzerland. He graduated from the University of Darmstadt, Germany, as a Chemical Engineer. Trautmann served in various functions at Hoechst in the Engineering Department, as Application Manager for Detergents and Personal Care and later was responsible for sales and marketing of the Detergents and Personal Care Business of American Hoechst/Hoechst Celanese, North America, based in Charlotte, NC (1986-1996). From 1996 to 2000, Trautmann held Global Marketing & Sales positions for the Detergents, Personal Care and Plant Protection Additives Business. In 2000, he became Head of New Business Development, and in 2007 took over the position of global Head of Marketing & Sales of the BU Detergents & Intermediates. Trautmann was appointed in 2008 to become the BU Head for the Detergents and Intermediates Business of Clariant. This business was sold in 2013 to International Chemical Investors Group (ICIG) and Trautmann assumed the role of Managing Director and Board Member for WeylChem Switzerland.

Manfred Trautmann has been an active AOCS member for many years, dating back to the early 1980s, and has presented several papers at AOCS annual meetings as a speaker and/or co-author, served as member-at-large on the AOCS Governing Board since 2010, was elected AOCS Vice President in 2014, and became President 2015/2016. He served on the Executive Committee for the World Conference on Fabric and Home Care (Montreux) in 2002, 2006, and 2010 (Vice Chair), Singapore 2012 (Vice Chair) and Montreux 2014 as General Chair.

## ■ Masaki Tsumadori, Senior Advisor, R&D, Kao Corporation, Japan

Masaki Tsumadori retired from Kao Corporation in February, 2016 as a Research Fellow in Strategy Research, R&D and as the director of the Kao Eco-Lab Museum. He is now a Senior R&D Advisor at Kao Corporation. He also runs his own global consulting business in the field of R&D planning.

Tsumadori began his career at Kao Corporation in 1977, working as a research chemist developing fabric and home care products. He subsequently held senior positions across Research & Development, including manager of hard surface cleaners from 1987 and director of fabric care products such as laundry detergents, fabric softeners and bleaches from 1997. During the years 1997 - 2002, he played key roles in the development and launch of powder and liquid laundry detergents in Japan and Asian countries, including the Attack brand. He was appointed Vice President of Global R&D, Fabric and Home Care of Kao Corporation in 2002.

Tsumadori has been a member of the governing board of AOCS from 2011 to 2016 and has been supporting the World Conference on Fabric and Home Care as a member of the Executive Committee since 2010. He has also been a member of the following associations:

- Member of the Governing Board of ISF (The International Society for Fat Research)

- Member of the Board of Directors of JOCS (Japan Oil Chemists' Society)

- Director of the Japan Research Association for Textile End-Uses

Masaki Tsumadori earned a Master's Degree in Polymer Chemistry from the Nagoya Institute of Technology in 1977.

## Technology Showcase Committee Biographies

### ■ John McIver, Technology Showcase Chair, EyeNex, LLC, USA

John McIver received his B.A. in Chemistry from the University of North Carolina, Wilmington, NC, USA, and a Ph.D. in Organic Chemistry from Duke University, NC, USA. He subsequently joined Procter & Gamble (P&G), where his formative years were spent in Corporate R&D, directing Technology research on novel chemistry for broad use across all consumer segments. Dr. McIver held several leadership positions within Corporate R&D, including an assignment focused on design, establishment, and leadership of a Corporate Biotechnology capability for P&G. He later moved to the Household Care business, where he maintained global responsibility for Technology in Fabric & Home Care R&D; culminating in a blended role focused on the Front End of Innovation. During this assignment, Dr. McIver was active in construction of novel Innovation Models, connecting technologies with a deep understanding of consumer needs, and External Partnering. He later assumed an additional responsibility in Corporate R&D where he played a leadership role in the establishment of the Transformative Platform Technology organization. Dr. McIver retired from P&G in 2016, and is the Founder of EyeNex, LLC, an Innovation Network Exchange dedicated to cultural, organizational, and operational excellence in consumer and customer inspired R&D.

### ■ Michael Dreja, Director International Research, Henkel AG & Co. KGaA, Germany

Since 2001, Dr. Michael Dreja has headed the International Research in the Laundry & Home Care Business of Henkel AG & Co. KGaA, Germany. He oversees the development of new raw materials with external partners, including industrial suppliers and universities.

Michael studied chemistry at the University of Cologne from 1990 to 1995. In 1998, he obtained his Ph.D. in physical chemistry with a thesis on polymerization in microemulsions. After postdoctoral research at the University of Washington (Seattle, WA, USA), he joined the Corporate Research department of Henkel, and in 2002, took over a position in international product development Home Care. He spent two years with the Dial Corporation - A Henkel Company in Scottsdale, AZ, USA, where he worked on laundry innovations. Back in Germany, he was responsible



# Biographies

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for the development of powder detergents, and, later, of all household cleaners, hand dish detergents, fabric finishers, and laundry additives categories in West Europe.

Michael is the author of 50+ patents, various peer-reviewed publications, and has received the Fritz Henkel Award for Innovation in 2009 for Purex 3in1 Laundry Sheets. He is a board member of the subgroup Chemistry of Detergents in the German Chemical Society (GDCh).

## ■ Ole Kirk, Vice President, Household Care Application Research, Novozymes A/S, Denmark

Ole Kirk is Vice President of Application Research in the Household Care Division of Novozymes A/S. He joined the Novo Nordisk A/S as a scientist in 1987. He has dedicated his R&D career to the development of new products and solutions based on biotechnology. Over the years he has held many different managerial positions and was appointed Vice President and member of the R&D Management of Novozymes when the company was formed in 2000, following a demerger from Novo Nordisk. Since 2013 he has been Vice President for Household Care R&D and transferred into his current role after the creation of the Household Care Division in March 2016. Dr. Kirk received his Ph.D. in bio-organic chemistry at the Technical University of Copenhagen in 1987. He has published 64 scientific papers and is co-inventor of 25 issued or pending patents. In 2005 he received the U.S. Presidential Green Chemistry Challenge Award. Dr. Kirk is a member of the Danish Academy of Technical Sciences and the Danish Chemical Society. Until 2016 he served as a member of The Danish National Council for Independent Research and on the board of the American Cleaning Institute.

## ■ Scott Power, DuPont Fellow, DuPont Industrial Biosciences, USA

Since 1983, as a member of Genencor Inc., Dr. Scott Power has served as Director of Protein Chemistry, VP of Global Research, and leader of various projects in Pathway Engineering, Protein Expression, Protein Engineering, and Vaccine Development. He is the inventor of over 50 patents.

Power received his B.A. from Reed College in Portland, OR, USA, his Ph.D. in Biochemistry from Rice University in Houston, TX, USA, and his postdoctoral NIH-fellowship at the University of Colorado in Boulder, CO, USA.

Power is currently a DuPont Fellow and responsible for all R&D programs in DuPont Industrial Biosciences.

## ■ Hans Jürgen Scholz, Director Research & Development, WeylChem Wiesbaden GmbH, Germany

Dr. Hans Jürgen Scholz studied Chemistry at the University of Wuerzburg, Germany, where he received his Ph.D. in 1986. He started his professional career in 1986 with Hoechst/Clariant in Research of the Division Surfactants and Auxiliaries. He held several positions in the Application department as Project Manager, in Marketing as Global Key Account Manager, and in New Business Development, being responsible for Project and IP Management within the BU Detergents Division Functional Chemicals.

From 2007 to 2013, he was Director of Application Development within the Business Unit Detergents & Intermediates of Clariant, based in Frankfurt, Germany. After sale of the Business Unit D&I by Clariant to the International Chemical Investors Group (ICIG) effective January 2014, he is head of the Application Development Department Consumer Care of WeylChem Wiesbaden GmbH.

Hans Jürgen Scholz is married, with four grown children (three daughters and one son).

## ■ Nilesh Shah, Global R&D Director, Consumer Care, The Dow Chemical Company, USA

Dr. Nilesh Shah is the Global R&D Director for the Consumer business of The Dow Chemical Company.

After joining the Rohm and Haas Company in 1985 as a research scientist for the Plastics business, he held positions of increasing responsibility in research management, leading Polymer Synthesis and Exploratory Polymer Research. From 1999 to 2002, Shah held commercial roles in the Architectural and Functional Coatings business, with responsibility for strategic planning and marketing before returning to research in 2003 as a global technology director. In this role, he led research and regulatory affairs for the Consumer and Industrial Specialties business followed by the Process Chemicals and Biocides business. He became the Research and Development Director for Home and Personal Care after The Dow Chemical Company acquired Rohm and Haas in April 2009. He transitioned to his current role in November 2015.

Shah graduated with a Bachelor Chemical Engineering in 1979 from Jadavpur University in Calcutta, India. He went on to receive his doctorate in chemical engineering from the University of Massachusetts at Amherst in 1985. Shah is a member of the Tau Beta Pi and the American Chemical Society. He serves on the Chemical Engineering Advisory Board of the University of Massachusetts at Amherst.

## Speaker Biographies

### Wednesday | 5 October 2016

## ■ Shailesh Jejurikar, President Global Fabric Care and Brand Building Organization, The Procter & Gamble Company, USA

Shailesh Jejurikar is the President, Global Fabric Care and Brand Building Organization, Global Fabric & Home Care. Prior to assuming this position, he was President, Fabric Care, North America. He also held the positions of Brand Building Organization, Global Fabric & Home Care, and Global New Business Creation.

Mr. Jejurikar graduated from Mumbai University in 1987 and received his M.B.A. in 1989 from the Indian Institute of Management-Lucknow. He joined P&G as Assistant Brand Manager, Personal Health Care, India in 1989 and has held various positions.

Mr. Jejurikar currently resides in Cincinnati, Ohio. He is active in the local school system, serving on the Board of Trustees for the Cincinnati Country Day School, Cincinnati, since 2012. He is a Board Member for the American Cleaning Institute and has been a Member of the Nanyang Business School, Nanyang Technological University, Singapore, Business Advisory Board, since 2009.

## ■ Lauren Lieberman, Cosmetics; Household & Personal Care Equity Research Analyst, Barclays, USA

Lauren Lieberman is a Managing Director at Barclays following the Cosmetics, Household and Personal Care sector within the U.S. Equity Research division. She has regularly been named to the Institutional Investor "All-America Research" team since 2006 and has been recognized quarterly as a top resource to Barclays' equity client base. She has a long-standing relationship with many of the largest companies in and around the Consumer Staples space, and has been a frequent participant in corporate strategy sessions and off-site meetings to share her perspective on the key opportunities and challenges for the industry. Prior to Barclays, she was with Lehman Brothers until 2008 and with Credit Suisse. Ms. Lieberman holds a B.A. from Dartmouth College in Psychology and Economics, and an MBA from the University of Pennsylvania's Wharton School.



# Biographies

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## ■ Katsuhiko Yoshida, Representative Director; Senior Managing Executive Officer; President, Consumer Products, Global; Kao Corporation, Japan

Katsuhiko Yoshida's career spans more than 35 years in marketing, product development, and brand strategy for Kao Corporation's wide range of consumer products.

His career achievements include leveraging innovation to create an entirely new product category, relaxation-focused eye care, by spearheading the development and launch of Kao's self-warming steam eye masks, one of the company's strongest selling personal care products. Mr. Yoshida also oversaw the development and commercialization of Kao's refillable dish detergent pouches, the company's first refillable packaging.

In 2007, he took the helm of Kao's human health care business unit, and, in 2010, was appointed head of its fabric and home care business unit for Japan and Asia. In 2014, he was named Managing Executive Officer; Representative Director; and President, Consumer Products, Global, and, in 2015, became a Senior Managing Executive Officer.

Mr. Yoshida is on the board of directors for the Nikkei Advertising Research Institute and is Vice President of the Japan Dentifrice Manufacturers Association.

He was born in Kyoto, Japan and joined Kao Corporation in 1979 after graduating from Osaka University's School of Human Sciences.

## ■ Mathieu Trépanier, CEO & Co-Founder, Tsquared Consulting Partners, Switzerland

Dr. Mathieu Trépanier is a co-founder of Tsquared Consulting Partners, a global insights company focused on big data modeling, based in Geneva, Switzerland.

Trépanier is also an affiliate researcher at the Swiss Institute for International Economics and Applied Economic Research of the University of St. Gallen (Switzerland).

He lectures at some of the world's top universities, including INSEAD, where he is a guest speaker in the Healthcare Compliance Implementation Leadership Programmes.

Prior to founding Tsquared Consulting Partners, Trépanier was Vice President, Science, Technology, and Innovation at FirstSight Group LLC, USA.

Trépanier holds a Ph.D. in managerial economics and strategy from the Kellogg School of Management, Northwestern University (USA), a M.Sc. in applied economics from HEC Montréal, Canada, and a Bachelor's degree in international business management from Laval University, Canada. He also studied finance at Audencia School of Management.

## ■ Craig M. Vogel, Associate Dean for Research, College of Design, Architecture, Art and Planning, University of Cincinnati; President, Live Well Collaborative, USA

Craig M. Vogel is Associate Dean for Research and Graduate Studies in the college of Design Architecture, Art, and Planning (DAAP) at the University of Cincinnati (UC), and President of Live Well Collaborative, USA. He is also a professor in the School of Design with an appointment in Industrial Design. He is a Fellow, Past President-Elect and Chair of the Board of the Industrial Designers Society of America (IDSA). Most recently (2015) he was recognized as one of 50 Notable IDSA Members. He is co-author of the book *Creating Breakthrough Products* (2012, Financial Times Prentice Hall), with Professor Jonathan Cagan. He was recognized as one of the most-admired design educators in the US in both the 2008 and 2011 Design Intelligence publications, listing the best design and architecture schools.

During the last 25 years, Professor Vogel has been a consultant to

over 20 companies and advised and managed dozens of research projects and design studios collaborating with industry. He co-founded Live Well Collaborative (LWC) in 2006, a joint venture between UC and P&G. He serves as President and is active on its Board of Directors. The LWC has several corporate members, and is a non-profit organization that forms interdisciplinary teams to design products and services for 50+ consumers. UC professors and student teams from the colleges of DAAP, Business, Medicine, Nursing, and Engineering work with faculty to respond to projects proposed by LWC members. To date, the collaborative has worked on over 50 different projects in the fields of health care, consumer goods, financial advising, and airline travel. In 2015 he was appointed by Dr. William Ball, V.P. of Research, to lead a four-college interdisciplinary research initiative for the University of Cincinnati focused on Wellness. It is now in the second phase and has adopted the working title "University of Cincinnati Wellbeing Initiative."

## ■ Roberto Verganti, Professor of Leadership and Innovation, School of Management, Politecnico di Milano, Italy

Roberto Verganti is Professor of Leadership and Innovation at Politecnico di Milano, where he teaches in the School of Management and the School of Design, and where he directs MaDe In Lab, the laboratory on the Management of Design and Innovation. He has been a visiting scholar at the Harvard Business School twice. Roberto serves on the European Design Leadership Board of the European Commission. His research on management of design and design clusters has been awarded the Compasso d'Oro (the most prestigious design award in Italy).

Verganti's research focuses on how leaders and organizations create innovations that people love. He explores how to generate radically new *visions*, and make those visions come real. His studies lie at the intersection between *strategy*, *design* and *technology management*. In his research Roberto combines methodologies of in-depth analysis of cases with experimentations with pioneering firms, in a variety of industries and contexts.

Verganti is the author of "*Design-Driven Innovation: Changing the Rules of Competition by Radically Innovating what Things Mean*" published by Harvard Business Press in 2009, which has been selected by the Academy of Management for the George R. Terry Book Award as one of the best books that have made the most outstanding contribution to the advancement of management knowledge. It has been translated in Chinese, Japanese, Korean, Italian and Portuguese.

He has issued more than 150 articles, including "Developing Products on Internet Time" published on *Management Science*, and "Innovating Through Design", "Which Kind of Collaboration is Right for You", "Designing Breakthrough Products" and "The Innovative Power of Criticism", all published on the *Harvard Business Review*. He has been featured on *The Wall Street Journal*, *The New York Times*, *Financial Times*, *BusinessWeek* and is a regular contributor to the *Harvard Business Review* online magazine. Roberto is currently framing its latest research, inspirations and experiences in the book "*Overcrowded. Designing Meaningful Products in a World Awash with Ideas*", due 2016 with MIT Press, where he provides processes and methods to create breakthrough visions.

Verganti, together with his team of like-minded researchers-consultants, has served as advisor to executives and senior managers at a wide variety of manufacturing and service firms, including Ferrari, Ducati, Procter & Gamble, Unilever, Gucci, Samsung, STMicroelectronics, Microsoft, IBM, Vodafone, Whirlpool, Nestlé, L'Oréal, ABB, Bausch + Lomb, Prysmian, Tetrapak, ARUP, SKY NewsCorp, and Deloitte. He has also helped national and regional governments around the world to conceive design and innovation policies.



## Biographies

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### ■ Siegfried Winkelbeiner, CEO, Schoeller Textil AG, Switzerland

Siegfried Winkelbeiner joined the Swiss company Schoeller Textil AG in February 2011, in April 2012 he took on the position as CEO. He brings many years of experience in the chemical industry from his previous roles at Ciba in Basel, Switzerland where he began with his apprenticeship as a textile technician. Following graduation as a Certified Chemist HTL in 1978, his career took him to South Africa and Thailand for many years. Following his return in 1985 to Basel, he held various positions in the international organization of Ciba Specialty Chemicals Inc. and was a member of the Global Leadership Board. From 2008 onwards, he was stationed in Hungary where he supervised the expansion of Ciba in Central and Eastern Europe. Ciba was taken over by BASF in 2009. Before joining Schoeller in February 2011, he was responsible for integration and change management at BASF.

### ■ James Carnahan, Global Sustainability Marketing Manager, Archroma Singapore, Pte. Ltd., Singapore

James Carnahan is currently responsible to further intensify the business focus on more sustainable solutions for the textile value chain.

With 36 years' experience in the textile industry James started his career working in fabric manufacture, in a textile mill, applying the principles of quality assurance in order to develop and maximize "right first time" processes in the exhaust dyeing of cotton, polyester and blends thereof. A move to ICI, and later BASF provided James with the opportunity to use his industry experience to continue this approach in the development and the resultant sales and marketing of textile dyes and chemicals which provide many solutions aimed at process re-engineering in fabric manufacture to reduce environmental impact and resources requirements.

During his career James has travelled to and supported many markets, having been based in South Africa, Italy, Germany, China and Singapore.

In his last role with BASF, he was responsible for portfolio strategy development and implementation, with focus on developing sustainable solutions to support the textile value chain in this direction.

### ■ Masazumi Kikukawa, Executive Director, Executive Officer, Lion Corporation, Japan

Masazumi Kikukawa joined Lion Corporation after graduating from the Agricultural Department at Tokyo University in 1984.

Mr. Kikukawa was responsible for research management as the Director of Fabric Care Research Laboratories in 2006. After accepting the position as the Director of Fabric Care Business Department in 2008, he moved into a new field as the Executive Officer and the Executive General Manager of Household Product Division in 2010. In 2012 he was appointed Director Executive Officer and the Executive General Manager of Health and Home Care Products Division, and has since been successfully expanding the Health and Home Care business. Mr. Kikukawa is currently Executive Director, Executive Officer responsible mainly for Health and Home Care Business.

### ■ Tobias Kimmel, Professor, Cleaning Technology, University of Applied Science Niederrhein, Germany

After graduating as a chemical engineer, Tobias Kimmel worked for five years as a scientific assistant at the Technical University Berlin. His research was focused on the interaction of catalysis, microemulsions, and reaction kinetics. He started at Miele in 2005, where he was responsible for the development and interaction of different systems, including design of new washing processes, detergent formulation, and dosing

systems. In 2012, he became professor for Cleaning Technology at the University of Applied Sciences, Niederrhein, Germany. Kimmel is head of the SEPAWA Professional Cleaning & Care section.

## Thursday, 6 October 2016

### ■ Tom Szaky, Founder and CEO, TerraCycle, Inc., USA

Tom Szaky is the Founder and CEO of TerraCycle, a global leader in the collection and repurposing of otherwise non-recyclable waste. TerraCycle creates national platforms across 21 countries to collect and recycle products and packaging that currently go to landfill or incineration, in collaboration with the world's largest brands (i.e., Pepsico to P&G), retailers (i.e., Staples to Walmart) to cities (i.e., Tokyo to New Orleans).

Through TerraCycle, Tom is pioneering a new waste management process involving manufacturers, retailers, governments, and consumers, to create circular solutions for materials ranging from cigarette butts to cosmetic waste and coffee capsules to laboratory waste that otherwise have no other path to be recycled.

Tom is the author of three books, *Revolution in a Bottle* (2009, Portfolio), and *Outsmart Waste* (2014, Berrett-Koehler), and *Make Garbage Great* (2015, HarperCollins). Tom created, produced, and stars in a TerraCycle focused TV show, *Human Resources*, currently airing in 25 countries. Tom and TerraCycle have received over 200 social, environmental, and business awards from a range of organizations including the United Nations, World Economic Forum, Forbes Magazine, Ernst & Young, and the Environmental Protection Agency.

### ■ Torsten Pilz, Vice President, Global Specialty Fulfillment, Amazon

Torsten Pilz is Vice President of Global Specialty Fulfillment at Amazon overseeing operations for AmazonFresh, Prime Pantry, Prime Now, and Amazon Campus. Prior to joining Amazon, Pilz was Senior Vice President of Supply Chain and Operations for Henkel in North America and the Global Head of Supply Chain Management for Henkel Beauty Care. Pilz holds a Ph.D. in Chemical Engineering.

### ■ Ian Bell, Head of Home Care Research, Euromonitor International, United Kingdom

Ian Bell manages the research programme for the global home care industry at Euromonitor International, which he joined in February 2001.

In his current post, Bell has direct responsibility over the content and quality of Euromonitor's Home Care research, which provides strategic analysis of the global market as well as in-depth coverage of 80 countries worldwide. He is also responsible for working with the international Home Care client base of Euromonitor's online database, Passport.

Mr. Bell has published numerous articles in professional publications and frequently speaks at key industry events around the world.

Euromonitor International is the leading provider of global strategic intelligence on consumer markets, with offices in London, Chicago, Singapore, Shanghai, Vilnius, Dubai, Cape Town, and Sydney. With a network of 600 in-country analysts worldwide, Euromonitor has published internationally, for more than 30 years, respected market research reports, business reference books, and online information systems, providing strategic business intelligence for the world's leading Fast Moving Consumer Goods (FMCG) multinationals.

Before joining the global research team at Euromonitor International, he worked initially as a Japanese FMCG Research Analyst and then as Research Manager overseeing FMCG market research for Northern Europe, including the UK, Germany, and Russia.

Mr. Bell has a degree in Japanese Studies (BSC) from the University of Sheffield, England and has also studied at Nagoya University, Japan.





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## ■ Stanislav Vecera, President and General Manager, The Procter & Gamble Company, Japan

Stanislav Vecera is President, Representative, Procter & Gamble Japan, one of the major local operations for The Procter & Gamble Company, US-based leading FMCG (Fast Moving Consumer Goods) company in the world. He received a B.S. degree in Marketing and Management from The Mendel University in the Czech Republic. He joined P&G as sales representative of P&G Czech/Slovak Republics in July 1991. During his 25 years of services in P&G, he had multiple global assignments, including Account Executive of P&G USA, and Sales Country Manager of Czech Slovak Republic, as well as Central Europe South. He was also the Beauty Care Market Strategy & Planning Manager of AAI (Australia, NZ, ASEAN, and India), and Vice President for broader markets in the African region, and then assumed the current assignment as the leader of Japan organization.

## ■ Rahul Kale, Group Head of Oleochemicals & Biofuels, Wilmar International Limited, Singapore

Rahul Kale holds a Bachelor of Arts (Honors) in Economics, and a Masters from the University of Delhi, India. He began his career in 1984 as a management trainee with Brooke Bond, India. In 1989 he joined Natural Oleochemicals Malaysia as part of the start-up team and went on to head its Marketing and Operations. He joined Peter Cremer in 1997. In 2004 he founded kemOleo Pte Ltd, which grew rapidly in the Oleochemicals and Biofuels area prior to be acquired by Wilmar International in 2007. Rahul is currently responsible for Wilmar's global Oleochemical and Biofuels business, one of the world's largest in its categories.

## ■ Nico Roozen, Executive Director, Solidaridad, The Netherlands

*Biography not available at time of printing.*

## ■ Navi Radjou, Innovation and Leadership Strategist, USA; Fellow, Judge Business School, University of Cambridge, United Kingdom

Navi Radjou is a Silicon Valley-based innovation and leadership advisor. A Fellow at Cambridge Judge Business School, Mr. Radjou serves on the World Economic Forum's Global Future Council on Innovation and Entrepreneurship and contributes to Harvard Business Review online. He won the 2013 Thinkers50 Innovation Award and spoke at TED Global 2014. Mr. Radjou is the co-author of *Frugal Innovation: How To Do More With Less* (2015, Economist Books). He is a sought-after keynote speaker, widely quoted in international media. An Indian-born French-American dual national, Mr. Radjou lives in Palo Alto, California.

## ■ Frithjof Netzer, Senior Vice President, BASF 4.0, BASF SE, Germany

Frithjof Netzer leads the digital transformation at BASF across divisions, regions, and functions with the BASF 4.0 project.

Digital core technologies, such as internet of things, big data analytics, mobility devices, and augmented reality are systematically merged with BASF's value chain. This includes procurement, supply chain, logistics, engineering, manufacturing, marketing and sales, and innovation. Based on this, BASF adds value to customers through digitally-enabled products and services. Horizontal and vertical connections are used to increase effectiveness and efficiency of customer and supplier interactions.

Netzer joined BASF in 1999, and held a variety of business and procurement leadership roles in coatings, hygiene, petrochemicals, and performance chemicals. His jobs were located in Münster, Germany; Mt. Olive, NJ, USA; Charlotte, NC, USA; Ludwigshafen, Germany; and Hong Kong, China.

## ■ Robert Blazej, Senior Manager, Head of San Francisco Unit, Novozymes, USA

Robert Blazej leads Novozymes' San Francisco Digital Biotechnology unit. He was co-founder and CEO of Allopartis Biotechnologies, a company created to develop optimized biocatalysts for industrial enzymes and synthetic biology. Allopartis was acquired by Novozymes in 2013.

Robert earned his doctorate in Bioengineering from UC Berkeley and UC San Francisco for the design, implementation, and characterization of microfluidic systems for next-generation DNA sequencing. He is an experienced biotechnologist with a broad skillset combining science, business, and intellectual property.

## ■ Sze Wee Tan, Executive Director, A\*STAR Science and Engineering Council (SERC), Singapore

Prof. Sze Wee Tan is currently the Executive Director of A\*STAR's Science and Engineering Research Council (SERC). His career in A\*STAR began in 2009, where he held the appointment of Programme Director of the Medical Technology initiative in SERC. His next appointment was as Director of SERC's Strategic Initiatives, where he oversaw all SERC cluster-led R&D development. In October 2012, Prof. Tan was promoted to Deputy Executive Director in the Biomedical Research Council (BMRC). His experience with the SERC RIs enabled BMRC to engage companies in these industry sectors holistically, cross-promoting the multi-disciplinary capabilities available at both Councils to meet the needs of companies. He helped to pave the way for growth of A\*STAR's engagements with companies in the Food & Nutrition, Medical Technology, and Consumer Care sectors, with leading multinational corporations such as GE Healthcare, Nestlé, Coca Cola, and P&G.

Prof. Tan is Adjunct Professor at Nanyang Technological University's School of Chemical and Biomedical Engineering and Lee Kong Chian School of Medicine, as well as an Adjunct Associate Professor at Duke-NUS Graduate Medical School, Singapore. He is also Chairman of the Singapore Stanford Biodesign Steering Committee, and member of the steering committee of Rehabilitation Research Institute of Singapore.

Prof. Tan was formerly the Managing Director and Chief Executive Officer of Rockeby Biomed Limited. Prior to joining Rockeby, he was the Asia-Pacific Associate Regional Medical Director (Asia Regional Office) for Mead Johnson Nutritionals, a division of Bristol-Myers Squibb Company, from 1997 to 2001.

Tan graduated with a Bachelor of Medicine and a Bachelor of Surgery from the National University of Singapore, and attained his Masters of Business Administration from Warwick University, UK. He attended the Stanford Executive Programme at the Stanford Graduate School of Business. He is an affiliate member of the Faculty of Pharmaceutical Medicine, Royal College of Physicians, UK. He is a registered medical practitioner with the Singapore Medical Council and the Hong Kong Medical Council.

## Friday, 7 October 2016

### ■ Paul Polman, CEO, Unilever, United Kingdom

Paul Polman actively seeks cooperation with other companies to implement sustainable business strategies and drive systemic change. He is Chairman of the World Business Council for Sustainable Development, a member of the International Business Council of the World Economic Forum, a member of The B Team and sits on the Board of the UN Global Compact and the Consumer Goods Forum, where he co-chairs the Sustainability Committee.



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Mr. Polman has been closely involved in global discussions on action to tackle climate change and the post-2015 Development Agenda. He served on the International Council of the Global Commission on the Economy and Climate, under former Mexican President, Felipe Calderon, whose flagship report “New Climate Economy” demonstrates that lasting economic growth can be achieved at the same time as reducing the immense risk of climate change. In 2016, Mr. Polman was asked by the UN Secretary-General to be a member of the SDG Advocacy Group, tasked with promoting action on the 2030 Agenda. Prior to this, he served on the High Level Panel on the Post-2015 Development Agenda, presenting recommendations on the SDGs on behalf of the private sector.

Other roles include: UK Business Ambassador by invitation of UK Prime Minister David Cameron, member of the Global Taskforce for Scaling up Nutrition, and Counsellor of One Young World. Polman was co-chair of the B-20 Food Security Task Force. Since 2010, Mr. Polman has been a non-executive director of the Dow Chemical Company.

In recognition of his contributions to responsible business, Mr. Polman has received numerous awards and accolades, including the World Wildlife Fund’s (WWF) Duke of Edinburgh Gold Conservation Medal (2013), the Centre for Global Development’s Commitment to Development Ideas in Action Award (2013), the Rainforest Alliance Lifetime Achievement Award (2014), the UN Foundation’s Champion for Global Change Award (2014), the Oslo Business for Peace Award (2015), and the UN Environment Programme’s Champion of the Earth Award (2015).

He earned a BBA/BA from the University of Groningen, Netherlands, in 1977, an M.A. in Economics and MBA in finance/international marketing from the University of Cincinnati, OH, USA in 1979. He has been awarded honorary degrees from a number of Universities, including Newcastle, Liverpool, Groningen and the University of Cincinnati.

Mr. Polman is married with three children. In a personal capacity, he is Chairman of Perkins School for the Blind International Advisory Board and serves as President of the Kilimanjaro Blind Trust.

### ■ John C. Warner, President, Chief Technology Officer, Warner Babcock Institute for Green Chemistry, LLC, USA

John C. Warner is the recipient of the 2014 Perkin Medal, widely acknowledged as the highest honor in American Industrial Chemistry. He received his B.S. in Chemistry from UMASS Boston, and his Ph.D. in Chemistry from Princeton University. After working at the Polaroid Corporation for nearly a decade, he served as tenured full professor at UMASS Boston and Lowell (Chemistry and Plastics Engineering). In 2007, he founded the Warner Babcock Institute for Green Chemistry, LLC (a research organization developing green chemistry technologies), where he serves as President and Chief Technology Officer; and Beyond Benign (a non-profit dedicated to sustainability and green chemistry education). He is one of the founders of the field of Green Chemistry, co-authoring the defining text *Green Chemistry: Theory and Practice* (1998, Oxford University Press), with Paul Anastas. He has published over 250 patents,


papers, and books. His recent work in the fields of pharmaceuticals, personal care products, solar energy, and construction and paving materials are examples of how green chemistry principles can be immediately incorporated into commercially-relevant applications. Warner received the 2004 Presidential Award for Excellence in Science Mentoring (considered one of the highest awards for U.S. academia), the American Institute of Chemistry’s Northeast Division’s Distinguished Chemist of the Year for 2002, and the Council of Science Society President’s 2008 Leadership award. Warner was named by ICIS as one of the most influential people impacting the global chemical industries. In 2011, he was elected a Fellow of the American Chemical Society and named one of “25 Visionaries Changing the World” by *Utne Reader*.

### ■ Asit K. Biswas, Distinguished Visiting Professor, Lee Kuan Yew School of Public Policy, National University of Singapore, Singapore; and co-founder, Third World Centre for Water Management, Mexico

Prof. Asit K. Biswas is universally acknowledged as one of the world’s leading authorities on water and environmental management. He is co-founder of the Third World Centre for Water Management in Mexico and currently the Distinguished Visiting Professor at the Lee Kuan Yew School for Public Policy in Singapore. Formerly a Professor in UK, Canada, and Sweden, he was a member of the World Commission on Water, and a founder of the International Water Resources Association and World Water Council. He has been senior advisor to 20 governments, six Heads of United Nations Agencies, two Secretary-Generals of the Organisation for Economic Co-operation and Development, and many other major international and national organizations. He is Past President of the International Water Resources Association and founder and co-chair of the Club of Tokyo.

Among his numerous awards are the Crystal Drop and Millennium Prizes of the International Water Resources Association, and the Walter Huber Prize of the American Society of Civil Engineering. He received the Stockholm Water Prize, considered to be the Nobel Prize in the area of water, for “his outstanding and multi-faceted contributions to global water resource issues;” the Person of the Year Award from Prime Minister Harper of Canada; the Aragon Environment Prize of Spain; the Excellence Award for Achievements from New Global Indian Foundation; and the Hind Rattan Award (Jewel of India). Reuters named him one of the top 10 water trailblazers of the world. He was selected by *Impeller* magazine as a “true global water hero,” and in 2015 he was named the world’s second most influential water industry leader by *Water and Wastewater International*, UK.

Prof. Biswas was a member of the Global Agenda Council of the World Economic Forum, and is currently member of the International Advisory Board, Pictet Investments, Geneva; member of the Advisory Board, Indian Institute of Technology, Kharagpur; and Strategic Advisor, Singapore International Water Week.

A woman with dark hair, wearing a white long-sleeved shirt, is smiling and holding up a white t-shirt with both hands. She is looking upwards towards a bright blue sky with scattered white clouds. The background shows a blurred view of a building and greenery.

Every day is full of wonderful moments.  
Birds singing outside your window.  
The clean feel of a freshly washed shirt.  
A blue sky without a cloud in sight.  
The smiling faces of children at play.  
A tasty meal after a hard day's work.  
Some days are special —  
weddings, birthdays, holidays ...  
But even the ordinary days are precious.  
At Lion our business revolves around ordinary days.  
Providing the products people need  
to maintain good lifestyle habits.  
Supporting cleanliness, health and comfort,  
while protecting our global environment.  
This is our mission, one in which we take pride.  
Inspired by the wonder of everyday life.  
Dedicated to creating a future full of health, hope and happiness.  
For people everywhere around the world.

**life.love.**  
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Together with customers, partners and the global community, we improve industrial performance while preserving the planet's resources and helping to build better lives. As the world's largest provider of enzyme and microbial technologies, our bioinnovation enables higher agricultural yields, low-temperature washing, energy-efficient production, renewable fuel and many other benefits that we rely on today and in the future. We call it Rethink Tomorrow