



INTERTECH



Tuesday 29 April - Wednesday 30 April 2008
Barceló Hotel Sants, Barcelona, Spain

The Future of Specialty Silicas

Latest market developments and applications of new technologies for specialty silicas

including presentations from



supporting associations and media



Visit us online: www.intertechpira.com/mineralsandmetals

Book before 25 March and get 10% off the conference fee!

See back page for more details

THE FUTURE OF SPECIALTY SILICAS



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reasons to attend

- **Expert opinion:** hear **Bridgestone's** views on tyre applications for silica
- Get up to date with the latest advances in natural siliceous products in the plastics and rubber markets from **World Minerals**
- **Learn** what the emerging global markets are for specialty silicas from **MineSet Partners**
- **Learn** more about synthetic amorphous silicas for industrial applications from **Elkem AS**
- **Understand the latest industry trends** affecting the semiconductor industry and what the future has in store for this silica application
- **Create and maintain business opportunities** or just share stories and ideas with fellow manufacturers, suppliers and brand owners, as well as the media
- **Networking** – take advantage of this unrivalled opportunity to meet with both global leaders and industry start-ups

about the conference

Specialty silicas play a vital role in a wide range of end use markets spanning rubber, elastomers, electronics, print media, chemical mechanical planarisation, polymers and footwear among other applications. Producers and users of silicas face several key challenges including overcoming the large regional differences in production and application, attaining the capacity to maintain steady growth and keeping up with environmental considerations and initiatives. Consumers are also directly driving development through their demand for fuel efficient green tyres and in insulation for construction.

By attending **The Future of Specialty Silicas**, you'll hear over 20 of the industry's leaders discuss the market and technical issues surrounding silica. Speakers include: **Bridgestone, Momentive, Rhodia, DuPont, Elkem, World Minerals, Planar Solutions/ Fuji Film Electronics Materials** and more...

Conference: Tuesday, 29 April – Wednesday, 30 April, 2008
Location: Barceló Hotel Sants, Barcelona, Spain

The need to meet the increasing demands of customers while competing with other material innovations is becoming a major challenge for silica manufacturers all around the world. The importance of creativity, consumer and customer knowledge and the willingness to adapt to the requirements of each application is essential to success in this competitive arena.

IntertechPira's **The Future of Specialty Silicas** conference will examine the recent technology developments by market with a focus on new applications such as nano-silica flakes to enhance the barrier properties of polymers and high purity silicas used in the semiconductor industry. Through case studies and revealing presentations from key industry leaders, you'll get a snap shot of the bigger picture of the specialty silicas market. This valuable conference will provide you with the tools to evaluate and capitalise on the future outlook for silicas for your business.

- **Tyre and rubber manufacturers** – come and exchange ideas and experiences with fellow manufacturers, suppliers and researchers on how to take advantage of the latest innovations in silicas
- **End users of silica in varied applications** – learn about the latest technology discoveries designed for agriculture, semiconductors, polymers and papermaking applications and how they can be applied in your everyday operations
- **Materials and equipment suppliers** – this conference will allow you to network with new clients and learn about the needs of end users
- **Chemicals suppliers** – hear what the industry needs from your company and get the knowledge you need to formulate a winning strategy to meet this demand
- **Researchers and consultants** – take this great opportunity to discuss new ideas for research projects and find out what the industry needs

who should attend

THE FUTURE OF SPECIALTY SILICAS

08:00 Registration and refreshments

09:00 Opening remarks from the chair



**Prof Roger Rothon, Consultant,
HYBRID PLASTICS,
UK**

09:10 Emerging global markets for specialty silicas

- Key markets: electronics, industrial rubber products and chemicals
- Precipitated silica as the largest type of specialty silica
- Fast value growth: fumed silica
- Rubber as the largest market for specialty silicas
- Global demand

Todd Harris, Managing Director, MINESET PARTNERS LLC, US

Latest developments in silica applications

09:45 Natural nanoscale silica-containing minerals: application opportunities

- Nomenclature and mineral characteristics
- Treatments for value-adding
- Known application opportunities
- Expected trends

Dr Joachim Schomburg, Managing Director, DURTEC, Germany

10:20 The role of soluble silicon in plant disease management

- Silicon enhanced resistance to fungal plant pathogens
 - Dicots and monocots
- Mode of action of soluble silicon in disease resistance
- Passive barrier
- Active mechanisms

Dr James Menzies, Phytopathologist, AGRICULTURE AND AGRI-FOOD CANADA, Canada

10:55 Morning refreshments

11:15 Amorphous silicon dioxide as an additive to improve the fire retardancy of polyamides (PA)

- Importance of silica morphology on dispersion into polyamide
- Physical properties of different PA grades containing silica
- Cone calorimeter investigation of their flame retardancy

Dr Gerd Schmaucks, Project Manager, ELKEM AS MATERIALS, Norway

CASE STUDY

11:50 Exploring the potential of using nano silica flakes to enhance the barrier properties of polymers

- The structure and properties of nano silica flakes
- The prospect of using nano silica flakes for barrier enhancement
- The potential problems for polymer application

Dr Fengge Gao, Reader in Nanotechnology, NOTTINGHAM TRENT UNIVERSITY, UK

12:25 Lunch will be served for delegates and speakers

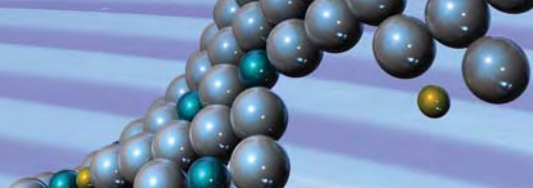
Tyre and rubber applications of silica

13:25 Advances in natural siliceous products into the plastics and rubber markets

- General processing options for Diatomaceous Earth (DE) and related products
- Recent developments in products going into high performance elastomers and plastics
- How to leverage the natural features of the products

Dr Julian Danvers, Segment Marketing Manager, WORLD MINERALS, US

day one – Tuesday 29 April, 2008



14:00 Processing silica filled rubber compounds

- Silica filled rubber processing concerns when compared to carbon black
- The polar/nonpolar filler/rubber interactions including silane coupling chemistry and organosulfur chemistry
- The influence of processing and additives on tyre compounds

Dr John Van der Kooi, Manager of R&D Polymer Additives (Retired), STRUKTOL, US

14:35 Sulfron 3000: an innovative material for silica tyres

- Improvement of productivity
- Optimisation of the level of silane used in silica tyres to reduce the ethanol emissions and maintenance of tyre properties
- Effect of Sulfron 3000 on silica tyres

Dr Rabin Datta, Business Manager, Tyres, TEIJIN ARAMID BV, Netherlands

15:10 Afternoon refreshments

15:35 High performance silicas in the tyre industry: sustainable mobility and interest in wide specific surface area range

MANUFACTURER PERSPECTIVE

- Silica in passenger car tyre tread gives the possibility to save fuel and reduce CO₂ emissions
- A passenger car tyre tread using silica technology allows enhancing the magic triangle of performances
- A wide range of highly dispersible silicas allows getting a better fine-tuning of the final tyre performances

Philippe Cochet, Global Development Manager Silica for Tyres and Technical Goods, RHODIA, France

16:10 NXT* Z Silanes: processing and properties of ethanol-free silanes in silica-filled rubber

- New momentive silanes with 1-pass mixing, high reinforcement, excellent dynamic properties and no ethanol emissions
- Improved dynamic and physical properties are achieved with reduced loadings
- Flexibility of design allows variation of mercaptan level to balance scorch control and physical properties while maintaining improved processability

Edward J Sadler, TechnoMarketing Support Leader, Silanes, MOMENTIVE, UK

16:45 Optimisation of silica production by improving dry filtration systems

- Fumed and precipitated silica: baghouse optimisation and troubleshooting
- Collection of silica generated by incineration processes
- Food grade silica: GMP considerations
- Filter media comparisons

Dr Ole Petzoldt, Global Market Leader Chemicals, W L GORE & ASSOCIATES, Germany

17:20 Closing remarks from the chair

17:25 Drinks reception

All speakers and delegates are invited to an informal drinks reception to network and discuss the day's proceedings

day two – Wednesday, 30 April, 2008

08:30 Registration and refreshments

09:00 Opening remarks from the chair



Todd Harris, Managing Director, MINESET PARTNERS LLC, US

Innovations in existing technologies

09:10 Use of colloidal silica in semiconductor applications

- Historical perspective of silica use
- Need for high purity silicas
- Requirements for silica in wafer polish and CMP applications
- Methods of manufacturing low defect silica

Dr Ajoy Zutshi, Chief Technical Officer, DUPONT AIR PRODUCTS NANOMATERIALS LLC, US

09:45 Properties and performance of silica based dispersions in chemical mechanical planarisation

- CMP slurries: market and requirements
- Commercial CMP slurries: chemistry and abrasives
- Use of silicas: fumed silica and colloidal silica
- Future application trends

Dr Deepak Mahulikar, Sr Technical Director, PLANAR SOLUTIONS LLC, FUJI FILM ELECTRONIC MATERIALS, US

10:20 Morning refreshments

10:40 Colloidal silica in papermaking

- Lightweight coated, supercalendered, recycled testliner and recycled corrugated medium applications
- Colloidal silica-based retention systems for newsprint and brown paper grades
- Colloidal silica-based nano particle technology in modern papermaking enhancing retention, dewatering, paper properties and machine runnability

Lennart Nilsson, Director Global Marketing, EKA CHEMICALS AB, Sweden

11:15 Influence of physisorption of polymers chains on silica: rheology and properties

Dr Sachin Jain, Global Polymer Research, BASF, Germany

11:50 Tixosil precipitated silicas as cleaning agent for toothpaste

- Requirements in toothcleaning
- Cleaning effect mechanisms
- Tixosil 63 Rhodia's high cleaning silica

Pierre-Yves Lahary, Global Application Manager-Nutrition, OralCare and Industrial, RHODIA, France

12:25 Lunch will be served for all speakers and delegates

13:00 Opening remarks from the chair

Latest technology innovations and future outlook

13:30 POSS chemicals in food packaging, dispersion and low friction plastics

- Transparency with permeation control
- Biological and food compatibility
- Dispersion and friction control

Prof Roger Rothon, Consultant, HYBRID PLASTICS, UK

THE FUTURE OF SPECIALTY SILICAS

14:05 Polyhedral silsesquioxanes innovations

- Octafunctional cubic silsesquioxanes
- Easily accessible materials in high yields from simple starting materials including rice hull ash
- Unique opportunities to engineer new nanobuilding blocks and polyfunctional materials
- Cubic nanobuilding blocks provide the tools for creating novel nanocomposites nanometre by nanometre

Prof Richard Laine, Materials Science and Engineering, UNIVERSITY OF MICHIGAN, US

14:40 Afternoon refreshments

15:05 Silica materials from zircon

- China: emerging markets
- Fumed silica in China
- Developing technologies: Astron Advanced Materials, a case Study

CASE STUDY

Murray Lines, Consultant, and Alex Brown, Managing Director, ASTRON, China

15:40 Process additives for silica-based rubber compounds

- Advantages of using newly designed processing promoters in rubber compounds
- Side effects of traditional materials on the physical properties of the vulcanised rubber compounds
- Benefits of the new materials Aflux 37 and Aflux 72 to maintain the physical properties

Dr Dietmar Hoff, Technical Director, RHEIN CHEMIE RHEINAU, Germany

16:15 High Purity Quartz: nice properties and advanced applications

- Properties
- Applications and market
- Products and production

Svein Olerud, Managing Director, NORWEGIAN CRYSTALLITES, Norway

16:50 Closing remarks from the chair

THE FUTURE OF SPECIALTY SILICAS



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Prof Roger Rothern, Consultant, HYBRID PLASTICS, UK

An independent consultant and a visiting professor at Manchester Metropolitan University, Prof Rothern has been working in the fields of inorganic filler production, surface modification and filled polymer composites for over 30 years. Of these, 15 were spent at ICI where he developed new types of coupling agents for silica and calcium carbonates. Later he was technical manager for Flamemag International, where he developed new processes for the manufacture of magnesium hydroxide flame retardants. He is now an independent consultant and also a director of ECOfillers, a company involved in recycling of polymers and particulate materials. Prof Rothern has a number of relevant patent applications and many scientific publications, including a highly regarded book on particulate filled mineral composites. Through his professorship at Manchester Metropolitan University, he actively engages in research work on filler surface modification.



Todd Harris, Managing Director, MINESET PARTNERS LLC, US

Todd Harris is the founder and Managing Director of MineSet Partners LLC, an independent consulting firm that provides business consulting services to active and prospective participants in the global industrial minerals industry. Todd Harris has much experience in this field: he has directed and authored over 35 major syndicated studies in the minerals and materials industry, he has served on the Board of Directors of the Society of Mining, Metallurgy and Engineering (SME), one of the largest professional societies serving the minerals industry, he is a past chairman of the Industrial Minerals Division of SME, and was a co-organizer and chairman of the 2006 Dreyer conference on the Geology and Markets for Value-Added Carbonates, held in Atlanta, GA.. Todd Harris' interests include the development of competitive intelligence, technology and manufacturing cost assessments, opportunity identification and evaluation, and customer management strategies.

Conference chairs

IntertechPira Industry Insights



Green Tyre Market and Technology Outlook: The Road Ahead

Vehicles are a major contributor to greenhouse gas emissions, mainly carbon dioxide, through the combustion of fuel. Improving fuel consumption has become a vital project for car manufacturers. Green tyre technology describes tyres that are specially formulated using precipitated silica and silane coupling agents in order to minimise rolling resistance.

This Industry Insight analyses the green tyre supply chain and dynamics of the market. It considers the threats to green tyre growth including cost, raw material availability, competing materials and changes in technology.

Price: £75 / €110 / \$150

Developments in Mineral Makeup

Mineral makeup is made from minerals and inorganic pigments. Combinations of these coloured minerals can be used to create all types of cosmetics including foundation, eye shadow and lipstick.

This Industry Insight considers what's hot within mineral makeup, global trends and challenges in the widespread commercialisation of mineral makeup. There is analysis of the opportunities for mineral suppliers in various makeup types and an overview of legislation that affects this industry.

Price: £75 / €110 / \$150

What is an Industry Insight?

Get up-to-date on the hottest issues and technologies with IntertechPira's new Industry Insights.

- Industry Insights are a minimum of 5000 words, annotated with figures and diagrams, and written by industry experts
- They're delivered in pdf format with no restrictions on internal corporate usage
- Original primary research designed to help you understand new technologies or top up your knowledge of the latest developments
- Linked to our events, they make ideal pre-reading for the conference, helping you to get the most out of them
- Share the intelligence around your company with unlimited internal distribution rights
- Instantly downloadable
- Ideal for use in presentations and reports
- Learn about a hot new industry subject or top-up your knowledge of the latest development

conference info



Venue

The modern Barceló Hotel Sants is equipped with all the facilities you need for business and relaxation. With spacious conference facilities, comfortable rooms and a range of internet, fax and printing services, you can benefit from the conference while staying in touch with the office. The hotel also offers easy access to the sights of the historic city of Barcelona, one of Europe's most beautiful and cultural cities. For more information please visit www.bchoteles.com

Getting there

The Barceló Hotel Sants is located 15 minutes from the airport, four minutes to the Plaza de Catalunya and 500 metres to the Fira de Barcelona. The hotel has direct access by elevator to the railway station and Barcelona's underground network.
Barceló Hotel Sants, Plaza dels Països Catalans 08014

Accommodation

Delegates are responsible for organising their own travel and accommodation. A limited number of rooms have been reserved for conference delegates wishing to stay at the Barceló Hotel Sants, Barcelona at a reduced rate. Wherever possible accommodation should be reserved by 28 March 2008 as rooms cannot be guaranteed and rates are subject to change after this date. To book your room at the Barceló Hotel Sants, please contact our agent, Origin Events, on:

T: +44 (0)845 3019002

E: info@originevents.co.uk

Please quote 'IntertechPira Specialty Silicas conference' as reference when booking

Conference fees

The conference fee includes entry to the conference sessions and the exhibition, full proceedings on CD, lunch and refreshments. However, fees do not include delegate travel and accommodation. All credit card orders are processed at that day's £/€//\$ exchange rate at the time the transaction goes through. Payment is required before the start of the conference. Please see note in step 3 for further details. **PLEASE NOTE:** Credit card details will be necessary if your booking is made less than 10 working days prior to the start of the conference, or if your invoice remains unpaid at the start of the event.

Cancellations

Cancellations will be accepted and fees will be refunded (less 20% handling charge) only if made in writing and received ten working days before the event. Bookings cannot be cancelled or fees refunded thereafter. Substitutions may be made at any time; if necessary, notify Stacey Ludlow at stacey.ludlow@pira-international.com.

Note

IntertechPira does not accept liability for any loss of or damage to the personal effects of delegates attending the conference. IntertechPira reserves the right to cancel, defer or modify the event proceedings without prior notice. If you have sent a booking to us but not received joining instructions at least one week prior to the event please contact Stacey Ludlow urgently on +44 (0)1372 802052 or stacey.ludlow@pira-international.com.

Visas

Delegates requiring visas should request a visa invitation letter from IntertechPira at the time of registering for the event, ensuring sufficient time is left for applications to be completed. Delegates are then responsible for contacting the relevant embassy themselves. IntertechPira can do nothing further to assist in this process.

Your conference organiser

IntertechPira provides events, training, online information and publications across a wide range of zeitgeist issues and disruptive technologies affecting industry. Our 100% independent products are provided globally 24/7 and delivered by teams of independent experts at sites in Portland, US and London, UK through 20 specialised industrial platforms. Our core competencies are information on: research and product development, globalisation and new markets; production methods; regulatory and compliance.

Exhibition and sponsorship opportunities

A range of sponsorship and exhibit based packages are available to organisations looking to develop their business within the field of silicas. Participation at this **The Future Specialty Silicas** conference will demonstrate your organisation's expertise in this market and raise your corporate profile amongst senior decision-makers in leading international companies. For more information on how this conference can benefit your company, please contact Paul Squires, tel: +44 (0)1372 802051 paul.squires@pira-international.com.

The Future of Specialty Silicas Conference Registration

1 Your details

Title:.....First Name:.....Last Name:.....

Organisation:.....Position:.....

Company business:.....

Address:.....

.....

.....Post Code:.....

Telephone:.....Fax:.....

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Choose your payment package:

Conference fee €1449 £999 \$1999

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*Academic rate for full time students and teaching staff at universities only.

For more information on our many exhibition and sponsorship opportunities and how they can meet your business goals, please contact Paul Squires on +44 (0)1372 802051 or paul.squires@pira-international.com

Office use only:

Date received:

3 Payment method

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UK VAT will be charged where appropriate at 17.5% unless an EU VAT number is supplied. Where UK VAT is not applicable, local VAT will be charged where appropriate.

Charge my credit card: American Express Visa MasterCard

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Card no:.....Expires:...../..... Security code:

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Cheque/banker's draft (made payable to IntertechPira) Please invoice my company

Invoice cannot be issued without receipt of a purchase order number at the time of booking.

Banker's information for credit transfer payments

Sterling A/C: HSBC Bank plc, 100 King Street, Manchester M60 2HD Account No: 62182610

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Euro A/C: Deutsche Bank AG London Account No: 13116600

Branch Sort Code: 23-30-55 IBAN: GB35 DEUT 4050 8113 1166 0

Swift Code (BIC): DEUTGB3L

US Dollar A/C: Citibank NY Account No: 30569898

Swift Code (BIC): CITIUS33 ABA No: 021000089

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4 How to book

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Fax: +1 207 781 2150 / Tel: +1 207 781 9610 / www.intertechusa.com

For further information on the conference please contact:

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Marketing and press: Corinne Pentucci / T: +44 (0)1372 802140

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THE FUTURE OF SPECIALTY SILICAS



Including presentations from:

Agriculture and Agri-Food Canada
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EKA Chemicals
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Planar Solutions LLC, Fuji Film Electronic Materials
Rhein Chemie Rheinau
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Struktol
Teijin Aramid BV
University of Michigan
W L Gore Associates
World Minerals

Praise for past InterTechPira Specialty Silica conferences:

"Up-to-date information; focused and not generally available through public information sources."

**James Trunzo, President, Vice President,
SPECIALTY CHEMICAL PRODUCTS**

"Good opportunity to learn about specialty silicas in relation to current issues and future trends."

**Peter Bergoo, Business Development Manager,
EKA CHEMICALS**

"Great conference; informative and helpful."

**TOM MACKEY, Executive Vice President,
MITSUBISHI POLYSILICON**

supporting media



Chemical Weekly

RubberWorld



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Register now!

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