

Nanocomposites²⁰⁰⁹

Day 1 - Wednesday 18 March 2009

8:15 **Registration and refreshments**

9:15 **Chairman's welcome**

9:30 **Global nano regulations and standards**

- Nano materials within the existing regulatory framework
- Nano-specific regulation
- Looking ahead at how regulators will deal with nanotechnology

[Anna Gergely](#) , *Principal Scientific & Regulatory Adviser, Mayer Brown International LLP*

10:00 **Engineering plastics nanocomposites**

- What can nanocomposites do and not do
- Exploring ways to make nanocomposites
- Non-mechanical property improvements

[Dr Sachin Jain](#) , *Research Scientist, Global Polymer Research, BASF-SE*

10:30 **Engineering compounds in Central and Eastern Europe - Possibilities for nanocomposites**

- Polyamide
- PC/ABS
- PBT based composites
- The future of nanocomposites

Senior Representative, ECEBD

11:00 **Question and answer session**

11:15 **Break**

11:45 **Perkalite: A novel synthetic nanoclay for polyolefins and other resins**

- Characteristics and advantages of Perkalite
- Current market developments
- Examples of applications including
 - barrier properties for food packaging applications
 - flame retardancy in Low Smoke Zero Halogen cables
 - improvement of mechanical properties in polypropylene

[Dimitri van Aqterveld](#) , *Research Scientist, Akzo Nobel*

12:15 **Creating better plastics with Nanomer Nanoclay additives**

- State of the art of nanoclay additive development
- Flexible incorporation of nanoclay into plastics
- Property value enhancement of plastic containing nanoclay

[Dr Tie Lan](#) , *General Manager, Nanocor, Inc USA*

12:45 **Question and answer session**

13:00 **Lunch**

14:15 **How to organise/orient nano-particles via modification and processing**

- Influence of clay modification on 'self-organisation'
- Building inorganic clay structures in a polymer matrix
- Orientation of nano-particles via processing
- Properties of oriented polymer nanocomposite films

Senior Representative, TNO Science and Industry

14:45 **Implications of the constrained polymer region for nanocomposites**

- The effect of the constrained polymer region on gas diffusion
- The effect of the constrained polymer region on engineering properties
- Design of better nanocomposites using the constrained polymer concept

[Dr Gary W Beall](#) , *Director Centre for Nanophase Research, Texas State University*

15:15 **Question and answer session**

15:30 **Break**

15:45 **POSS flow enhancers, high temperature epoxies, dispersants and lubricants**

- Introduction to POSS and current applications
- Newly discovered - POSS as a high-performance lubricant
- POSS ultra-high temperature epoxies
- POSS-flow for high temperature polymers
- Safety and availability

[Chris DeArmitt](#) , *Chief Scientist, Hybrid Plastics Inc*

16:15 **Polymeric nanocomposites with improved performance: The masterbatch approach**

- Efficient preparation techniques to manufacture highly filled masterbatches
 - producing true nanocomposites
- Examples and experience

[Dr Leila Bonnaud](#) , *Co-ordinator of Polymer and Composite Research Unit, Materia Nova asbl*

16:45 **New concepts for nano-engineered fibre reinforced polymer composites**

- Carbon fibre/epoxy composites reinforced with carbon nanotubes
 - collaborative work between K.U. Leuven and Nanocyl
- Intelligent structuring of matrices reinforced with carbon nanotubes
 - 5-year project at K.U. Leuven

[Stepan Lomov](#) , *Professor, Katholieke Universiteit Leuven*

17:15 **Question and answer session**

17:30 **Close of conference Day One**

19:00 **Conference dinner**

Informal networking dinner for all delegates, speakers and sponsors. This is included in your registration fee.

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Day 2 - Thursday 19 March 2009

8:30 Refreshments

9:00 Chairman's opening remarks

9:15 **Creating hierarchical structures in renewable composites by attaching nanocellulose onto natural fibres**

- Why green(er) composites?
- Challenges with renewable materials (polymers, fibres, composites)
- Fully renewable nanocomposites: nanocellulose composites
- A new route to incorporate nanomaterials into composites
- Nanomaterial enhanced composite interfaces
- Green hierarchical composites or natural fibre reinforced nanocomposites

[Dr Alexander Bismarck](#) , *Reader in Advanced Materials, Polymer & Composite Engineering (PaCE) Group, Imperial College London*

9:45 **Silver nano particle preparation by the use of dendritic or hyperbranched polymers and their antimicrobial application**

- Introduction to dendritic polymers
- Easy preparation without by-products
- Describing the antimicrobial effect
- Application and summary

[Dr Stefan Reinemann](#) , *Head of the Plastics Department, TITK eV*
[Michael Gladitz](#) , *Scientific Project Manager, TITK eV*

10:15 **Achieving flame retardancy with nanocomposites for industry applications**

- PVC nanocomposites - Hope or Hype?
- Nano-magnesiumhydroxide - A new flame retardant?
- Nanocomposite applications for the new European fire regulation CDP

[Dr Guenter Beyer](#) , *Lab-Manager, Kabelwerk Eupen AG Belgium*

10:45 **Question and answer session**

11:00 **Break**

11:30 **Carbon nanotubes: Technology and market update**

- Presentation of the carbon nanotubes technology
- A growing share in the conductive plastics industry
- Most promising applications: market update

[Oliver Decroly](#) , *Global Business Development Director, Nanocyl*

12:00 **Carbon nanotube composites**

- CNT composites with polymers, ceramics, metals
- Properties of composites
- Applications

[Urszula Kosidlo](#) , *Research Engineer, Fraunhofer-Institut*

12:30 **Question and answer session**

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12:45 **Lunch**

14:00 **Creating of electric conductive structures on moulded parts**

- What is 'mid' (moulded interconnected parts)?
- CNT as conductive additive
- Ways to create conductive structures with pp-mid technology
- Electrical properties
- Applications of pp-mid materials

[Peter Putsch](#) , PP-Mid

14:30 **Product stewardship to ensure a safe use of carbon nanotubes**

- Product stewardship
- Toxicology
- Safety measures
- Carbon nanotubes

[Dr Jacques Ragot](#) , *Global Product Steward*, Bayer MaterialScience AG

15:00 **Graphistrength carbon nanotubes developments at Arkema**

- Industrial applications of CNT
- Health and safety of CNTs

[Jean-Marc Corpart](#) , *General Manager* , Arkema

15:30 **Question and answer session**

15:45 **Close of conference**

The organisers reserve the right to change the programme, speakers or venue should circumstances require