Press Release

International Workshop Dispersion Analysis and Materials Testing in Berlin, Germany, 23-24 January 2014

Berlin, 23 December 2013:

LUM GmbH hosts the upcoming, now traditional International Workshop Dispersion Analysis and Materials Testing in Berlin, Germany, from 23-24 January 2014.

The keynote *An investigation on adhesion forces of particles on surfaces in centrifugal and magnetic fields* by Prof. Nirschl of German Karlsruhe Institute of Technology, opens the congress. Surface characterization of the particle itself becomes a more and more important topic industry. A Japanese scientist is discussing it on the example of the determination of the Hansen Solubility Parameters (HSP) by the Separation Analyser LUMiReader®.

Nanoparticle reference materials are described by Russian researchers, the dispersibility of carbon black in n-alkanes by a representative of the University of Sheffield and the dispersing behaviour of carbon nanotubes a member of the Technical University Nuernberg.

Lignite hydrocolloids are measured using a Dispersion Analyser LUMiSizer at Brno University of Technology, Czech Republic.

The term “particle” is frequently associated with isolated, homogeneous spheres. Yet in practice, most particle systems contain particle aggregates and/or agglomerates. The characterization of colloidal particle aggregates is successfully performed by optical analysis in a separating centrifugal field, presented by the Technical University Dresden.

Further sessions of the congress are dedicated to emulsion characterization. Here, experts in Israeli pharmaceutical industry save time and money when using the accelerated separation in the Stability Analyser LUMiFuge for the development of a new drug. Weeks and months of storage for information on physical stability are reduced down to hours of measuring time.

The reduction of saturated fat in mayonnaise is the final objective, when representatives of the Malaysian Palm Oil Board report on the stability analysis of palm olein. Double emulsions play an important role for the encapsulation of sensitive ingredients. The difficult yield determination for these double emulsions becomes easy, when researchers of Ghent University, Belgium, apply the time- and cost-saving analytical centrifugation.

A French workshop contribution gives proof of the stability analysis of aqueous dispersions for cosmetic and aerospace industries. Formulation development in pharmaceutical industry belongs to the important application areas of LUM customers. Novartis Pharma AG, Switzerland, reports on wet-media milled drug suspensions, Perrigo Israel Pharmaceuticals Ltd. about the LUMiSizer as bioequivalescence tool for nasal spray development.

Applications for LUMiSizer® and LUMiFuge®, proving the enormous potential of these innovative measuring instruments outside the fast stability testing and particle characterization, complete the workshop programme. For the first time, a LUM instrument is applied for the determination of biomechanical properties of bone samples, introduced by Charité-Universitätsmedizin, Berlin. Mechanical properties of sediments and filter cakes strongly depend on colloidal interactions between particles and influence the dewaterability of sludges and wastewater. New scientific findings are presented by the University of Leeds.

The rate and extent of dewatering for particulate suspensions, sediment permeability and compressibility are investigated by the University of Melbourne, Australia. These are parameters playing an important role for the dewaterability of mineral slurries, wastewater sludges and red blood cells. Filtration in the centrifugal field of a standard LUMiSizer® is introduced by the University of Technology, Compiègne, France. This enables the measurement of filterability of juices, extracts, sludges and suspensions for smallest sample amounts of only one milliliter.

Many technical and personal convenience goods get their final properties by coatings. LUM offers suitable measuring instruments for the entire development cycle, starting from particles, via a dispersion, up to the final coating on a surface. Ceramic wear-resistant coatings are made of nanoparticle suspensions. Researchers from Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Dresden, give a lecture on their suspension characterization. A representative of OSRAM GmbH discusses the relevance of the sedimentation characteristics in the mass production of fluorescent lamps. German BAM Federal Institute for Materials Research and Testing applies the new centrifuge technology for the determination of the adhesive strength of both optical and ophthalmic coatings. This technology is realized in the Adhesion Analyser LUMiFrac® and was awarded the Berlin-Brandenburg Innovation Prize 2012.

One session is dedicated to the Young Scientist Award 2014, offered by LUM GmbH for the first time, for outstanding scientific results in particle characterization and dispersion analysis. „I would like to thank all applicants.“, Prof. Dr. Lerche, scientific chair of the workshop and jury, answers. „It was a hard job for the jury to select just one prize winner from the

numereous applications. Due to the high quality of many contributions, the four best candidates for the Young Scientist Award 2014 were invited to present and discuss their results on the workshop. However, the winner of the prize money of 750 Euro will not be revealed, yet.“

The entire comprehensive programme allows all participants to discuss their questions with international experts and to set future trends in their particular research and development and production fields.

International Workshop Dispersion Analysis, Berlin, Germany, 23.1.-24.1.2014

Full programme and registration

http://www.lum-gmbh.com/tl_files/Veranstaltungen/LUM_International_Workshop_2014.pdf

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