



Figure 2: Anna Ström, Chalmers University of Technology, Sweden, and SuMo Biomaterials, presented her work on mass transport in alginate gels.

for Functional and Biomimetic Materials was presented by Olli Ikkala, Aalto University. He showed examples of the use of superhydrophobic channels for droplet transport, structure formation using ice templating, magnetic fluids and the behavior of mixtures of biomimetic clay and PVA. Routes towards hierarchical self-assemblies for novel functions were reviewed.

The ISOPOW XII conference was organized by SuMo Biomaterials (www.chalmers.se/chem/sumo-en) and Powtech ITN (www.powtech.sik.se) in close collaboration with Chalmers University of Technology (www.chalmers.se), SIK – The Swedish Institute for Food and Biotechnology (www.sik.se) and ISEKI (www.iseki-food4.eu). The conference was sponsored by VINNOVA, www.vinnova.se/en, FORMAS, www.formas.se/en, AstraZeneca, www.astrazeneca.se/home, AkzoNobel, www.akzonobel.com/se, Lantmännen, www.lantmannen.se, IUFoST, www.iufost.org, and Material Science, Chalmers Area Of Advance, www.chalmers.se/en/areas-of-advance/materials/Pages/default.aspx.

More information about the conference and presentations can be found at the conference webpage <https://www.chalmers.se/chem/isopow-xii-en>.

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THE 1ST INTERNATIONAL RILEM SYMPOSIUM ON RHEOLOGY AND PROCESSING OF CONSTRUCTION MATERIALS

PARIS, FRANCE
SEPTEMBER 2–4, 2013

The 1st International RILEM Conference on Rheology and Processing of Construction Materials was held in Paris (France) in September 2013 along with the 7th RILEM Conference on Self-Compacting Concrete and the 67th RILEM Week. These combined RILEM events gathered in Paris international experts dealing with various aspects of the rheology and processing of construction materials.

Sixty-six years after its birth, the RILEM association was back to Paris. Indeed, in 1947, two years after the founding of the United Nations in San Francisco at the end of the Second World War, Europe was slowly rebuilding its infrastructures. Upon the invitation of Robert L’Hermite, a group of laboratory directors met in Paris, France. These directors represented fifteen

different nations and their goal was to renew international relations in the field of materials and structures, which were interrupted by the war.

Since 1947, the RILEM association has of course changed through the years but it has remained, in many different aspects, faithful to its initial objective. The mission of the association has turned through the years into “advancing scientific knowledge related to construction materials, systems and structures and encouraging transfer and application of this knowledge world-wide”. This mission is now achieved through collaboration of not only testing laboratories but also leading experts in construction practice and science including academics and researchers.

This is an extract of the complete reprint-pdf, available at the Applied Rheology website <http://www.appliedrheology.org>

Advanced construction materials, such as self-compacting concrete, tile adhesives and modified bitumen have strongly benefited from transversal knowledge exchange between various disciplines in the last decades. As a result, the level of science and technology needed to understand and carry out diligent mix design and processing of these materials has tremendously increased.

From a material point of view, this RILEM conference dealt with a variety of construction materials with very different rheological behaviors, including concrete, mortar, grouts, renders, plasters, bitumen, paints or adhesives, ... In particular, a wide set of works concerning the rheology, design and processing of self-compacting concrete was presented. For each of the above construction materials, the conference focused on the following aspects:

- Components properties and characterization
- Chemical admixtures and mix design
- Laboratory and in-situ rheological testing
- Constitutive models and flow modeling
- Mixing, production and quality control
- Processing and casting processes
- Drying and setting
- Process induced final properties such as mechanical or durability properties

The conference was introduced by a keynote lecture given by P. Coussot. This opening lecture described construction materials through the concepts of rheology showing that these materials, no matter their complexity, display rheological behaviors originating from components interactions, which have both been for decades topics of interest for the rheology community.

More than 400 attendees spent the following three days listening to more than 200 lectures in parallel sessions. Following the same spirit as the introductory lecture, these sessions were opened by lectures given by academic experts. The following topics were covered:

- Adapted rheometry for construction materials – G. Ovarlez
- Admixture and polymers for construction materials (Part I) – R. Flatt
- Admixture and polymers for construction materials (Part II) – J. Plank
- Bituminous material – E. Chailleux
- Curing and early age properties of cementitious materials – O.M. Jensen
- Durability of self-compacting concrete – G. de Schutter
- Fiber reinforced concrete – S. Grunewald
- Foam and air in construction materials – O. Pitois



Figure 1: A sunny conference break at venue in the 6th district of Paris, France.

- Geopolymers and alkali-activated materials – J.B. D’Espinose
- Incorporation of wastes in construction materials – G. Habert
- Mineral and organic aggregates – S. Amziane
- Mix design and rheology of cementitious materials – N. Roussel
- Mixing, production and online control of construction materials – E. Gouillard
- Self-compacting concretes with low environmental impacts – O. Wallevik

The large number of lectures allowed for dedicated sessions on recent growing topics. This includes e.g. alkali-activated binders, foams and air-void systems in construction materials, mixing processes and induced properties, bio-aggregates based materials, and lightweight Self-Compacting Concrete. Through an anonymous reviewing process, 44 papers were selected for publication in the proceedings available at www.rilem.org.

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