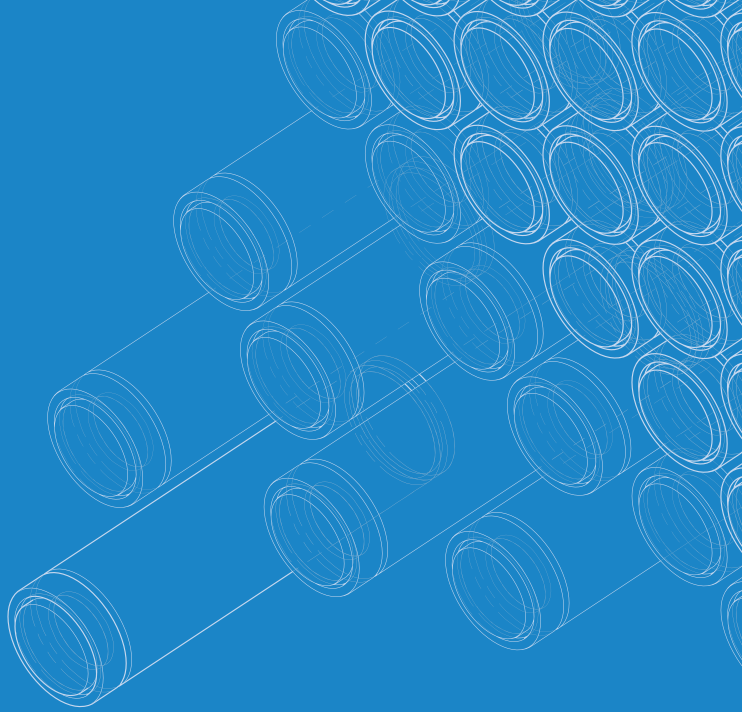


SUMAS

SEMINAR

**SUSTAINABLE
BATTERY CELL
PRODUCTION**



HIDDEN CHAMPIONS

Overlooked opportunities for
optimizing battery production.

**06/07
MAR 2024
FRANKFURT
& HANAU**

MEDIA PARTNER:



POWERED BY:

NETZSCH



06
MAR
2024

Hanau & Frankfurt

NETZSCH

14:00 - 18:00

Dry grinding of battery material

Factory tour in Hanau & casual get-together with snacks.

Please send specific mail for registration and pick up arrangement!

SUMAS

19:00 – 22:00

Opening Reception

Casual get-together with drinks.

@SUMAS Office

07
MAR
2024

Kunstverein Familie Montez

Note: All presentations include 10 minutes of discussion time.

SUMAS

9:00 – 9:30

Entrance and Breakfast

SUMAS

9:30 – 9:40

Introduction

Owen Bates

SUMAS GmbH

NETZSCH

09:40 – 10:10

Mixing and Grinding of Dry and Wet Battery Materials

Dr. Maximilian Münzner

NETZSCH Grinding & Dispersing

Meeting the rising demand in battery production requires ever larger and more efficient battery factories. To save costs during coating and drying, the proportion of solvent necessary can be reduced or even completely removed. NETZSCH makes this possible for mixing powders and dry grinding. For the large-scale production of slurries, we offer turn-key solutions for a complete mixing plant with improved efficiency and flexibility.

NETZSCH

10:10 – 10:40

Flow Properties of Battery Slurries:

Why Is Rheology So Important for Electrode Manufacturing?

Torsten Remmler

NETZSCH Analyzing & Testing

The flow behavior of battery slurries needs to be balanced between too high shear viscosity—which limits coating speed—and too low shear viscosity—which causes the slurry to slump after coating. Furthermore, the elasticity of the slurry can lead to flow instabilities during coating but helps the structural recovery after coating. This talk will introduce rotational and capillary rheometry, which allows us to measure flow properties of battery slurries at processing conditions as well as their viscoelasticity.

NETZSCH

10:40 – 11:10

Complex Battery Fluid and Slurry Handling with NETZSCH Pumps

Erwin Weber

NETZSCH Pumps & Systems

Fluids and slurries in battery production are very complex to handle and pump. Gentle, air- and pulsation-free pumping is a must—with NETZSCH pumps, it's guaranteed.

Blue.Solutions[®] WILLER

11:10 – 11:40

One sustainable path to overcome shortage of raw materials is recycling

Nicolas Ambrois

CQO and COO Blue Solutions

One sustainable path to overcome shortage of raw materials is recycling of battery materials and components. Blue Solutions' batteries use an advanced high energy Lithium metal anode. Designed with circularity in mind, the company is able to recover 90% of the lithium metal from the cells.

KATOP[®] 嘉拓智能

11:40 – 12:10

Opportunities of Battery Electrode Manufacturing

Dr.-Ing. Geng Jin

KATOP

We'll discuss three cutting-edge electrode fabrication methods. Ultra-high-speed roll-to-roll processing, coupled with enhanced drying techniques such as laser drying, offers precise process control and reduces footprint. Double-sided simultaneous coating offers advantages in terms of manufacturing efficiency and cost-effectiveness. Finally the elimination of solvents by dry coating process reduces harmful emissions and minimizes the overall environmental impact associated with traditional wet coating techniques.

12:10 – 13:10

Lunch

BROFIND[®]

13:10 – 13:40

Lithium Battery Production: Under the Magnifying Glass of European Legislation

Paolo Melloni

Brofind

The world of lithium-ion batteries is gaining ground and quickly becoming one of the most important manufacturing sectors. However, regulations on disposal and recovery of pollutants from this rising-star industry are still uncertain. Brofind® will shed some light on European regulations that address this issue.

**13:40 – 14:10****Sustainable Battery Manufacturing:
An Intellectual Property Perspective**Dr. Dustin Bauer
Reddie & Grose

Intellectual property, especially patents, help drive and support sustainable battery manufacturing while ensuring a competitive edge in the rapidly growing battery industry. This presentation will show which areas of battery manufacturing innovations are being protected. We will also discuss how there may be some “overlooked opportunities” for smaller players with a small-but-focused patent portfolio who could be sitting on hidden opportunities.

**14:10 – 14:40****Recovering of critical raw materials from Li-ion batteries**Steven Lans
CEO/CTO Back to Battery

Back to Battery is a startup for closed loop recycling of Li-ion batteries. We offer a process that is more environmentally friendly than existing primary as well as other circular alternatives. Our chloride based hydrometallurgical process can treat black mas from a variety of Li battery chemistries. Minimizing waste because of internal recycle of reactants.

**14:40 – 15:10****Sales and Strategic Partnerships**Christoph Siara
ElevenES

Utilizing LFP (lithium-ion phosphate) technology, ElevenES currently manufactures the first cobalt- and nickel-free battery produced in Europe. Here we will discuss flat cells with side terminals for cell-to-pack solutions in stationary energy storage applications. We'll also sketch our vision for a sustainable, localized supply chain for battery materials and manufacturing equipment in Europe, from the point of view of a battery cell manufacturer.

**15:10 – 15:40****How Cell Manufacturing Drives
Automotive Battery Technologies**Dr. Cecile Pera
Orovel

We will cover the latest battery pack designs and trends in the automotive battery industry, as well as a look into safety requirements and important recycling information for electric vehicle batteries.



15:40 – 15:55

Improving battery usage and recovery

Johannes-Robert Bruch
Stena Metall

Stena Metall AB is a family owned material processing and trading company. The consulting of customers regarding the improved sustainability of their products and implemented processes for high voltage batteries will be discussed in the presentation.



16:00 – 17:00

Podiums Discussion: Hidden Champions - Sustainable Battery Cell Production

Host:
Dr. Cecile Pera
OROVEL

Nicolas Ambrois



Christoph Siara



Steven Lans

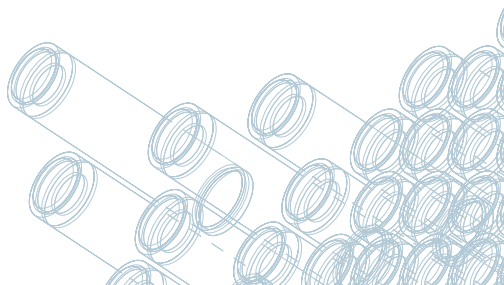


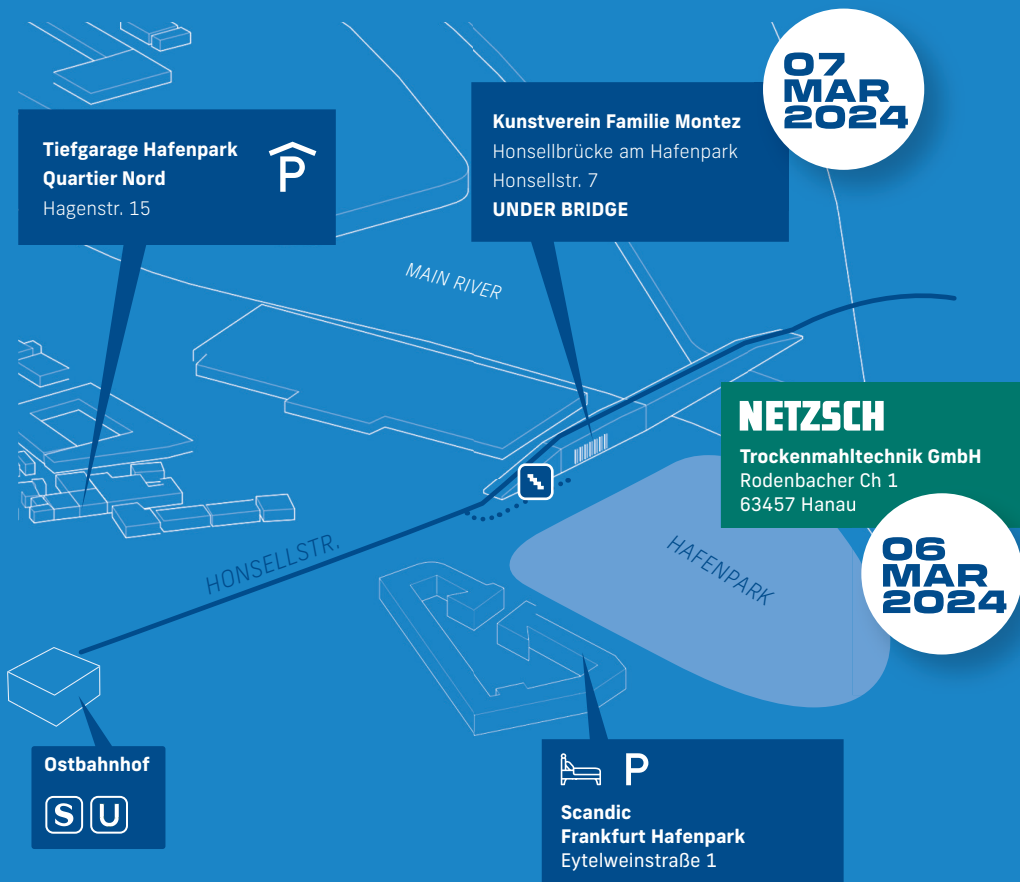
Johannes-Robert Bruch



18:00

Dinner, Drinks and Music





LOCATION

WEDNESDAY, 06 MARCH 2024

Netzsch Trockenmahltechnik GmbH

Rodenbacher Ch 1

63457 Hanau

THURSDAY, 07 MARCH 2024

Kunstverein Familie Montez

Honsellstraße 7

Entrance is underneath the bridge and is accessible via the staircase on the northwest side or through the Hafenpark.

The SUMAS Seminar on Sustainable Battery Cell Production brings together top decision makers with key technological partners to unlock the power of optimization. See for yourself how sustainable, efficient, and future-proof solutions will transform production processes across the battery cell industry.

SUMAS GmbH (Sustainable Machinery Solutions) helps make production processes as efficient and sustainable as possible—saving resources and maximizing technological capabilities. We connect industries, manufacturers, and technology and service providers throughout Europe and Latin America. Each of our solutions is integrated into a sustainable network of partners and services, ranging across sectors such as battery production, battery recycling, and flexible packaging. Our wide network and cross-industry know-how enables our clients to exploit unseen opportunities and discover new potential.

SUMAS GmbH

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