



# **BASMATI WORKSHOP**

## **Novel Nanomaterials for Energy & Printing Applications**



# **Basmati**

Bringing Innovation by Scaling Up Nanomaterials and Inks for Printing

**23 November 2016**

**Enginyers BCN  
Carrer del Consell de Cent 365  
08009 Barcelona**

More information:

**[basmati-project.com](http://basmati-project.com)**



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 646159. This publication reflects only the author's views and the European Union is not liable for any use that may be made of the information contained therein.

# Objectives

This workshop, organised by BASMATI project, gathers high-level researchers and industrials representatives in the field of printing nanomaterials, printing systems and applications for batteries and energy. Organisations part of the BASMATI consortium but also external organisations situated at different stages of the value chain are invited to present their activities.

BASMATI aims to scale-up the ink formulations to pilot line ensuring large volume fabrication of new products with improved properties for printing application.

# Agenda

Time	Presentation	Organisation	Speaker
9:40-10:00	BASMATI Project	Umicore	Tim Van Rompaey
10:00-10:20	Organic and Printed Electronics	OE-A	Constanze Ranfeld
10:20-10:40	Materials for Energy Roadmap	EMIRI	Marcel Meeus
<b>10:40-11:00</b>		<b>Q&amp;A Session</b>	
<b>11:00-11:20</b>		<b>Coffee Break</b>	
11:20-11:40	Next generation Li ion batteries	3M	Petra Stegmaier
11:40-12:00	Materials for printing – Project presentation	Inspired	Andreas Rudorfer
12:00-12:20	Digital printed Li ion batteries	CEA	Yohann Thomas
<b>12:20-12:40</b>		<b>Q&amp;A Session</b>	
<b>12:40-13:40</b>		<b>Lunch Break</b>	
13:40-14:00	Printing the consumer experience	Novolia	Chris Jones
14:00-14:20	Printed Electronics at LEITAT – NanoCaTe	LEITAT	Maziar Ahmadi
<b>14:20-14:40</b>		<b>Q&amp;A Session</b>	
<b>14:40-15:00</b>		<b>Coffee Break</b>	
15:00-15:20	Thin and flexible printed batteries	VARTA MB	Martin Krebs
15:20-15:40	Cell Manufacturing	Leclanché	Hugues-Yanis Amanieu
<b>15:40-16:00</b>		<b>Q&amp;A Session</b>	
<b>16:00-16:20</b>		<b>Closure</b>	

# About the Speakers

## Dr. Tim van Rompaey - Umicore: *BASMATI: Development of nano-inks for printed batteries*



Tim Van Rompaey obtained his PhD in Material Science at the University of Leuven (Belgium). In 2004, he took up the position of Project Leader Pyrometallurgy at Umicore Research. Later he was Operations Manager at the Umicore Precious Metals Refining plant in Hoboken, Belgium. In 2013, he moved to Grenoble, France as a research resident at the CEA Tech laboratories. He joined the BASMATI project. Now, Tim is Senior Project Manager at Umicore Research in the domain of Recycling and Extraction Technology.

## Dr.-Ing. Constanze Ranfeld - OE-A: *Organic and Printed Electronics – Paving the way for novel applications*



Constanze Ranfeld is a Project Manager at OE-A (Organic and Printed Electronics Association), the leading industry association for this emerging technology. She holds a Master's Degree in Microtechnology, and a Doctorate in Mechanical Engineering. Constanze has been working as a researcher at Technische Universität Darmstadt, focusing on process development for printed electronics, and as an application engineer at the leading manufacturer of flexible printed circuits. Constanze joined the OE-A in 2015, supporting the roadmapping activities, OE-A's numerous Working Groups, and LOPEC Conference.

## Dr. Marcel Meeus - EMIRI: *Advanced Materials for Energy Roadmap*



After finishing his Masters in inorganic chemistry at the Catholic University of Leuven, M. Meeus obtained a PhD on "The manufacture and characterization of intrinsic germanium". He started his career at Metallurgy Hoboken-Overpelt (now Umicore) and since then he held several functions in R&D, Production, Application Management, Business Development and Battery Business Line Management. Afterwards, he took up the coordination of a team focused on Technology Scouting with a particular focus on Clean Technologies and Energy Storage. He now started a private consulting company SUSTESCO, Sustainable Energy Services Consulting.

## Dr. Petra Stegmaier - 3M: *Si alloy material for next Generation Li ion batteries*



Petrea Stegmaier studied chemistry at University of Mainz with focus on polymer science. After, she worked in Italy on polymer characterization and surface modification. She then did her PhD at the Max Planck Institute and investigated on the synthesis of photo activatable silanes as surface modification agents for silica surfaces for biotechnological applications. She joined 3M Corporate Lab in 2008, initially working on development of film technologies, then in the field of pressure sensitive adhesives and new adhesive technologies. Later, she moved to the battery group to support development and implementation of new battery materials.

## Mag. Andreas Rudorfer - Joanneum Research: *Industrial-scale production of nano-materials for printing applications*



Andreas Rudorfer achieved the Master degree in Chemistry at the Karl Franzens University in Graz. He then joined the company SEZ and was responsible for process development and application in the area of semiconductor wet chemistry surface treatment. Afterwards, he joined Joanneum Research and became deputy head of the department Functional Surfaces and coordinated NANONET Styria. In 2016 he was appointed deputy head of the research group Sensors and Functional printing and joined the H2020 INSPIRED project. Main research focus is the process development and integration of additive manufacturing technologies like inkjet printing and aerosol jet printing for the fabrication of organic- or inorganic electronic devices.

## Dr. Yohann Thomas - CEA: *Digital printed Li-ion batteries*



Yohann Thomas is a research engineer at CEA specialized in lithium batteries. He has an extensive knowledge in the synthesis of active materials for lithium-ion batteries and the formulation, characterization and aerosol jet printing. Before, he worked in the field of PEM fuel cells including the synthesis of nanoscale catalyst platinum alloys for oxygen reduction reaction. Yohann has an engineering degree and a PhD in advanced materials from the Argentinian National Atomic Energy Commission.

# About the Speakers

## Chris Jones - Novalia: *Printing The Consumer Experience*



Chris Jones has been involved with Printed Electronics since 2000, before joining Novalia Limited in 2010 as the ink and print expert. He has over twenty five years practical print & packaging industry experience. At Novalia he is responsible for identifying and leading conductive & functional ink formulation, print production and process developments. Chris works with the University of Cambridge Graphene Centre, lecturing in Graphene Technology course and serves as the Vice Chairman on the UK Plastic Electronics Leadership Group advising the UK government. He is a member of the IEC/ISO TC119 Technical Committee drafting international standards.

## Dr. Maziar Ahmadi - LEITAT: *Printed Electronics at LEITAT: BASMATI & NANOCATE projects*



Maziar Ahmadi is a senior researcher from the LEITAT Energy Storage Unit. He is also the manager of the printed electronics working group and is involved in different research projects in this field. Last, he is the representative of LEITAT in the OE-A. Maziar holds a degree in electrical engineering and a PhD in electronics from the Polytechnic University of Catalonia (UPC). He used to work at the UPC as an advanced technician and researcher during two years.

## Dr. Martin Krebs - VARTA Microbatteries: *Thin and flexible, fully printed batteries*



Martin Krebs is currently Manager of Innovative Projects including funded research projects within Varta Microbattery GmbH but also supervisor of the Patent Department and representative of VARTA Microbattery in the OE-A. He holds a diploma in Physica and a PhD in Electrochemistry from the University of Clausthal. Before he was the supervisor of the Basic Electrochemistry Development Department and representative in the IEC.

## Dr.-Ing. Hugues-Yanis Amanieu - Leclanché: *Cell manufacturing*



Hugues-Yanis Amanieu joined Leclanché GmbH in January 2016 as an R&D project manager. He graduated with a PhD in materials engineering after 3 years as an engineer at Robert Bosch GmbH. There, he built up experience with materials characterization and testing of Li-ion batteries. He brings a strong experience in scientific software development to leverage measurement data, along with a professional understanding of electrochemical and mechanical processes.



## Contact

For more information about the project,  
visit [basmati-project.com](http://basmati-project.com)  
or contact [mviallon@leit.at](mailto:mviallon@leit.at)

# How to get there?

## Venue:

Enginyers BCN  
Carrer del Consell de  
Cent 365  
08009 Barcelona

## From the airport:

- Aerobus until Plaça de Catalunya
- Regional Train Rodalies until Passeig de Gràcia

## Taxi numbers:

- +34 933 033 033
- +34 932 250 000
- +34 933 070 707

## Emergency: 112



# Hotels nearby

- Catalonia Eixample 1864 4\*
- Renaissance Barcelona 5\*
- Room Mate Anna 4\*
- Hcc St. Moritz 4\*
- Eurostars BCN Design 5\*