



TECH DAYS

HOW CAN WE DO MORE
WITH LESS ENERGY?

November 14-16 2023

Conseil Départemental de la Haute-Vienne
11 Rue François Chénieux, 87000 LIMOGES
www.unilim.fr/sigmatech-days



Σ-TECH DAYS

2023

The fifth edition of the “Σ-Tech Days” is on the theme “**how can we do more with less energy?**”. The conferences cycle will be held from **14th to 16th November 2023** at **Conseil Départemental de la Haute-Vienne** in **Limoges** (11 Rue François Chénieux, 87000 Limoges).

The “Σ-Tech Days” is intended to be an international gathering in Limoges leading international specialists in a domain. It is supported by The LABEX Σ-LIM “From specific ceramic materials and components to integrated, secured and smart communicating systems“, a joint operational structure between two UMR research units, the IRCER and XLIM laboratories belonging to the University of Limoges and the CNRS. This autumn school will serve as a forum to establish a snapshot of the academic landscape and industrial internationally on targeted research area and act as a fertilizer to confront everyone's ideas and allow the emergence of new ones.

This year, the scientific program of the autumn school is organized around several themes: **energy mix, energy transition management, batteries and recycling, thermoelectricity, harvesting, hydrogen, etc.**

AGENDA

Tuesday

09.00 – 09.20 am

Welcome & opening speech
Frédéric Dumas-Bouchiat
Fabrice Rossignol &
Bernard Ratier
(LABEX Σ-Lim, France)

9.20 – 10.20 am

**Research and energy
transition issues**

Abdelilah Slaoui (visio)
Cellule Énergie du CNRS

10.20 - 10.40 am

Coffee break & networking

10.40 am - 11.40 pm

**The R3 TESNA regional research
network focuses on the energy
model of tomorrow**

Pierre Cezac
Institut Carnot ISIFoR – R3 Energie

11.40 am - 12.40 pm

Strategic vision of an energy player

Thierry Beaudouin
AT2E

12.40 am – 02.00 pm

Lunch

02.00 – 03.00 pm

Tomorrow's engineers

Sam Allier
SHIFT PROJECT

03.00 – 04.00 pm

**Ecological transition:
in praise of constraint**

Christophe Goupil
Université Paris-Diderot - LIED

04.00 – 04.30 pm

Coffee break, networking
& poster session

04.30 – 06.00 pm

Lab tour XLIM

Wednesday

09.00 – 10.00 am

Next generation of batteries

Vasily Tamopolskiy
CEA LITEN

10.00 - 10.30 am

Coffee break & networking

10.30 - 11.30 am

**Perspectives in the circular
economy of batteries**

Philippe Barboux
Chimie Paris Tech

11.30 am - 12.30 pm

**Photovoltaic energy :
challenges and issues**

Jean-François Guillemoles
PEPR TASE

12.30 am – 02.00 pm

Lunch

02.00 – 03.00 pm

**Emerging materials and technologies
for the organic/polymer electronic
devices and systems of tomorrow.**

Georges Hadziioannou
LCPO

03.00 – 04.00 pm

Harvesting

Manos Tentzeris (video conference)
Georgia Tech

04.00 – 04.30 pm

Coffee break, networking
& poster session

04.30 – 06.00 pm

Lab tour IRCER

07.00 – 10.00 pm

Cocktail reception

Thursday

09.00 – 10.00 am

Electrolysis and green hydrogen

Raphaël Faure
Elogen

10.00 - 10.30 am

Coffee break & networking

10.30 - 11.30 am

**Solid Oxide Cell Electrolysis
for Low Carbon
Hydrogen Production**

Jacinthe Gamon
ICMCB

11.30 am - 12.30 pm

Turbulent combustion modelling

Renan Vicquelin
Central SupElec

12.30 am – 02.00 pm

Lunch

02.00 – 03.00 pm

Radioactive Waste Management

Aurélien Debelle
Andra

03.00 – 04.00 pm

Closing speech
Fabrice Rossignol &
Bernard Ratier
(LABEX Σ-Lim, France)

LABEX Σ -LIM

AT A GLANCE

The LABEX Σ -LIM “From specific ceramic materials and components to integrated, secured and smart communicating systems “ is a joint operational structure between two UMR research units, the IRCER and XLIM laboratories belonging to the University of Limoges and the CNRS. Two competitiveness clusters, the European Ceramics Cluster and the ALPHA RLH cluster, provide support.

LABEX Σ -LIM is organized around 4 flagships:

- Going beyond 5G
- Bringing new light to photonics
- Doing more with less energy
- Advanced diagnosis & therapies for promoting health

The LABEX Σ -LIM aims to strengthen the international position of the University of Limoges as a reference for the **design of advanced ceramics and innovative materials, the development of new electronic and photonics components, and the design of innovative secure communicating systems**. The complementary skills of IRCER and XLIM laboratories, covering the entire chain from **ceramic materials/processes to communication systems and health technologies**, allow the integration of innovative ceramics in new devices that meet the scientific, technological, environmental and societal challenges for today and tomorrow.