



Sugar Alcohol based Materials for Seasonal Storage Applications

## Suggested SAM.SSA Workshop Programme:

### First day: Tuesday 17<sup>th</sup> of March

08h30 – 08h50: Bus transfer from the hotel (Vitoria) to CIC Energigune

08h50 – 09h00: Registration

09h00 – 09h10: Opening & welcome  
Jesús Goiri, CIC Director  
Bruno D'Aguanno, CIC scientific Director

09h10 – 13h20: **Session 1: SAM.SSA Results presentation**  
**Chair: Elena Palomo Del Barrio**

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09h10 – 09h25: Background and objectives of the SAMSSA project  
Elena Palomo Del Barrio, CNRS-I2M, coordinator

#### Session on Sugar Alcohol Development

09h25 – 10h35: Sugar alcohols properties and thermal stability (20 min)  
Julien Daranlot, Solvay  
Nucleation rates and crystal growth kinetics (20 min)  
Alexandre Godin, CNRS-I2M  
Multi-scale modelling of SA properties and kinetics (20 min)  
Silvia Nedeá (or H. Zhang), TU/e  
Discussion (10 min)

10h35 – 11h00: **Coffee break**

#### Session on Heat Transfer Enhancement

11h00 – 12h10: Porous structures for thermal conductivity enhancement (30 min)  
Alain Celzard, CNRS-IJL  
Karthik Mani, CIC Energigune  
Sugar alcohols micro-encapsulation techniques (30 min)  
Maria Dolores Romero, AIDICO  
Discussion (10 min)

### Session on System integration and Performances

12h10 – 13h00:      Activation of the crystallization and integration to the system (20 min)  
Marie *Duquesne*, CNRS-I2M  
Performances assessment through a case study (20 min)  
Peter *Schossig*, FhG-ISE  
Discussion (10 min)

13h00 – 13h15:      Major outcomes of the SAMSSA project  
Elena *Palomo Del Barrio*, CNRS-I2M, *coordinator*

13h15 – 15h00:      **Lunch break**

**15h00 – 16h00:      Session 2: Tutorials and "in-situ" demonstration**  
**Chair: Abdessamad Faik**

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15h00 – 15h45:      Measurements of thermal diffusivity and conductivity by Laser Flash  
Apparatus  
Ramón *Arauz Lombardia*, NETZSCH

15h45 – 16h30:      Materials synthesis and engineering  
*Carbon foams synthesis* (CIC, CNRS-IJL)  
*Carbon foams hydrophobization* (IMNR, CIC, CNRS-IJL)  
*Sugar alcohols micro-encapsulation* (AIDICO)  
*Sugar alcohols milli-encapsulation* (FhG-ISC)

16h30– 17h15:      **Coffee break& Tour around CIC premises**

17h15– 18h00:      Materials testing and characterization  
*Key thermodynamics and physical properties* (CNRS-I2M, CIC, CNRS-IJL)  
*Nucleation rates and crystal growth kinetics* (CNRS-I2M)  
*Activation of the crystallization* (CNRS-I2M, FhG-ISC)  
*Thermal stability* (FhG-ISE, AIDICO, IMNR, ...)  
*Small prototypes* (PPL)

18h10 – 18h30:      Bus transfer from CIC Energigune to the hotel (Vitoria)

19h30 – 20h30:      Touristic tour around Old Quarter & Pintxopote experience

## Second day: Wednesday 18<sup>th</sup> of March

08h30 – 08h50: Bus transfer from the hotel (Vitoria) to CIC Energigune

**09h00 – 11h00: Session 3: Industry session**  
**Chair: Zafer Ure**

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09h00 – 9h30: Market opportunities for thermal energy storage technologies based on sugar alcohols  
*Zafer Ure, PPL Company (UK)*

09h30 – 10h00: Thermal energy storage at low to medium temperatures: Applications, challenges and barriers  
*Paul Baudry, EDF (France)*

10h00 – 10h30: FP7 European projects on Seasonal Storage Applications  
*Wim van Helden, COMTES project coordinator (Austria)*

10h30 – 11h00: UTES Projects in the Basque Country: State of the Art and Trends  
*Telur geotermia y agua (Spain)*

11h00 – 11h30: **Coffee break**

**11h30 – 13h00: Session 4: TES in EU - Ambition, challenges, horizons**  
**Chair: Bruno D’Aguanno**

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11h30 – 13h00: Participants:

- European H2020 representative (tbc)
- Coordinator of SAM.SSA project, *Elena Palomo Del Barrio, CNRS-I2M*
- Industry representatives, *Zafer Ure, PPL Company, EDF, Telur.*
- EU SAM.SSA officer, *Szilvia Bozsoki*
- Venture capital firm, *Jon Arosa Talde Gestión SGEGR,S.A*

13h00 – 13h15: Conclusions and closure

13h20 – 13h30: Bus to Vitoria/Bilbao Airport