

# **GRICU & AIDIC DAET School 2022 - Process Decarbonization and Energy Transition**

## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

## **Welcome and presentation of the initiative (GRUCU, AIDIC and organizing committee)**

*Thursday, 13 October 2022 14:00 (10 minutes)*

**Session Classification:** Day 1 – October 13th, 2022

Contribution ID: 2

Type: **not specified**

## **Introduction to Day 1 (A. Galia, University of Palermo)**

*Thursday, 13 October 2022 14:10 (5 minutes)*

**Session Classification:** Day 1 – October 13th, 2022

Contribution ID: 3

Type: **not specified**

## **Hydrogen: processes and technologies (S. Bensaid – Polytechnic of Turin)**

*Thursday, 13 October 2022 14:15 (55 minutes)*

**Presenter:** BENSAID, Samir

**Session Classification:** Day 1 – October 13th, 2022

Contribution ID: 4

Type: **not specified**

## **Ammonia: processes and technologies (M. De Joannon – CNR-STEMS)**

*Thursday, 13 October 2022 15:10 (1 hour)*

**Presenter:** JOANNON, Mara DE

**Session Classification:** Day 1 – October 13th, 2022

Contribution ID: 5

Type: **not specified**

## **Salinity gradient power technologies for energy production, conversion and storage (A. Cipollina – University of Palermo)**

*Thursday, 13 October 2022 16:10 (1 hour)*

**Presenter:** CIPOLLINA, Andrea

**Session Classification:** Day 1 – October 13th, 2022

Contribution ID: 6

Type: **not specified**

## Hydrogen distribution (P. Ercoli – SNAM)

*Thursday, 13 October 2022 17:10 (50 minutes)*

**Presenter:** ERCOLI, Piero

**Session Classification:** Day 1 – October 13th, 2022

Contribution ID: 7

Type: **not specified**

## **Conclusion of day 1 (A. Galia – University of Palermo)**

*Thursday, 13 October 2022 18:00 (10 minutes)*

**Session Classification:** Day 1 – October 13th, 2022



Contribution ID: 8

Type: **not specified**

## **Introduction to Day 2 (F. Scala – University of Naples Federico II)**

*Friday, 14 October 2022 14:00 (5 minutes)*

**Session Classification:** Day 2 – October 14th, 2022

Contribution ID: 9

Type: **not specified**

**From oil and gas to biofeedstocks: availability,  
conversion processes, the biorefinery concept (P.  
Salatino – University of Naples Federico II)**

*Friday, 14 October 2022 14:05 (55 minutes)*

**Presenter:** SALATINO, Piero

**Session Classification:** Day 2 – October 14th, 2022

Contribution ID: **10**

Type: **not specified**

## **Biomass, biofuels, and biorefineries: biochemical processes (M. Majone – University of Rome La Sapienza)**

*Friday, 14 October 2022 15:00 (1 hour)*

**Presenter:** MAJONE, Mauro

**Session Classification:** Day 2 – October 14th, 2022

Contribution ID: 11

Type: **not specified**

**Biomass, biofuels, and biorefineries:  
thermochemical processes (L. Tognotti – University  
of Pisa)**

*Friday, 14 October 2022 16:00 (1 hour)*

**Presenter:** TOGNOTTI, Leonardo

**Session Classification:** Day 2 – October 14th, 2022

Contribution ID: 12

Type: **not specified**

## **PROESA®: Break-through Technology for Producing Advanced Bio-Fuels and Renewable Chemicals (F. Mantovani – Versalis)**

*Friday, 14 October 2022 17:00 (1 hour)*

**Presenter:** MANTOVANI, Filippo

**Session Classification:** Day 2 – October 14th, 2022

Contribution ID: 13

Type: **not specified**

## **Conclusion of Day 2 (F. Scala – University of Naples Federico II)**

*Friday, 14 October 2022 18:00 (10 minutes)*

**Session Classification:** Day 2 – October 14th, 2022

Contribution ID: **14**

Type: **not specified**

## **Introduction to Day 3 (D. Fino – Polytechnic of Turin)**

*Thursday, 20 October 2022 14:00 (5 minutes)*

**Session Classification:** Day 3 – October 20th, 2022

Contribution ID: 15

Type: **not specified**

## **Power-to-X: Heat to Fuels (M. Antonini - Hysytech)**

*Thursday, 20 October 2022 14:05 (55 minutes)*

**Presenter:** ANTONINI, Massimiliano

**Session Classification:** Day 3 – October 20th, 2022



Contribution ID: 16

Type: **not specified**

## **Solar heat/power for industrial processes (A. Giaconia - ENEA)**

*Thursday, 20 October 2022 15:00 (1 hour)*

**Presenter:** GIACONIA, Alberto

**Session Classification:** Day 3 – October 20th, 2022

Contribution ID: 17

Type: **not specified**

## **Decarbonization of hard-to-abate industrial sectors: overview on economical constraints and opportunities (D. Chiaramonti - Polytechnic of Turin)**

*Thursday, 20 October 2022 16:00 (1 hour)*

**Presenter:** CHIARAMONTI, David

**Session Classification:** Day 3 – October 20th, 2022

Contribution ID: 18

Type: **not specified**

## **Navigating the energy transition: technology solutions to decarbonise the petrochemical value chains (D. Winch - JM Low Carbon Solutions)**

*Thursday, 20 October 2022 17:00 (1 hour)*

**Presenter:** WINCH, Dominic

**Session Classification:** Day 3 – October 20th, 2022

Contribution ID: **19**

Type: **not specified**

## **Conclusion of Day 3 (D. Fino – Polytechnic of Turin)**

*Thursday, 20 October 2022 18:00 (10 minutes)*

**Session Classification:** Day 3 – October 20th, 2022

Contribution ID: 20

Type: **not specified**

## **Introduction to day 4 (F. Bezzo – University of Padova)**

*Friday, 21 October 2022 14:00 (5 minutes)*

**Session Classification:** Day 4 – October 21st, 2022

Contribution ID: 21

Type: **not specified**

## **Carbon capture and sequestration: technologies, opportunities and challenges (F. Bezzo - University of Padova)**

*Friday, 21 October 2022 14:05 (55 minutes)*

**Presenter:** BEZZO, Fabrizio

**Session Classification:** Day 4 – October 21st, 2022

Contribution ID: 22

Type: **not specified**

## **CO2 to platform molecules - thermo/electrical routes (S. Hernandez - Polytechnic of Turin)**

*Friday, 21 October 2022 15:00 (1 hour)*

**Presenter:** HERNANDEZ, Simelys

**Session Classification:** Day 4 – October 21st, 2022

Contribution ID: 23

Type: **not specified**

## **CO2 to platform molecules - biochemical routes (T. Tommasi - Polytechnic of Turin)**

*Friday, 21 October 2022 16:00 (1 hour)*

**Presenter:** TOMMASI, Tonia

**Session Classification:** Day 4 – October 21st, 2022



Contribution ID: 24

Type: **not specified**

## **The role of CCUS in the decarbonization of the cement industry: technologies, challenges, perspectives (M. Romano - Polytechnic of Milan)**

*Friday, 21 October 2022 17:00 (1 hour)*

**Presenter:** ROMANO, Matteo

**Session Classification:** Day 4 – October 21st, 2022

Contribution ID: 25

Type: **not specified**

## **Conclusion of Day 4 (F. Bezzo – University of Padova)**

*Friday, 21 October 2022 18:00 (10 minutes)*

**Session Classification:** Day 4 – October 21st, 2022

Contribution ID: 26

Type: **not specified**

## **Introduction to day 5 (V. Cozzani – University of Bologna)**

*Thursday, 27 October 2022 14:00 (5 minutes)*

**Session Classification:** Day 5 – October 27th, 2022

Contribution ID: 27

Type: **not specified**

## **Risk management and trade-off in the framework of technologies for energy transition (V.Cozzani – University of Bologna)**

*Thursday, 27 October 2022 14:05 (55 minutes)*

**Presenter:** COZZANI, Valerio

**Session Classification:** Day 5 – October 27th, 2022

Contribution ID: 28

Type: **not specified**

## **The importance of life cycle assessment for the early sustainability assessment of emerging energy technologies (S. Cucurachi – University of Leiden)**

*Thursday, 27 October 2022 15:00 (1 hour)*

**Presenter:** CUCURACHI, Stefano

**Session Classification:** Day 5 – October 27th, 2022

Contribution ID: 29

Type: **not specified**

# **Life Cycle Assessment of conventional and innovative waste-to-energy technologies (U. Arena – University of Campania L. Vanvitelli)**

*Thursday, 27 October 2022 16:00 (1 hour)*

**Presenter:** ARENA, Umberto

**Session Classification:** Day 5 – October 27th, 2022

Contribution ID: 30

Type: **not specified**

## **Safe Hydrogen Fuel Handling and Use for Efficient Implementation - SH2IFT project (F. Ustolin - NTNU)**

*Thursday, 27 October 2022 17:00 (1 hour)*

**Presenter:** USTOLIN, Federico

**Session Classification:** Day 5 – October 27th, 2022

Contribution ID: 31

Type: **not specified**

## **Conclusion of Day 5 (V. Cozzani – University of Bologna)**

*Thursday, 27 October 2022 18:00 (10 minutes)*

**Session Classification:** Day 5 – October 27th, 2022



Contribution ID: 32

Type: **not specified**

## **Introduction to day 6 (A. Frassoldati – Polytechnic of Milan)**

*Friday, 28 October 2022 14:00 (5 minutes)*

**Session Classification:** Day 6 – October 28th, 2022

Contribution ID: 33

Type: **not specified**

## **Waste recovery and recycling by pyrolysis and gasification processes: state of the art, open issues and future directions (M. Pelucchi – Polytechnic of Milan)**

*Friday, 28 October 2022 14:05 (55 minutes)*

**Presenter:** PELUCCHI, Matteo

**Session Classification:** Day 6 – October 28th, 2022

Contribution ID: 34

Type: **not specified**

## **The role of CCS and CCU in delivering negative emissions for a climate neutral society (M. Mazzotti – ETH Zurich)**

*Friday, 28 October 2022 15:00 (1 hour)*

**Presenter:** MAZZOTTI, Marco

**Session Classification:** Day 6 – October 28th, 2022

Contribution ID: 35

Type: **not specified**

## **Store&Go Project (D. Trimis – Karlsruhe Institut of Technology)**

*Friday, 28 October 2022 16:00 (1 hour)*

**Presenter:** TRIMIS, Dimosthenis

**Session Classification:** Day 6 – October 28th, 2022

Contribution ID: 36

Type: **not specified**

## **An outlook on future directions of Process Decarbonization (G. De Santi, Politecnico di Torino / past director EC JRC)**

*Friday, 28 October 2022 17:00 (30 minutes)*

**Presenter:** DE SANTI, Giovanni

**Session Classification:** Day 6 – October 28th, 2022

Contribution ID: 37

Type: **not specified**

## **A holistic perspective on Energy Transition (A. Tilche, Strategic Committee - Italian Ministry of Infrastructure)**

*Friday, 28 October 2022 17:30 (30 minutes)*

**Presenter:** TILCHE, Andrea

**Session Classification:** Day 6 – October 28th, 2022

Contribution ID: **38**

Type: **not specified**

## **Conclusion of the School (G. Veronesi, EFCE President)**

*Friday, 28 October 2022 18:00 (10 minutes)*

**Session Classification:** Day 6 – October 28th, 2022