

# CO<sub>2</sub>OLING THE EARTH SUMMER SCHOOL II: FOCUS ON BIO-CCU

Online webinar series

29/9/2020 – 1/10/2020

Organized by the [Laboratory of Steam Boilers and Thermal Plants, NTUA](#)  
as part of the [BIOCON-CO<sub>2</sub>](#) research project activities



*This event is a continuation of the “Co2oling the Earth” multidisciplinary training events series of the European CCUS research and development community. For information on future events, please visit <https://www.co2olingearth.eu/>*

# EVENT AGENDA

**Scope:** An introduction to the state-of-the-art and research and development activities in the fields of climate change mitigation, focusing on carbon capture, utilization (CCU) and sequestration (CCS) technologies. Special attention will be given to biological CCU methods, as highly promising due to their versatility and low cost, as compared to other processes.

**Suitable for:** Graduate students interested in carbon capture, utilization (CCU) and sequestration (CCS) technologies, early career researchers and professionals.

**Spring School language:** all presentations and subsequent discussions will be carried out **in English**.

**Recordings, slides etc.:** Recorded material, along with presentations, will be made available (password-protected) after event completion for educational purposes, however **only real-time participants** will receive certificates of attendance.

**Registration:** Free to attend, subject to limited number of slots.

**Certificates of attendance:** Certificates of attendance will be electronically distributed to all **live** attendees shortly after the event is completed.

## More questions?

Send your e-mails to [dmskouloudi@mail.ntua.gr](mailto:dmskouloudi@mail.ntua.gr) (Ms. Despina Magiri Skouloudi ).

## About the [BIOCON-CO<sub>2</sub>](#) project

**BIOCON-CO<sub>2</sub>** aims to develop and validate a platform of flexible and versatile techniques capable of using biological processes to transform raw waste gases (rich in CO<sub>2</sub> and CO) from the iron, steel, cement and electric power industries into value-added chemicals and plastics. Exploring novel biotechnological solutions, the project intends to generate new knowledge to develop commercially viable strategies for reducing Europe's dependency on fossil fuel resources. This will lead to the increased sustainability of the chemical industry and provide support for European leadership in CO<sub>2</sub> re-use technologies.



**NTUA-LSBTP** has a leading role in WP8, which focuses on the socio-economic evaluation, environmental sustainability and public perception of **BIOCON-CO<sub>2</sub>** objectives and research outcomes. NTUA also provides its expertise on gas requirements and boundaries for bioconversion processes in WP2. It also takes part in WP7 in relation to modelling and simulating of the up-scaling of biotechnological processes, and is involved in WP9 concerning dissemination activities.

## SUMMER SCHOOL SCHEDULE

### Day 1: Tuesday, 29/9/2020

Time	Session title	Speaker(s)
9.00-10.00	Welcome & Introduction to Carbon Capture, Storage and Valorisation	S. Karellas (NTUA), G. Sanchez (LEITAT)
10.00-11.30	CCUS technologies: EU targets, environmental & economic aspects	R. Rønneberg (ACT), A. Rosenberg (GSRT), D. Magiri - Skouloudi (NTUA)
11.30-12.00	Coffee break	
12.00-13.00	CO <sub>2</sub> Capture: current technologies & future development	G. Romanos (NCSR Demokritos)
13.00-14.00	Lunch	
14.00-15.30	Microbial CCU: state of the art & future prospects	A. Serpico (LEITAT), I. Lauer, G. Philipps (Fraunhofer IME), A. Hüser (RWTH Aachen)
15.30-16.00	Coffee break	
16.00-17.30	Enzymatic CCU: state of the art & future prospects + Genetic engineering tools for CCU	C. Boeriu, T. Ewing (WFBR)

### Day 2: Wednesday, 30/9/2020

Time	Session title	Speaker(s)
9.00-10.00	Climate Change: Past, Present and Future	C. Zerefos (Acad. Of Athens)
10.00-11.30	Electrochemical & electrobiocatalytic CCU applications	L. Bañeras (UdG), D. Pant (VITO), E. Borrás (LEITAT)
11.30-12.00	Coffee break	
12.00-13.00	CCS: overview, outlook towards wide commercial deployment	A. Asimakopoulou, G. Skevis (CERTH / CPERI)

13.00-14.00		Lunch
14.00-15.30	CCUS pilot experience sharing session	S. Montenegro (Hysytech), K. De Winter (BBEPP)
15.30-16.00		Coffee break
16.00-17.30	CCUS researchers knowledge exchange session	G. Skevis (CERTH), G. Romanos (INN-Demokritos), D. Pant (VITO), E. Borrás (LEITAT), S. Hernandez (PoliTo)

### Day 3: Thursday, 1/10/2020

Time	Session title	Speaker(s)
9.00-10.00	Power-to-X: Catalytic CCU as Contribution to Climate Protection	C. Kuhr (Mitsubishi Power Europe)
10.00-11.30	Industrial CCUS: past experiences, potential opportunities, synergies & challenges	M. Pachnos (MOH), N. Kanellopoulos (NCSR Demokritos), M. Katsiotis (TITAN), L.-I. Csepei (Fraunhofer IGB)
11.30-12.00		Coffee break
12.00-13.00	Industrial CCUS: past experiences, potential opportunities, synergies & challenges (cont'd)	J.-L. Dubois (Arkema), A. Seifert, S. Bernacchi (Krajete), E. De Coninck (AM)
13.00-14.00		Lunch
14.00-15.30	CCS & CCU Poster session	S. Bernacchi (Krajete GmbH), T. Roncal (Tecnalia), V. Koidi, A. Scaltsoyiannes, T. Papalas (CERTH), A. Suarez (LEITAT), A. Carceller, M. Benito (UAB), I. Lauer (Fraunhofer IME), J. Zeng (IIT)



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