

## INTERNATIONAL SCHOOL ON WATER REUSE

19-21 SEPTEMBER 2021

TORINO – CHEMISTRY DEPARTMENT

VIA PIETRO GIURIA 7

ROOM “AVOGADRO” – GROUND FLOOR

### *Program*

19<sup>th</sup> September 2022

**8:30-9:00 Registration**

**9:00-9:30** Institutional greetings

**9:30-10:00** Climate change and water scarcity; from present to future troubles (M.Lasagna, University of Torino, Italy)

**10:00-11:00** Wastewater reuse in Europe. New EU regulation and challenges for stakeholders (L.Rizzo, University of Salerno, Italy and P.Simon, Water treatment plant Murcia, Spain)

**11:00-11:20 COFFEE BREAK**

**11:20-11:50** Water reuse from sludge treatments for fertigation (L.Celi, University of Torino)

**11:50-12:20** VALUE CE-IN – “VALorisation of treated wastewater and sIUdgE in view of Circular Economy and INdustrial symbiosis” (L.Petta, ENEA, Italy)

**12:20-12:50** Water reuse: drivers and barriers at policy, planning and governance levels (T. Fidelis, University of Aveiro, Portugal)

**13:00-14:00 LUNCH BREAK**

**14:00-16:00 ROUND TABLE: Drivers and barriers to speed up water reuse in Europe.**

**Speakers:** P.Simon (Murcia, Spain), D.Mainero (ACEA Pinerolese, Italy), L.Petta (ENEA, Italy), V.Maurino (University of Torino, Italy), C.Pulgarin (EPFL, Lausanne, Swiss), A. Battilani (Irrigants d'Europe), R. Maffettone (EC, JRC, Ispra, Italy), L.Celi (University of Torino, Italy), I.Macsinga (University of Timisoara, Romania), M.Lai (IRIS srl, Italy)

**Chairs:** A.Bianco Prevot (University of Torino, Italy), L.Rizzo (University of Salerno, Italy)

**16:00-16:20 COFFEE BREAK**

**16:20-18:30** Reuse adoption: Framework and tools (P.Garrone, Politecnico di Milano, Italy and E.Weber, Fondazione Politecnico di Milano, Italy)

**20:00 WELCOME COCKTAIL**

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**8:00 MEETING AT TORINO ESPOSIZIONI (VIALE BOIARDO) TO TAKE THE PRIVATE BUS TO PINEROLO**

**9:00-12:00** Visit to a local water utility (ACEA Pinerolese S.P.A., Pinerolo)

**13:00-14:00 LUNCH BREAK**

**14:00-18:30** *Technologies for water treatment and reuse: state of the art and challenges.* **Chairs:** A.Arques (Polytechnic University of Valencia, Spain; M.Minella, University of Torino, Italy)

**14:00-14:30** Introduction to AOPs, Basic concepts on Reactive Species (M. Minella, University of Torino, Italy)

**14:30-15:30** State of the art and challenges for the scale-up of AOPs up to the industrial level: Fenton processes and heterogeneous photocatalysis (A. Arques, Polytechnic University of Valencia, Spain; V. Maurino, University of Torino, Italy)

**15:30-16:00** Solar-based advanced oxidation processes: the long experience at the PSA (S. Malato, Plataforma Solar de Almeria, Spain)

**16:00-16:20 COFFEE BREAK**

**16:20-17:00** Membrane and reactive membranes: introduction and engineering aspects (V. Boffa, University of Aalborg, DK; A. Tiraferri, Polytechnic of Torino, Italy)

**17:00-18:00** State of the art in the application of heterogeneous photocatalysis, photo-Fenton and H<sub>2</sub>O<sub>2</sub>/ UV processes in disinfection: limits and perspectives (S. Giannakis, Polytechnic of Madrid, Spain; C. Pulgarin, EPFL, Swiss)

**18:00-18:30** Analytical control: from laboratory to water treatment plants (A. Bianco Prevot, University of Torino, Italy)

**20:00 SOCIAL DINNER**

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**9:00-10:15** Application of narrative methodologies for awareness raising and education on water reuse issues (B.Bruschi and M.Repetto, University of Torino)

**10:15-11:30** Public involvement to raise spread awareness and Social acceptance of innovative solutions. (I.Macsinga and A.Petcu, University of Timisoara, Romania)

**11:30-11:45 COFFEE BREAK**

**11:45-13:00** Conceptualize a social acceptance challenge and see how it could be assessed empirically. The Project O experience (E.Jensen, Institute for Method Innovation, Ireland)

**13:00-14:00 LUNCH BREAK**

**14:00-15:30** Team working on a specific case study: Almeria and Murcia (Spain): two areas one next to the other: water reuse or not reuse? This is the question (I. Oller, Plataforma Solar de Almeria and P.Simon, Water treatment plant, Murcia, Spain)

**15:30-16:00** Update on water reuse guidelines at european level (R.Maffettone, EC, JRC, Ispra, Italy)

**16:00-16:20 COFFEE BREAK**

**16:20- 16:55** The role of Water Footprint Metrics in water use management (A.Manzardo, UNI, Italy)

**16:55- 17:15** The role of standardization in the water reuse; a brand new toolkit (C.Di Maria, UNI, Italy)

**17:15-17:45** Open challenges and future perspectives

**17:45-18:00** Closing remarks