



## Circular Transformation Days Cologne 2025

11.-12.09.2025

Mevissensaal & Galery TH Köln, Claudiusstr. 1, 50678 Köln

<https://ctdc-conference.com/>

### Program

#### Thu, 11.9.2025 (Day 1):

##### 08:30 Registration & Reception

##### 09:15 Welcome (CTL, Executive Committee TH Köln)

**Keynote Speaker:** Prof. Dr. Henning Wilts (Wuppertal Institute for Climate, Environment Energy gGmbH) *"Germany's National Strategy for Circular Economy – insights in circular transformation processes"*

##### 10:00 Session I: Circular Economy

The transformation from linear to circular economy needs transdisciplinary teams to develop innovative solutions that matter and foster social change. Ever wondered how real-life laboratories contribute to the transformation? What policies are required to support a circular economy and where are the limitations? How to assess the success of circular economy solutions? Join us in the discussion.

**Chair:** Prof. Dr. Kathrin Hesse & Prof. Dr. Christian Wolf (TH Köln)

**Keynote Speaker:** tba

**Speaker:**

- **Christian Hohaus** (Fraunhofer-Institute for Material Flow and Logistics IML, Dortmund) *"Chances and Challenges of the Circular Economy"*
- **Robin Dietsch** (Bergischer Abfallverband, Engelskirchen) *"metabolon - From Landfill to Innovation Campus"*
- **tba** (German Institute of Development and Sustainability - IDOS, Bonn) *"tba"*

##### 11:30 Lunch Break

##### 12:30 Session II: Energy Transition

The session "Energy Transition" discusses how the transition towards a renewable energy system and the circular transition interact: On the one hand, energy systems such as heat pumps will need to meet circular requirements. On the other hand renewable energy supply in all phases of the circular economy is key for reducing the energy related environmental footprint. And, since energy systems typically have lifetimes in the decade range, aspects such as repair need to be extended towards upgrades enabling to cope with future regulation and innovation.

**Chair:** Prof. Dr. Johanna May, Prof. Dr. Arjuna Nebel & Prof. Dr. Valérie Varney (TH Köln)

**Keynote Speaker:** Prof. Dr.-Ing. Stephan Ramesohl (Wuppertal Institute for Climate, Environment Energy gGmbH) *"C2E: Clean x Circular Energy for a sustainable energy system transformation"*

**Speaker:**

- **Torsten Hummen** (Robert Bosch GmbH, Zentrum für Forschung und Vorauentwicklung; Renningen) *"Beyond Durability: Lifespan Optimization for Low-Carbon and Circular Heating Systems"*
- tba
- tba



**14:00 Coffee Break**

**14:30 Poster Session (inkl. Quiz Rally)**

**Chair:** Dr. Kristina Maliutina & Dr. Himanshu (TH Köln)

**15:30 Coffee Break**

**16:00 Session III: Water Management**

This session explores innovative approaches and technological advancements in sustainable wastewater management. Presentations will cover emerging treatment technologies that enable efficient resource recovery, large-scale industrial strategies for water sustainability from treatment to sludge handling, and the application of the Cradle to Cradle (C2C) principle to wastewater facility design. Together, these talks highlight the shift towards circular, resource-conscious solutions in water infrastructure and environmental engineering.

**Chair:** Prof. Dr. Matthias Eisenacher, Prof. Dr. Miriam Sartor & Dr. Kristina Maliutina (TH Köln)

**Keynote Speaker:** Prof. Dr. Christine Kleffner (Bochum University of Applied Sciences) *“Water-Efficient Brine Mining in Industry: New Membrane Solutions for Scalable Applications”*

**Speaker:**

- **Dr. Jan Ruppelt** (Ruhrverband, Essen) *„Towards Sustainable Wastewater Facilities: Embracing the Cradle to Cradle (C2C) Principle for Wastewater Buildings“*
- **Dr. Julian Quenel** (WTE Wassertechnik GmbH, Essen) *“Implementing Water Sustainability on an industrial Scale – From Water Treatment to Sludge Management and Technical Innovation”*
- **Dr. Himanshu** (:metabolon Institute, TH Köln) *“Rethinking Wastewater: The Past We Inherited, the Future We Design”*

**17:30 End of CTDC Day 1**

**19:00 Conference Dinner**

**Location:** XII Apostel, Heumarkt 68, 50667 Cologne



**Fri, 12.9.2025 (Day 2):**

### **09:00 Session IV: Polymer Technology**

The session "Polymer Technology" at CTDC 2025 addresses key challenges and innovations in integrating circular economy principles into product development and polymer processing industry. Featuring discussions on the barriers to achieving sustainable cycles and the latest technological advancements, the session aims to provide a broad perspective on how polymers can contribute to a more sustainable future.

**Chair:** Prof. Dr. Simone Lake & Prof. Dr. Martin Bonnet (TH Köln)

**Keynote Speaker:** Peter Schwarz (Covestro Deutschland AG, Leverkusen) „*Circularity in the Plastics World – Technologies, Chances and Challenges*“

**Speaker:**

- **Jochen Ebbing** (Lobbe Industrieservice GmbH & Co KG, Iserlohn) "*AI-Driven Material Recovery: Advancing Precision in Waste Sorting*"
- **Lena Engel** (igus GmbH, Köln) "*Challenges and successes of the circular value creation of motion plastics using the example of e-chains.*"
- **Günter Margraf** (Envalior GmbH, Düsseldorf) "*tba*"

### **10:30 Coffee Break**

### **11:00 Session V: Circular Solar Modules**

The session "circular PV modules" will give an insight into the "state of the art" technology benchmark regarding "recycling of PV modules". Furthermore, new approaches for sustainable and energy efficient components of PV modules will be presented. A special emphasis will be on glass and encapsulation materials. The novel components allow to re-think the design of PV modules – enhancing not only recycling, but also re-pair and re-manufacturing of PV-modules.

**Chair:** Prof. Dr. Ulf Blieske (TH Köln) & Prof. Dr. Eva Schwenzfeier-Hellkamp (Bielefeld University of Applied Sciences)

**Keynote Speaker:** Malte Fislake (Reiling PV-Recycling GmbH, Münster) "*Recycling of Silicon-Based Photovoltaic Modules - State of the art in Europe*"

**Speaker:**

- **Anna Katharina Schnattmann** (Bielefeld University of Applied Sciences) "*Transferring the R principles to photovoltaic modules - Technical potential for reuse and repair*"
- **Thomas C. Sauer** (EXXERGY GmbH, Gräfelfing) "*Circularity and resource efficiency: How can glass contribute to make photovoltaic modules more sustainable*"
- **Oliver Pfeiffer** (TH Köln) "*Sustainability vs. Energy yield: How to balance antimony content in PV glass*"

### **12:30 Award Ceremony & Goodbye**

### **13:00 Farewell Lunch**

### **14:00 End of CTDC Day 2**

