8th Late Summer Workshop 2019
22th – 25th September 2019 in Haltern am See

- Chemical and biological transformation processes and tools for their investigation -

- Programme -
Update

Sunday, 22nd September

16.30 – 18.30  ◆ Registration
                Conference Office
19.00           - Dinner -
                Restaurant
Afterwards      - Come together for a cocktail -
                Hotel-Bar

– End of day 1 –

Monday, 23rd September

9.00 – 9.15    ◆ Prof. Dr. Torsten C. Schmidt,
                Chair of Water Chemistry Society, University Duisburg-Essen,
                Essen, DE:
                Welcome and opening remarks

Chair: Dr. Holger Lutze

9.15 – 10.15   ◆ Prof. Dr. Urs von Gunten,
                Eawag Water Resources and Drinking Water, Dübendorf, CH:
                Oxidation processes for water treatment: Are we on track?

10.15 – 10.45  ◆ Dr. Fabian Itzel,
                Institut für Energie- und Umwelttechnik e.V. (IUTA), Duisburg, DE:
                Evaluation of a biological post-treatment after full-scale ozonation at
                a municipal wastewater treatment plant
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>10.45 – 12.00</td>
<td><strong>Coffee break &amp; Poster time</strong> –</td>
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</table>
| 12.00 – 12.30 | **Stephanie Remke,**  
*Eawag EPFL, Dübendorf, CH:*  
The role of “long-lived” photooxidants in the transformation of aquatic organic compounds photosensitized by dissolved organic matter |
| 12.30 – 13.30 | **Dr. Peter Tentscher,**  
*Aalborg Øst, DK:*  
Chemical oxidation: How quantum chemical calculations can support experimental studies |
| 13.30 – 16.00 | **Lunch & Poster time** -                                               |
| 16.00 – 17.00 | Chair: **Dr. Arne Wick**  
**Prof. Dr. Damian E. Helbling,**  
*School of Civil and Environmental Engineering at Cornell University, Ithaca, New York, USA:*  
Can micropollutant biotransformations be predicted from microbial community biomolecular parts lists? |
| 17.00 – 17.30 | **Nina Henning,**  
*Federal Institute of Hydrology (BfG), Dep. G2, Aquatic Chemistry, Koblenz, DE:*  
Elucidating the biological transformation of fexofenadine and sitagliptin by carrier-attached biomass and suspended sludge from a hybrid moving bed biofilm reactor |
| 18.00 – 19.30 | **Dinner** -                                                           |
| 19.30 – 20.30 | **Prof. Dr. Michael Dodd,**  
*University of Washington, Department of Civil and Environmental Engineering, Seattle, USA:*  
Antibiotic Resistance Gene Fate during (Waste)water Disinfection Processes: Degradation, Deactivation, and Implications for Mitigation of Antibiotic Resistance Dissemination |
20.30 – 21.00  ♦ Katharina Hupperich,
University of Duisburg-Essen, Instrumental Analytical Chemistry, Essen, DE:
Reaction of chlorine dioxide with organic matter – Formation of inorganic products

Afterwards - Cometogther -  Hotel-Bar

– End of day 2 –
## Tuesday, 24th September

**Chair: Prof. Dr. Christian Zwiener**  
Conference room “Drusus/Caesar”

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<thead>
<tr>
<th>Time</th>
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<tr>
<td>9.00 – 10.00</td>
<td>Dr. Imma Ferrer, University of Colorado, Environmental Engineering, Boulder, USA</td>
<td>Identification of transformation products by LC/Q-TOF-MS - examples from pesticides in plants to surfactants in hydraulic fracturing waters</td>
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<td>10.00 – 10.30</td>
<td>Dr. Martina Werneburg, Eberhard Karls University of Tübingen, Center for Applied Geoscience, Tuebingen, DE</td>
<td>Targeted and non-targeted LC-MS workflows for the identification of input and transformation of emerging pollutants in a small river system</td>
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<td>10.30 – 12.00</td>
<td>- Coffee break &amp; Poster time –</td>
<td>Room “Cicero”</td>
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<tr>
<td>12.00 – 12.30</td>
<td>Dr. Maolida Nihemaiti, Université Paris-Est Créteil, Laboratoire Eau Environnement et Systèmes Urbains, Créteil Cedex, FR</td>
<td>Screening of micropollutants and their transformation products in performic acid treated wastewater</td>
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**Chair: Prof. Dr. Thorsten Reemtsma**  
Conference room “Drusus/Caesar”

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<tr>
<td>12.30 – 13.30</td>
<td>Prof. David Sedlak, University of California, Department of Civil &amp; Environmental Engineering, Berkeley, USA</td>
<td>Oxidative Treatment in Potable Water Reuse: Understanding the Formation and Fate of Transformation Products</td>
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<tr>
<td>13.30 – 15.30</td>
<td>- Lunch &amp; Poster time –</td>
<td>Restaurant + Room “Cicero”</td>
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<td>15.30 – 16.00</td>
<td>Daniel Sauter, Berliner Wasserbetriebe, Research and Development, Berlin, DE</td>
<td>Post-treatment options for ozonation in tertiary municipal wastewater treatment</td>
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| 16.00 – 17.00 | **Prof. Dr. Martin Elsner,**  
*Technical University of Munich, Chair of Analytical Chemistry and Water Chemistry, Munich, DE:* | Exploring Transformation Pathways and Limits of Biodegradation by Stable Isotope Fractionation |
| 17.00 – 17.30 | **Jens Terhalle,**  
*University of Duisburg-Essen, Instrumental Analytical Chemistry, Essen, DE:* | Isotopic effect of ozonation of specific reaction sites                                  |

From 18.00  
*Dinner*  
Barbecue at lido Lake of Haltern

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End of day 3 --
### Wednesday, 25th September

**Chair: Dr. Maik Jochmann**

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| 9.00 – 10.00 | ◆ **Prof. Dr. Thomas Ternes,**  
  *Federal Institute of Hydrology (BfG), Qualitative Hydrology, Koblenz, DE:*  
  Transformation products in the urban water cycle: a hidden problem? |
| 10.00 – 10.30 | ◆ **Stefanie Lorenz,**  
  *Leuphana University of Lüneburg, Institute of Sustainable and Environmental Chemistry, Lüneburg, DE:*  
  Design of fluoroquinolones with improved environmental mineralization |
| 10.30 – 11.00 | ◆ **Nina Hermes,**  
  *Federal Institute of Hydrology (BfG), Dep. G2, Aquatic Chemistry, Koblenz, DE:*  
  Ozonation of the antidiabetic sitagliptin: determination of reaction kinetics and identification of transformation products |
| 11.00 – 11.30 | - Coffee break –  
  **Room “Cicero”** |

**Chair: Dr. Arne Wick**

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| 11.30 – 12.30 | ◆ **Prof. Dr. Jeppe Lund Nielsen,**  
  *Aalborg University, Department of Chemistry and Bioscience, Aalborg DK:*  
  Who and how do they degrade micropollutants? |
| 12.30 – 13.00 | ◆ **Jonas Schaper,**  
  *Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB), Berlin, DE:*  
  Removal and Transformation of Trace Organic Compounds in Hyporheic Reactors of Urban Freshwater Systems |
| 13.00 – 13.15 | ◆ **Prof. Dr. Torsten Schmidt,**  
  *Chair of Water Chemistry Society, University Duisburg-Essen, Essen, DE:*  
  Closing remarks |
| 13.15 | - Lunch –  
  **Restaurant**  
  **End of workshop –** |