

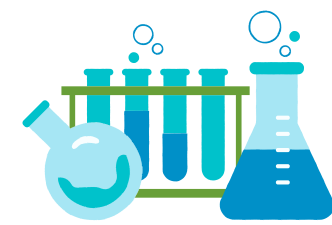
Why?

The presence of hazardous micro-pollutants in water streams has become a worldwide concern, as it compromises not only the environment but also human health.



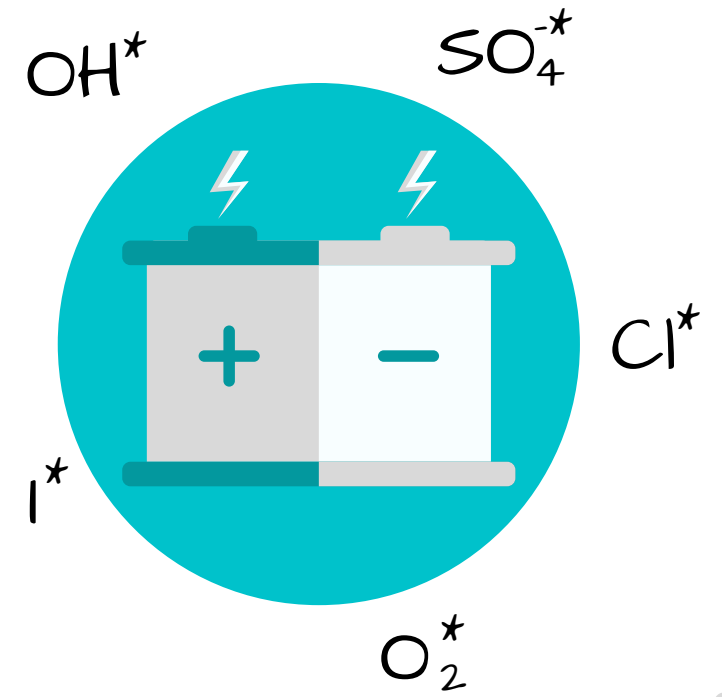
To be one step ahead of a future where water scarcity will only accentuate this issue even more, overcoming the limitations of current wastewater treatment technologies is one of our top priorities.

What?



Advanced Oxidation Processes (AOPs) are a well-known class of technologies for the degradation of micro-pollutants. In particular, Electrochemical AOPs (eAOPs) stand out as a sustainable and effective solution since they can operate at ambient conditions and may be powered by renewable energy sources. Additionally, they may be chemical-free and waste-free.

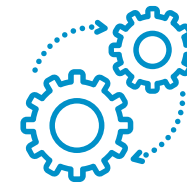
Despite great advancements made over the last few decades, eAOPs can still be adversely affected by several process factors, limiting its industrial roll-out.



InnoveOX

MSCA-ETN

How?



Training of a new generation of researchers in Innovative Electrochemical Oxidation processes for the removal and analysis of micro-pollutants in water streams

In-situ generation of oxidative radicals

WP1

Electrochemical Advanced Oxidation Processes (eAOPs)

Photo-electrocatalysis

WP2

Implementation & Assessment

WP4

Novel analytical techniques

WP3

Advanced sample preparation

Universal separation method

Structural elucidation of degradation products

Deep learning tools



In-vivo toxicity models



Life Cycle Assessment



eAOPs & biological wastewater treatment



Hydrogen peroxide-driven oxidation



Catalytic wet air oxidation



Industrial implementation

Renewable energy-driven photocatalysis



Photo-electrochemical cell design

Early-Stage Researchers



Beneficiaries



Partner Organizations



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