



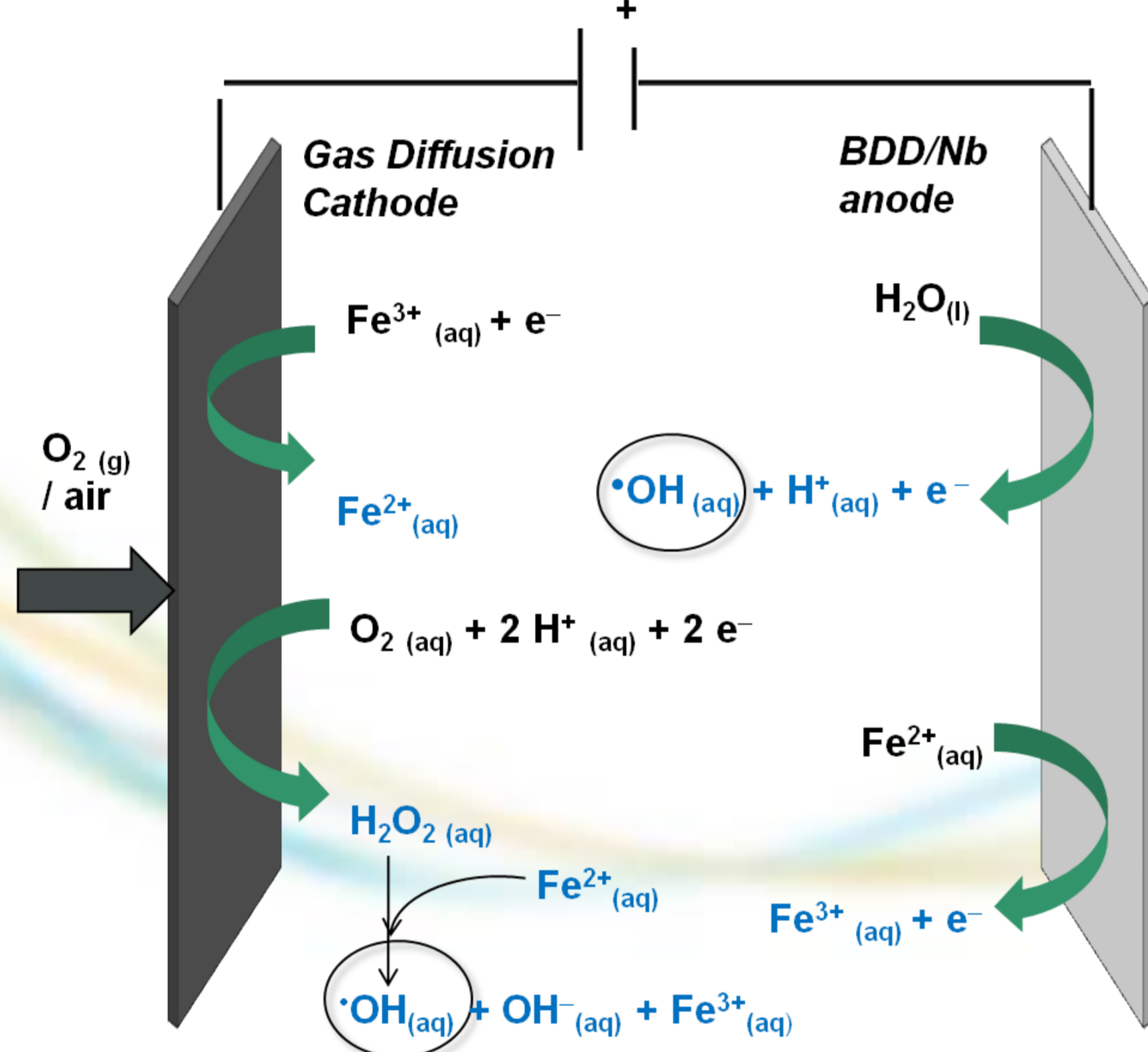
Demonstrating integrated innovative technologies for an optimal and safe closed water cycle in Mediterranean tourist facilities www.demeaumed.eu

SOLAR PHOTOELECTRO-FENTON (SPEF)

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Description

- Solar Photoelectro-Fenton (SPEF) process is an **advanced electrochemical oxidation process (AEOP)**.
- Its process is based on the **H₂O₂ electrogeneration** and the addition of a small amount of Fe²⁺ to produce •OH and Fe³⁺ from the **Fenton's reaction**.



Applicability

- Remediation of wastewaters containing hazardous organics.
- Tertiary treatment for wastewaters.
- Direct greywater treatment.

Advantages

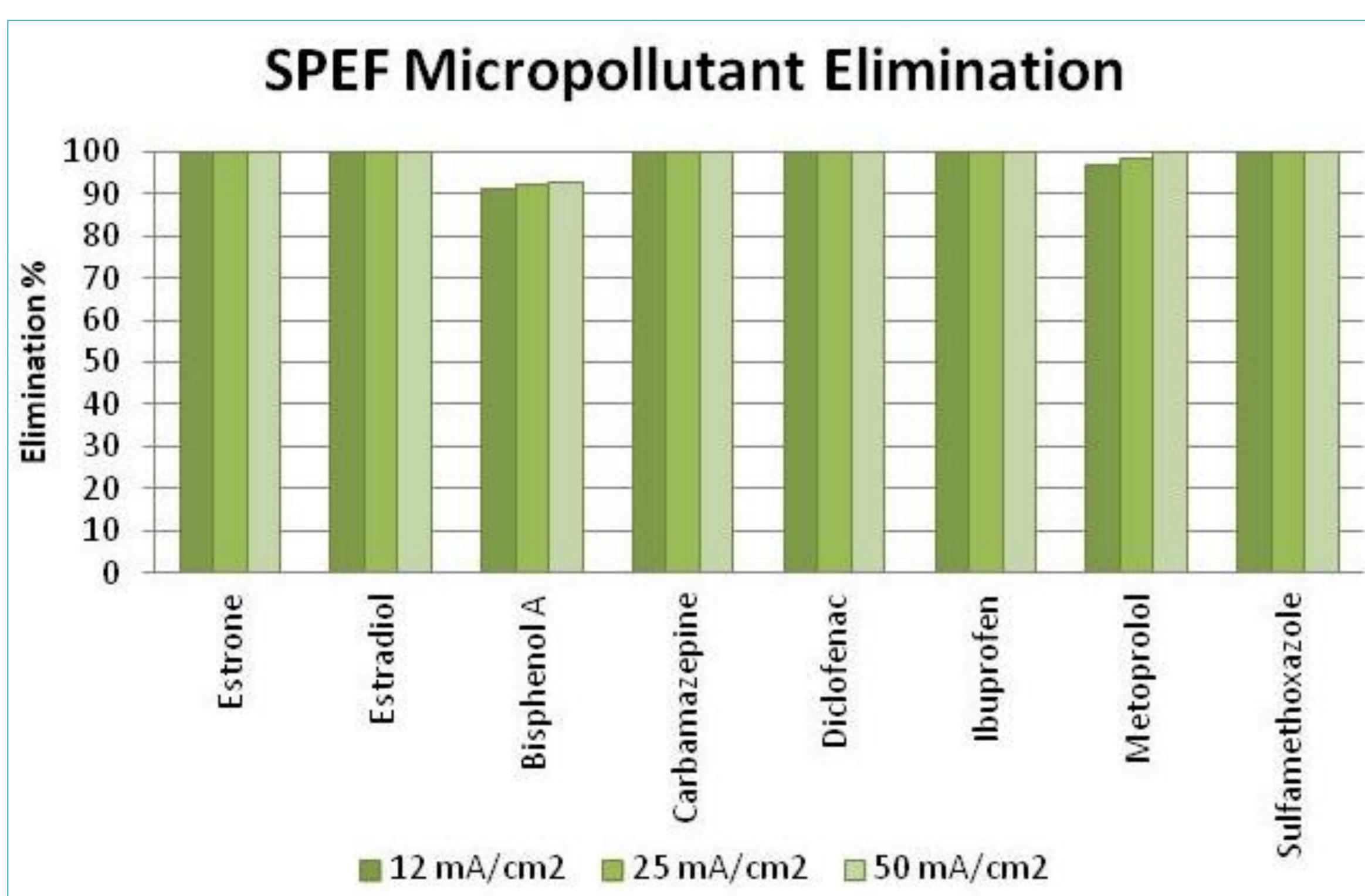
- **Flexibility** to treat different waters.
- **Chemical reagents minimization** compared to other Fenton technologies.
- **Energetic reduction** due to solar use for catalyst recovery.

Market uptake

- Estimated total cost: 1,85€/m³
- Operational cost: 1,11€/m³
- Maintenance cost: 0,74€/m³

Results from demEAUmed demonstration

- COD reduction: >30%
- Water disinfection: Total Count >3 log
- Micropollutants elimination:



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