SAMELODIZER

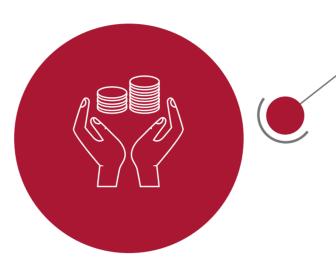
Sustainable membrane distillation for industrial water reuse and decentralised desalination approaching zero waste



Project

MEIoDIZER implements high-performance membranes and modules in strategic applications of membrane distillation (MD). MEIoDIZER's overarching goal is to provide the needed step to transform membrane distillation (MD) and especially its core components, namely, membranes

OUR Objectives



New membranes and modules

Creation of next-generation membranes and modules obtained with green and readily scalable approaches

Smart renewable energy

and membrane modules, into products for the benefit of industry and society.

MEIoDIZER will demonstrate membranes, modules, and components in four MD prototypes in operational environments: specifically, two demos will be demonstrated in industrial settings, while two demos for drinking water production. Versions of the MD technology have already been validated in real environments, but MEIoDIZER will provide improved and currently missing core membrane components, and additional technology transfer in new and more appropriate implementations.



Rationally integrate the core innovative membrane and module components with energy and control systems that maximise their performance and enable the smart utilisation of renewable energy

Reuse of water

Reuse of industrial waste for production of drinking water

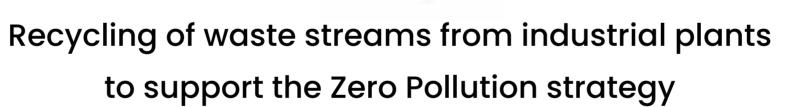
Benefits

Demonstrate the economic and environmental benefits associated with the implementation of the innovative membrane components

EXPECTED Impacts



New membrane materials, delivering smart solutions for greening of industrial plants





Better materials with outstanding separation performance in terms of chemical and mechanical









Reduction of the water footprint of 10% in industrial plants for the preservation of freshwater resources

MEloDIZER will develop new MD systems and designs with disruptive energy efficiencies

The membranes will be obtained using alternative green, non-toxic, and more sustainable solvents



Project details

Project number: 101091915

Project title: Sustainable membrane distillation for industrial water reuse and decentralised desalination approaching zero waste Project Acronym: MELoDIZER Granting authority: European Health and Digital Executive Agency Start date: 01 December 2022 Duration: 48 months

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Contacts

PROJECT COORDINATOR

Alberto Tiraferri | Politecnico di Torino alberto.tiraferri@polito.it

Matteo Fasano | Politecnico di Torino matteo.fasano@polito.it

DISSEMINATION MANAGER

Isella Vicini | Tinexta Innovation Hub isella.vicini@tinextainnovationhub.com



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