

CIVIL AND ENVIRONMENTAL ENGINEERING

DIATI - Water reuse with innovative membrane-based technologies

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| Funded By | Dipartimento DIATI |
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| Context of the research activity | Experimental and modeling activities to promote water reuse and resource recovery from waste liquid streams utilizing innovative membrane-based technologies that can be coupled with renewable energy. |
| Objectives | <p>The research activities will include the following:</p> <ul style="list-style-type: none"> - setup of membrane filtration systems - filtration tests at low and high water recovery using synthetic and real wastewater and high-salinity streams - investigation of membrane fouling, wetting, and other performance-limiting phenomena - optimization of productivity and achieved product quality - analyses of aqueous streams - modeling of the results for optimization and for prediction purposes - process modeling at different scales |
| Skills and competencies for the development of the activity | <ul style="list-style-type: none"> - Knowledge of membrane filtration processes - Experience in laboratory activities - Basic knowledge of membrane modeling and modeling software |