

The special Edition of

EuroMembrane 2022

to Celebrate the 40th EMS Anniversary

20 - 24 November 2022 - Sorrento (Naples, Italy)



Book of Abstracts

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GREEN BRINE: Agri-food brine valorisation through integration of sustainable membrane-based technologies

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Table olive processing wastewaters and brines in particular are very complex and voluminous liquid matrices due to their high content in organic matter and salinity, which makes them a serious environmental concern with a very difficult and expensive management. Nowadays, their treatment requires specially designed systems because conventional ones present in wastewater treatment plants (WWTPs) are not prepared to deal with such a complex waste matrix, but they require large impermeable surfaces as evaporation ponds, thus causing gaseous odorous emissions, polluting soils and aquifers and proliferating the occurrence of insects. This worrying outlook leads to seek sustainable and environmentally-friendly treatments to those mentioned before, thus resulting in minimising emissions and discharges and, as a consequence, reducing the environmental impact of agri-food activities. The main objective of the GREEN BRINE project is to develop an alternative and more sustainable approach to valorising table olive processing wastewaters and, in particular, brines. So, the integral valorisation of agri-food brines through the integration of sustainable systems such as low-cost ceramic membrane technology (based on clayey materials) and membrane-based bioelectrochemical systems could be a successful case study of technological application based on the concept of circular economy and is being investigated with the purpose of obtaining bioactive compounds, water purification and in situ generated products of industrial interest, such as energy carriers, acids and bases.

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