

# EFCE Spotlight Talks

Section on Membrane Engineering

10  
March  
2026

16:00-17:45  
CET



## Membrane Engineering for a circular economy

Circular economy is at the basis of a sustainable development and it is becoming crucial in view of the continuous grow of population, of an increasingly consumerist society and of an acceleration of industrial productions. The reuse and recycling of existing materials and products is, in fact, the key to minimize waste production and raw sources depletion. Membrane operations are known to be sustainable since they operate in mild conditions and without the use of chemicals. Moreover, they can be applied to valorize waste streams, through the separation and recovery of species of interest, thus contributing to the circular economy goals. However, after their life time, membranes must be disposed, and end-of-life treatments need to be defined. In this webinar, the contribution of membrane operations for the recovery of hydrogen from e-fuels and of biomolecules from winemaking by-products are reported as case studies. Moreover, the "cradle-to-grave" path of nanofiltration is presented and discussed.

### PROGRAM

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| 16:00 | <b>Welcome and introduction</b><br>Alessandra Criscuoli – Chair Section on Membrane Engineering<br>Boelo Schuur, EFCE Scientific Vice-President  |
| 16:10 | <b>Towards circularity in nanofiltration: from building blocks to end-of-life treatments</b><br>Gyorgy Szekely, King Abdullah University of Science and Technology (KAUST)- Saudi Arabia |
| 16:40 | <b>The valorisation of hydrogen in e-fuels by membrane operations</b><br>Giuseppe Barbieri, Istituto per la Tecnologia delle Membrane (CNR-ITM) – Italy                                  |
| 17:10 | <b>Recovery of biomolecules from winemaking by-products: A path towards circular economy in the wine industry</b><br>Maria Norberta dePinho, Universidade de Lisboa (ULisboa) – Portugal |
| 17:40 | <b>Conclusion</b><br>Alessandra Criscuoli – Chair Section on Membrane Engineering  |

**REGISTRATION**

*free of charge but mandatory*

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