

Membrane Technology Seminars to Industry: Technical Program

April 27, 2026

TÜBİTAK, Gebze, Turkey

With the collaboration of senior research scientists from:

Flemish Institute for Technological Research, Membrane Separation and Value Chain Assessment (VITO-MESCH) and Fraunhofer Institute for Ceramic Technologies and Systems (Fraunhofer IKTS)

Module 1: Membrane technology for Industry: Principles, process operation and case studies

9:00 – 10:40 Introduction from VITO – basic principles in membrane technology for the industrial scale applications

- Basic principles and terminology
- Benefits and triggers
- Overview membrane processes
- Technologies: micro-, ultra-, nanofiltration, reverse osmosis – and beyond
- Materials, membranes/modules, and unit operations
- Performance parameters

10:40 – 11:00 Morning break

11:00 – 12:40 Industrial applications and case studies from VITO

- “Real-life” industrial problems – What are typical cases and how do we approach them?
- From lab-scale feasibility studies to piloting and industrial implementation
- Techno-economic evaluation

12:40 – 13:00 Interactive – Q&A session

13:00 – 14:00 Long break

Module 2: Application of Ceramic Membranes in Industry

14:00 – 15:45 Introduction from Fraunhofer - membranes and membrane materials for

- large scale liquid filtration
- pervaporation / vapor (steam) permeation
- gas separation
- membrane extraction
- membrane distillation

15:45 – 16:05 Afternoon break

16:05 – 17:35 Application and case studies from Fraunhofer IKTS

17:35 – 17:50 Conclusions and closure