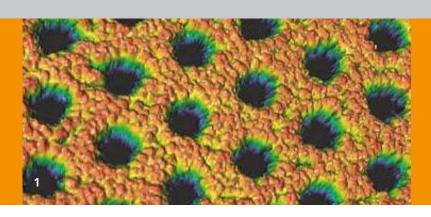


FRAUNHOFER INSTITUTE FOR ENVIRONMENTAL, SAFETY, AND ENERGY TECHNOLOGY UMSICHT



1 Microsieve with hole diameters of 8 µm.

APPLYING OF MICROSIEVES

DEVELOPMENT AND OPTIMIZATION OF TAILOR MADE SEPARATION PROCESSES

Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT

Osterfelder Strasse 3 46047 Oberhausen, Germany

Dr.-Ing. Ilka Gehrke

Head of Department
Photonics and Environment
Phone +49 208 8598-1260
ilka.gehrke@umsicht.fraunhofer.de

Dipl.-Ing. Josef Robert

Head of Department
Process Engineering
Phone +49 208 8598-1150
josef.robert@umsicht.fraunhofer.de

www.umsicht.fraunhofer.de

Do you want to separate valuable materials, clarify a product or reject particulate matter? Do you have problems with blocking or stability of membranes and detect contaminants in your products?

We can help with the development and optimization of tailor made separation processes based on microsieves.

Keywords

- Maximum selectivity
- High efficiency
- High thermal and chemical stability

Industrial sectors

- Water technology
- Wastewater technology
- Life science
- Pharmacy
- Chemical industry
- Flue gas purification





- 1 Stirring cell.
- 2 Microsieve.

Technological specification

- Microsieve of stainless steel, nickel and silicon nitride (dp 0,3 to 10 μ m, filtration area > \varnothing 5")
- Functionalized microsieves with reactive surfaces
- Test facility at laboratory scale (stirring cell, filtration area < Ø 80 mm, 400 ml sample volume, < 100 bar)
- Test facility at pilot scale (filtration area < 0,3 m², approx. 1 m³/h, < 16 bar)
- Laboratory analysis (3-D-microscopy, particle sizer, turbidity measurement, zeta sizer)

Our service

- Screening tests at laboratory scale
- Development and implementation of microsieve processes and pilot plants
- Development and implementation of prototypes
- Feasibility studies
- Market studies
- Laboratory analysis

Your benefit

- Optimized product quality
- More efficient applications
- High process reliability through maximum selectivity and robustness