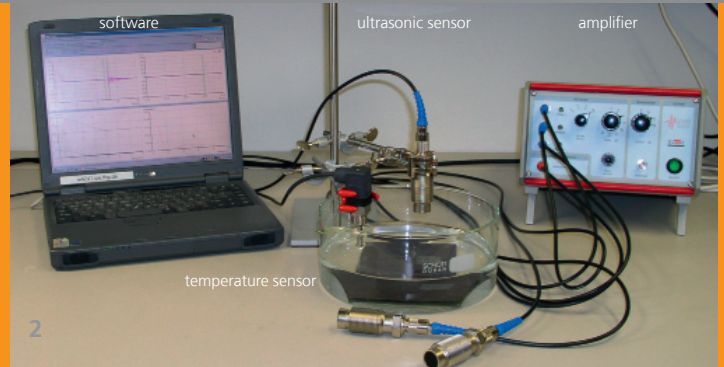
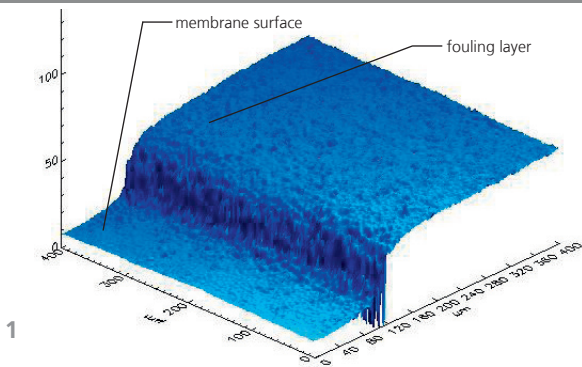




FRAUNHOFER WATER SYSTEMS ALLIANCE (SYSWASSER)



1 *Optical Fouling measurement (offline).*

2 *Components of Online Detection.*

ONLINE-DETECTION OF FOULING LAYERS

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Fraunhofer Institute for Solar Energy Systems ISE is developing autonomous filtration plants for the water disinfection.

The basic problem of membrane filtration is the formation of undesirable layers (fouling) and of unpredictable micro-biological growth in particular (biofouling).

Up to now only flow and pressure drop were available to control the formation of fouling layers during the liquid solid filtration and to draw conclusions from the process condition.

To provide additional valuable information about the condition of plants Fraunhofer ISE is developing a new system for online fouling detection.

Using the online detection of fouling layers has following advantages:

- »Visualizing« of the fouling layers,
- Detection of layers on any key position on the membrane module (e.g. location of clogging in capillary membranes),
- Interpretation of measuring signals to choose the right cleaning procedure,
- Optimized process flow,
- High reduction of energy and resources,
- Closed-loop control.

How can your company benefit from this new Technology?

We will be glad to adjust the fouling detection technique to the specific needs of your production process and we would be pleased to cooperate with you.