

Membrane Applied Science and Technology Center (MAST)

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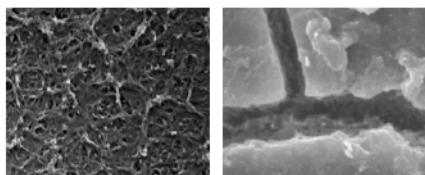
Center website: <http://www.mastcenter.org/>

Reducing Membrane Fouling in Water Treatment Processes

The problem of membrane fouling by natural organic matter is critically important in the production of potable water from surface waters such as rivers and streams. Many such waters have a brown or tan appearance due to the natural organic matter they contain (humic and tannic substances). Those materials tend to bind to the surface of water treatment membranes in reverse osmosis and nanofiltration processes. Researchers at the Membrane Applied Science and Technology Center have evaluated and characterized several kinds of membranes to determine their fouling characteristics. In addition to published research, the Dow Chemical Company has evaluated the technology and is in the process of launching new products that benefited from the knowledge gained from this Center project. For more information, contact Dr. Alan R. Greenberg at the University of Colorado at 303.492.6613, alan.greenberg@colorado.edu.



Above: Bench-scale experimental system for measuring membrane flux decline (left) and membrane rejection (right).



Above: SEM micrographs showing representative surfaces of clean (left) and fouled (right) membrane.

