

## Separation of Water/Organic Mixtures Using Micro- and Nanostructured Membranes of Special Type of Wettability

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**Abstract :** Both hydrophilic-oleophobic and hydrophobic-oleophilic membranes were obtained by coating of the substrate of membranes, presented by stainless steel meshes with various dimensions of their openings, with a composition that forms the special type of their surface wettability via spray-coating method. The surface morphology of resulting membranes was studied using SEM, the type of their wettability was identified by measuring the contact angle between the surface of membrane and a drop of studied liquid (water or organic liquid) and efficiency of continuous separation of water and organic liquid was studied on self-assembled setup.

**Keywords :** membrane, stainless steel mesh, oleophobicity, hydrophobicity, separation, water, organic liquids

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