

Polymer Coatings for Multi-functional Filtration Membrane

강 효[†]

동아대학교

(hkang@dau.ac.kr[†])

The decrease in water permeation flux caused by membrane fouling has been recognized as a major problem in membrane filtration, because it has detrimental effects on the efficiency and economics of the membrane filtration process. The membrane fouling originates from the interactions between the membrane surface and various foulants such as proteins and oils in water. Therefore, it is important to modify the membrane surface which directly interacts with the foulants during the filtration in order to reduce the fouling. We designed a series of polymers as antifouling coating materials containing hydrophilic and hydrophobic moiety and nature-based moiety. These results will provide insight into the synthesis and fabrication of high performance multi-functional filtration membranes for water treatment applications.