

Zeolite/MOF Membranes for Antifogging Coating and Molecular Separations

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Our research group is aimed at developing wet deposition technology for preparing thin films and membranes composed of inorganic nanoporous materials. These materials involve ceramic nanotubes, zeolites, and metal-organic frameworks (MOFs). This talk covers two topics of our very latest work. The first topic is about the deposition, modification, and application of zeolites. We develop a novel deposition method that allows for casting zeolite films/membranes on various types of substrates in one step. In the second part, we discuss the mass transport in MOFs with flexible structure. We expect this molecular-level study will provide critical information to the next-generation high-performance MOF-based membranes.