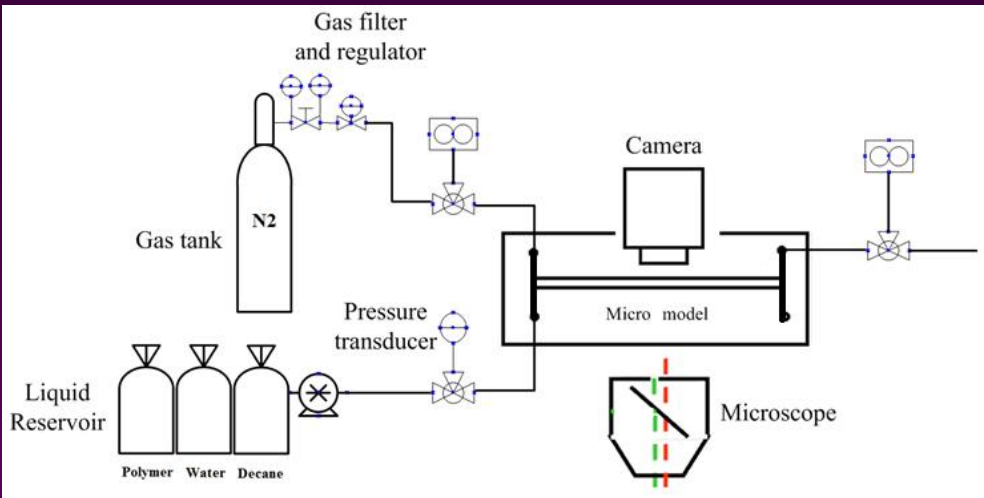


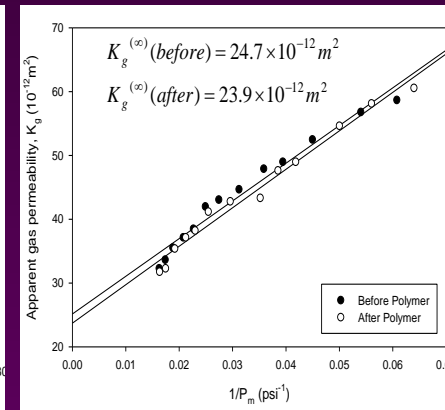
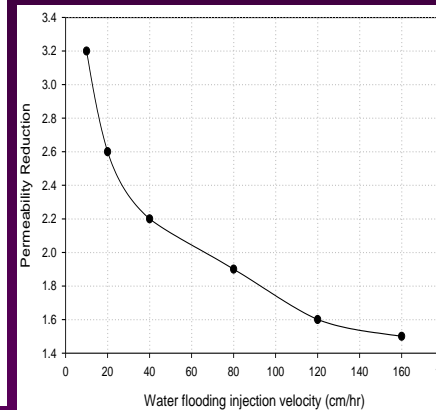
Effect of Polymer and Polymer Gel on Disproportionate Permeability Reduction to Gas and Water for Tight Gas

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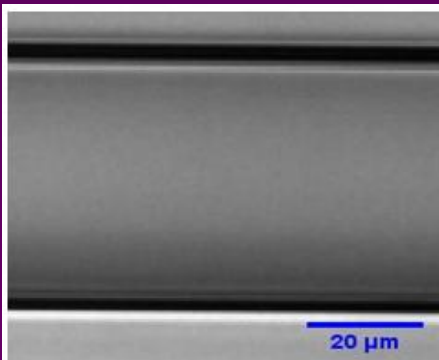
1. Experimental Setup of single molecule imaging system



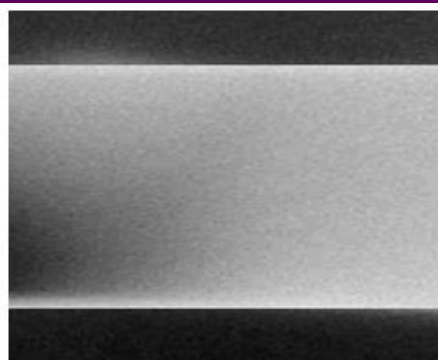
2. Polymer could significantly reduce the water permeability without changing the gas flow in the micro channels



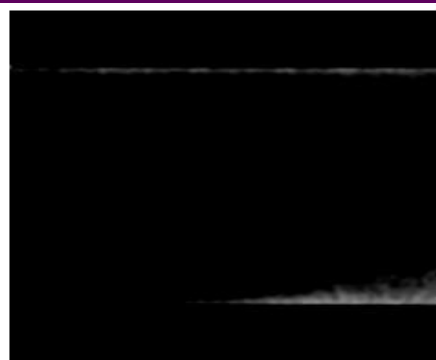
3. Microscope Images of Fused-Silica Square Capillary Before and After Polymer Injection



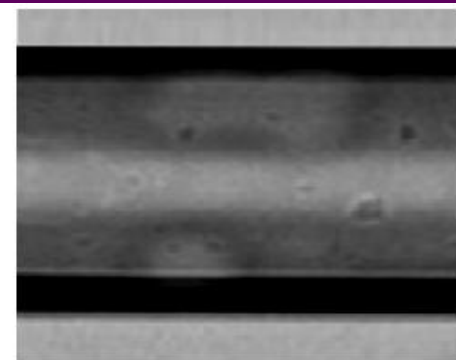
A) Empty capillary before polymer injection



B) Capillary filled with polymer with fluorescence dye



C) Capillary with adsorbed polymer layer after water flooding



D) Capillary with adsorbed polymer layer after gas injection