

Supporting information for:

**Multiscale Simulation Method for Flow and Mass Transfer Characteristics in a
Reverse Osmosis Membrane Module**

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This file includes Figures S1 and S2.

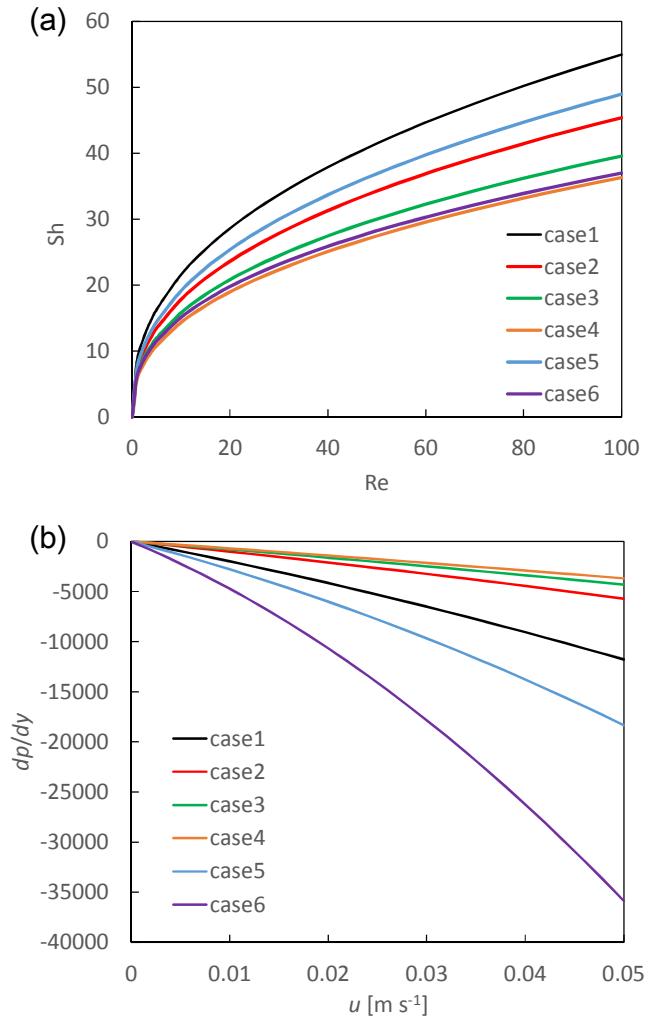
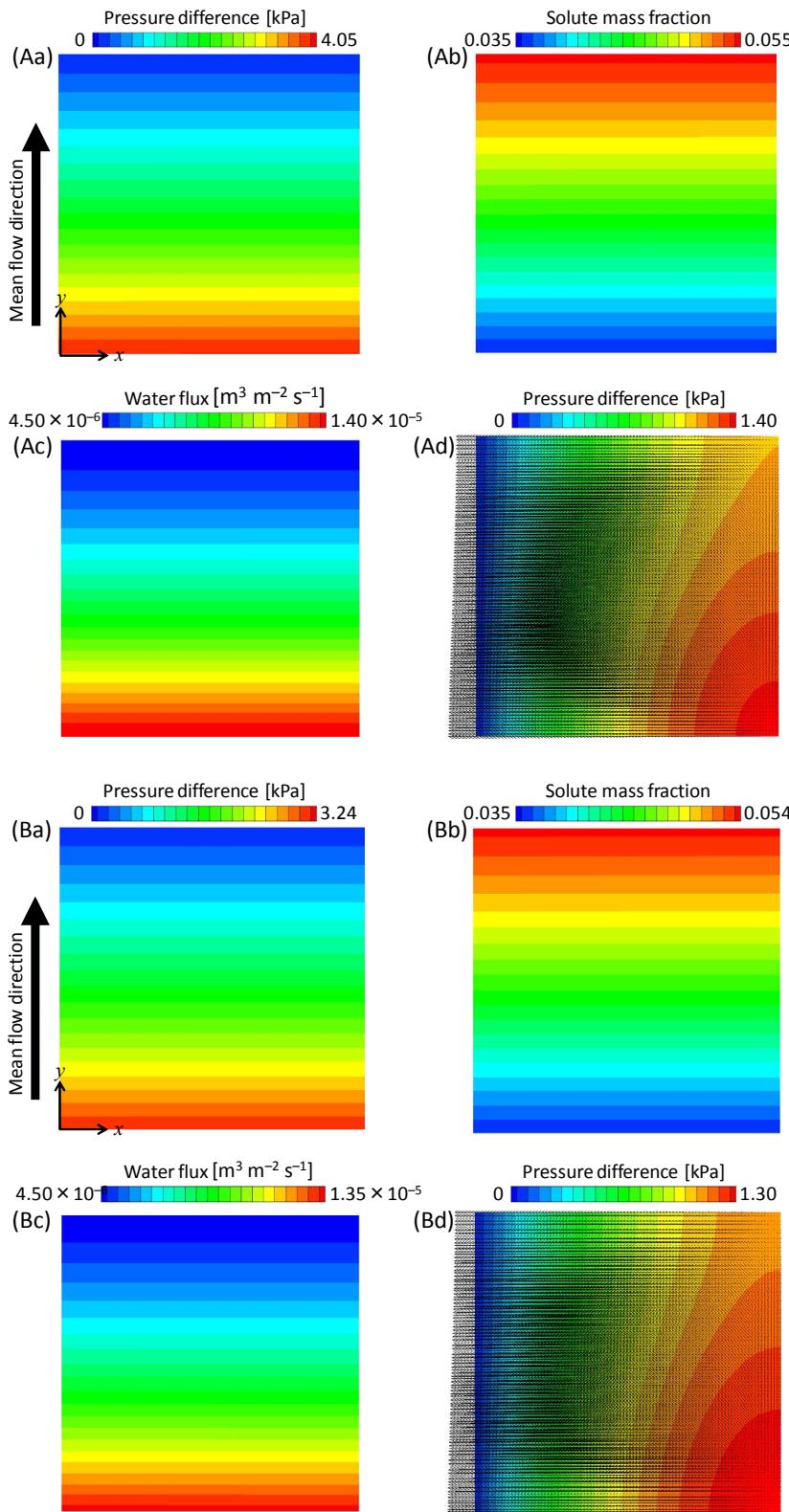
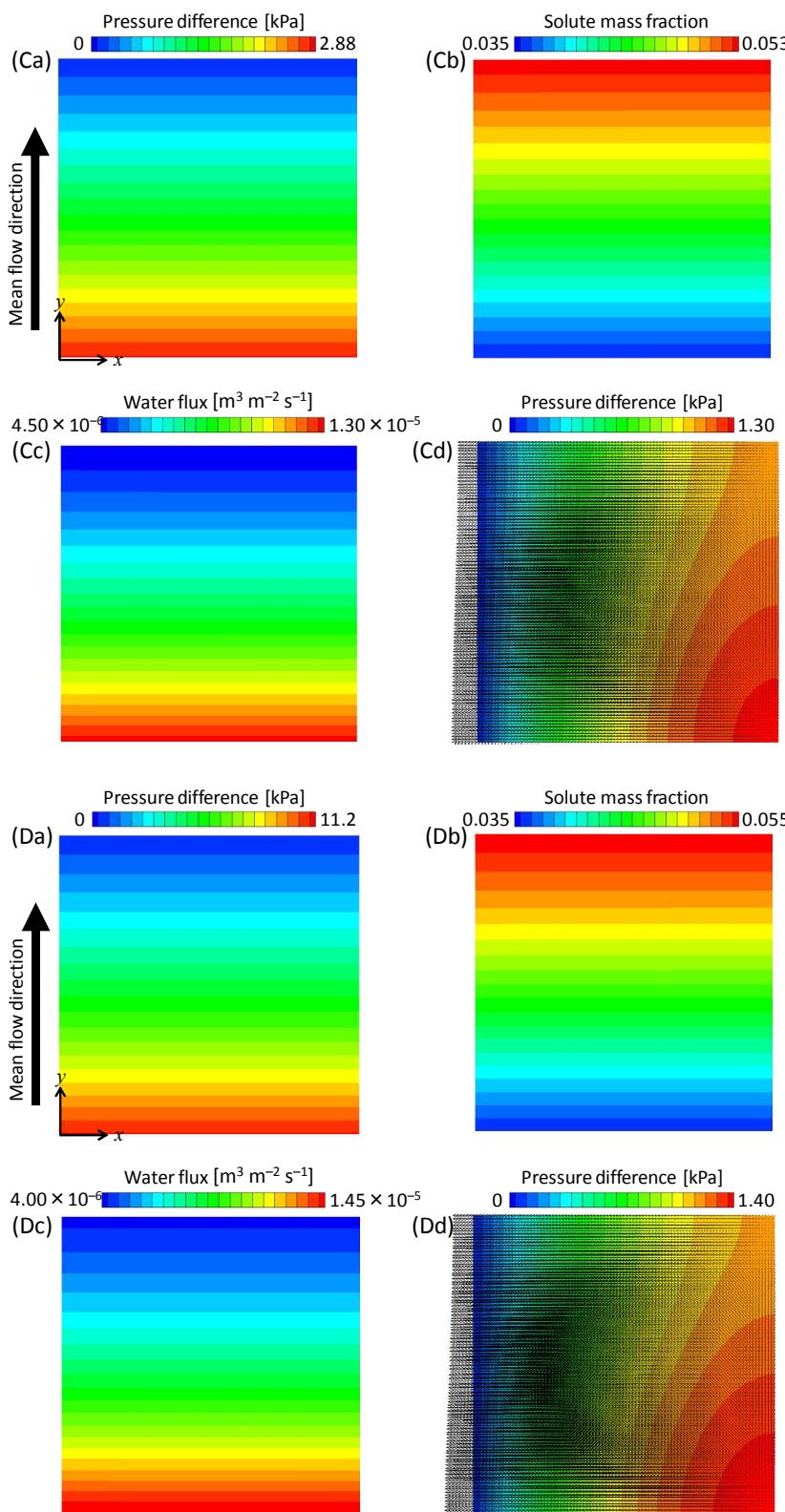


Figure S1. Flow and mass transfer characteristics obtained using fitting results for each case of the unit cell simulation. (a) Relationship between Sherwood and Reynolds numbers (b) Relationship between pressure gradient and streamwise velocity.





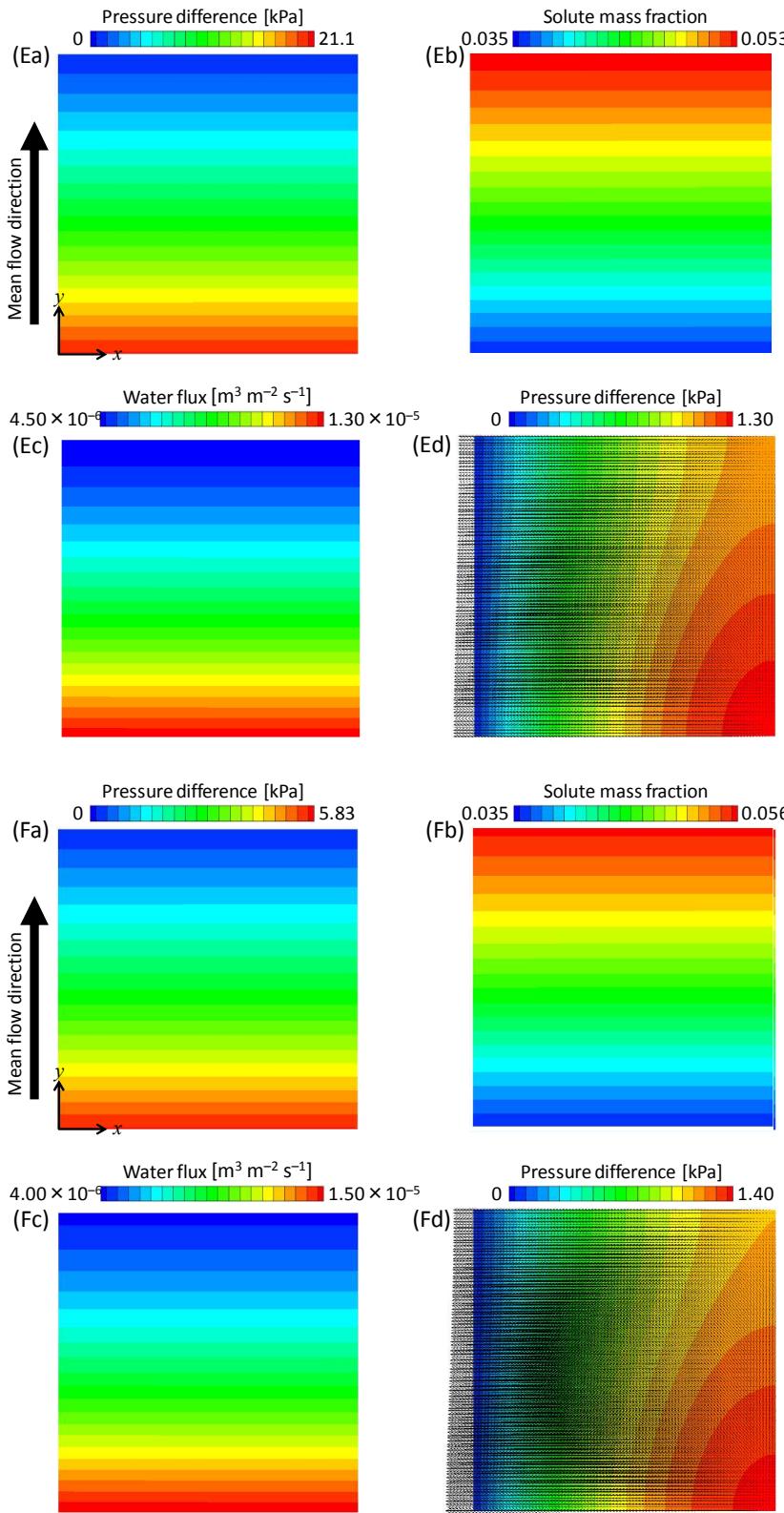


Figure S2. Distributions for simulated channels (A) Case 2 (B) Case 3 (C) Case 4 (D) Case 5 (E) Case 6 (F) Case 7. (a) Pressure in the feed channel (b) Solute mass fraction in the feed channel (c) Water flux across the membrane surface (d) Velocity vector and pressure in the permeate channel.