Strain Sensor-Inserted Microchannel for Gas Viscosity Measurement

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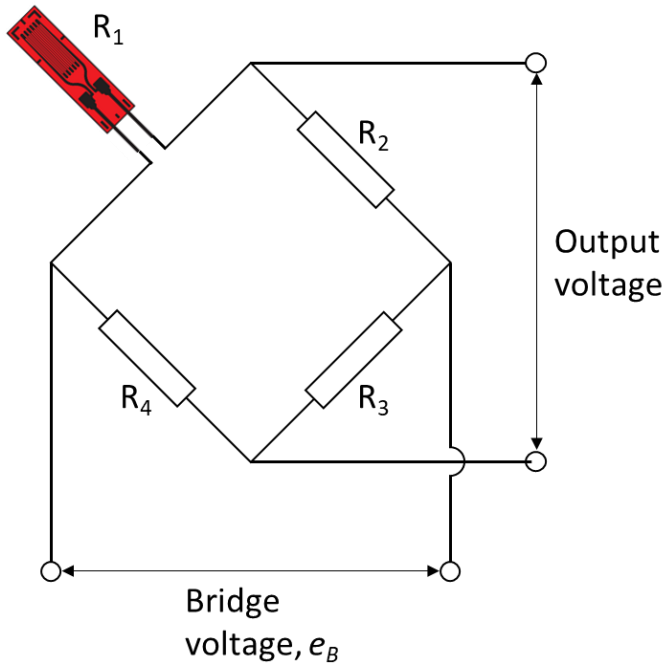


Figure S1. Schematic of a bridge circuit used in this study.

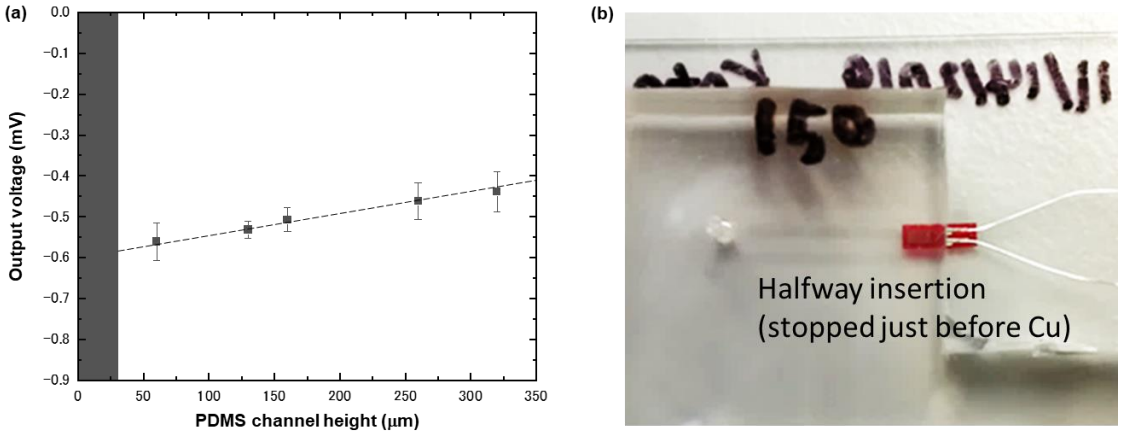


Figure S2. (a) Plot of output voltages as a function of PDMS channel height. All the output voltages are measured by inserting the strain gauge halfway in a microchannel with a height of 60, 130, 160, 260, and 320 μm. The data taken at different flow rates are fitted with a linear function which is drawn with the dashed lines. (b) Photo of the strain gauge inserted halfway in the microchannel.

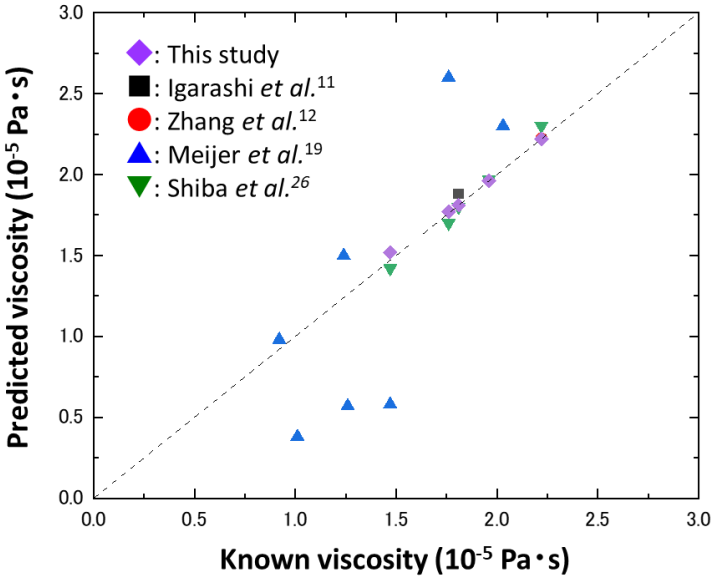


Figure S3. Predicted viscosity as a function of known viscosity for various gases. The data shown in this paper is compared to those reported previously.

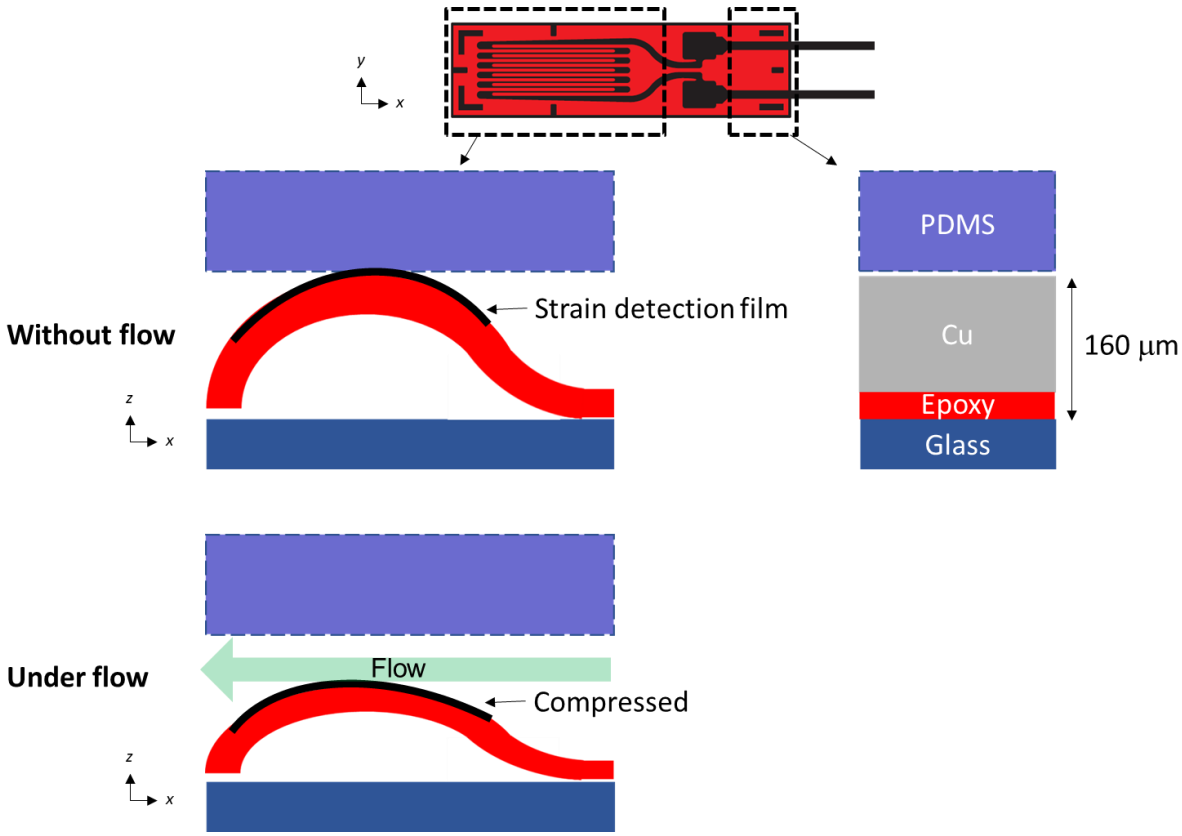


Figure S4. Schematic of the strain gauge inserted in a microchannel with a height of 160 μm (top) without flow and (bottom) under flow.