

Electronic supplementary section

Figure captions

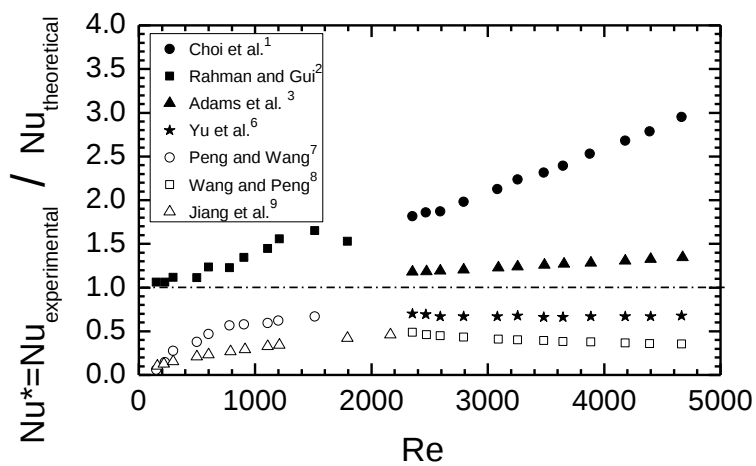
SF1 Dispersion of Nusselt number determined experimentally in previous work

SF2 Temperature sensitivity of the thermoresistances as a function of current I

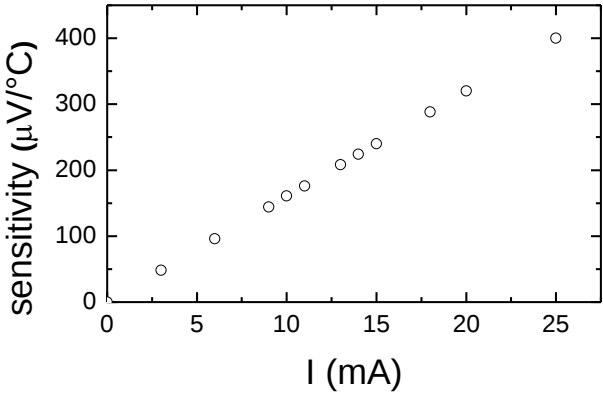
SF3 (a) Electrothermal model and (b) computed Joule effects and temperature biases

SF4 Temperature and heat flux in the cross section (yOz) of the instrumented substrate ($h=50\text{ k W.m}^2.\text{K}^{-1}$; microchannel width 4 mm, center at $z=0$)

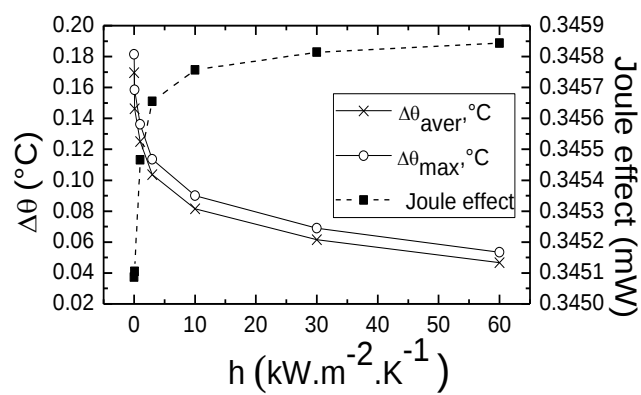
SF5 Heat-flux distribution along the flow direction in the microchannel ($Re=0.2$, $e=25.4\text{ }\mu\text{m}$)



SF1



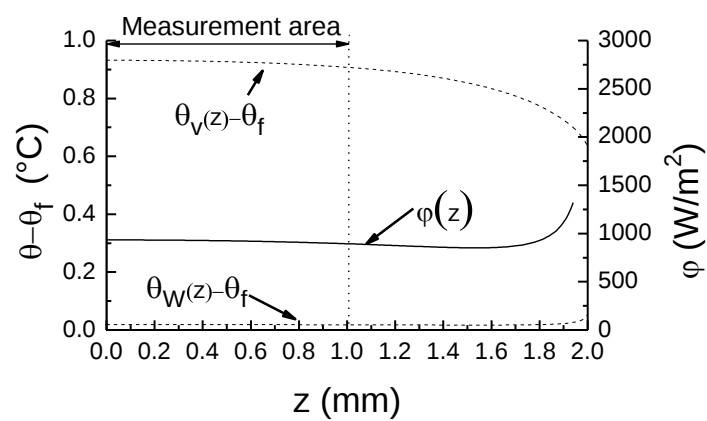
SF2



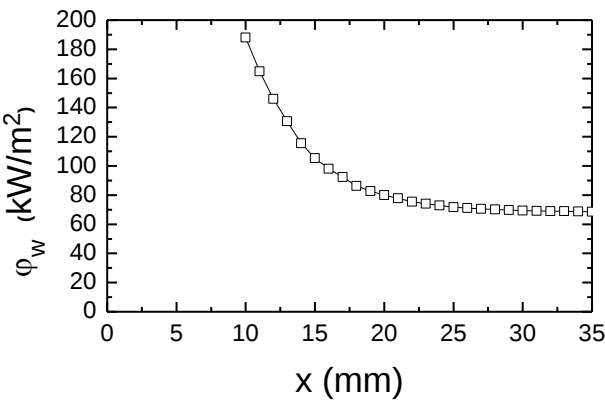
(a)

(b)

SF3



SF4



SF5