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Stick or Slip ?: Measuring slip lengths with nm resolution SUNG
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Fluid dynamics within small channels draws great interest due to the development of
microfluidic devices, yet details about flow immediately at a solid surface remain too
vague. Previous attempts to measure surface flow rate were limited to a resolution
of the optical wavelength. Here, by using a fluorescence resonance energy transfer
(FRET) approach, we improve the resolution by 1-2 orders of magnitude. Two
different flow systems, hydrodynamic flow and electrokinetic flow, were investigated
with this technique.

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