

## **Dynamics of individual Brownian rods in a microchannel flow – Supplementary Information**

Andreas Zöttl,<sup>\*ab</sup> Kira E. Klop,<sup>c</sup> Andrew K. Balin,<sup>b</sup> Yongxiang Gao,<sup>c,d</sup>  
Julia M. Yeomans,<sup>b</sup> and Dirk G. A. L. Aarts<sup>c</sup>

<sup>a</sup> *Institute for Theoretical Physics, TU Wien, Wiedner Hauptstraße 8-10, Wien, Austria. E-mail: andreas.zoettl@tuwien.ac.at*

<sup>b</sup> *The Rudolf Peierls Centre for Theoretical Physics, University of Oxford, Clarendon Lab., Parks Rd., Oxford, OX1 3PU, UK.*

<sup>c</sup> *Department of Chemistry, Physical and Theoretical Chemistry Laboratory, University of Oxford, Oxford, OX1 3QZ, UK.*

<sup>d</sup> *Institute for Advanced Study, Shenzhen University, Nanshan Avenue 3688, Nanshan District, Shenzhen, 518060, China.*

### **Supplementary Video 1 (S1)**

Typical image series (1000 frames, 10 frames per second) of a dilute suspension of silica rods recorded using a Ximea MQ042MG-CM CMOS camera.

### **Supplementary Video 2 (S2)**

Typical kayaking-like rod trajectory extracted from a recorded image series.

### **Supplementary Video 3 (S3)**

Typical x-y-tumbling rod trajectory extracted from a recorded image series.