Communi

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Abstract

d e ed, h b id . I ' -
CAH *fld* . T
/ . T
. C
4 30 L fl fl (PTFE) . N

E perimental setup

I , fl . T
4, 10, 20, 30 L, . A
S F . S1. T
T PTFE

T ,

σ E . (9)

$f < (\gamma_{SL} \ \kappa)$,

T

F . 2( )

F . 2( ),
$(\gamma_{SL}$ $\kappa)$ = 5 N/ , $(\gamma_{SL}$ $\kappa)$ = −80 N/ , F . 2
( ), $(\gamma_{SL}$ $\kappa)$ = 50 N/ , $(\gamma_{SL}$ $\kappa)$ = −10 N/ . T
F . 2( ) 2( ) : ( ) -
F . 2( )
( )
F . 2( ). B

49.2 . E ,
$(\gamma_{SL}$ $\kappa)$ −(γ

. T ,
12 −33 N/
20 L fi PTFE .
F 3 -
F . 2. T
. N

A 30 µL droplet on a tilted plate

A 30 L
20 L
. T
22.6 30 L,
2 0

N/ , −10 N/), (3 N/ , −80 N/), (50 N/ , −5 N/). A (14 N/ , −10 N/) . S F S7 (10 N/ , −14 N/), (3 N/ , −80 N/), (50 N/ , −5 N/) .

Equilibrium, advancing and receding contact angles

T S F . S8. E . T 4, 10, 20, 30 L 16.7 , 29.3 , 32.3 , 21.7 , . O 20 L , . I . E 4, 10, 20, 30 L S . 8 S M . O .

Discussions on pseudo-line tensions

. T PTFE . B . T 20 L 30 L , 20 L

Concluding remarks

A N–S- [12] I CAH . B . F 4 30 L G . M fi . T . F . T

Supplementar material

T ://10.1557/ .2019.92.

Acknowledgments

T 2018 R E G (REG) A LU . T C A P M (CAPM) L U . T A C C (TACC) UT A (#G-819854). C I , C E (CICE) L U . D . H - C M . P L IT I D LU HPC M . C S HPC .

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