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Add ; a c ; d; c; ; ; ; Ch -W; Ya a **c ao@lamar.edu**

(R; c; ; d 23 Ma 2019; acc; ; d 27 J ; 2019)

Abstract

de ed, h b id . I

CAH *fld* . 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( ),

(γ_{SL} κ) = 5 N/ , (γ_{SL} κ) = −80 N/ , F . 2

( ), (γ_{SL} κ) = 50 N/ , (γ_{SL} κ) = −10 N/ . T

F . 2( ) 2( ) : ( ) -

F . 2( )

( )

F . 2( ). B

49.2 . E ,

(γ_{SL} κ) −(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
. 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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