Electrically Driven Multiaxis Rotational Dynamics of Colloidal Platelets in Nematic Liquid Crystals

[illegible][1,2] [illegible][1] [illegible][2] [illegible][1,3,*]

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([illegible] ,49, [illegible])

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ð þ, 0 ð 0þ ¼ 0/2,

. F r r r

F . 2( ) .T

10% . F r r , r

C, ,

A F . 2( ),

: ¼

ð / 2/ 2 þ½ð / þ2 1 1, r ¼ 0.146

r , ¼ 12.1

Fr Z -3412, ¼ 11

. A

nðrþ

Ab ¼ 5 , r b

(r r

r rr r), r b

/ 2,

r .

A ¼ 5 , r

b y rr ¼ /2,

b r b z r , F . 3( )

/4 r b b r r v r

.T

F . 3( ), r r

(6.4) (4.5). A > ,

ð / þ½ /ðε0 εþ1/2

ð / þ 8 .T

, F . 4 b FC

P ? x, r b C

r nðrþ r

. F r r , r - FC

F . 4(b) 4( ) r

P k x, r

ðrþ nðrþ ¼ ðrþx þ

n ðrþz.T

b

T

nðrþ r nðrþ b E,

8-627.3( )T 0-1.154

F . 3( ) r r r

). 5CB

r . 1 0.T

5CB' ( )

(ε 11).

x-y ¼ /2

1 0 F . 3( ) . A

¼ 6, 8, 10 F . 3(b). A ,

ð þ . 1 ¼ . 0 ð / þ r

0 . ð þ . 1 0.2 d .T

F . 3( ) . A

41(r ,)T -15.676-1.1598 D(r r)9(-6( )20.33140 D() /F51 29420 D() /F71

( )-941( )2934.7( )3954.7

( )-32521(r