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

C[illegible] P. L[illegible],[1,2] S[illegible] H[illegible],[1] T[illegible] G. M[illegible],[2] [illegible] I. S[illegible][1,3,*]

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([illegible] S[illegible] ,49, [illegible])

W[illegible]. A[illegible]. B[illegible]

[illegible] Fig. 1( ), [illegible], NLC [illegible]
[illegible]
[illegible] /2, [illegible]
[illegible] (k [illegible] z). [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] [4]. [illegible] SU-8 [illegible] 1 H
49([illegible])]TJ-14U5 [illegible]

[illegible] FCPM [illegible]. B [illegible]
[illegible] NLC [illegible] FCPM [illegible]
[illegible] ZLI-3412
[illegible] 0.0 [illegible]
[illegible] 5CB.

I [illegible] NLC [illegible]
[illegible] (k x),
[illegible] [3], [illegible]
Fig. 1( ). [illegible]
[illegible]
[illegible] <1 [illegible].
A [illegible]
[illegible]
[illegible] NLC [illegible]
[illegible]
[illegible]. W [illegible]
[illegible]
[illegible].
B [illegible] < [illegible] 1.2 [illegible]
[illegible]. F [illegible] < [illegible] < [illegible],
[illegible] ¼ 2.4 [illegible] F – [illegible]
[illegible]
[illegible] [[illegible]
[illegible], Fig. 1( ) [illegible] 1( )] [illegible] ([illegible] /2).

[illegible] ¼ [illegible]/2, [illegible] F[illegible] [illegible]

[illegible] [Fig. 2( )]. T[illegible] 10% [illegible] F[illegible] NLC, [illegible] As[illegible] Fig. 2( ), [illegible] ¼ [illegible] ^{2} [illegible] 1 [illegible]$^{-1}$, [illegible] ¼ 0.146 [illegible] ¼ 12.1 [illegible] F[illegible] ZLI-3412, [illegible] ¼ 11 [illegible] At [illegible] A [illegible] ¼ 5 [illegible] S[illegible] /[illegible]^2, [illegible]

At [illegible] ¼ 5 [illegible] ¼[illegible]/2, [illegible] [illegible], Fig. 3( )] [illegible] /4 [illegible]

[illegible] F[illegible]. 3( ), [illegible] (6.4 [illegible]) [illegible] (4.5 [illegible]). At [illegible] > [illegible] $^{1/2}$ [illegible] [8]. T[illegible]

[F . 3( )] s s st -

t s t

t t's v t s (t v - s t v √ ð

s). W v s v s t t s s 5CB

t s t s ll . 1 0. T s ss

5CB's v v st s t ( )

s t s t (ε 11).

Us ss, v s t -

t s tz t t t t's t

x s x-y s t s s . ¼ /2 t

. 1 0 [F . 3( )]. A t t s

¼ 6, 8, 10 V s v F . 3( ). At t t s,

x t s x t v t -

s tt ð þ . 1 ¼ . 0 ð / þ v

0 . ð þ . 1 0.2 d T t

. 1 s t ll s-

[F . 3( )] A v t x t t

t t v t s ll t

t s t t s s

st t t st t s

nðrþ t s

s T s , 1 s t t st -

ss s t41(t t s ,)]TJ-15.676-1.1598TD( )9(-6(t)20.33140TD()Tj/F51T 29420TD()Tj/F71T

s s t t] (t)-941(s s s)2934.7( )3954.7 v

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t t tt

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