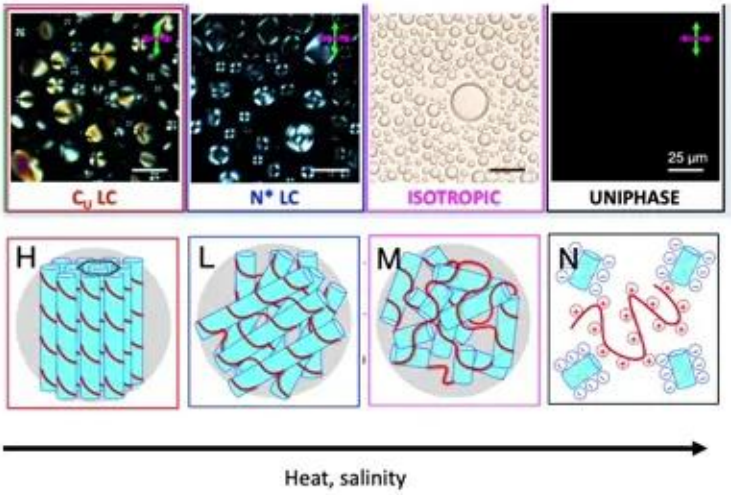
DNA Liquid Crystal Coacervates



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Fraccia and Jia. *ACS Nano*. 14(11), 15071-15082 (2020)

1
00:00:05,269 --> 00:00:03,429
my research at lc has been focused on

2
00:00:07,110 --> 00:00:05,279
studying membraneless droplets formed

3
00:00:09,669 --> 00:00:07,120
through liquid liquid phase separation

4
00:00:10,150 --> 00:00:09,679
as protocell models the first system we

5
00:00:12,390 --> 00:00:10,160
studied

6
00:00:13,430 --> 00:00:12,400
are dna liquid crystal coaster rates

7
00:00:16,710 --> 00:00:13,440
which form

8
00:00:18,790 --> 00:00:16,720
when short dna duplexes combine with

9
00:00:19,750 --> 00:00:18,800
long poly lysine peptides which are

10
00:00:21,750 --> 00:00:19,760
cationic

11
00:00:23,429 --> 00:00:21,760
these droplets that are formed have

12
00:00:25,349 --> 00:00:23,439
their structures modulated through

13
00:00:26,630 --> 00:00:25,359

changes in heat and salinity

14
00:00:28,870 --> 00:00:26,640
some of these studies have been

15
00:00:30,150 --> 00:00:28,880
published in the last year in acs nano

16
00:00:31,910 --> 00:00:30,160
and crystals

17
00:00:33,750 --> 00:00:31,920
the other major system we're studying

18
00:00:35,990 --> 00:00:33,760
are polyester micro droplets which are

19
00:00:38,229 --> 00:00:36,000
formed when polyesters are synthesized

20
00:00:39,190 --> 00:00:38,239
through drying of alpha hydroxy acid

21
00:00:41,430 --> 00:00:39,200
mixtures

22
00:00:43,190 --> 00:00:41,440
these micro droplets can segregate

23
00:00:46,389 --> 00:00:43,200
various biomolecules such as

24
00:00:47,830 --> 00:00:46,399
proteins nucleic acids and lipids some

25
00:00:50,549 --> 00:00:47,840
of these studies have also been

26
00:00:53,430 --> 00:00:50,559
published in the last two years in pnas

27
00:00:55,750 --> 00:00:53,440
life and biomacromolecules i would like

28
00:00:58,630 --> 00:00:55,760
to thank all my funding sources