Electronic Supplementary Material (ESI) for Soft Matter.

Supporting Information

for

Compaction and Self-Association of Megabase-Sized Chromatin is Induced by Anionic Protein Crowding

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1. Partitioning of BSA crowders inside and outside chromatin self-associates

The fluorescence intensities of Texas Red labeled BSA inside and outside the chromatin aggregates were similar indicating no discernible excess accumulation of BSA in self-assembled particles (**Figure S1, B**). The self-assembled aggregates do not exhibit the interfacial droplet-like shape (**Figure S1, C**) and behavior (**Figure S2**) characteristic for liquid-liquid phase separation (LLPS).

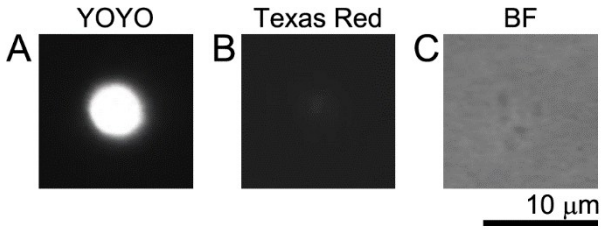

Figure S1. A-B. Fluorescent images of an associate formed in a solution of chromatin at 100% HO loading in a bulk solution of TE buffer containing 10% of BSA, 0.1 M of NaCl, YOYO dye (8 nM), and Texas Red labeled BSA (25 μg/L) observed though B-2A filter (A) for DNA-bound YOYO dye and G-2A filter (B) for Texas Red labeled BSA under the same irradiation conditions. **C.** Bright field image of the chromatin associate.

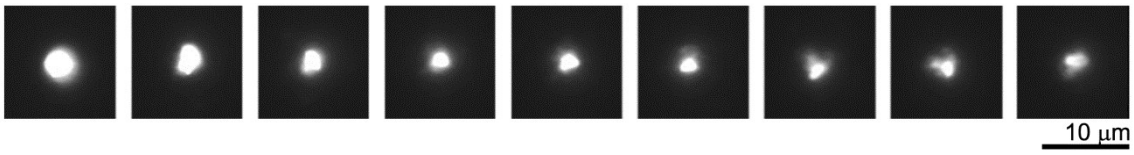

Figure S2. Fluorescent images showing decomposition of an associate of chromatin at 100% HO loading under strong light irradiation (λ = 485-585 nm) observed though B-2A filter. The time interval between snapshots is 5-10 s. The solution composition the same as for **Figure S1**.