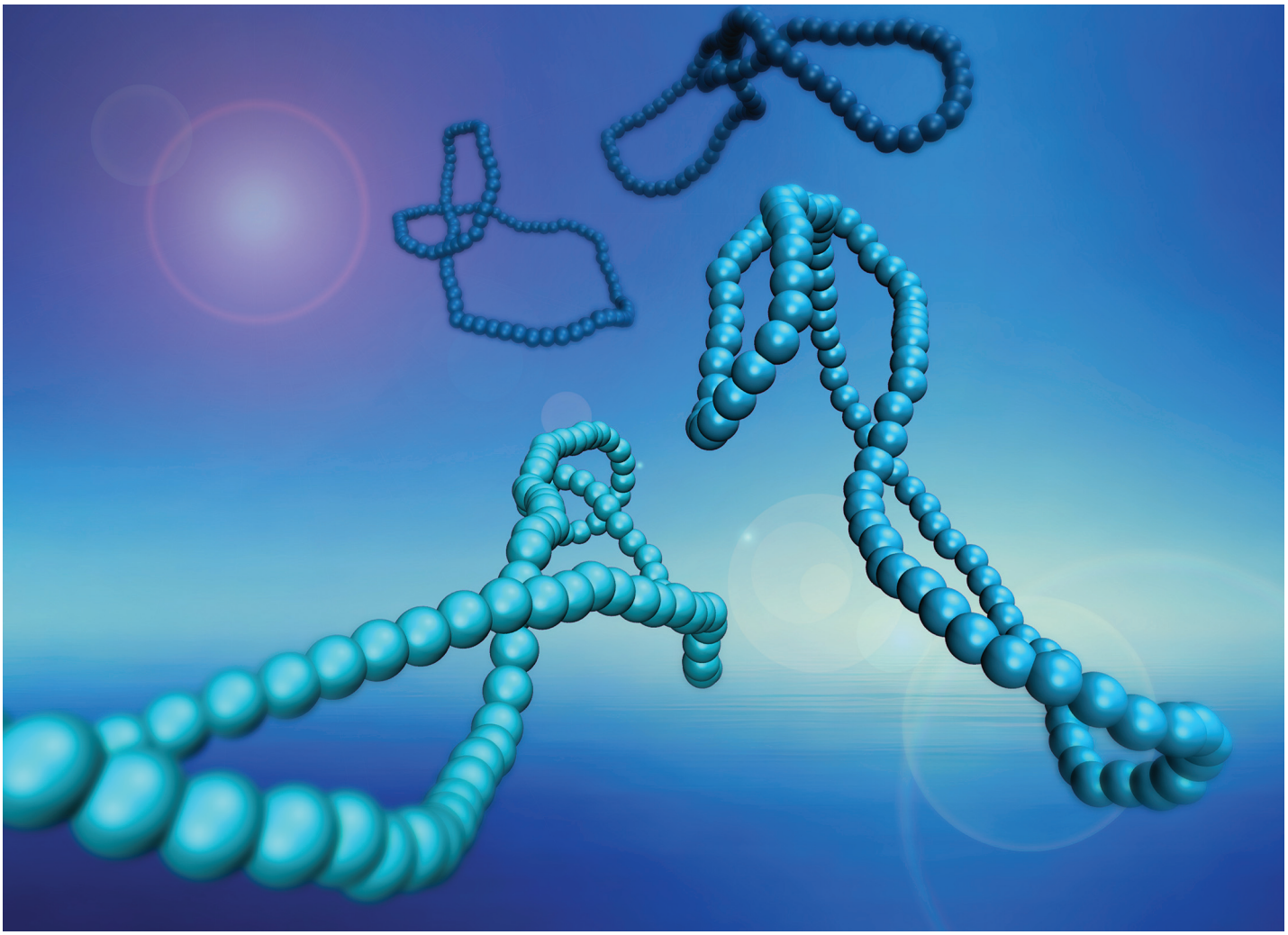
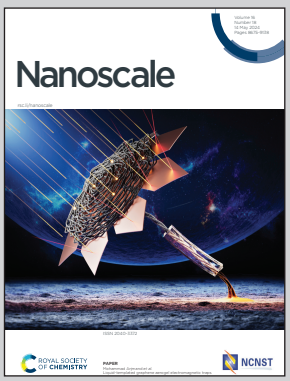


Showcasing research from Professor Likos' laboratory, Faculty of Physics, University of Vienna, Austria.

Supercoiled ring polymers under shear flow

Cyclical DNA is not just a closed polymer with its two ends connected, it is also supercoiled – a situation that arises macroscopically when, e.g., one connects two ends of a ribbon after having twisted them with respect to each other. In the present work, Schneck *et al.* perform extensive numerical experiments on such supercoiled ring polymers, finding that hydrodynamics can bring about topological conversion of writhe to twist while maintaining their sum constant. The work underlines once more the intricate interplay between polymer topology and hydrodynamics, which manifests itself in various forms also for knotted or mechanically linked polymers, such as catenanes and bonded rings.

As featured in:



See Christos N. Likos *et al.*, *Nanoscale*, 2024, **16**, 8880.

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