Scientific Achievement

It was revealed that secondary interactions encoded in the molecular architecture (i.e., cyclic versus linear) can confer control over the formation of dynamic intermolecular assemblies.

Significance and Impact

Dynamic aggregation of polymers can result from a competition between forces that favor aggregation (e.g., dipole-dipole interactions and solvophobic effects) and those that oppose it (e.g., the need for the dipoles/charged ends to be solvated). These fundamental studies are relevant to understand and optimize self-assembly of soft-matter systems as well as utilize these biomimetics.

Research Details