Supporting Information

for

Self-Assembly of Rigid Amphiphilic Graft Cyclic-brush Copolymers to Nanochannels Using Dissipative Particle Dynamics Simulation

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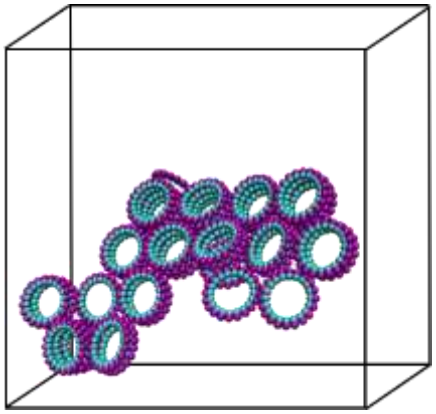
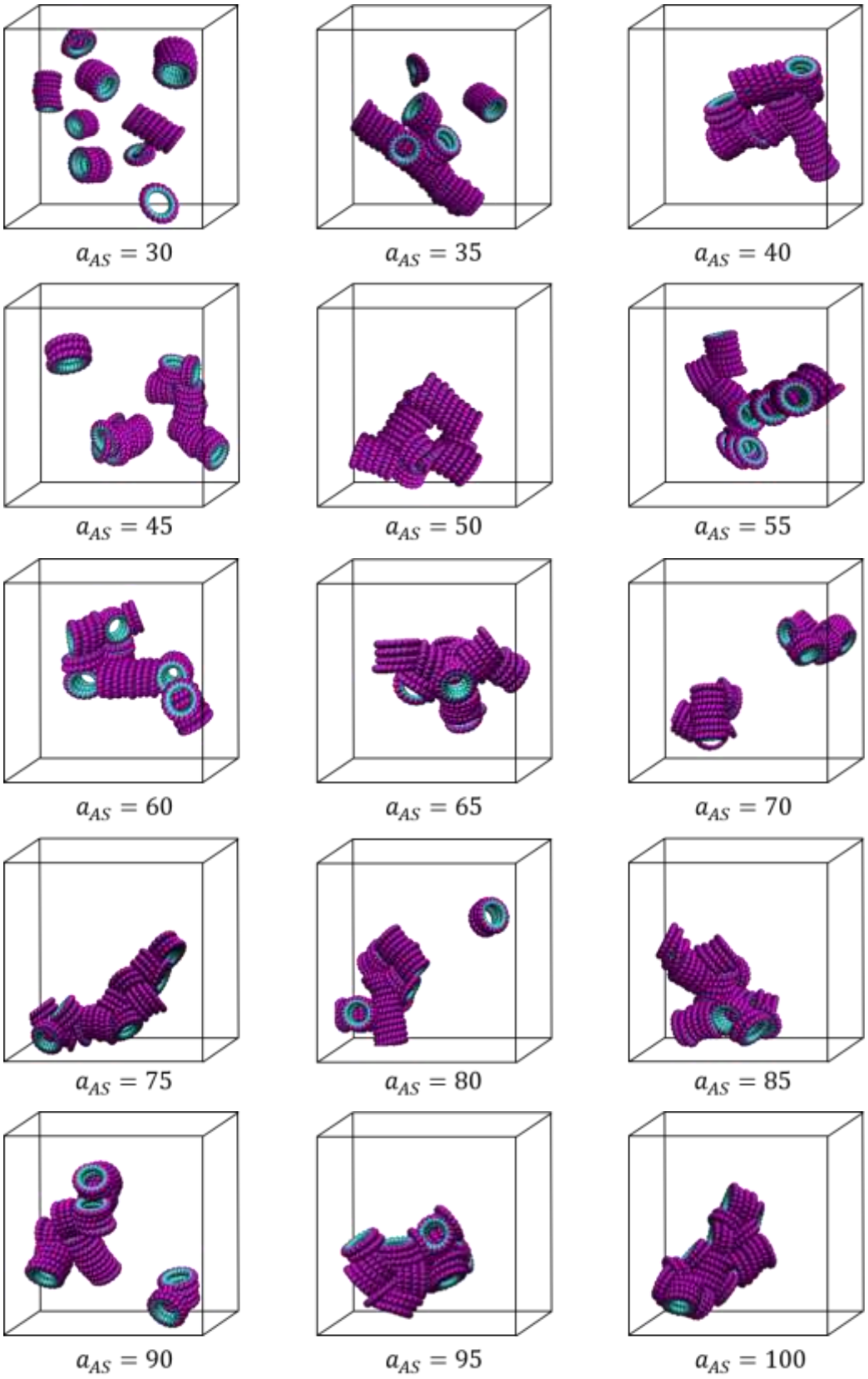


Figure S1. The snapshot of last frame extracted from MD trajectory in φ=40, N=20, a_{AS}=25, a_{BS}=65 and a_{AB}=45, which indicates hydrophilic beads are inside and hydrophobic beads are outside.



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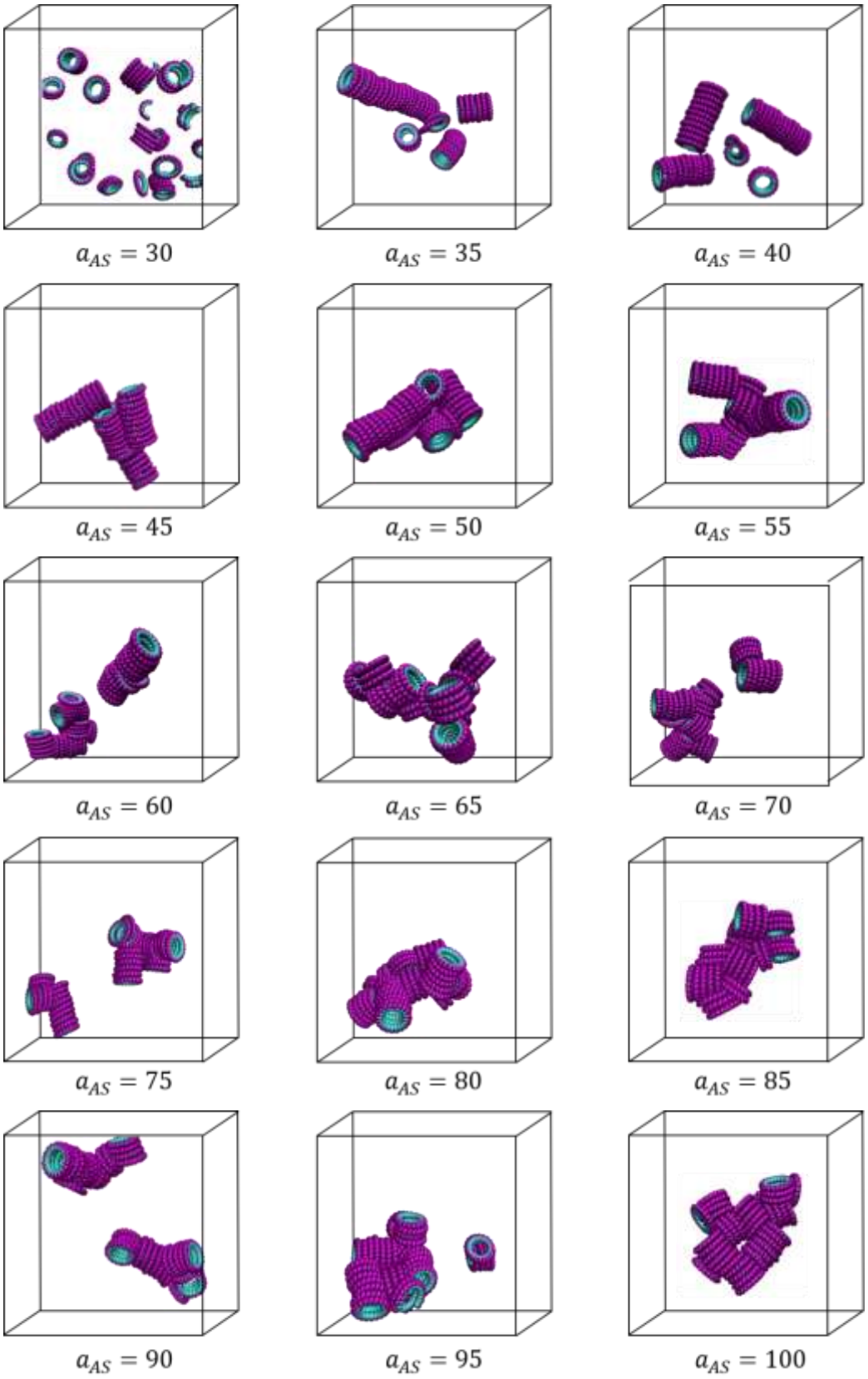

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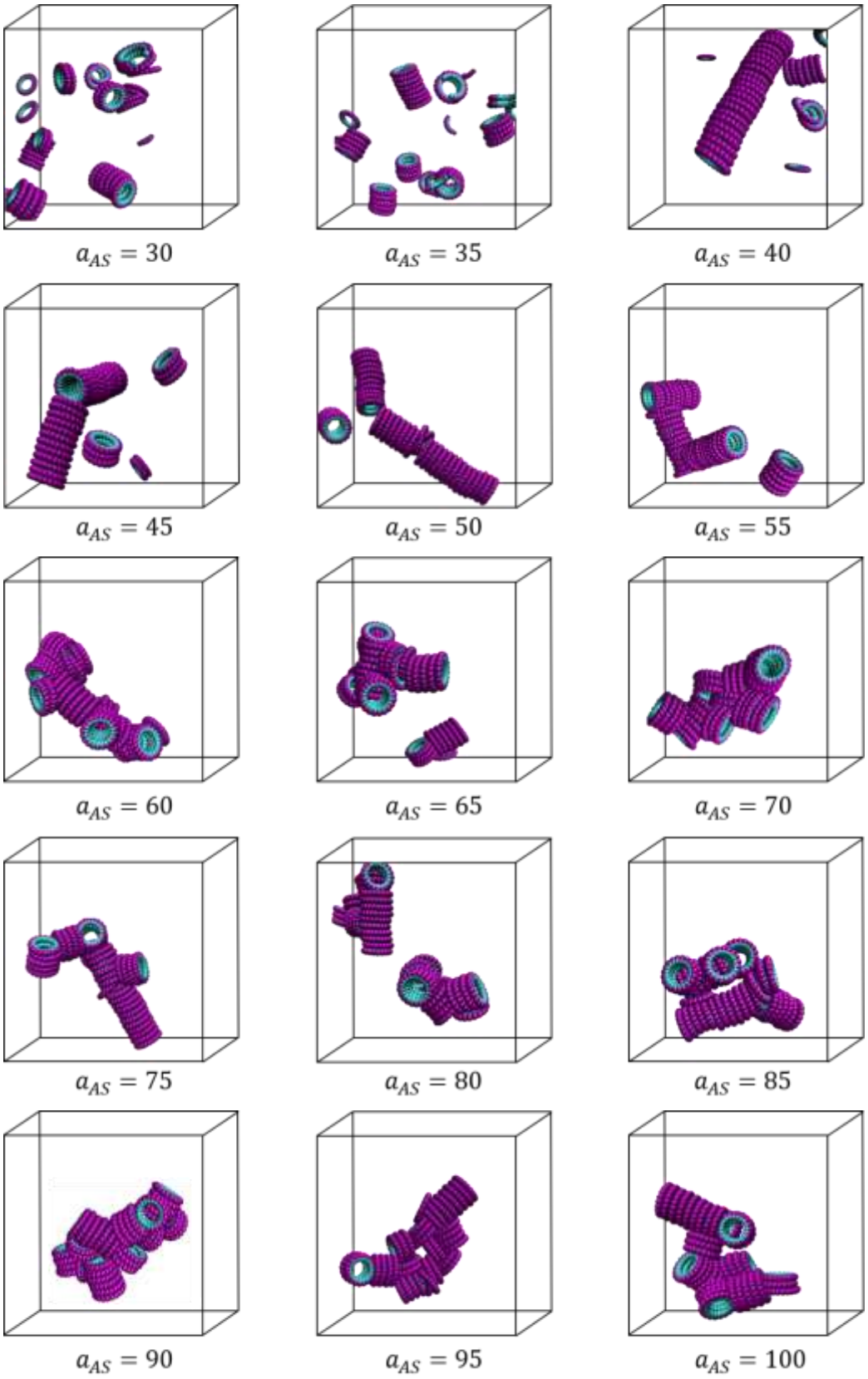

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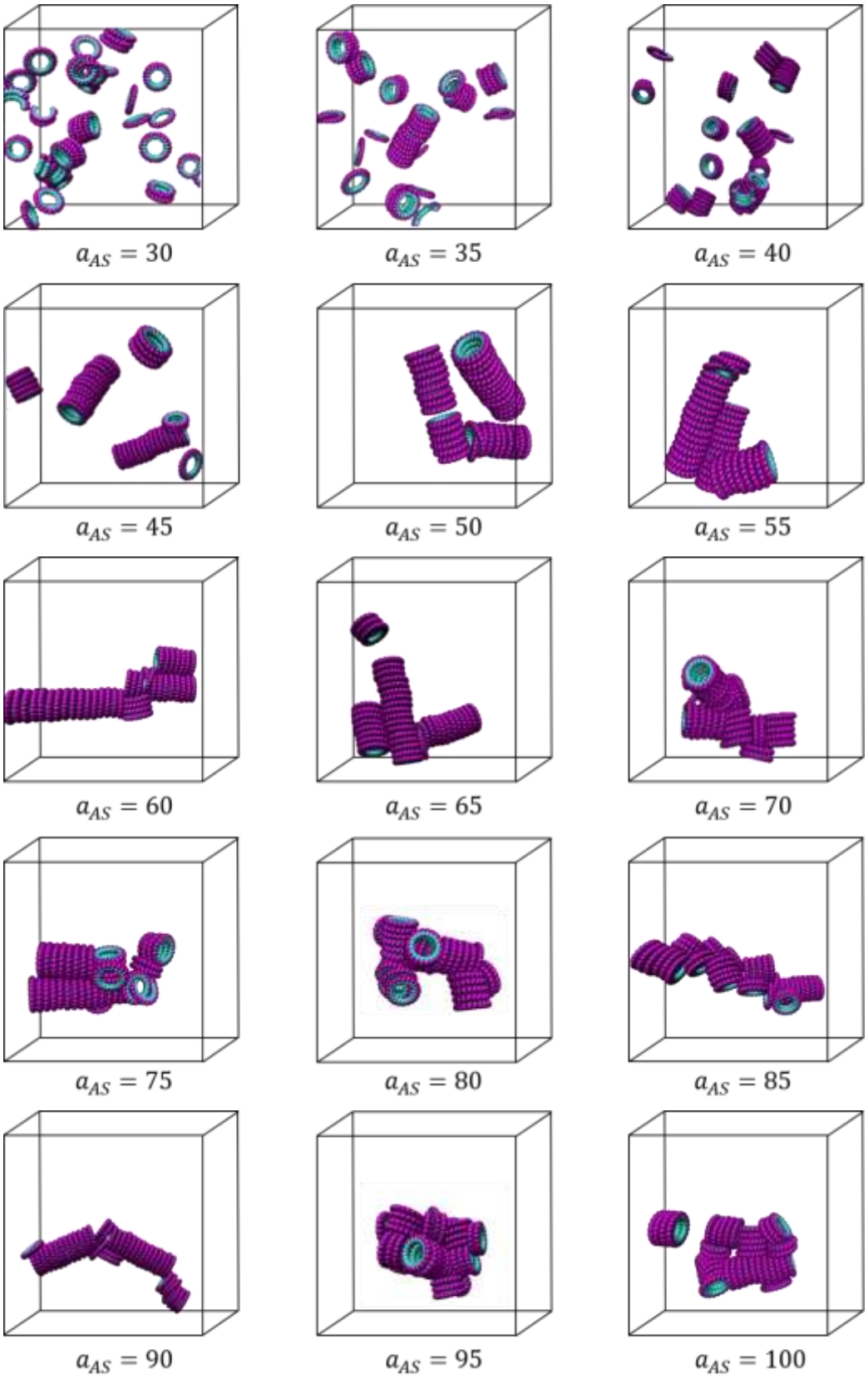

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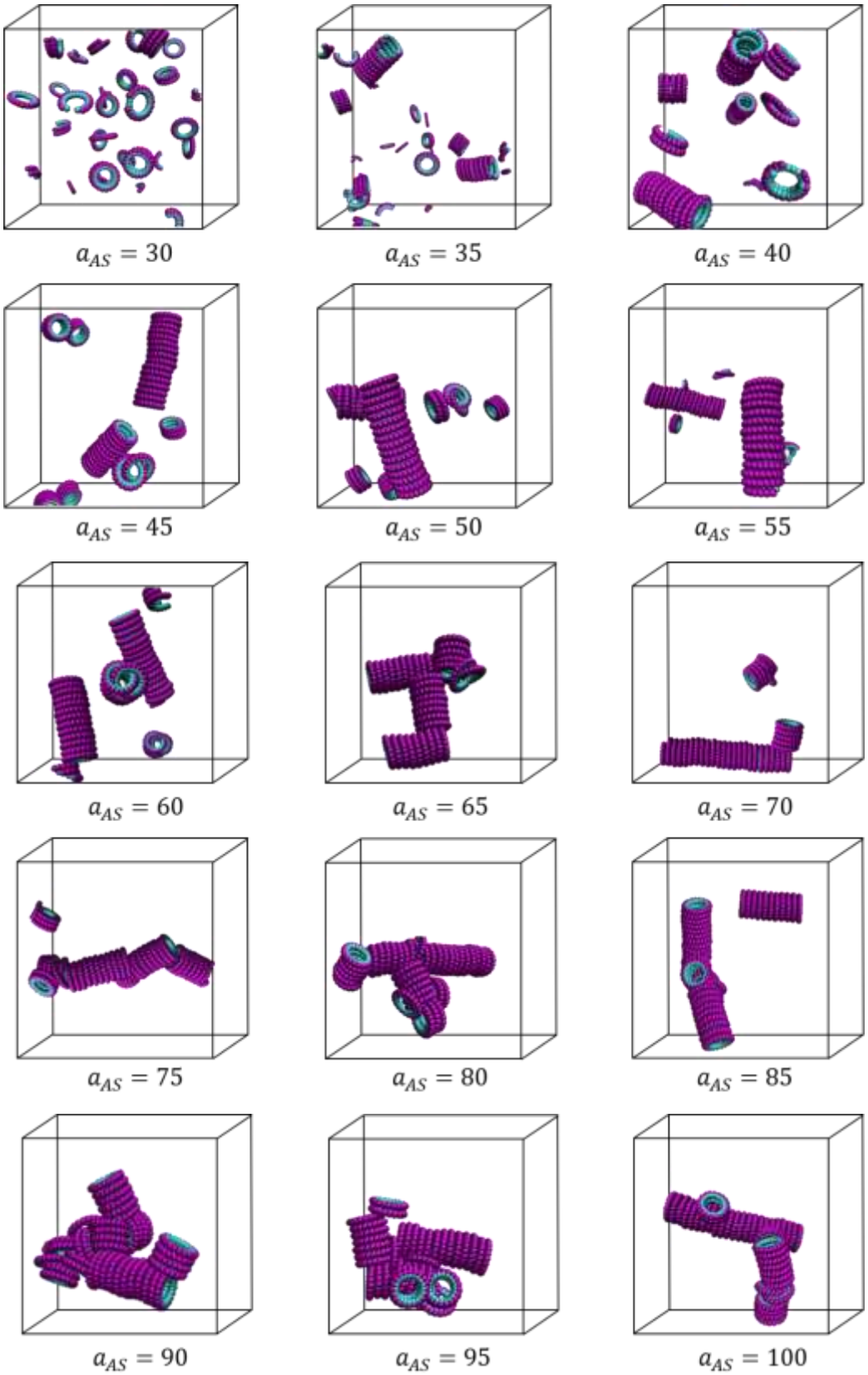

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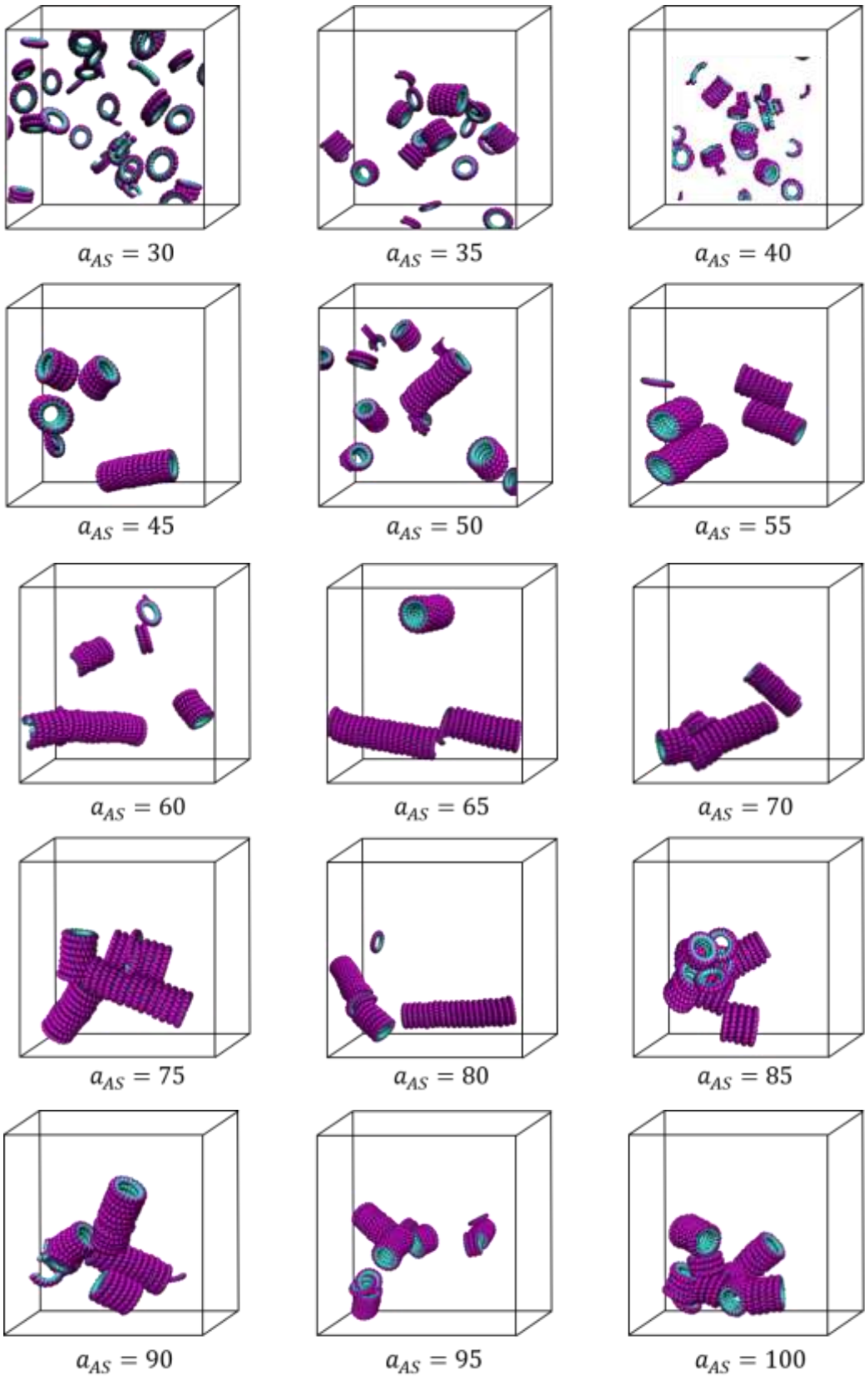

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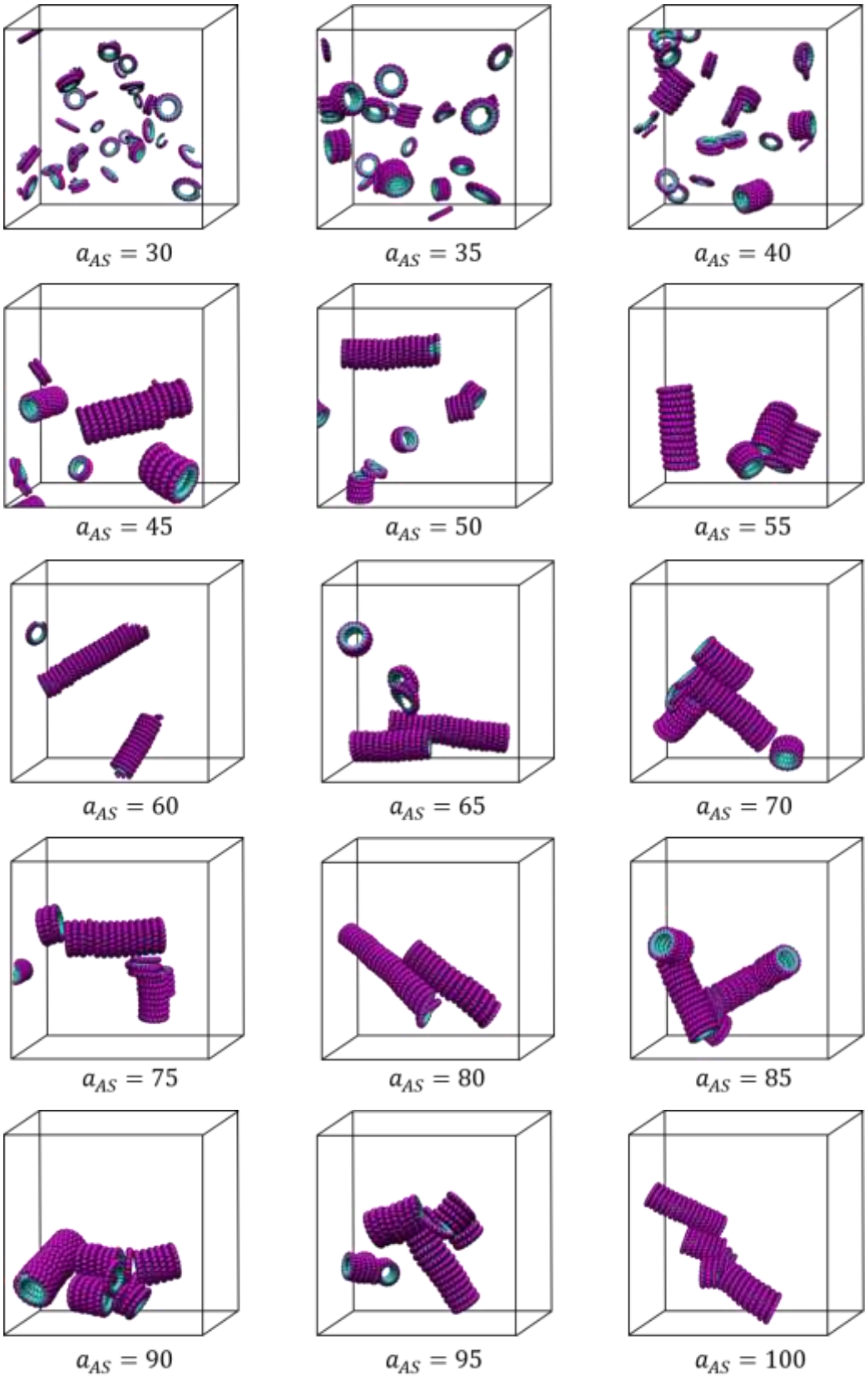

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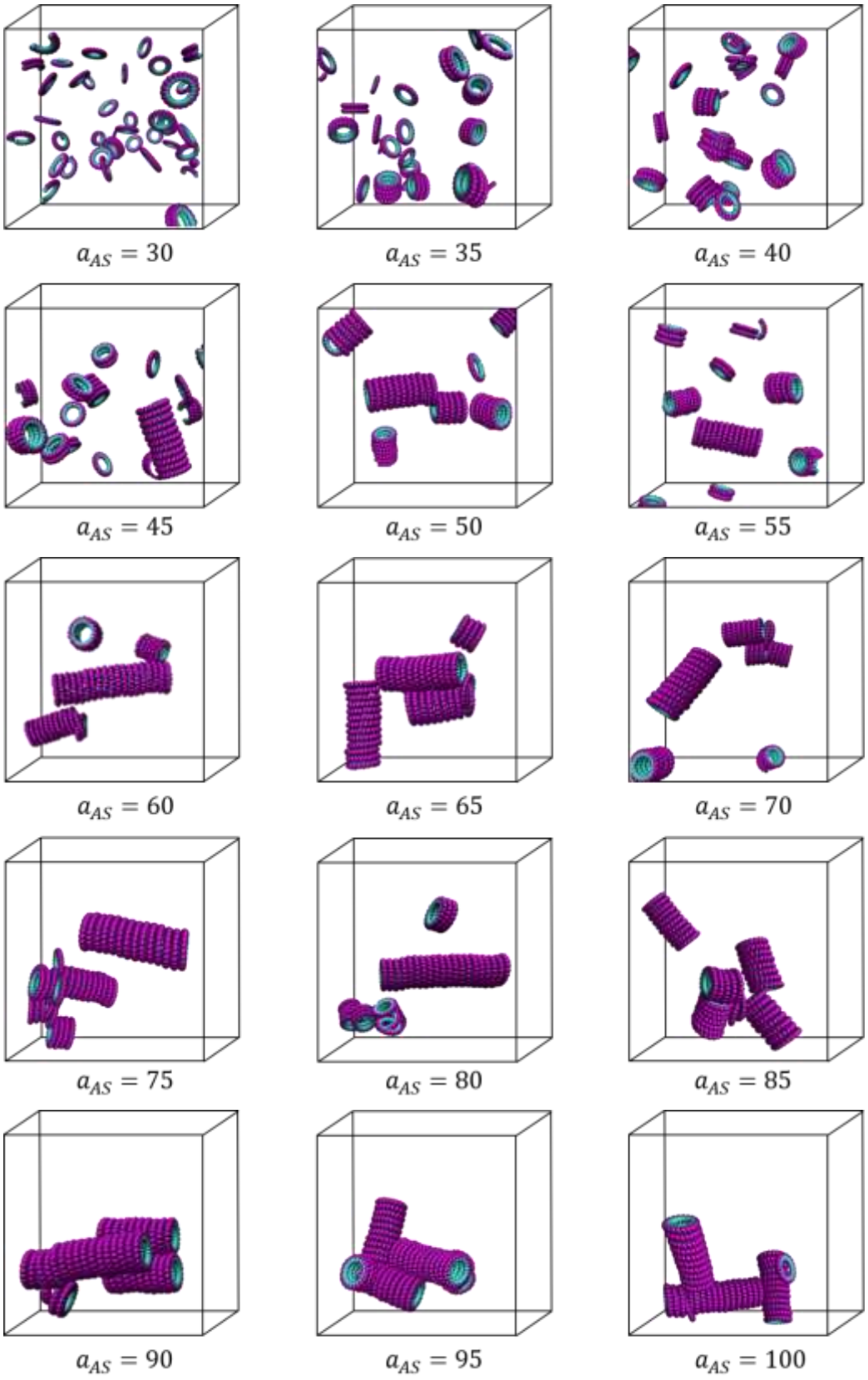

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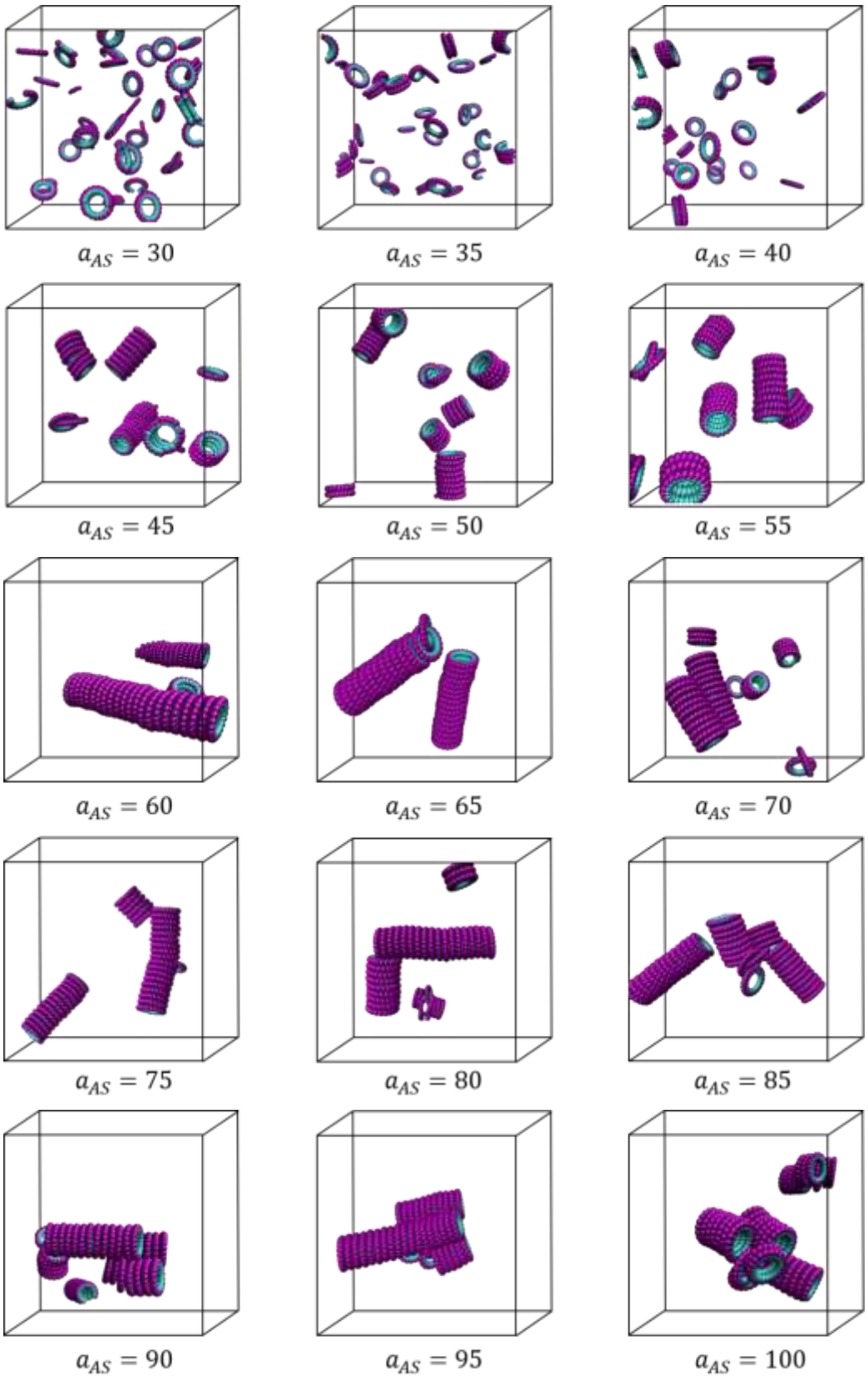

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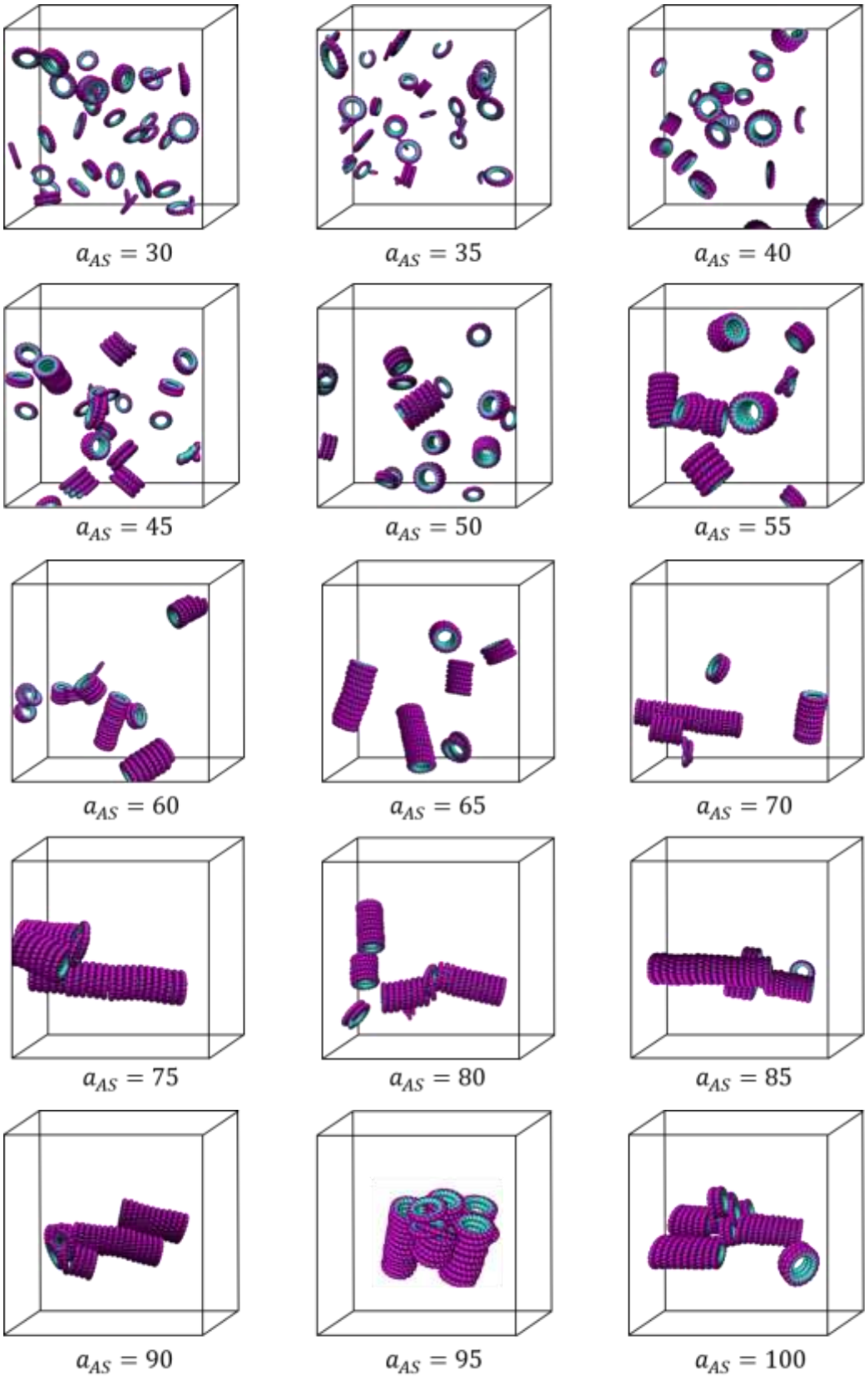

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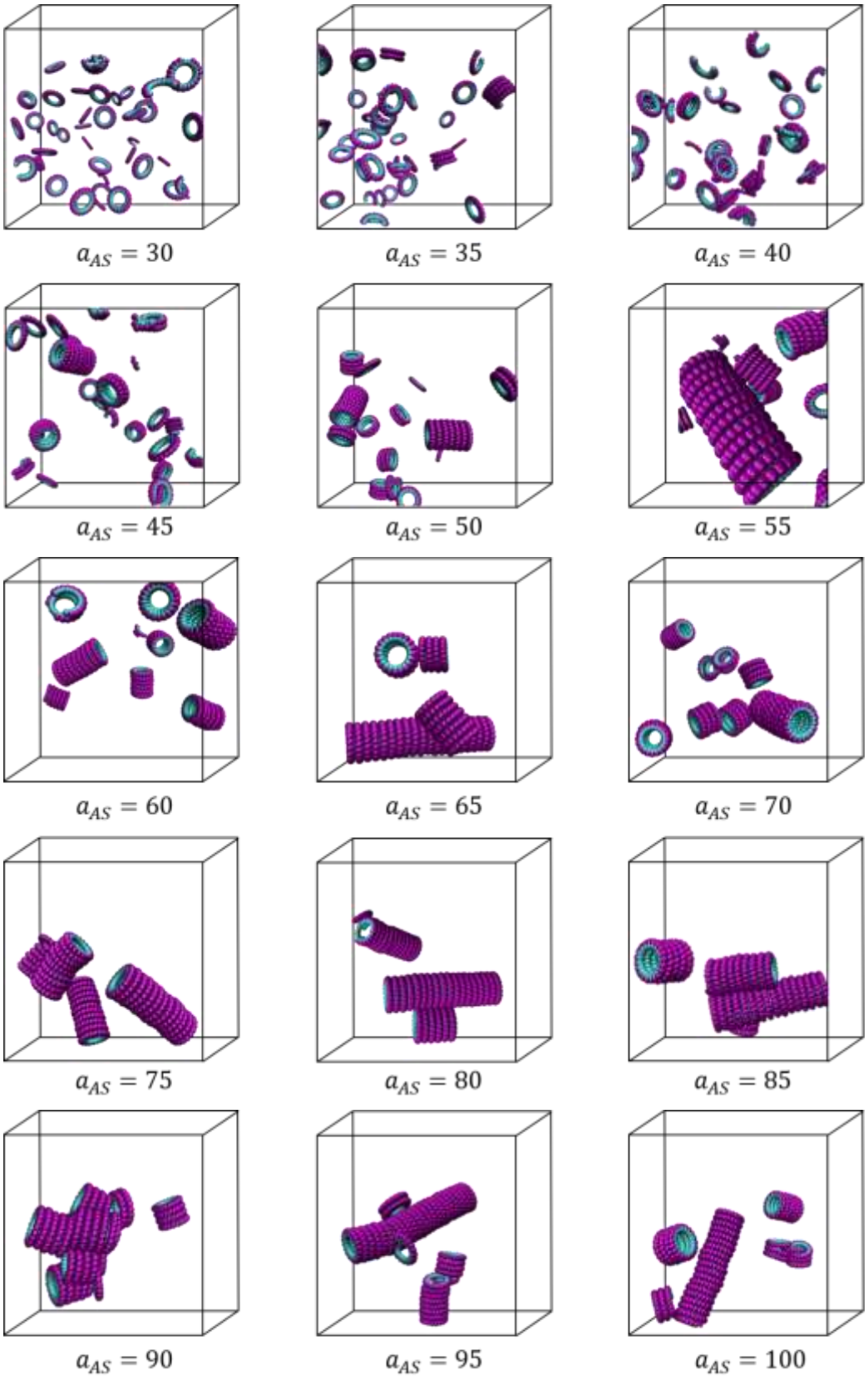

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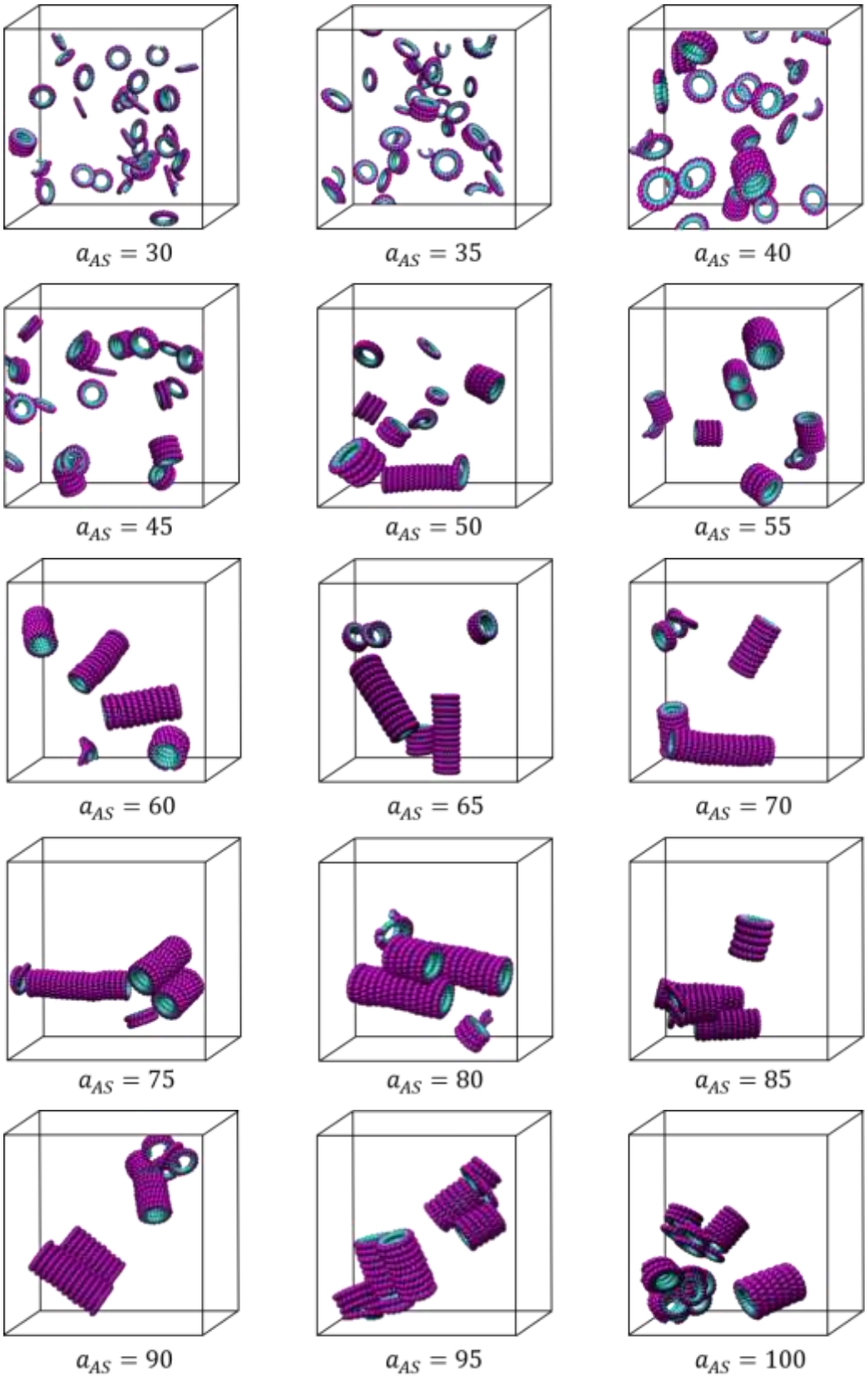

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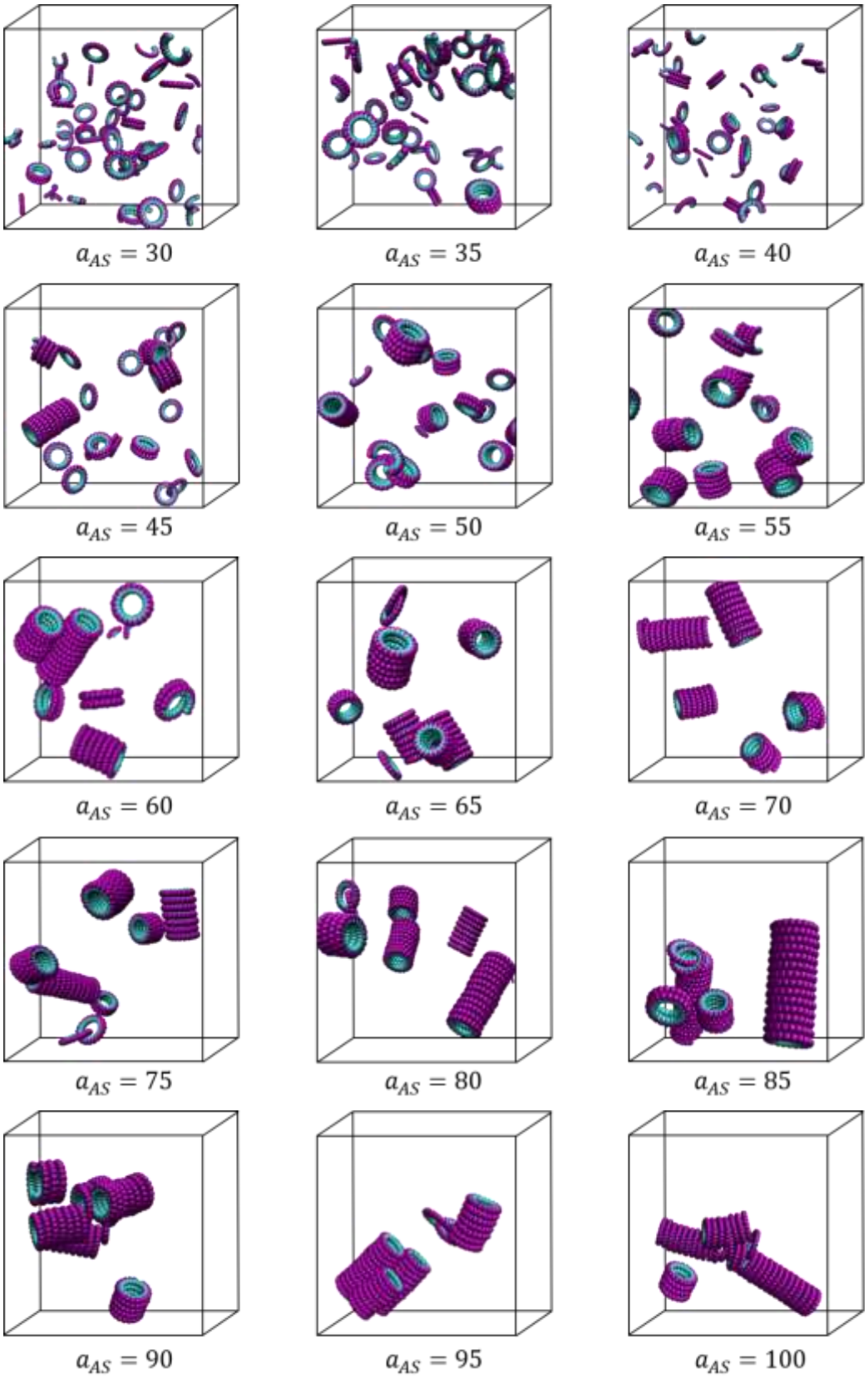

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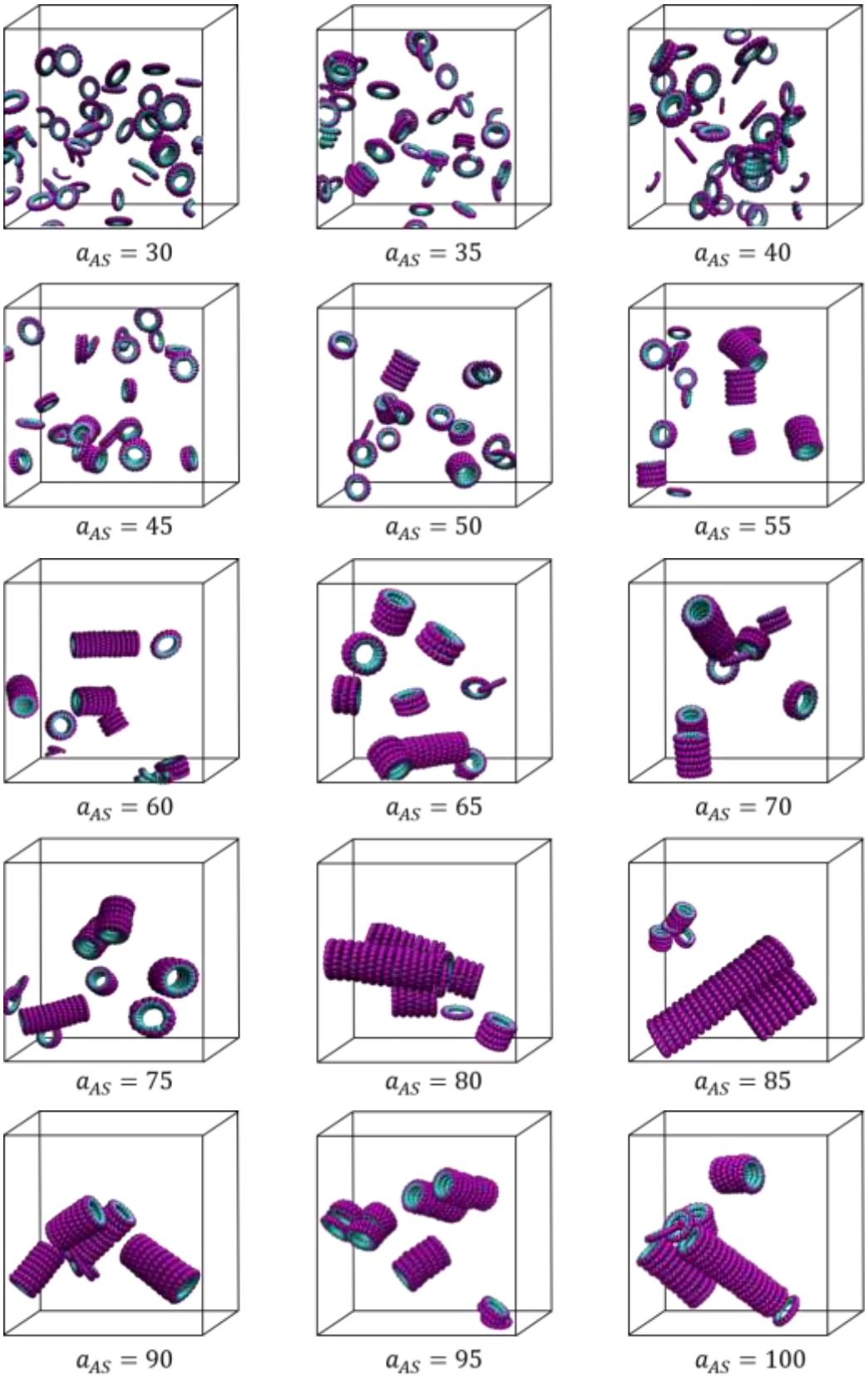

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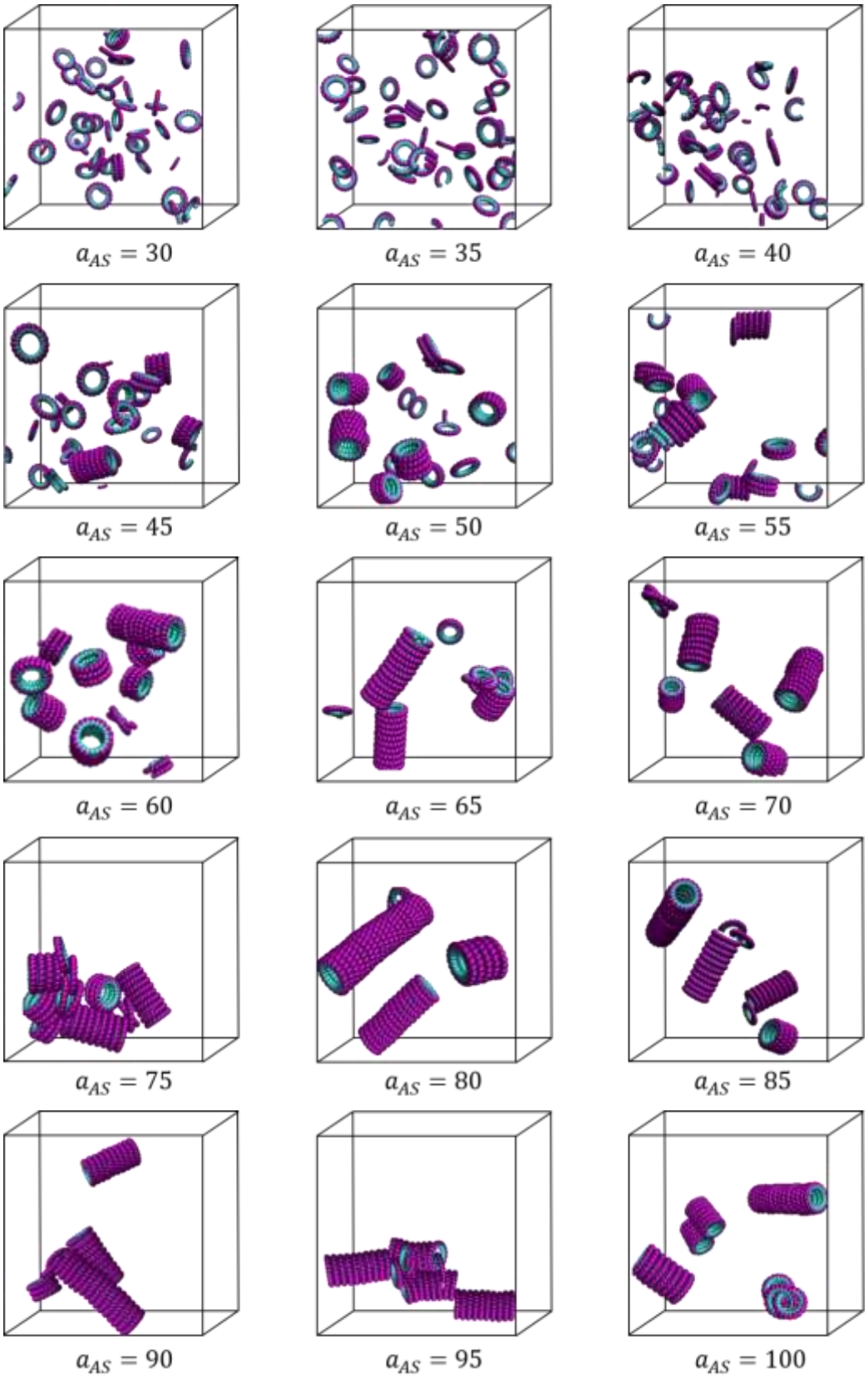

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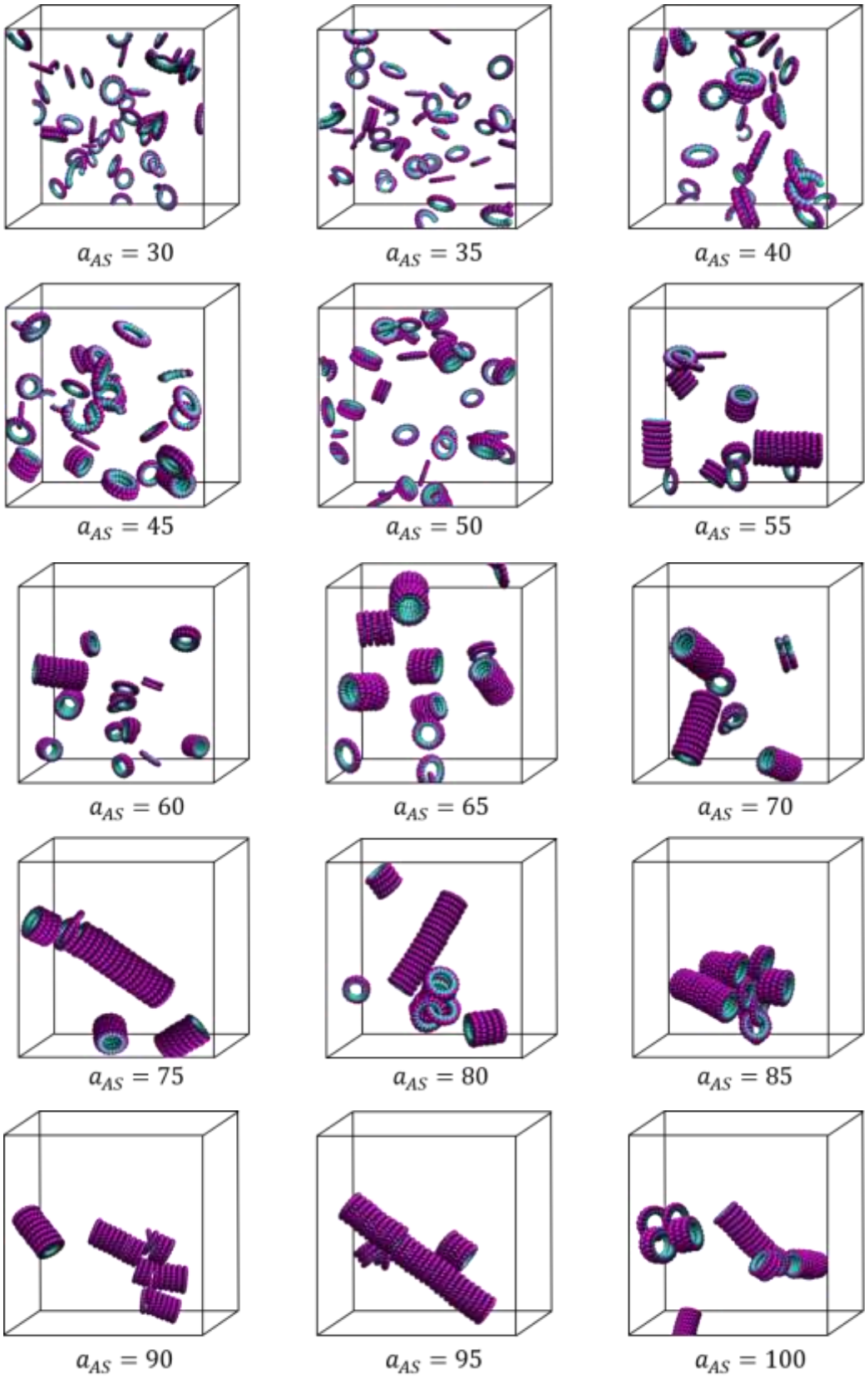

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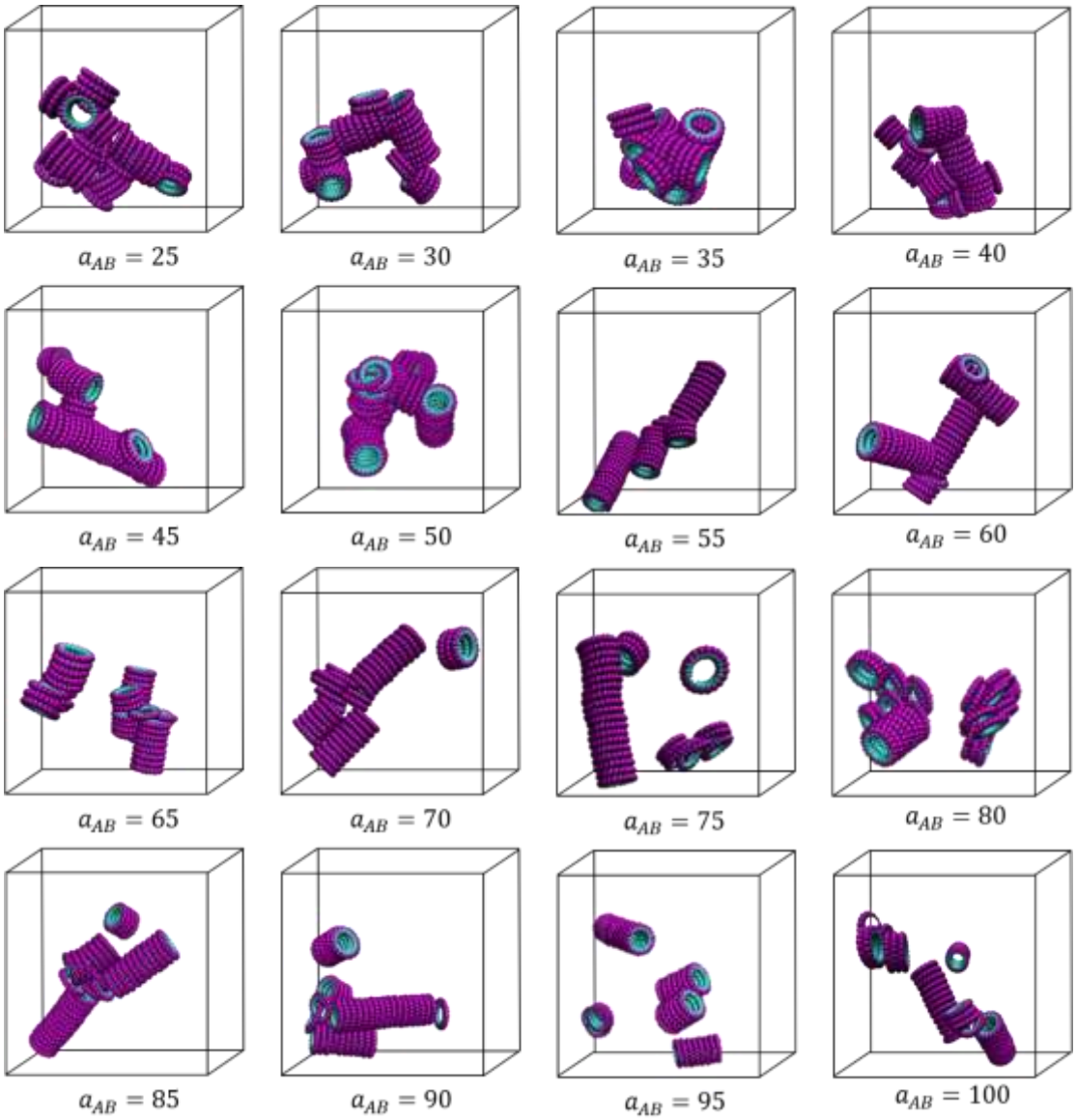

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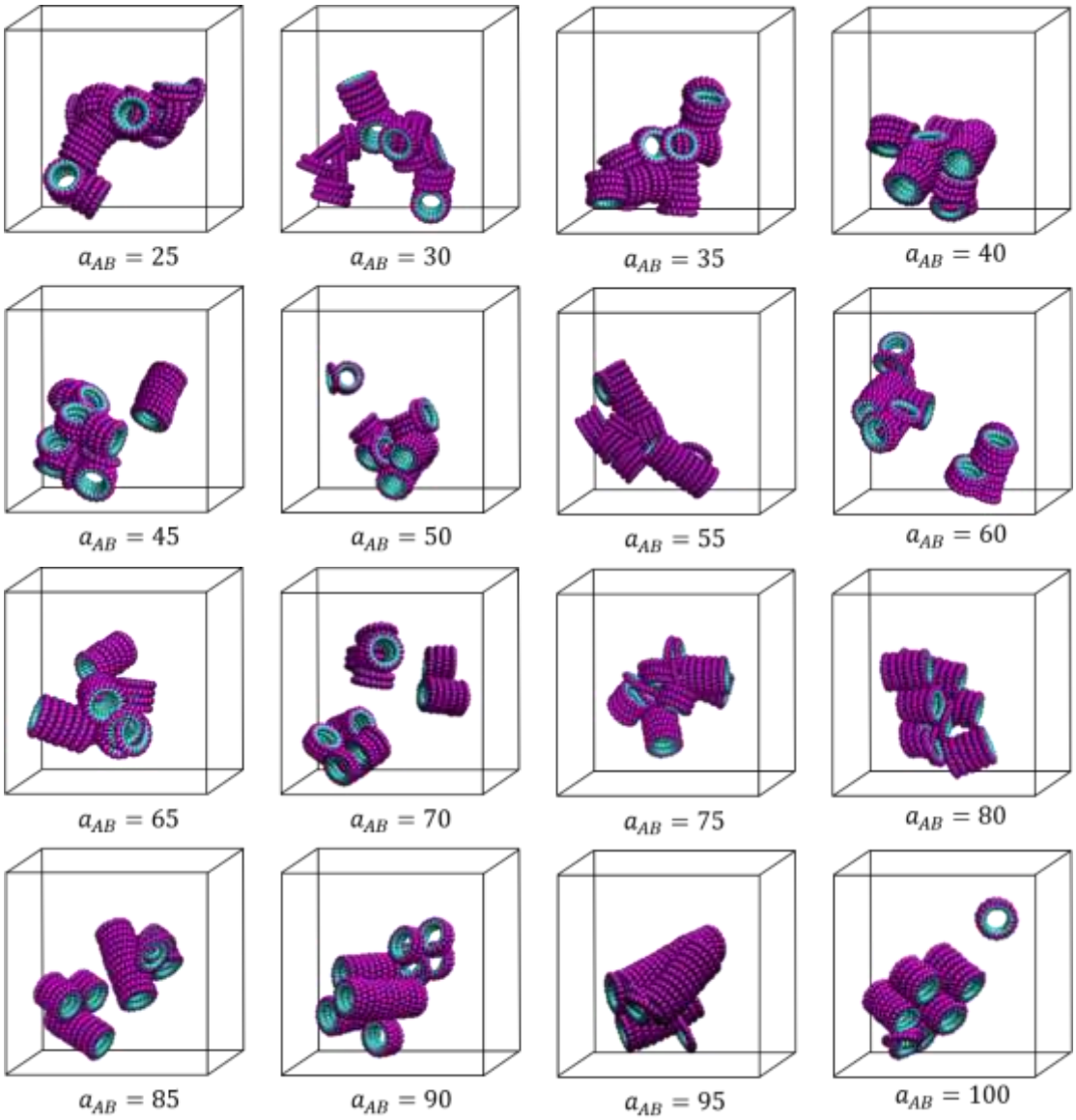

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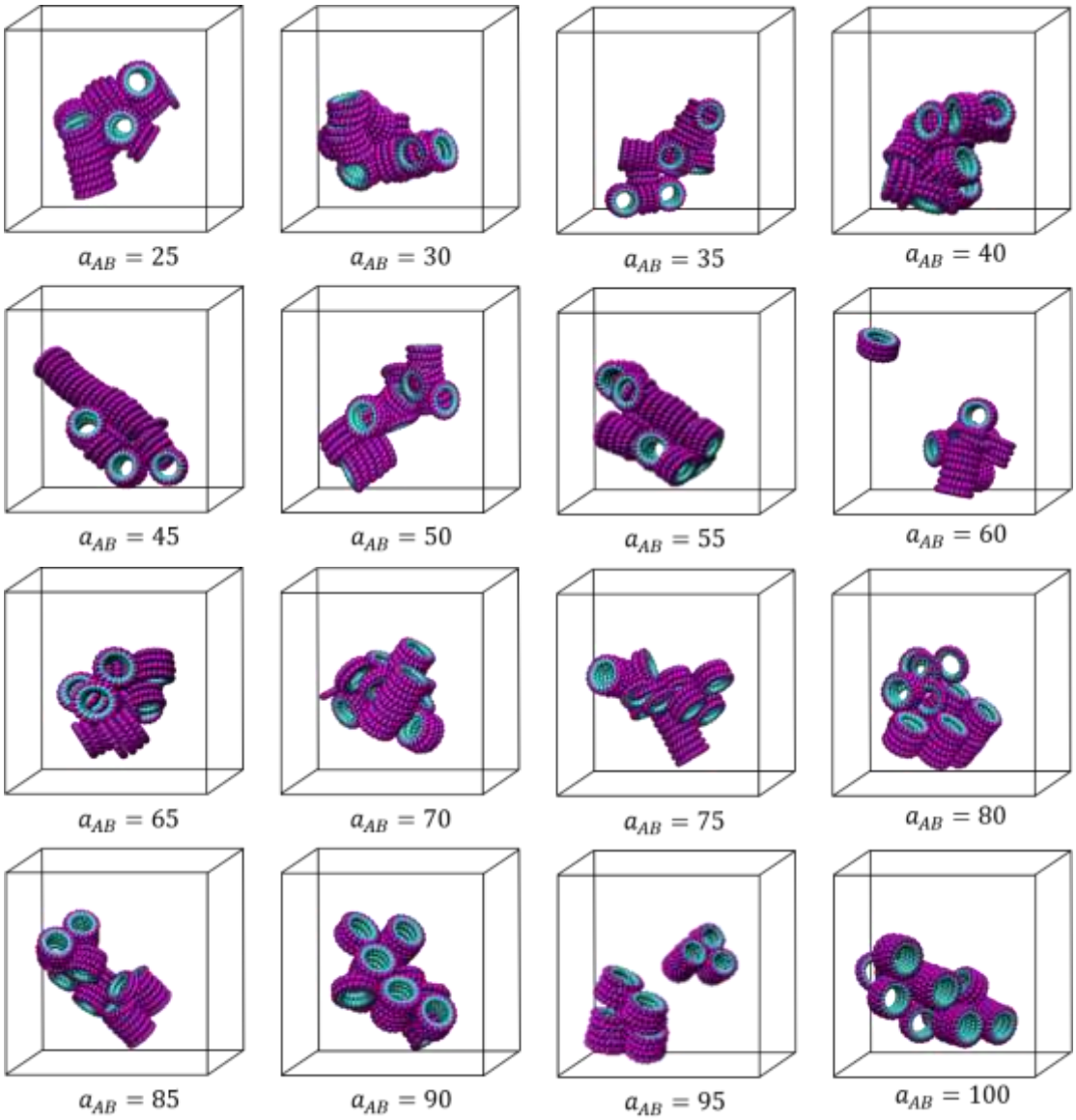

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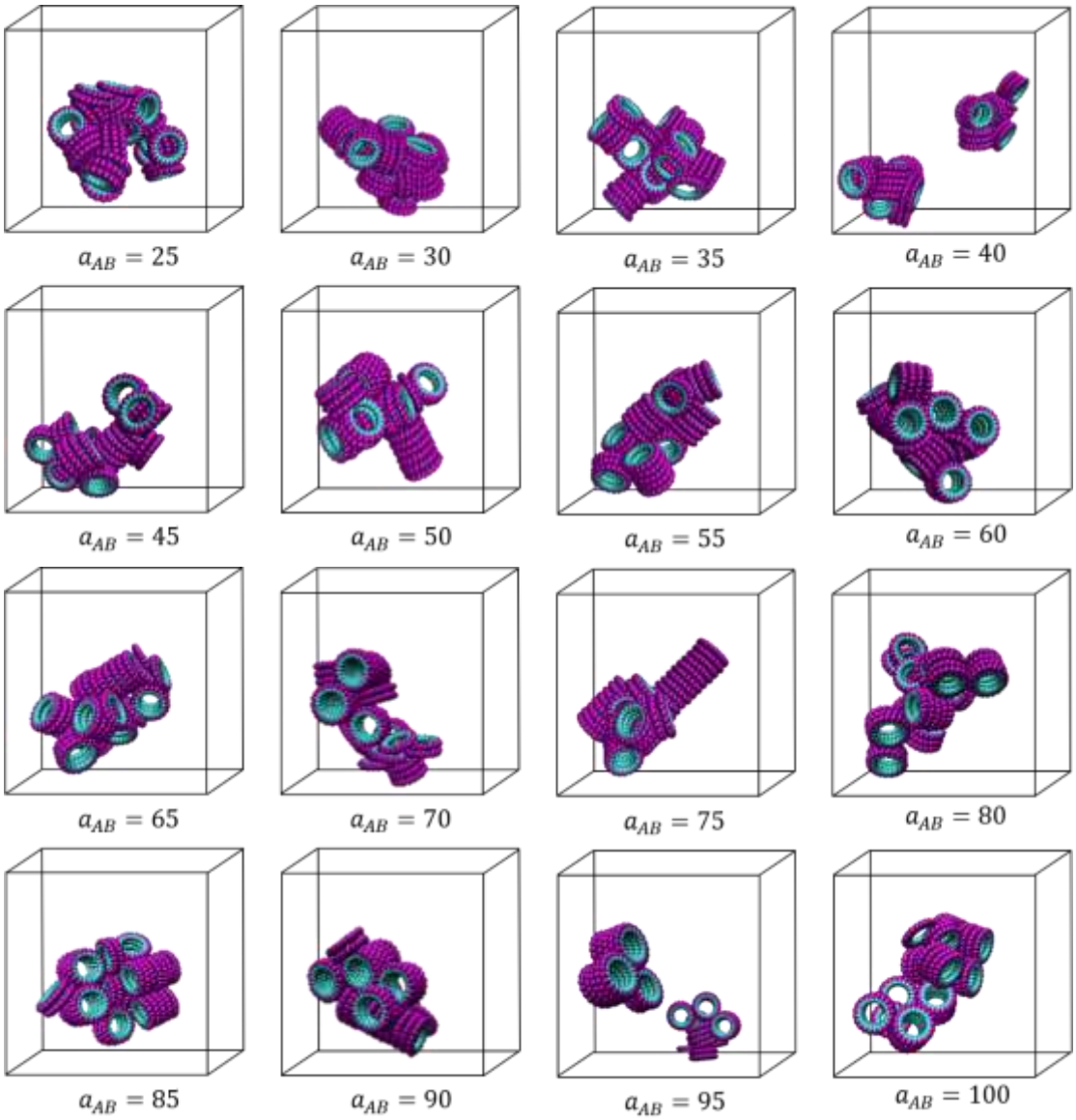

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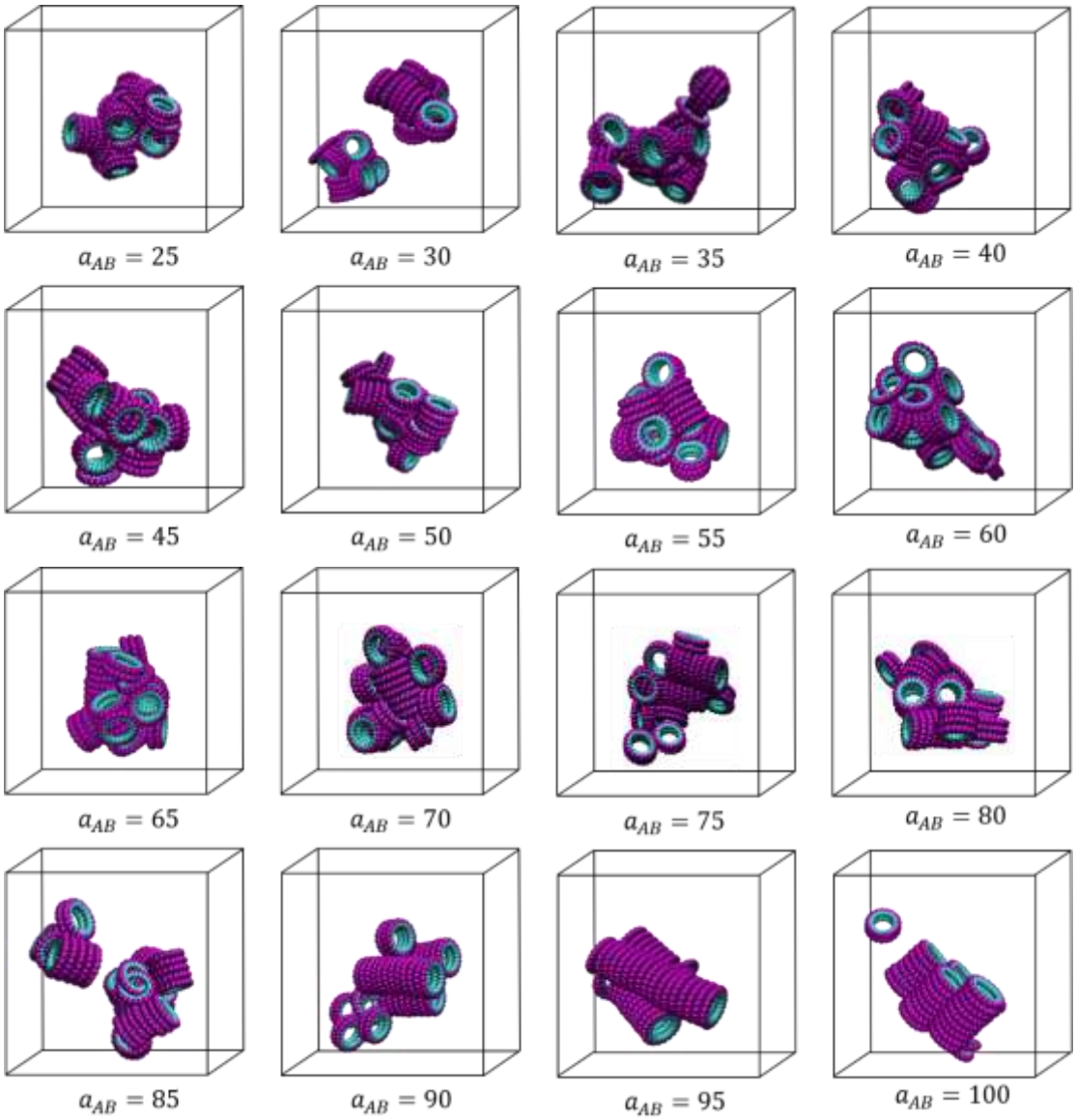

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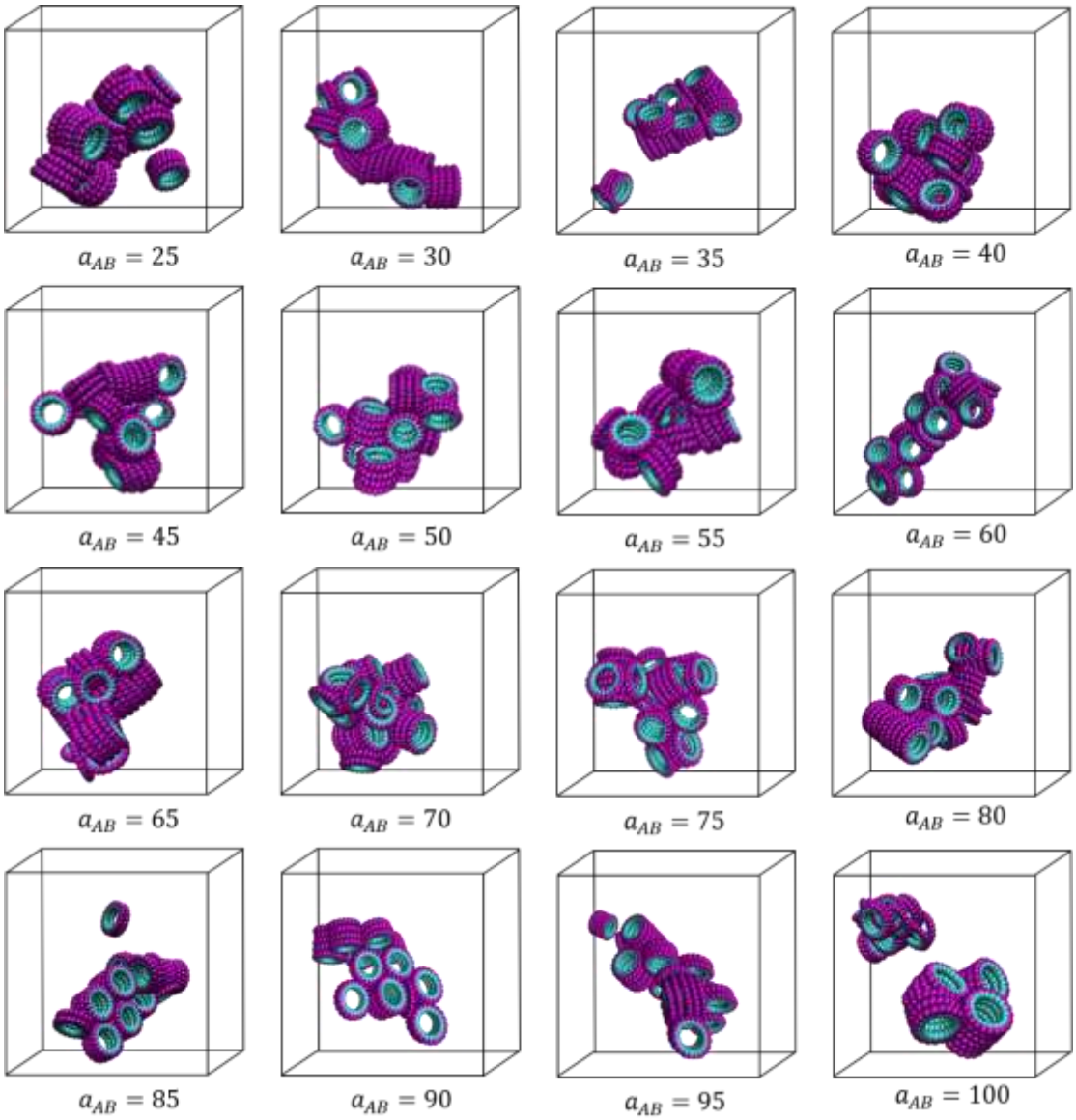

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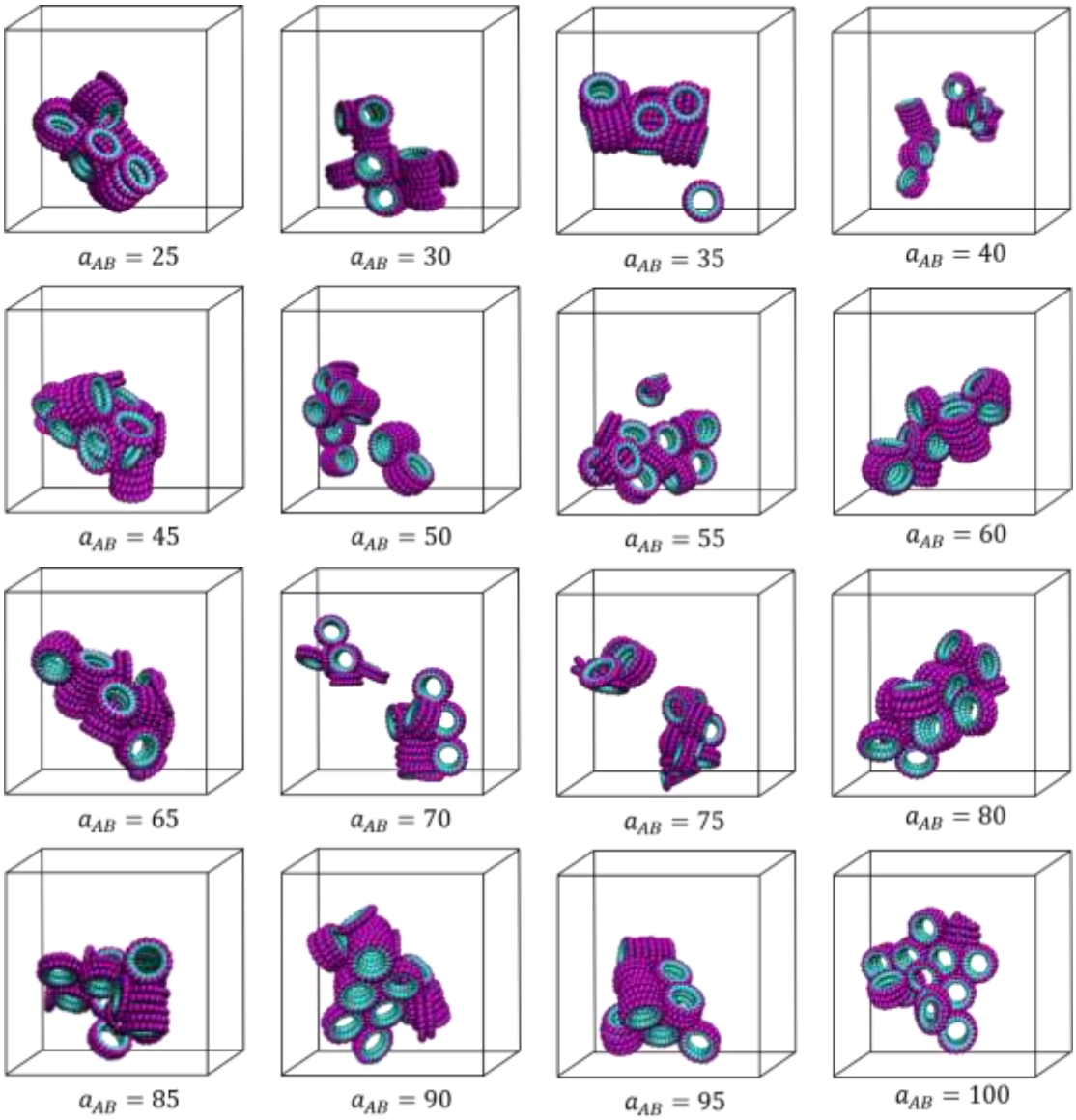

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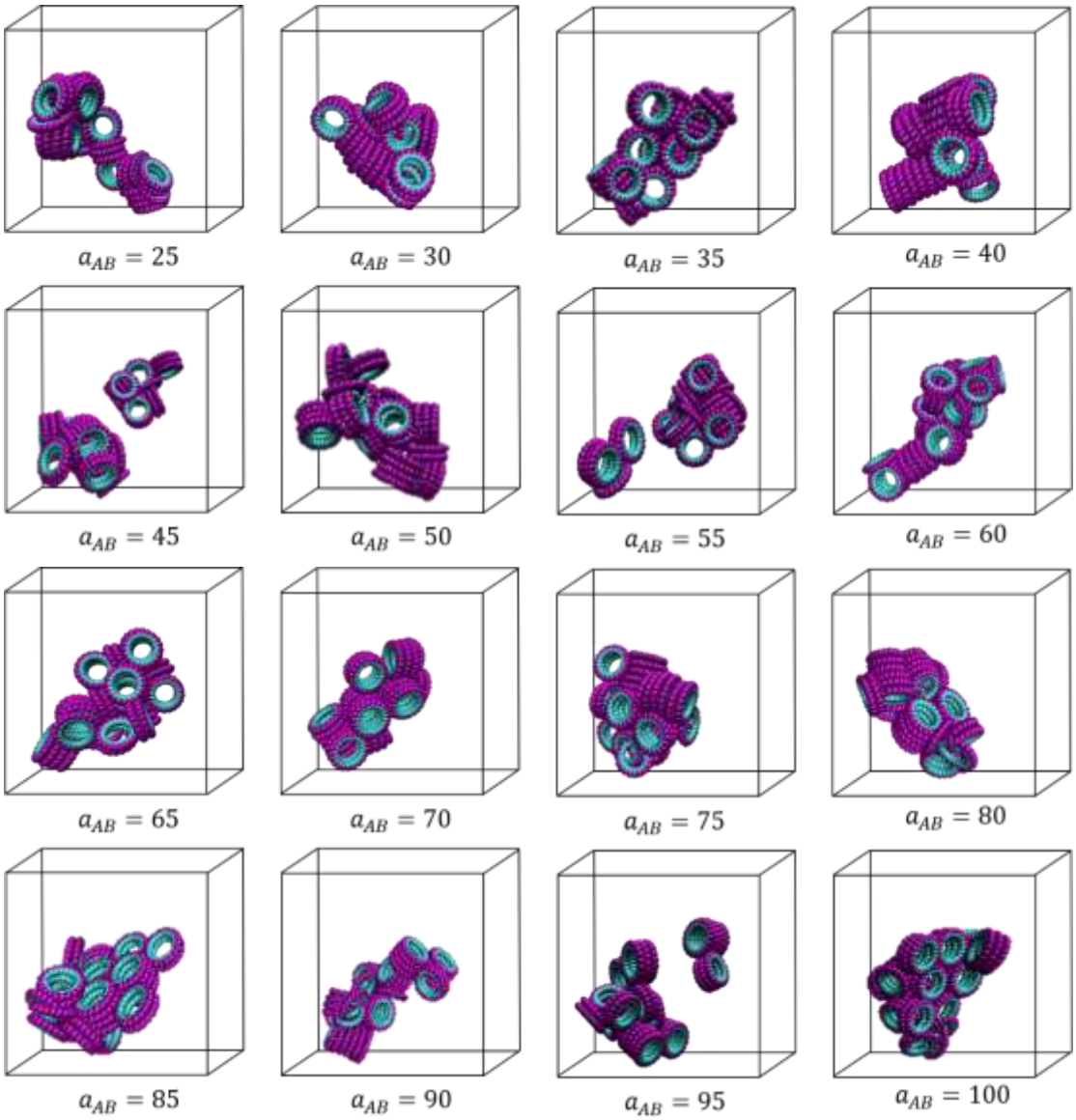

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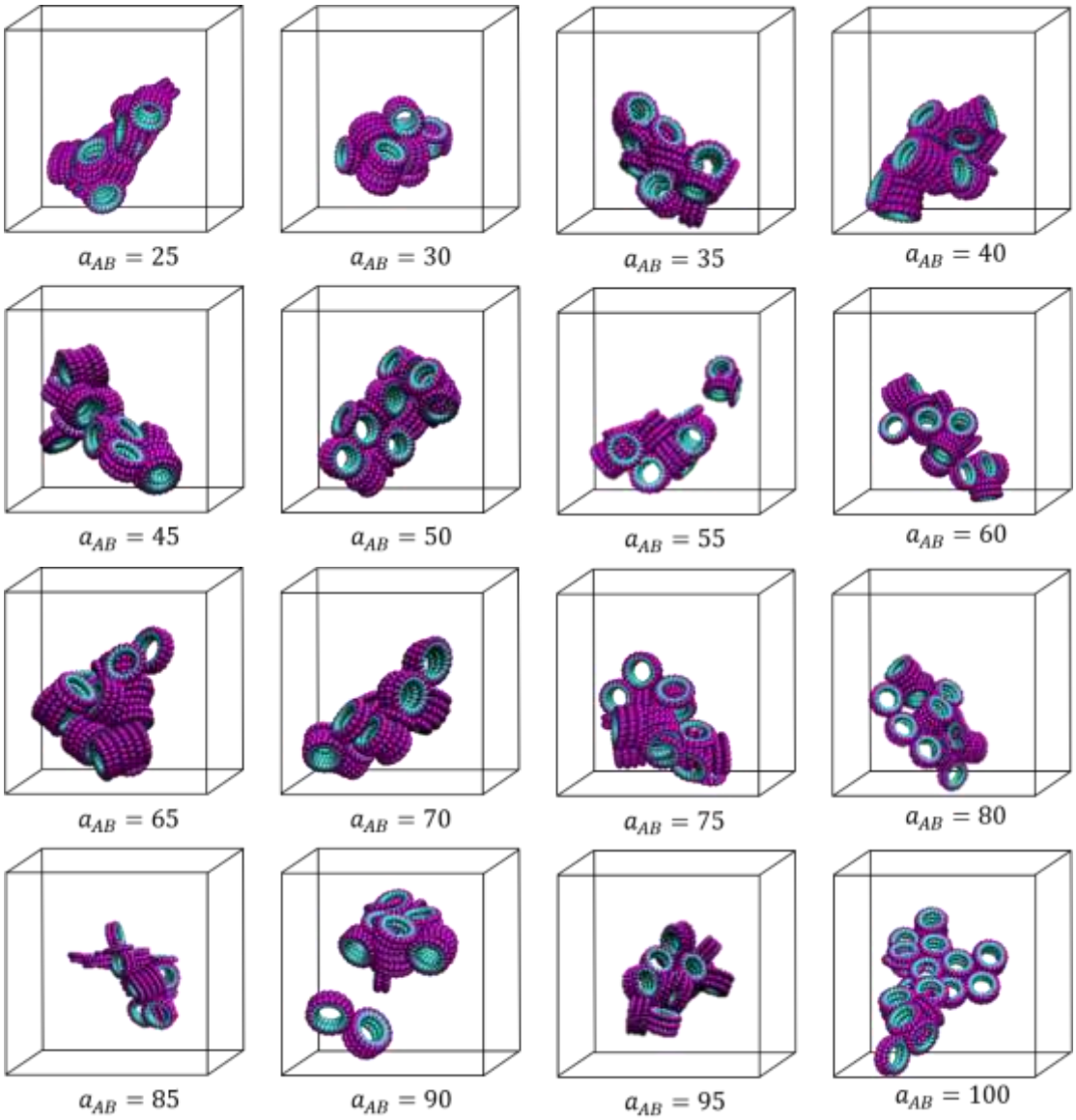

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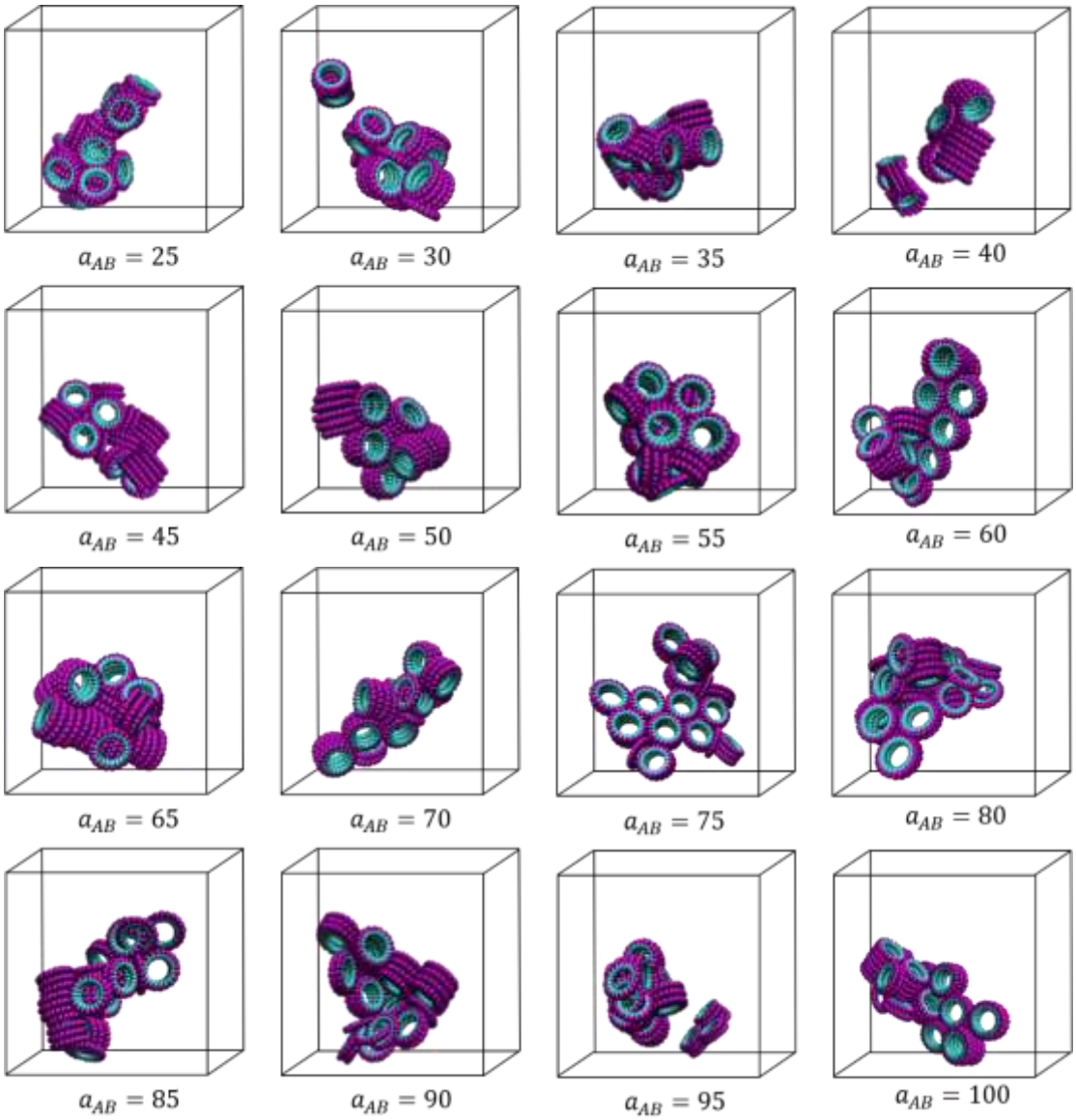

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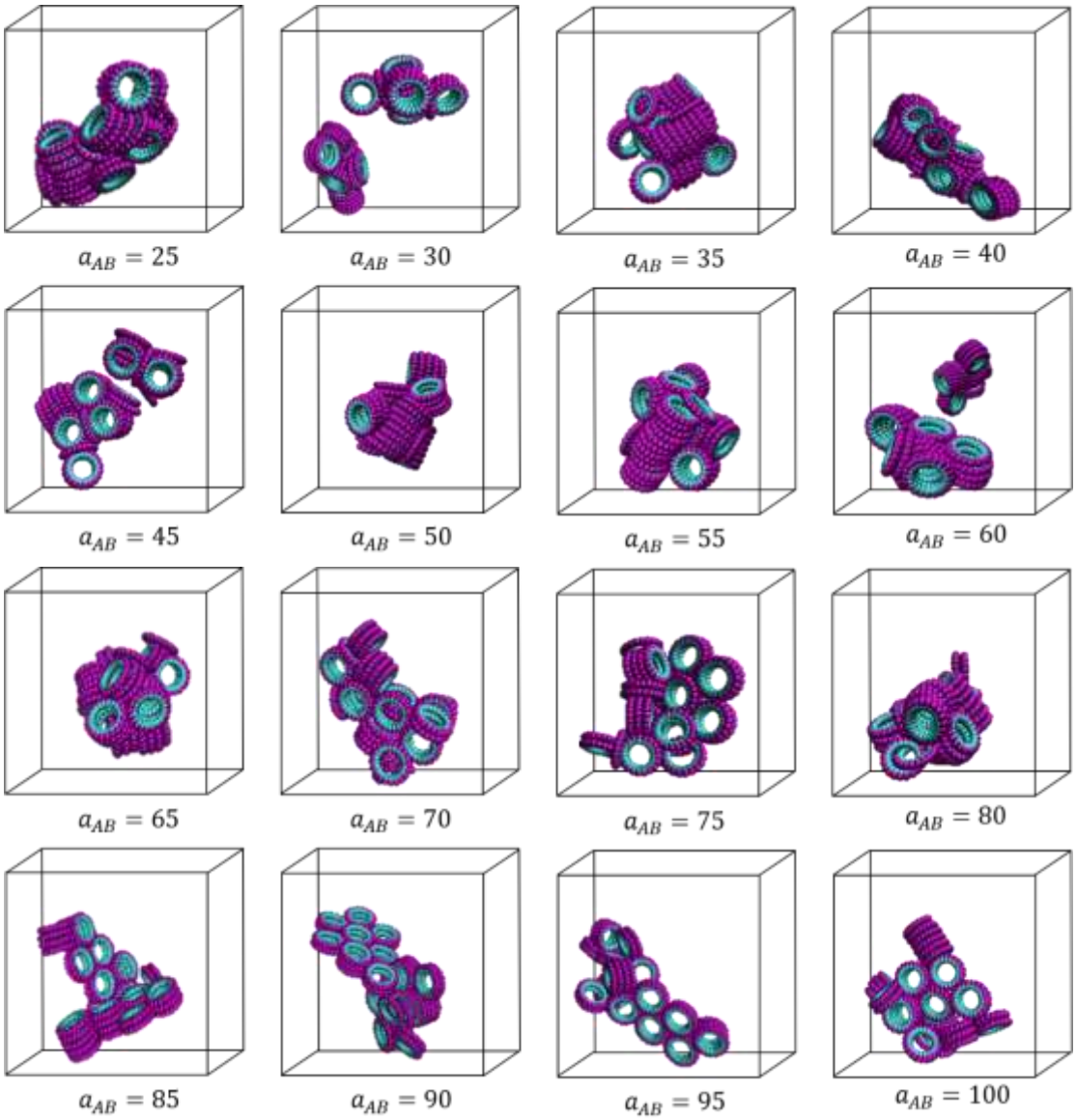

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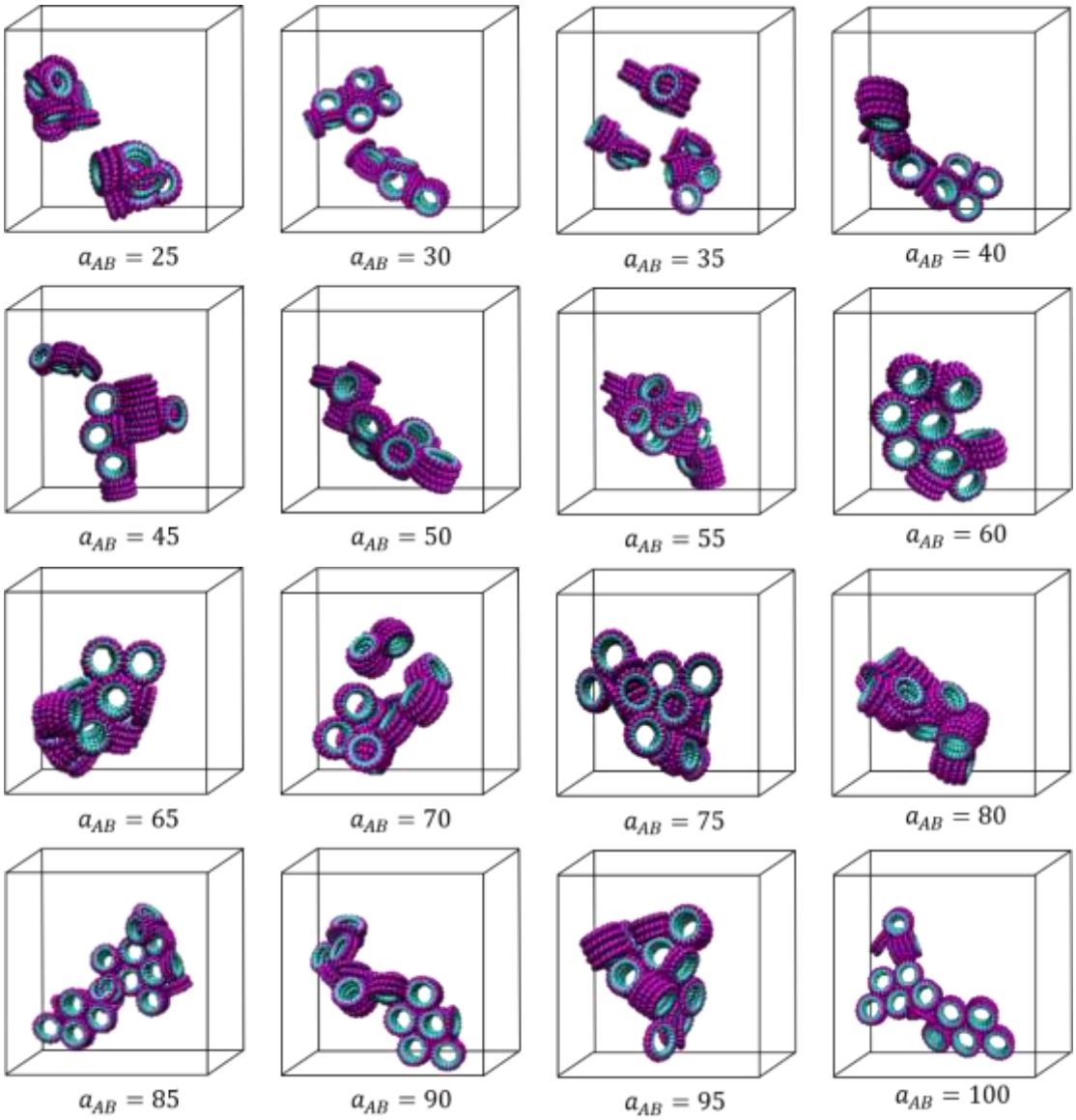

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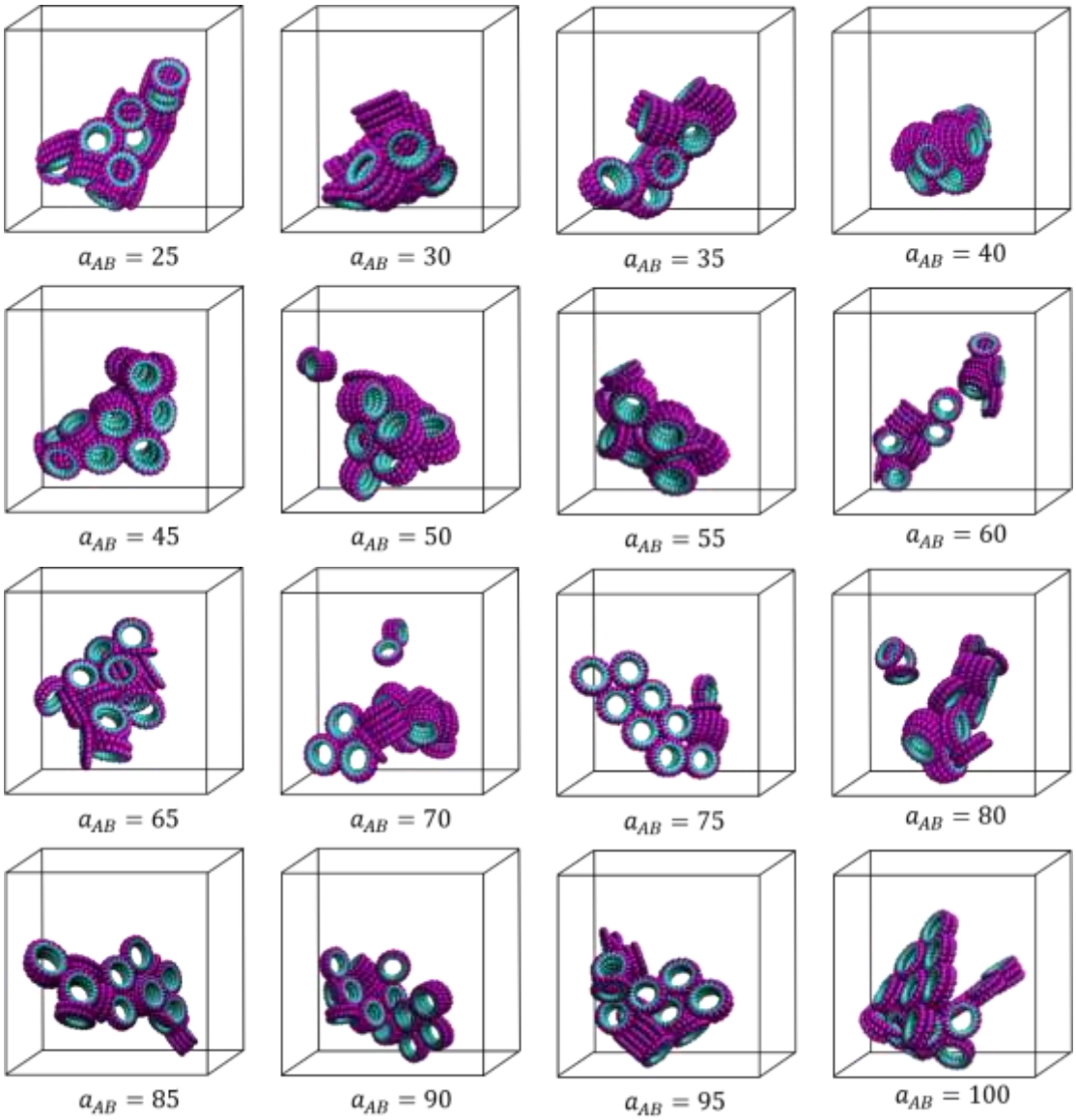

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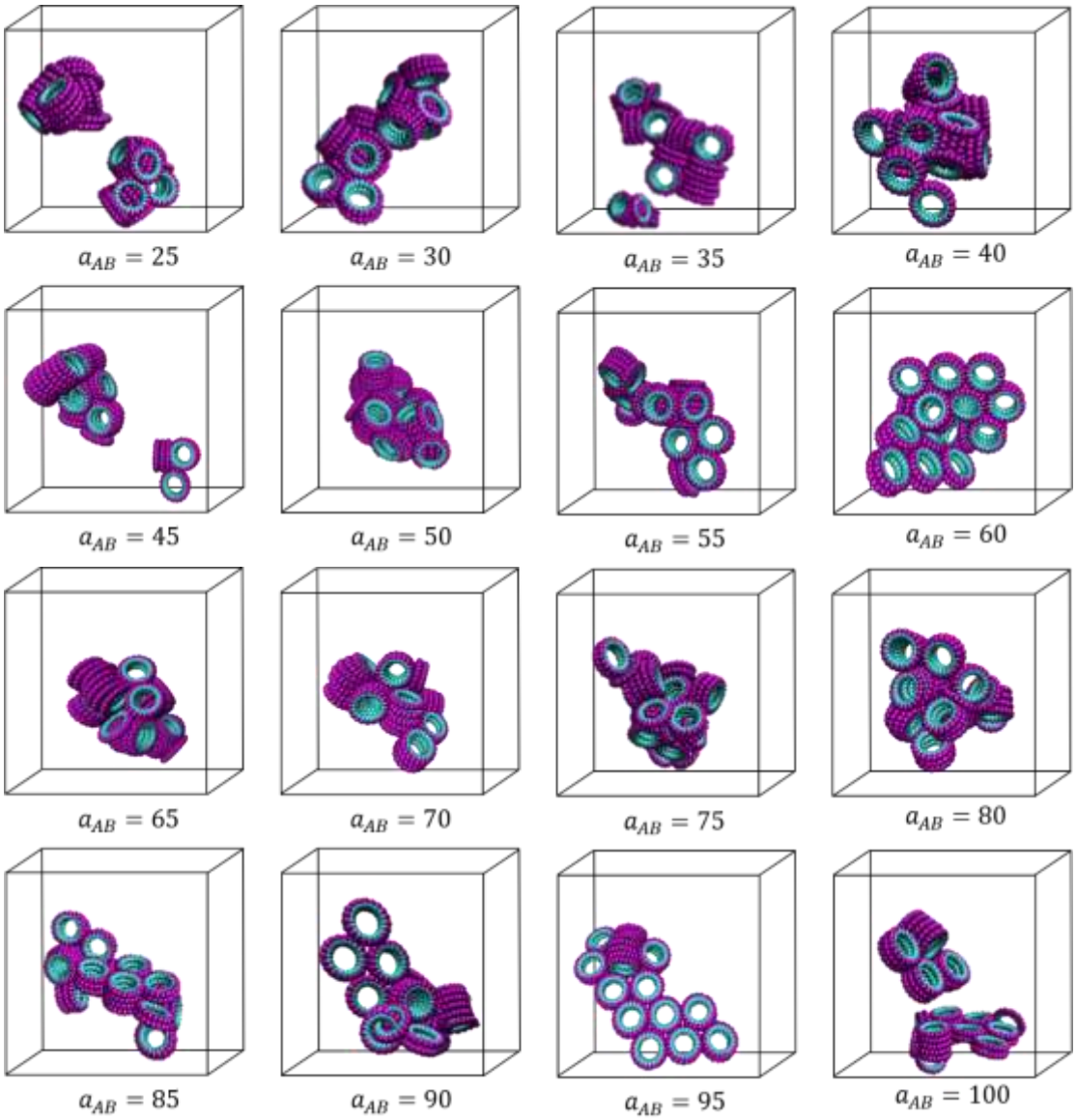

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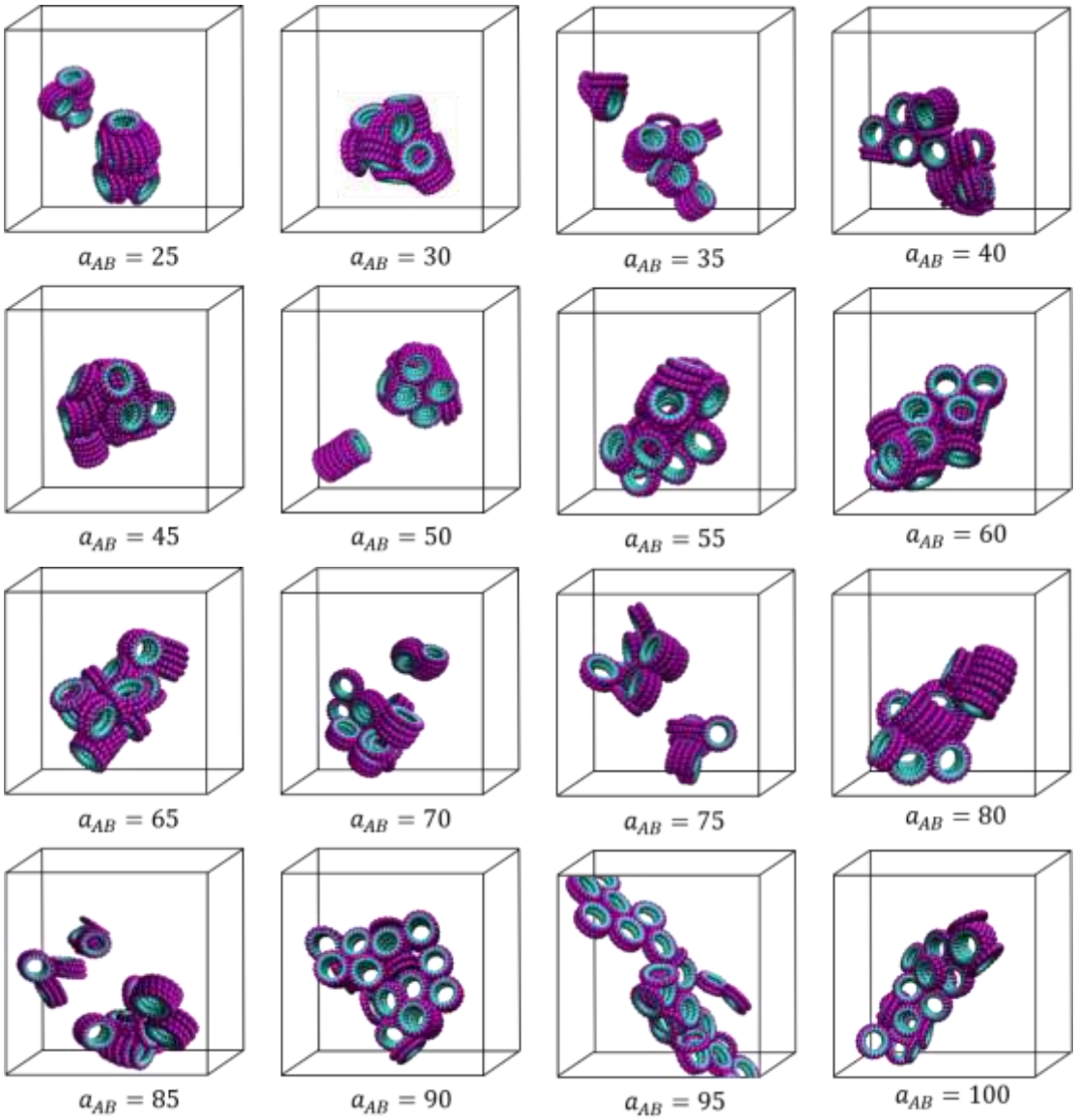

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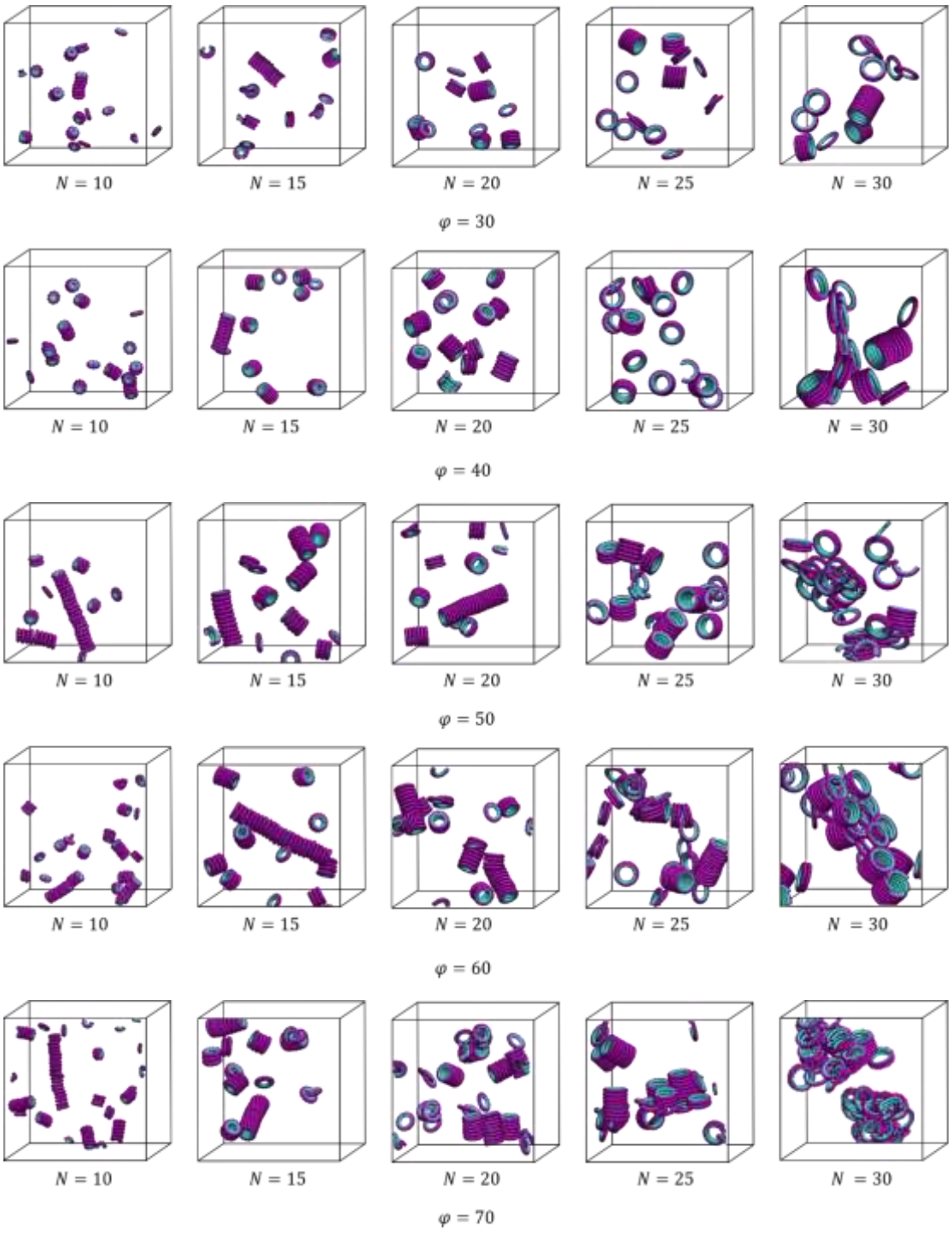

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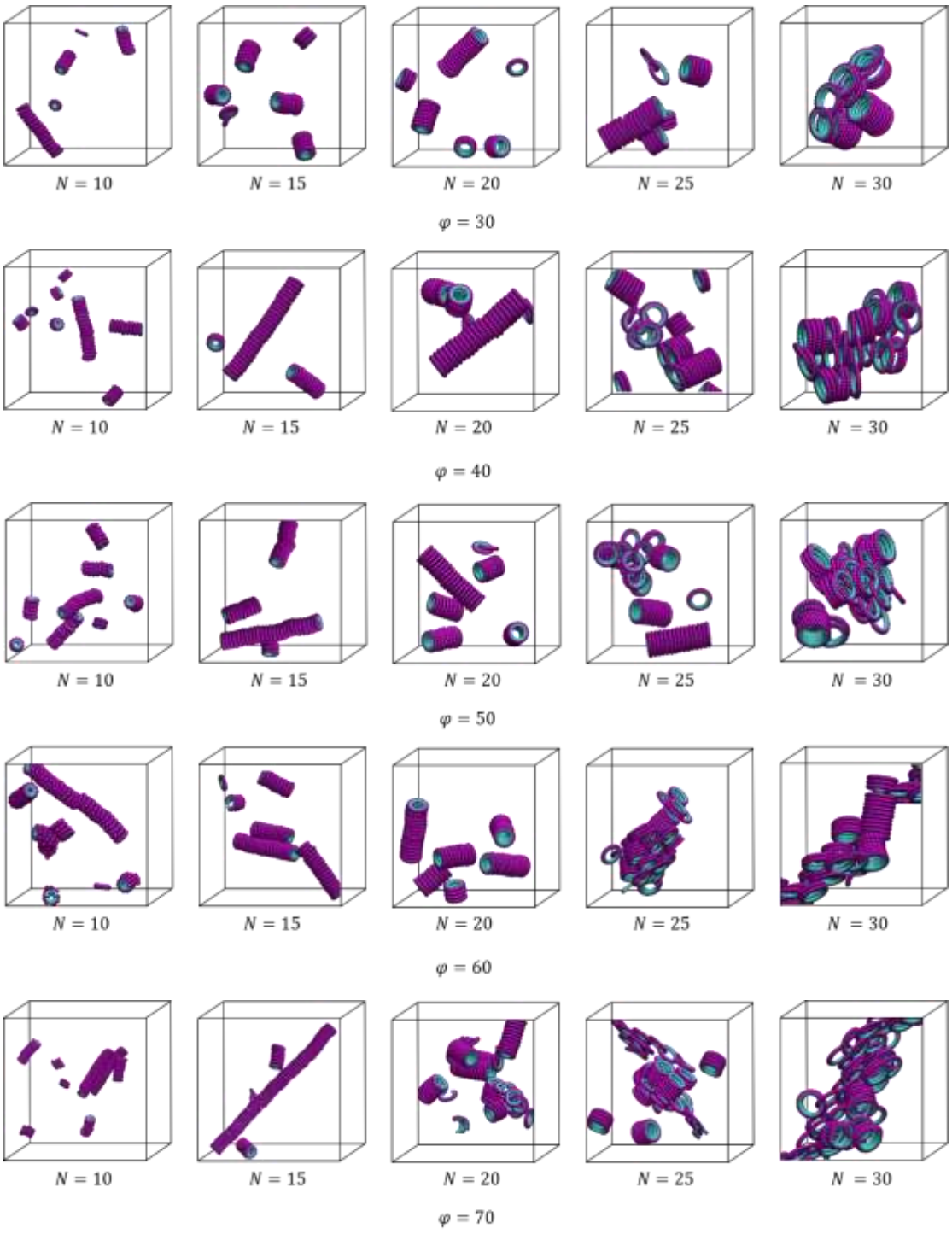

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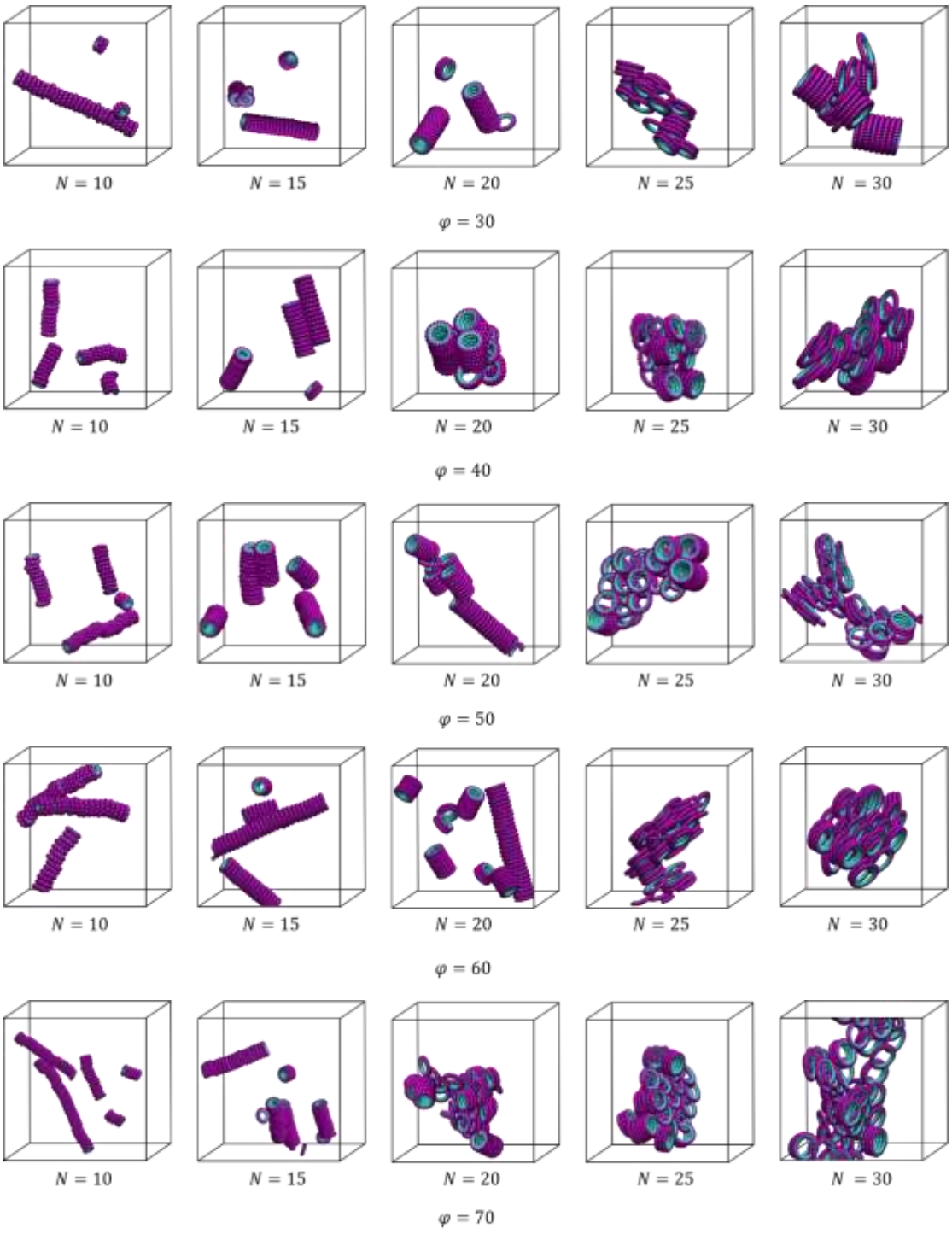

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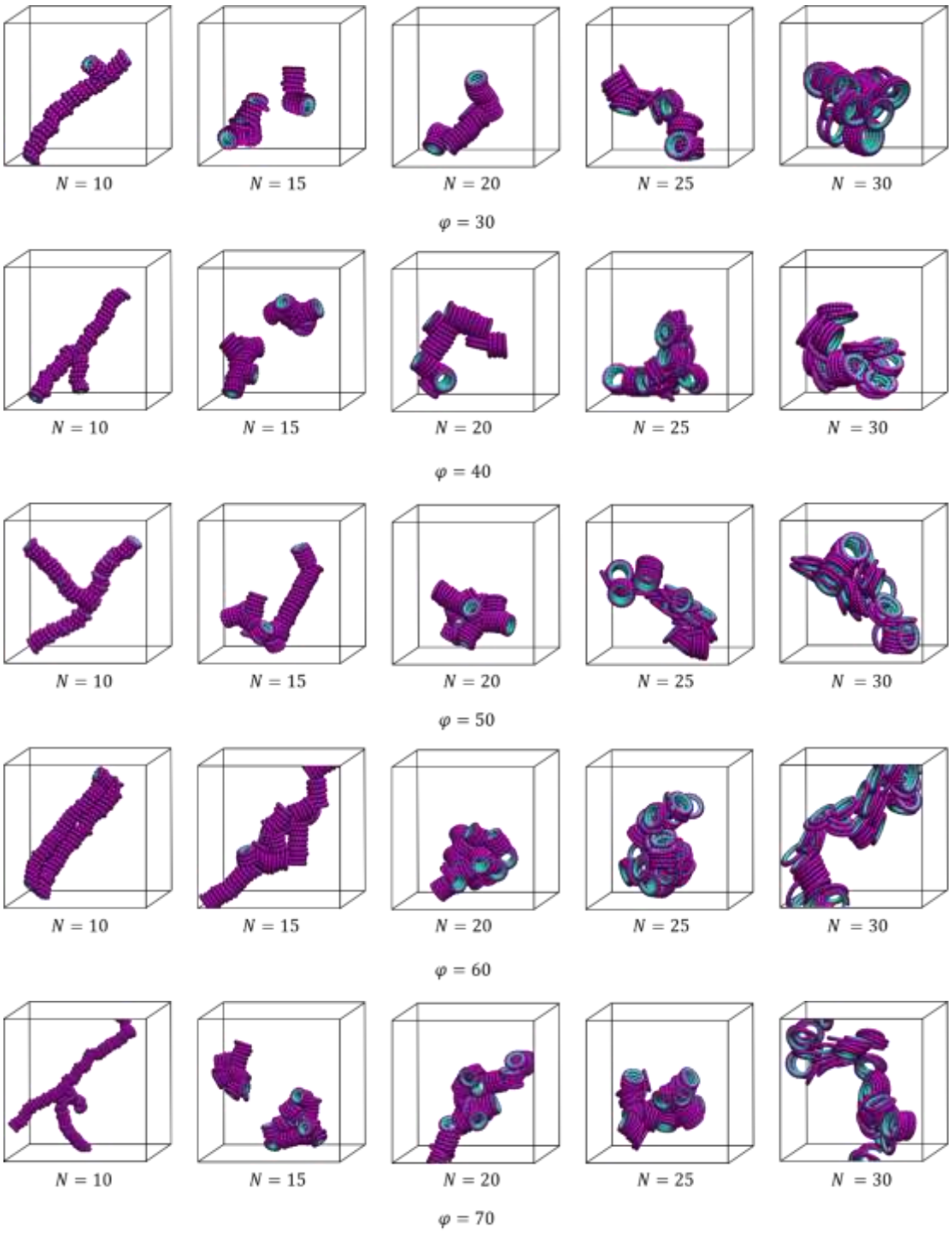

Figure S36. The snapshots of last frames extracted from MD trajectories in different values of N and φ, in which a_{AS}=100, a_{BS}=100 and a_{AB}=30.

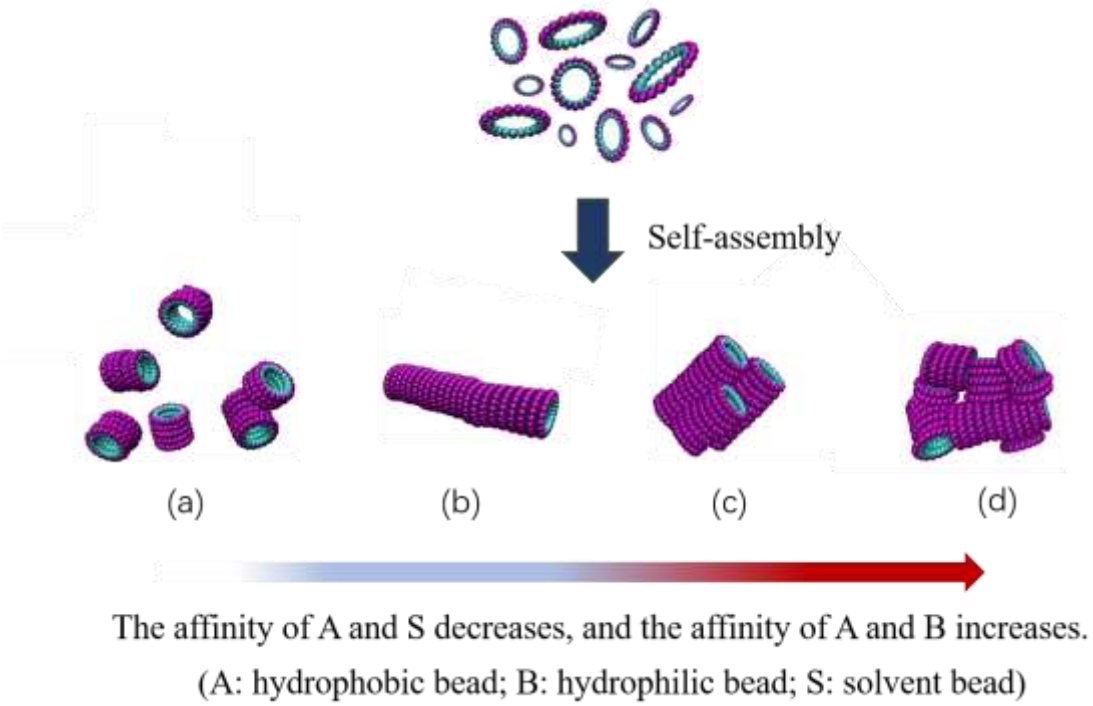

Figure S37. Summary of the phase transformation along the changes of simulation parameters, in which the interaction affinity of A and S decreases and the interaction between A and B increases. Herein, the parameters of φ=40 and N=20. In particular, (a) short independent channel; (b) long independent channel; (c) parallel channel; and (d) disordered channel.

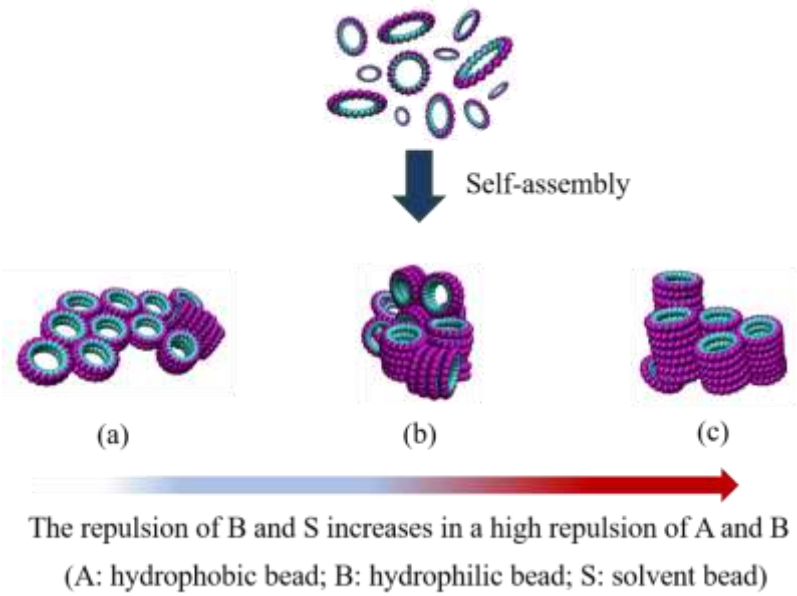

Figure S38. Summary of the phase transformation along the changes of simulation parameters, in which the repulsion of B and S beads increases. Herein, the parameters of φ=40 and N=20. Meanwhile, there is a big interaction parameter for A and B beads. In particular, (a) Laterally parallel channel; (b) disordered channel; and (c) vertically parallel channel.