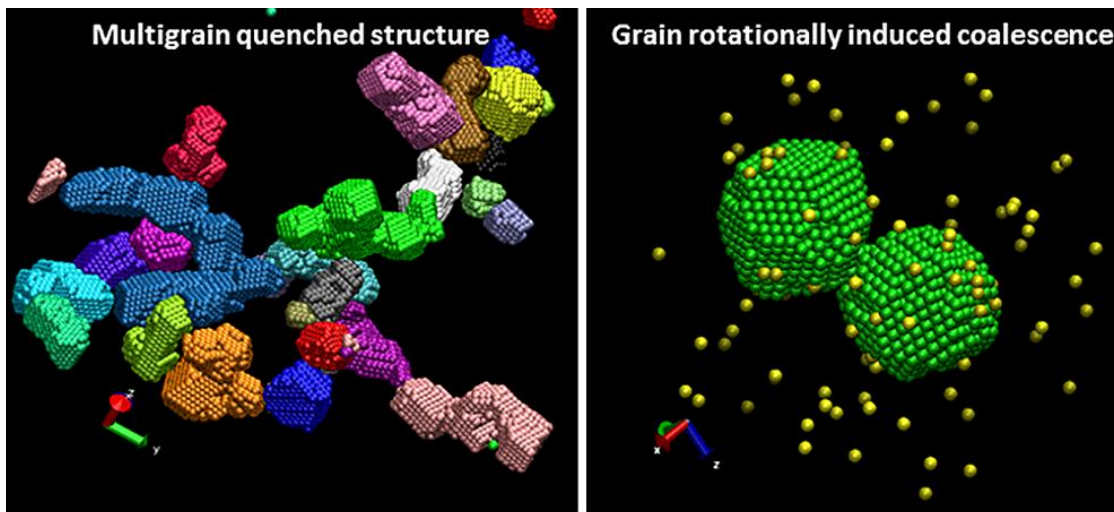


# Dynamics of Multigrain SNA Superlattices

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In order to understand SNA superlattice coarsening, and to discover pathways to avoid kinetically trapped multigrain structures, we study the coalescence of bcc SNA crystallites. We find the coalescence proceeds via the minimization of the twist disclination between two misoriented crystallites (GRIC). Using large-scale molecular dynamics, we measure the growth of SNA crystallites and find that it scales quadratically with time,  $a \sim t^{1/2}$ , even at times after grains are coalescing. We show this scaling was seen experimentally in recent SNA bcc superlattice growth measurements. Finally, using the relationship between the DNA length and the Au NP size, we are able to affect the SNA dynamics during coarsening by changing the SNA binding potential.

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