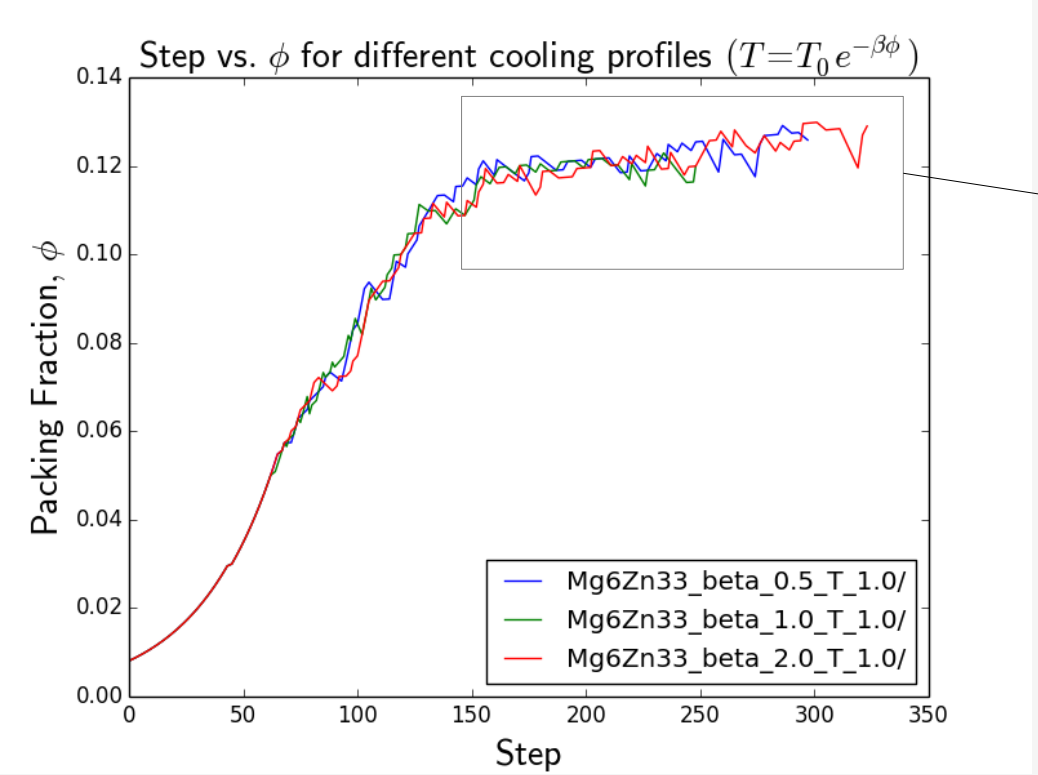
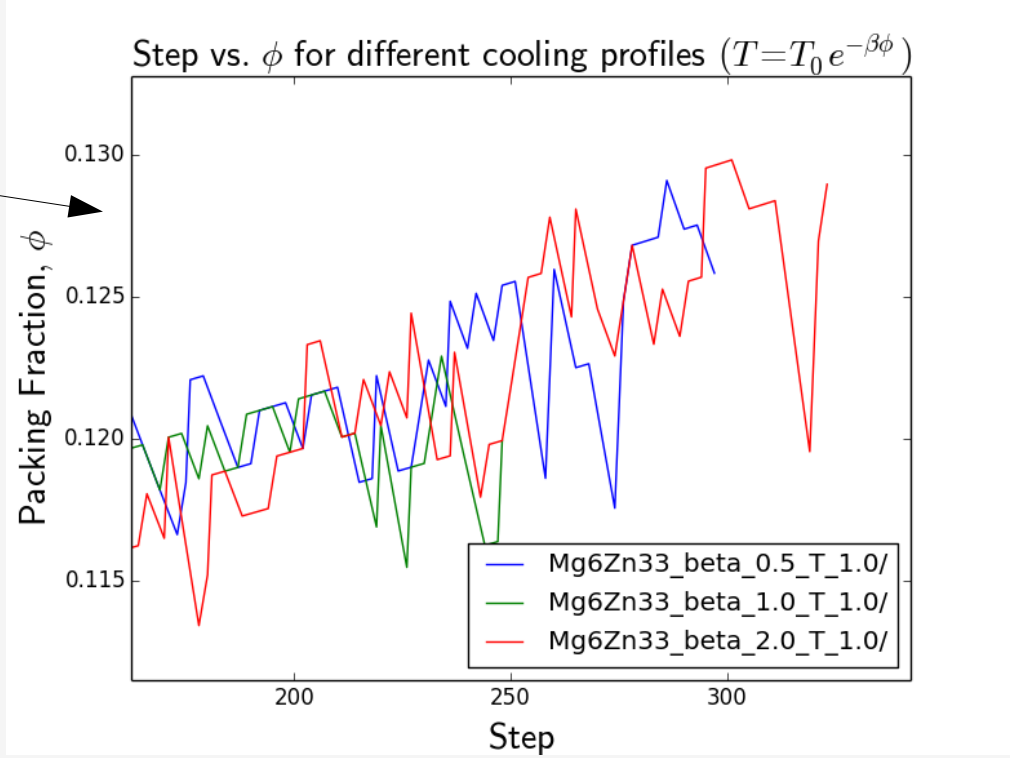
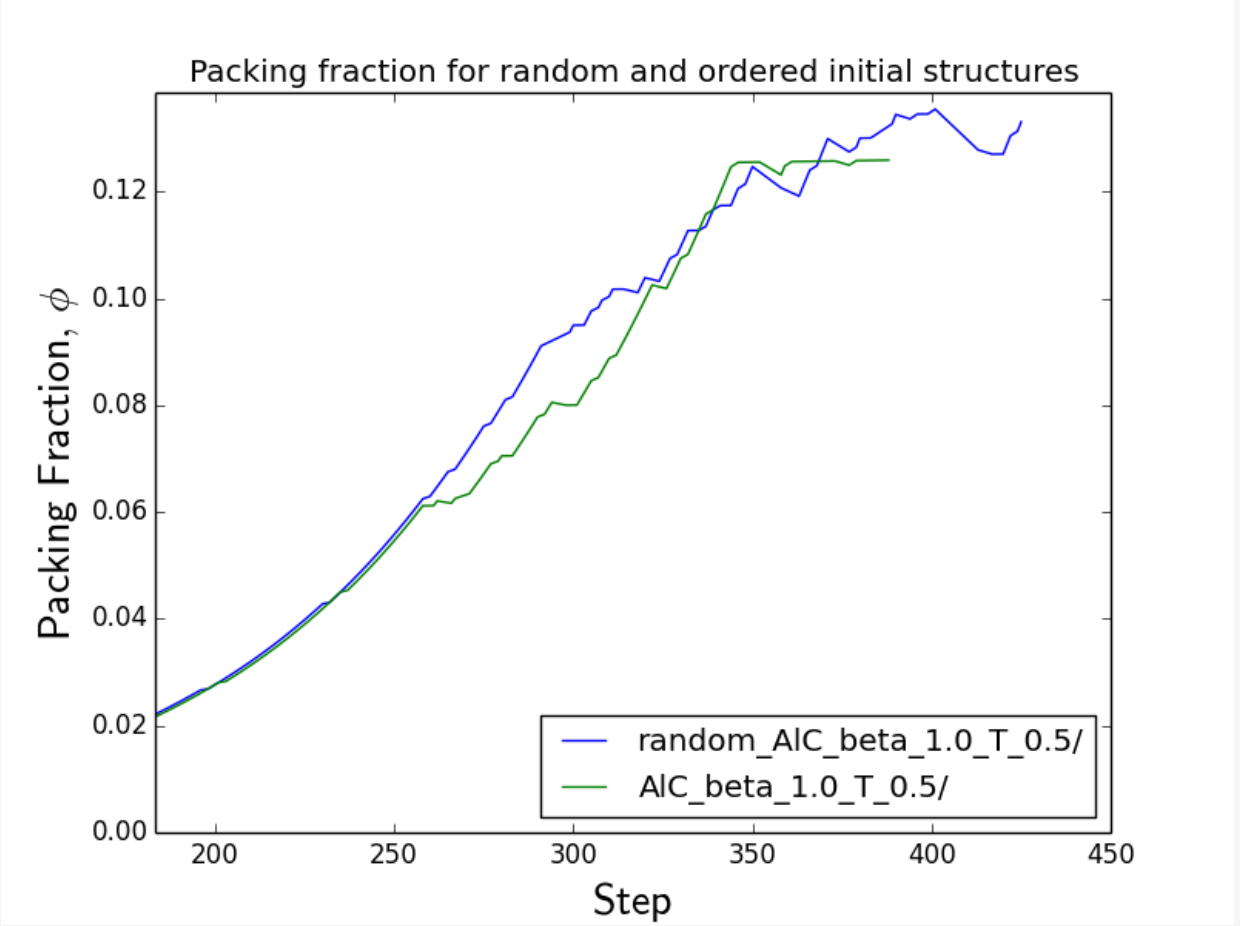
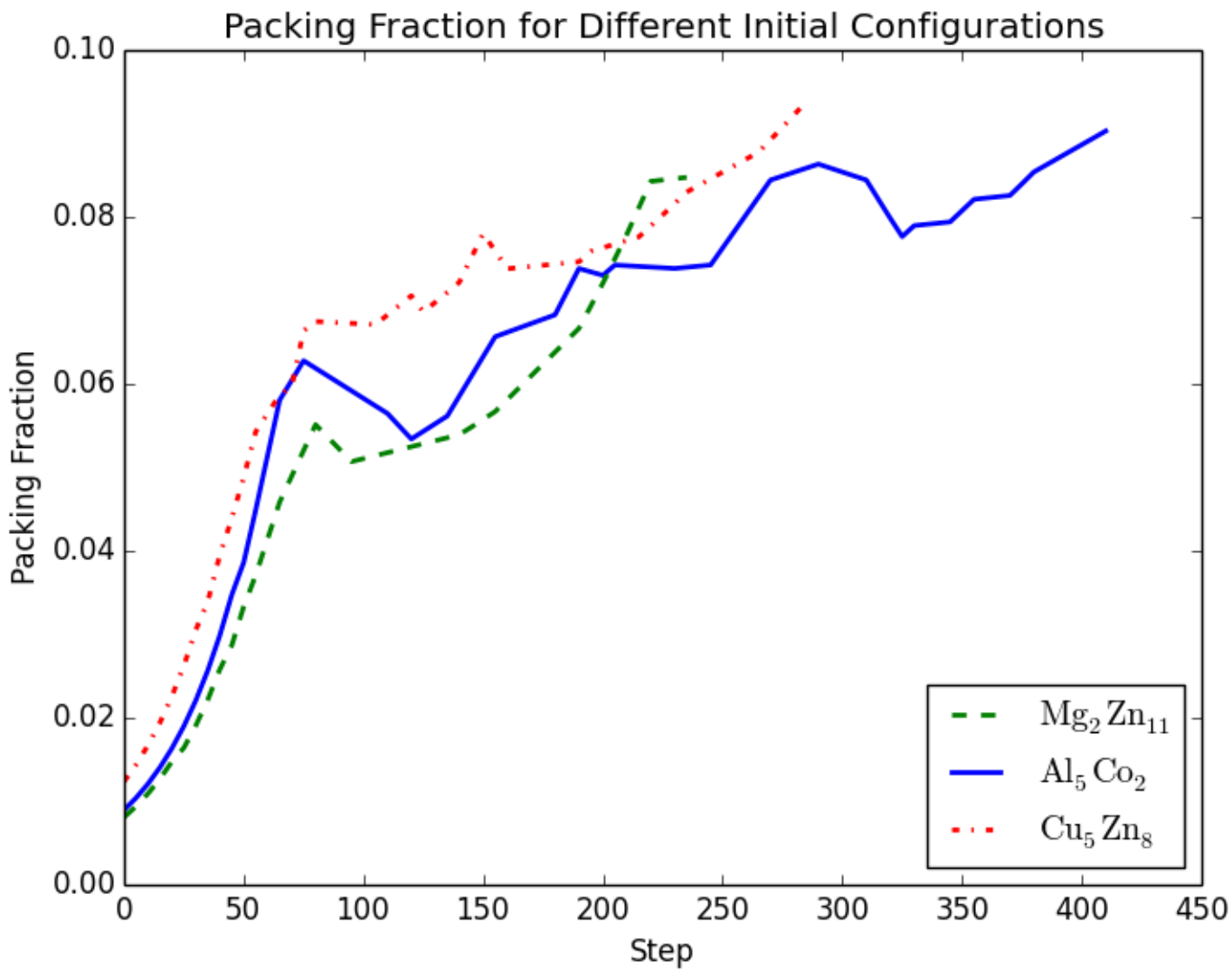
For large structures with many tetrahedra (here 210), changing the cooling profile does not make much difference

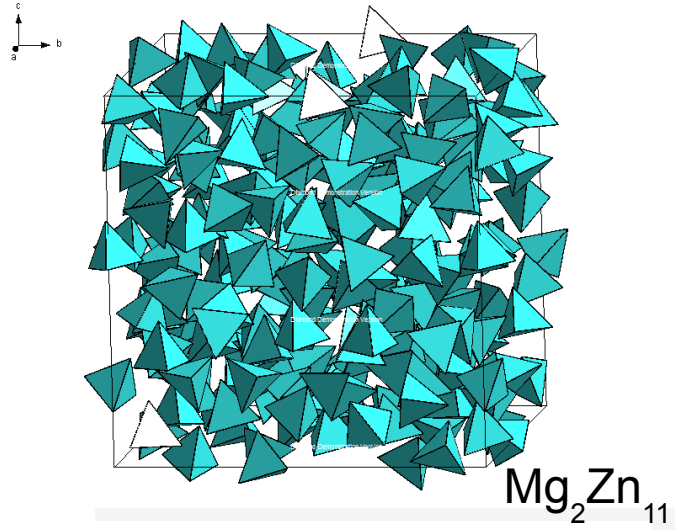


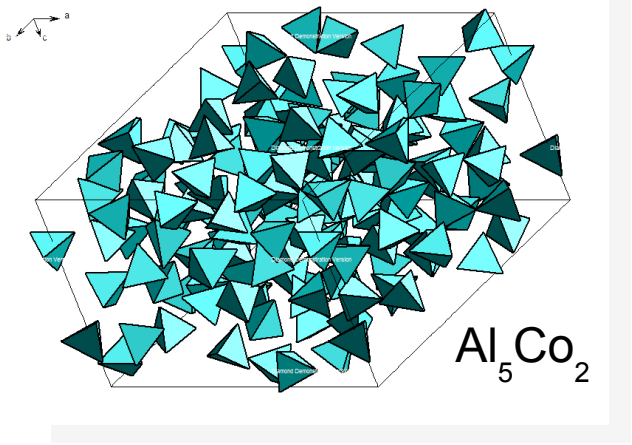


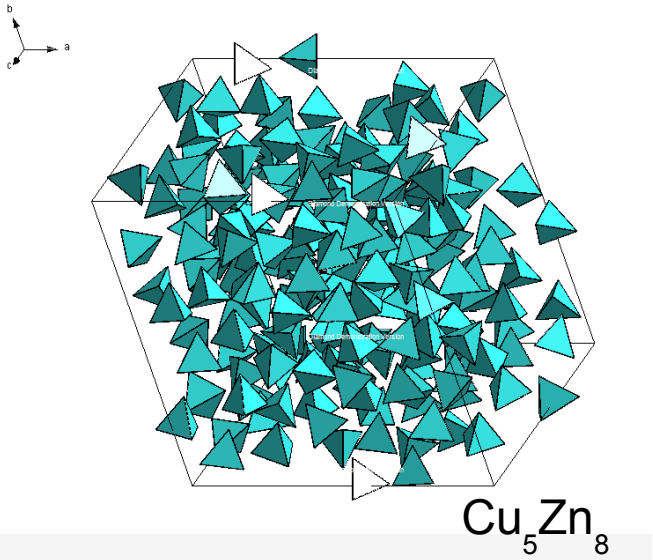
Random initial configurations may be slightly better than “ordered” configurations (here with 24 tets)




Packing Fraction for Different Initial Configurations
Packing Fraction
Step
0.00
0.02
0.04
0.06
0.08
0.10
0
50
100
150
200
250
300
350
400
450
Mg_2Zn_{11}
Al_5Co_2
Cu_5Zn_8


Mg_2Zn_{11}

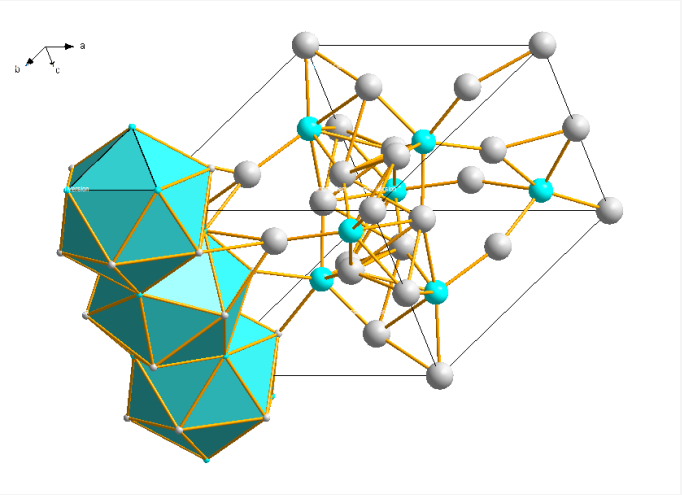

Al_5Co_2

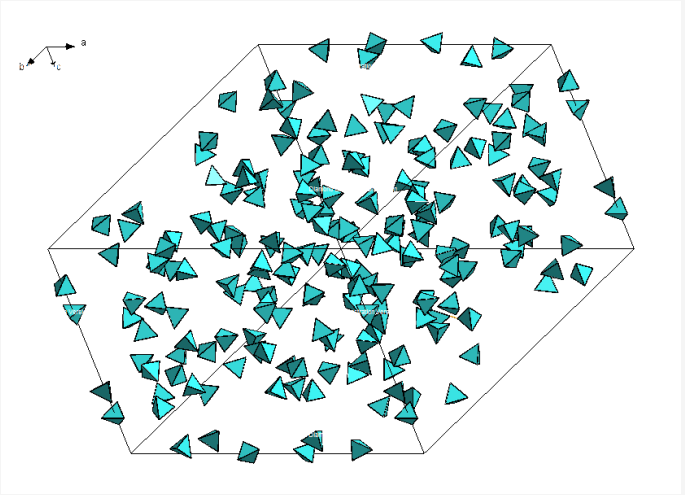

Cu_5Zn_8

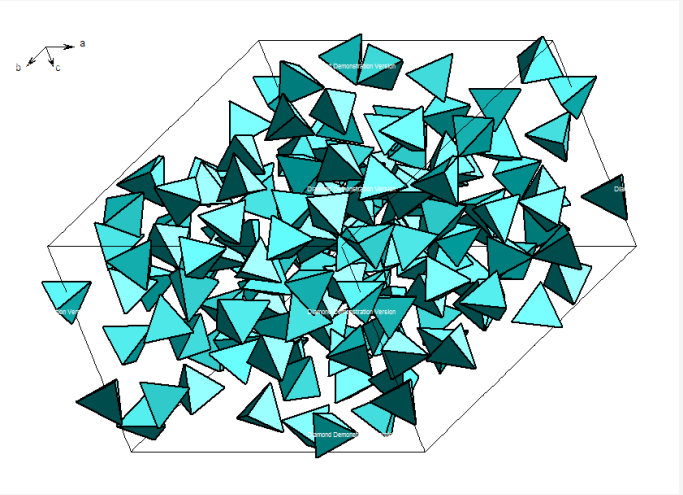
Al_5Co_2

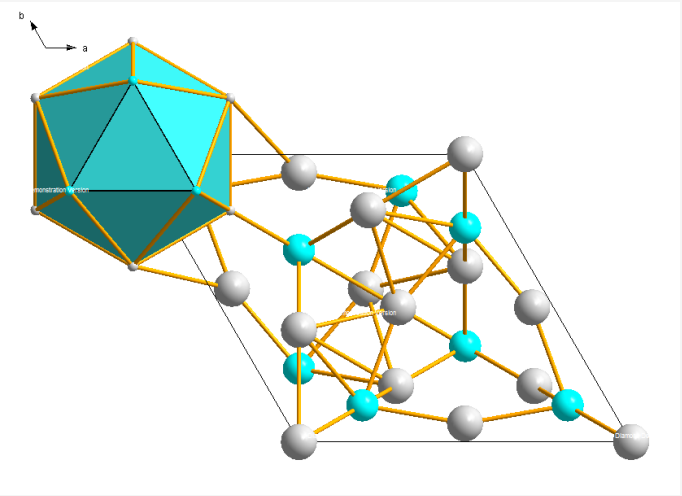
Initial configuration (144 tets)

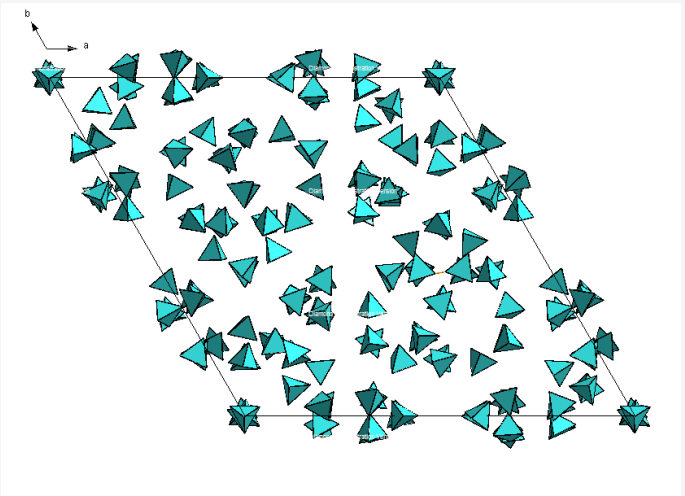
Compressed config. (0.0903)

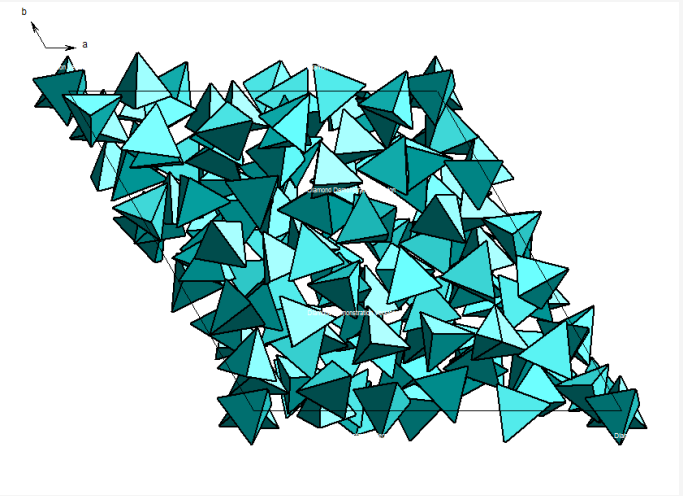




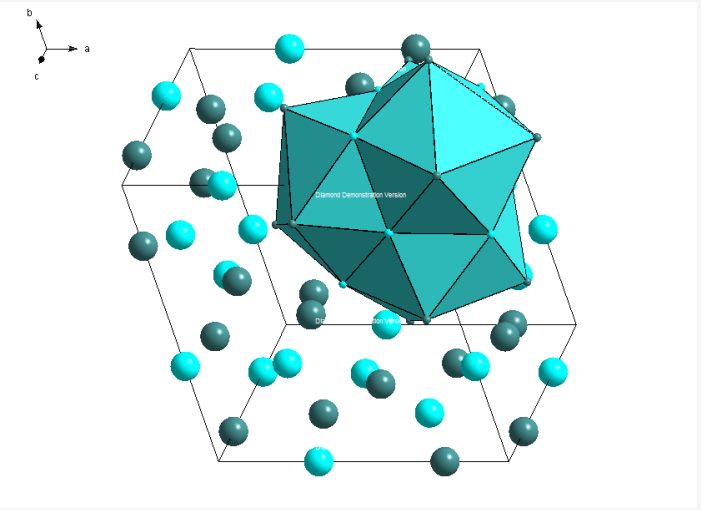


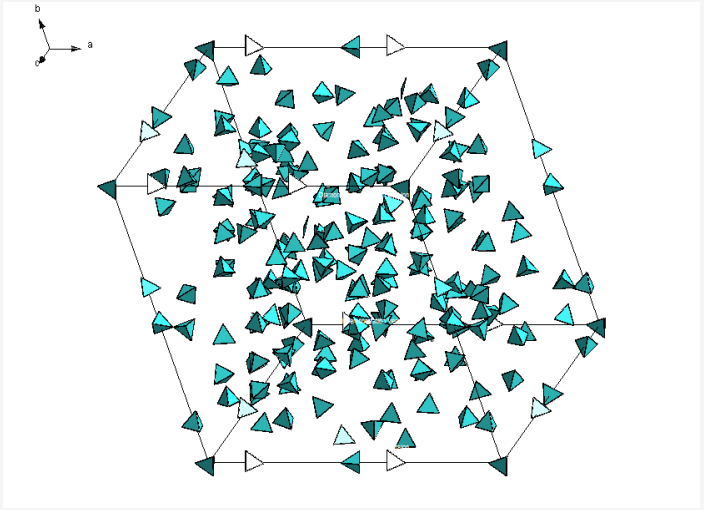


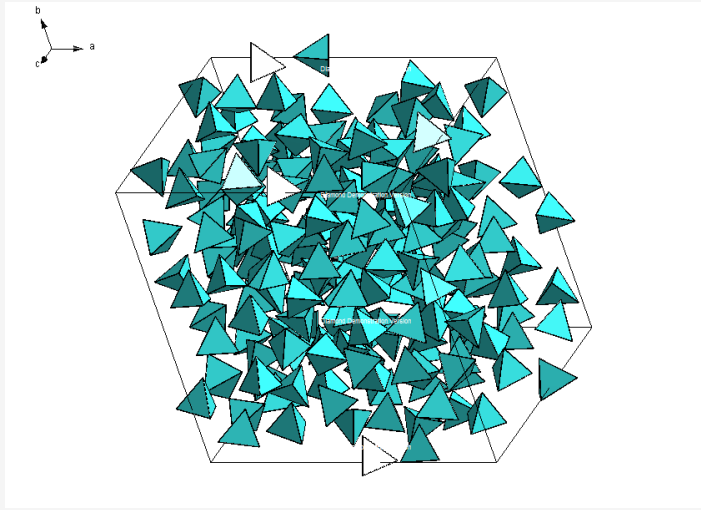


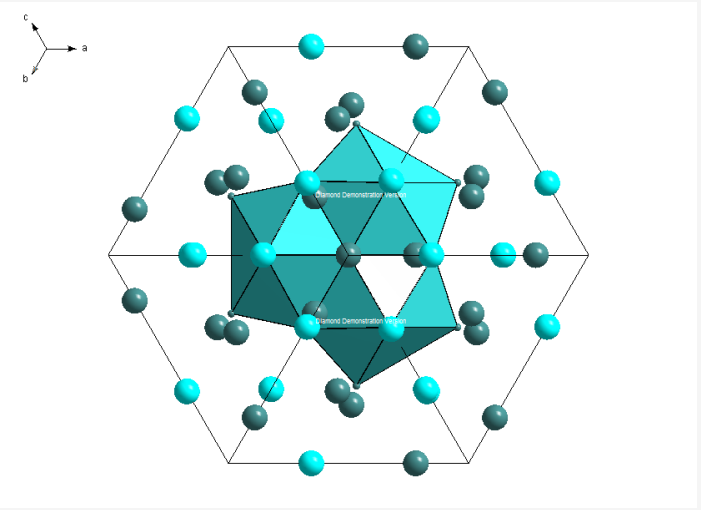


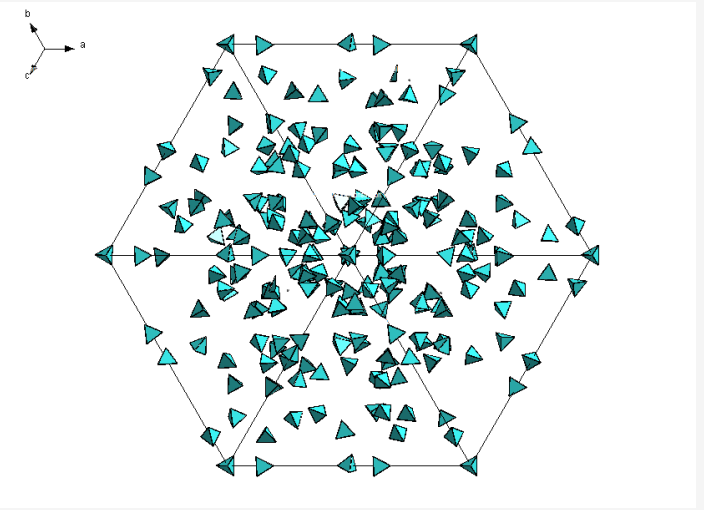
Cu_5Zn_8 Initial configuration (179 tets) Compressed config. (0.0938)

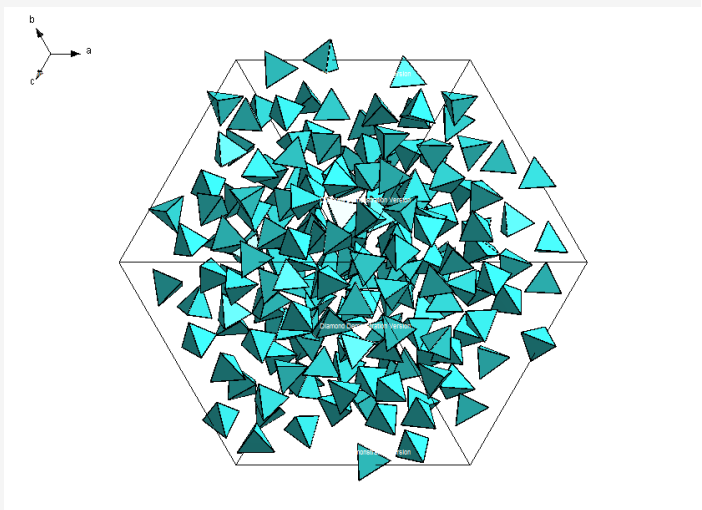




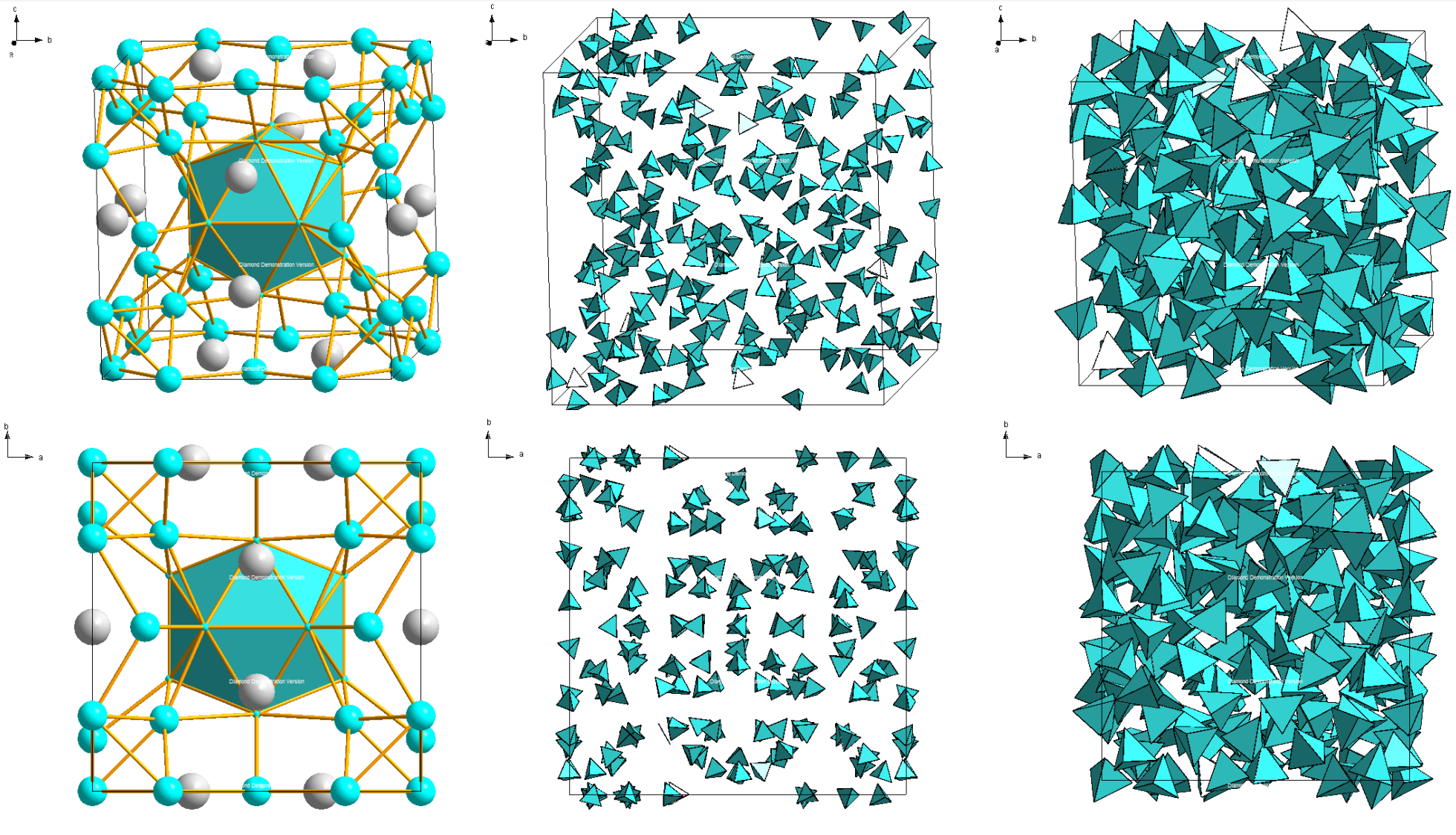








Mg_2Zn_{11} Initial configuration (210 tets) Compressed config. (0.0847)



Even for many steps, this algorithm can't seem to break ~14%