

**[P27] Modified Achlioptas process showing discontinuous percolation transitions**

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One of the main controversial issue in explosive percolation transition problem is whether or not the transition is indeed discontinuous. We find that this controversy comes from the failure of the original suppression rule by Achlioptas *et al.* Thus, we modify the original Achlioptas process to reinforce the suppression against the growth of all clusters, and obtain that the order parameter tends to approach a finite value at  $p_c$  as the system size increases, indicating that the explosive PT could be discontinuous in the thermodynamic limit.

†Y. S. Cho and B. Kahng, Phys. Rev. Lett. **107**, 275703 (2011).