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Role of Temperature on Self-organization of Networks LE YAN, MATTHIEU WYART, New York University NYU — Both the thermodynamics and the dynamics of network glasses strongly depend on the network coordination. For instance, the fragility and the jump of specific heat at glass transition of covalent glass are minimal when the covalent network sits at the rigidity transition. We introduced a random network model with frozen topology to rationalize these observations (Yan, Dürning, Wyart, PNAS(2013)). Here, we consider a novel model without frozen disorder, where the network topology can change dynamically. The model and the previous one shows nearly identical thermodynamic properties. In addition, this model allows us to compare rigidity percolation and jamming, and to study the presence of a rigidity window in covalent glasses.

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