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Time Correlations on the Ziff-Gulari-Barshad Model with Random Defects C.S. DIAS, A. CADILHE, GCEP-Centro de Fisica da Universidade do Minho, 4710-057 Braga, Portugal — We studied a generalized version of the Ziff, Gulari, and Barshad model (1986), i.e., of the $A + B_2$ reaction, in order to accomodate the presence of a given fraction of inert sites present on the substrate. Specifically, we show their impact on the kinetics of the catalysis, particularly on the time correlation of the reactants distribution on the surface, to monitorize the evolution, in time, of a list of reactants of both species. We also characterize the reactant cluster structure in the presence of impurities by resorting to the Hoshen-Kopelmann algorithm. We have found two diferent regimes of the time correlation, namely, an initial exponential decay at short times, and a second regime given by a streched exponential decay at late times of the number of surviving particles.

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