



## Random crystal field effect on the kinetic Ising spin Blume Capel mode

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LAP Lambert Academic Publishing Mai 2017, 2017. Taschenbuch. Condition: Neu. Neuware - This book is about the effect of random crystal-field (RCF) on the stationary states of the kinetic spin Ising Blume-Capel model (BCM), it is mainly investigated within the framework of the mean-field approach and Glauber-type stochastic to describe the time evolution of the system which is subject to a time-dependent oscillating magnetic field. The book then goes onto describe spin  $3/2$  and spin  $1$  BCM, in addition to the well-known phase transitions and the appearance of the partly ferromagnetic phase characterized by the magnetization  $m=1$  in equilibrium case, a new dynamical regions between the ferromagnetic phases  $F_{1/2}, F_1$  and  $F_{3/2}$  are found where  $F_{3/2}+F_{1/2}, F_{3/2}+F_1, F_1+F_{1/2}$  phases coexist for a weak field ( $h$ ), for higher  $h$  both solutions ordered  $F$  and disordered  $P$  coexist. The RCF has been also applied to the kinetic spin- $1$  BCM, the phase diagram of the pure kinetic Ising spin- $1/2$  and spin- $1$  are deduced as particular cases, first-order, second-order transition lines, dynamical critical and dynamical double critical end points are also obtained. For the two systems, the dynamical thermal behavior magnetizations, susceptibilities and phase space trajectories are discussed in detail. 56 pp. English.



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