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ERRATA

Erratum: Quantum transition-state theory below the crossover temperature [Phys. Rev. E 52, 178 (1995)]

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Erratum: Non-Poisson statistics of reactive events and nonexponential kinetics [Phys. Rev. E 52, R2125 (1995)]

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PACS number(s): 02.50.−r, 05.40.+j, 82.20.Fd, 99.10.+g

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Erratum: Growth of breakdown susceptibility in random composites and the stick-slip model of earthquakes: Prediction of dielectric breakdown and other catastrophes [Phys. Rev. E 53, 140 (1996)]

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PACS number(s): 05.45.+b, 05.40.+j, 91.30.Px, 99.10.+g

There are some typographical errors in the above mentioned paper. In Sec. III all the $\overline{Z_c}$'s should be replaced by Z_c. In the caption of Fig. 5, the Z_c will be replaced by Z. In Sec. IV, the nonlinear function $\phi(y)=\mathrm{sgn}[y/(1+|y|)]$.

Apart from this, there are some shortcomings of the algorithm described in Sec. II. Although these do not affect the conclusions, they do affect the accuracy of the numerical results displayed in Figs. 1 and 2. Using the previous algorithm, for the dielectric breakdown, even after the convergences mentioned in the paper, one still gets an electric field of the order of 10^{-4} in the conducting cluster. This can be improved considerably (employing the same amount of computational effort), following the same updating rules (i), (ii), and (v), with the changed rules (iii) and (iv) as given below.

(iii) The potential in any conducting cluster is made equal to the algebraic mean of the values of potential of all conducting sites in the cluster.

(iv) We keep on updating each lattice site at each iteration over the lattice until the average value of the differences of potentials of all sites in two successive updates goes below a small value (10^{-6} here).

With these modifications in the updating rules for dielectric the breakdown, the modified Figs. 1 and 2 incorporating the new results are given below. For comparison, we are also giving here some additional results of the breakdown initiation field in Fig. 1. It may be noted that both of these breakdown fields have wide distributions, as can be seen from the susceptibility measurements (Fig. 2).

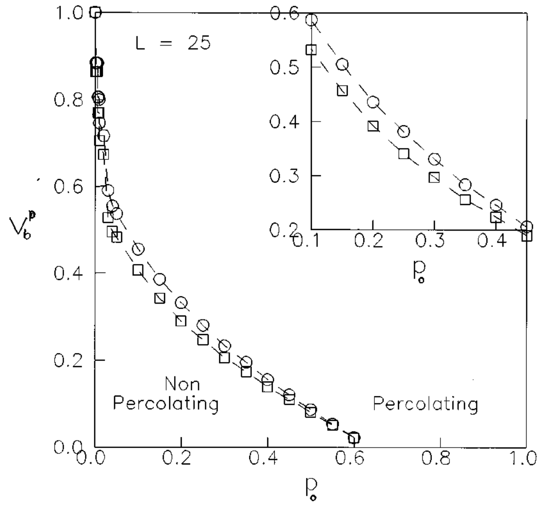

FIG. 1. Variations of (○) average percolation breakdown electric field $V_b^p(p_0)$ and (□) average breakdown initiation field, with the initial conductor concentration p_0. Here $L=25$ and averages are made over 1000 configurations. Inset shows a magnified portion of the breakdown curve.

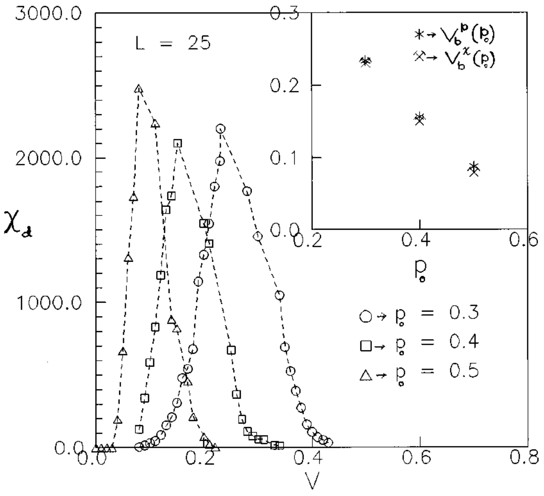

FIG. 2. Variation of breakdown susceptibility χ_d with applied field (V) across the sample for various initial conductor concentrations (p_0). Inset shows the variation of breakdown fields (voltage per unit of sample length) $V_b^\chi(p_0)$, obtained from the peak position of χ_d, and $V_b^p(p_0)$, obtained from the percolation due to breakdown (Fig. 1), with initial conductor concentration p_0. Here $L=25$ and averages are over 5000 configurations.