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Simulation of High-Field Conditioning and Operation

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To synthesize the experimental results and theory pertaining to high-field phenomena, a Monte Carlo model has been developed to simulate the conditioning and operation of high-field systems. Using a grid-based approach, any arbitrary geometry and surface field distribution may be simulated in spatially resolved fashion for both RF and DC devices alike. The probabilistic behaviour of breakdown and the inhomogeneous distribution of breakdowns sites are among the phenomena described by this approach. An outline of the model is presented and several results are discussed.

Topic

Modeling and Simulations

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