

Enhancement of the allowed gradient in a dielectric-loaded superconducting cavity

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It is shown that by incorporating a nonisotropic conductive thin film in a dielectric loaded super-conductive structure, it is possible to design an accelerator cavity wherein the maximum magnetic field at the surface of the superconductive material is below the critical value, although the gradient on axis may exceed 50 MV/m. © 2007 American Institute of Physics.

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