

Superconducting photonic band gap structures for high-current applications

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We report the results of recent design and testing of several 2.1 GHz superconducting radio-frequency (SRF) photonic band gap (PBG) resonators. PBG cells have great potential for outcoupling long-range wakefields in SRF accelerator structures without affecting the fundamental accelerating mode. Here we describe the results of our efforts to fabricate 2.1 GHz PBG cells with round and elliptical rods and to test them with high power at liquid helium temperatures.

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