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(54) Title: FORMATION OF SUPERCONDUCTING DEVICES USING A SELECTIVE ETCHING TECHNIQUE

(57) Abstract

A method for forming a superconducting device (232) using a selective etching technique on superconducting thin films. The method utilizes rapid etching which combines ion implantation with chemical etching. The portions of the superconducting film to be retained are masked (215) from the ion implantation process (217). The chemical etching process then removes the implanted portions (225, 227) of the superconducting film at a much faster rate than the portions (223) not implanted so that only the un-implanted portions (223) remain. The resulting superconducting devices can be used, e.g., as nanostructures and nano tips, bolometers, multilayer RF coils, microwave waveguides and filters.

