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(71) Applicant (for all designated States except US): **VEECO INSTRUMENTS INC.** [US/US]; 100 Sunnyside Boulevard, Woodbury, NY 11797-2902 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DAHLEN, Gregory, A.** [US/US]; 1821 Laguna Street, Santa Barbara, CA 93101 (US). **LIU, Hao-chih** [CN/US]; 367 Cannon Green Drive, Unit H, Goleta, CA 93117 (US).

(74) Agent: **NEWHOLM, Timothy, E.**; Boyle Fredrickson Newholm Stein & Gratz S.C., 840 North Fredrickson Avenue, Milwaukee, WI 53203 (US).

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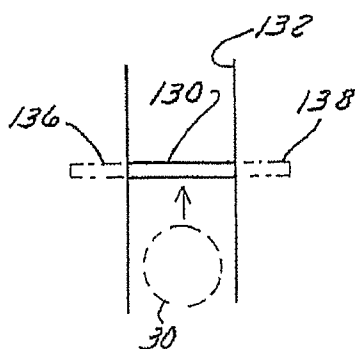
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(54) Title: METHOD AND APPARATUS FOR CHARACTERIZING A PROBE TIP



(57) Abstract: A method and apparatus are provided of characterizing a re-entrant SPM probe tip (30) through a single scan of a characterizer, thus dramatically increasing throughput, accuracy, and repeatability when compared to prior known tip characterization techniques. The characterizer also preferably is one whose dimensions can be known with a high level of certainty in order to maximize characterization accuracy. These dimensions are also preferably very stable or, if unstable, change catastrophically rather than in a manner that is difficult or impossible to detect. A carbon nanotube (CNT), preferably a single walled carbon nanotube (SWCNT), has been found to be well-suited for this purpose. Multi-walled carbon nanotubes (MWCNTs) (130) and other structures may also suffice for this purpose. Also provided are a method and apparatus for monitoring the integrity of a CNT.