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(71) Applicant: SYMAP MEDICAL (SUZHOU), LIMITED [CN/CN]; Unit 601, Building B3, 218 Xinghu Street, Suzhou Industrial Park, Suzhou, Jiangsu (CN).

(72) Inventor: WANG, Jie; 5 Beverly Road, Englewood Cliffs, New Jersey 07632 (US).

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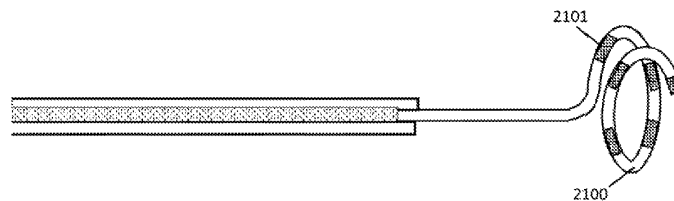
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(54) Title: SYSTEM AND METHOD FOR MAPPING THE FUNCTIONAL NERVES INNERVATING THE WALL OF ARTERIES, 3-D MAPPING AND CATHETERS FOR SAME

Figure 21A



(57) Abstract: Disclosed herein are systems and methods for locating and identifying nerves innervating the wall of arteries such as the renal artery. The present invention identifies areas on vessel walls that are innervated with nerves; provides indication on whether energy is delivered accurately to a targeted nerve; and provides immediate post-procedural assessment of the effect of energy delivered to the nerve. The methods include evaluating a change in physiological parameters after energy is delivered to an arterial wall; and determining the type of nerve that the energy was directed to (sympathetic or parasympathetic or none) based on the evaluated results. The system includes at least a device for delivering energy to the wall of blood vessel; sensors for detecting physiological signals from a subject; and indicators to display results obtained using said method. Also provided are catheters for performing the mapping and ablating functions.



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