

Abstracts

Thermoacoustic CT

R.A. Kruger, W.L. Kiser, Jr., K.D. Miller, H.E. Reynolds, D.R. Reinecke, G.A. Kruger and P.J. Hofacker. "Thermoacoustic CT." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 933-936.

We have developed instrumentation for measuring the tissue-absorption properties of radio waves in the human body using thermoacoustic interactions. The imaging principles upon which this instrumentation is based are applicable to other irradiation sources, such as visible and infrared. We present the imaging reconstruction methodology that we have developed for mapping radiation absorption patterns in three dimensions. An example use of the technique to monitor breast tumor response to chemotherapy is presented.

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