



Novel Photoconductive Decay Measurement System

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Summary: A nondestructive, contactless means to measure the recombination of lifetime of a wide range of semiconducting and photoconducting materials

Description: The efficiency and performance of photovoltaic devices are heavily dependent on the photocarrier recombination lifetime, which itself is highly dependent on impurities and defects within the photoconducting material. Thus measurement of the photocarrier recombination lifetime of a sample is a useful quality control measure. This invention provides a nondestructive, contactless means to measure the recombination of lifetime of a wide range of semiconducting and photoconducting materials. The device exceeds the performance and range of applicability of existing commercial products. It utilizes a novel system of radio frequency coils that allow for a rapid data acquisition time with no contact of the sensitive photovoltaic material.

Main Advantages of this Invention:

- Fast data acquisition time
- Provides a non-destructive means of measuring the lifetime of a variety of materials
- Performance exceeds those of current methods
- Has a greater range of applicability than the current method

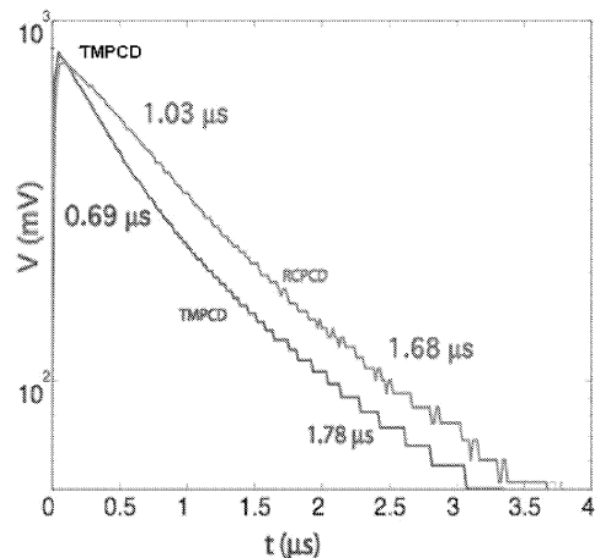
Potential Areas of Application:

- Photovoltaic industry
- Microelectronic industry
- Optoelectronic industry

ID number: 9001

Intellectual Property Status: US 8,581,613

Opportunity: We are seeking an exclusive or non-exclusive licensee for marketing, manufacturing, and sale of this technology.



Comparison of transition-modulated photoconductivity decay (TMPCD) in this work and resonance coupled photoconductive decay (RCPCD) measurements.

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