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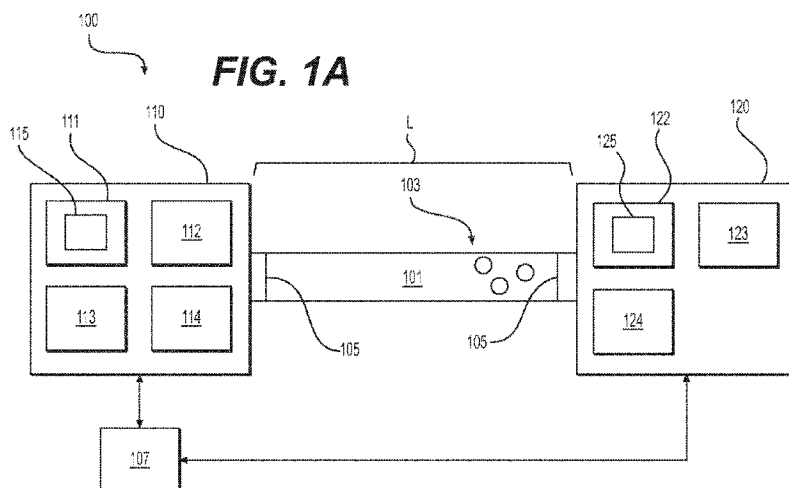
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(54) Title of the Invention: **Systems and methods for terahertz spectroscopy**
Abstract Title: **Systems and methods for terahertz spectroscopy**

(57) A method, system, and device for terahertz spectroscopy to analyze a sample. The device comprises a transmitter, a waveguide, a receiver, and a processor. The transmitter generates electromagnetic (EM) radiation in a terahertz frequency band from about 0.1 terahertz to about 10 terahertz. The waveguide propagates the EM radiation generated from the transmitter and houses the sample to attenuate the EM radiation. The receiver is in communication with the waveguide and generates a signal in response to EM radiation propagating in the waveguide. The processor analyzes the signal to identify a parameter associated with the sample.



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