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Title:THz spectroscopy using low temperature mesoscopic devices
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Abstract:The prototype of a THz spectroscopic camera based on low temperature mesoscopic devices is presented. The core of this system is an array of Quantum- Dots coupled to Quantum Point Contact sensors. Readout electronics is based on Time Domain Multiplexing combined with Lock-in technique. Results show that such system can reach the sensitivity needed to detect THz emission of materials in a fully passive way. © Springer Science+Business Media, LLC 2012.
Number of references:2
Main heading:Time domain analysis
Controlled terms:Excitons - Multiplexing - Quantum chemistry - Semiconductor quantum dots - Superconducting materials - Temperature
Uncontrolled terms:Lock-in technique - Low temperatures - Mesoscopic devices - Mesoscopic sensors - Quantum point contact - Readout Electronics - THz emission - Thz spectroscopy - Time domain
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