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Title

Terahertz spectroscopy of quantum phase transitions and the temperature-frequency scaling

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Abstract

In the last few decades, significant progress has been achieved in the development of generators and detectors of terahertz radiation (at frequencies in the range from 300 GHz to 3 THz). Different terahertz spectroscopic techniques have been widely used now in investigating semiconductors, superconductors, molecular magnets, multiferroics, metamaterials, and other promising objects. It has been demonstrated that terahertz spectroscopy offers wide but not completely realized possibilities for studying quantum phase transitions in electron-correlated systems. (21 References).