



Optically detected resonances induced by far infrared radiation in quantum wells and quantum dots

By Michael Gerbracht

GRIN Verlag. Paperback. Book Condition: New. Paperback. 192 pages. Dimensions: 8.3in. x 5.9in. x 0.6in. Doctoral Thesis Dissertation from the year 2008 in the subject Physics, grade: 1, 0, University of Dortmund (Experimentelle Physik II), language: English, abstract: Abstract Photoluminescence (PL) and optically detected resonances (ODR) were studied on semiconductor quantum wells and quantum dots. Magnetic fields of up to 33 T where applied to samples at temperatures between 0. 25 K and 10 K. In nonmagnetic quantum wells optically detected cyclotron resonance was used to determine basic properties such as effective mass and mobility of GaAsAlGaAs quantum wells. In CdTeCdMgTe quantum wells evidence for the singlet and triplet state of the negatively and positively charged exciton was found at high magnetic fields. In a highly n-type doped GaAsAlGaAs quantum well, signatures of the fractional quantum hall effect were observed in PL and ODR data. Also shake up processes in a variety of quantum wells are discussed. In magnetic quantum wells, cusps in the exciton shift are present at moderate magnetic fields which could be assigned to next nearest neighbor interactions between Mn²⁺ ion pairs and single ions. Resonances in InGaAsGaAs quantum dots induced by far-infrared radiation have been observed optically....



READ ONLINE
[6.16 MB]

Reviews

The publication is great and fantastic. I am quite late in start reading this one, but better then never. I discovered this pdf from my dad and i suggested this ebook to discover.

-- **Linnie Kling**

A brand new eBook with a brand new standpoint. I could possibly comprehended everything out of this composed e publication. Your life span will likely be enhance once you total reading this pdf.

-- **Willa Ritchie**