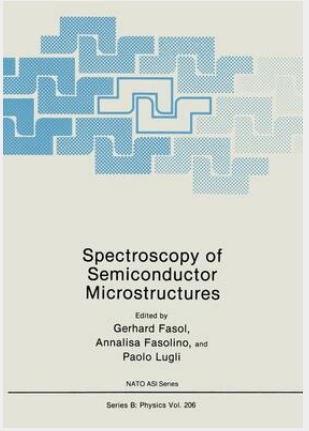
Fasol / Lugli / Fasolino

Spectroscopy of Semiconductor Microstructures

IDES have been realized in modulation doped AlGaAs/GaAs heterostructures by fabricating split-gate configurations and ultrafine etched structures with optimized lithography and etching techniques. With deep-mesa etching technique it is possible to prepare single and multi-layered quantum wire systems. From dc magnetotransport typical confinement energies of 2me V are determined. The FIR response is strongly governed by collective effects which give the resonances the character of local plasmon modes. In multi-layered quantum wire structures a splitting of the plasmon dispersion in longitudinal and acoustical type of layer-coupled local plasmon modes is observed. ACKNOWLEDGEMENT We would like to thank K Ploog for providing us with excellent samples and acknowledge financial support from the Bundesministerium fur Forschung und Tech nologie, Bonn. REFERENCES 1K-F. Berggren, T. J. Thornton, D. J. Newson, and M. Pepper, Phys. Rev. Lett. 57, 1769 (1986) 2H. van Houten, B. J. van Wees, M. G. J. Heijman, J. P. Andre, D. Andrews, and G. J. Davies, Appl. Phys. Lett. 49, 1781 (1986) 3J. Cibert, P. M. Petroff, G. J. Dolan, S. J. Pearton, A. C. Gossard, and J. H. English, Appl. Phys. Lett. 49, 1275 (1986) 4T. P. Smith, III., H. Arnot, J. M. Hong, C. M. Knoedler, S. E. Laux, and H. Schmid, Phys. Rev. Lett. 59, 2802 (1987) 5M. L. Roukes, A. Scherer, S. J. Allen, Jr., H. G. Craighead, R. M. Ruthen, E. D. Beebe, and J. P. Harbison, Phys. Rev. Lett.

Springer Book Archives



53,49 €
49,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9781475765670
Medium: Buch
ISBN: 978-1-4757-6567-0
Verlag: Springer US
Erscheinungstermin: 03.03.2013
Sprache(n): Englisch
Auflage: 1989
Serie: NATO Science Series B:
Produktform: Kartoniert
Gewicht: 1264 g
Seiten: 667
Format (B x H): 178 x 254 mm