

Contents

- | | | | |
|----|---|----|---|
| 5 | <p>The energy structure of free electrons for semiconductor in the field of cylindrical symmetry
 <i>J.M. Stakhira, R.J. Stakhira</i></p> | 41 | <p>Determination of surface parameters of solids by methods of X-ray total external reflection
 <i>S.V. Balovsyak, I.M. Fodchuk, P.M. Lytvyn</i></p> |
| 9 | <p>Theory of the free-carrier absorption in quantum wires with boundary roughness scattering
 <i>G.B. Ibragimov</i></p> | 47 | <p>Diffusion and mobility of native point defects in narrow-gap $Hg_{1-x}Cd_xTe$ crystals
 <i>V.V. Bogoboyashchyy, A.I. Elizarov, K.R. Kurbanov</i></p> |
| 14 | <p>High-temperature configurations of dimers in Si (001) surface layers
 <i>A.E. Kiv, T.I. Maksymova, N.V. Moiseenko, V.N. Soloviev</i></p> | 53 | <p>Magnetic point contact in ferromagnetic semiconductor (Ga,Mn)As
 <i>T. Figielski, T. Wosinski, A. Morawski, O. Pelya, A. Makosa, W. Dobrowolski, J. Wrobel, J. Sadowski, J. Jagielski, J. Ratajczak</i></p> |
| 19 | <p>High-power low-frequency current oscillations in germanium samples
 <i>S.P. Pavljuk</i></p> | 55 | <p>High-resistance low-doped GaAs and AlGaAs layers obtained by LPE
 <i>S.I. Krukovsky, D.M. Zayachuk, O.V. Rybak, I.O. Mryhin</i></p> |
| 23 | <p>Polyassociative thermodynamical model of A^2B^6 semiconductor melt and P-T-X equilibria in Cd-Hg-Te system: 2. Phase equilibria in initial two-component systems. Cd-Te system
 <i>P.P. Moskvyn, L.V. Rashkovets'kyi, S.V. Kavertsev, G.I. Zhovnir, A.O. Ruden'kyi</i></p> | 58 | <p>Electrical activity of misfit dislocations in GaAs-based heterostructures
 <i>T. Wosinski</i></p> |
| 28 | <p>Energy levels of rare-earth ions in crystal lattice sites of cubic symmetry
 <i>C.A.J. Ammerlaan</i></p> | 62 | <p>Electron emission modulation effects in micro-size structures
 <i>H. Hartnagel</i></p> |
| 32 | <p>Electron field emission from SiO_x films
 <i>A.A. Evtukh, I.Z. Indutnyy, I.P. Lisovskyy, Yu.M. Litvin, V.G. Litovchenko, P.M. Lytvyn, D.O. Mazunov, Yu.V. Rassamakin, P.E. Shepeliavi</i></p> | 68 | <p>Changes of anisotropy of dilatative and optical properties of DGN crystal at ferroelectric phase transition
 <i>B.V. Andriyevsky, M.O. Romanyuk, Yu.A. Dumka</i></p> |
| 37 | <p>Investigations of physical mechanisms of metal-insulator transition in highly strained n-Si and n-Ge crystals
 <i>S.I. Budzulyak, V.M. Ermakov, B.R. Kyjak, V.V. Kolomoets, V.F. Machulin, M.K. Novoselets, L.I. Panasjuk, B.B. Sus', E.F. Venger</i></p> | 73 | <p>Relaxation and thermoinduced processes in glassy $HgSe_{(x)}-GeSe_{2(1-x)}$ alloys
 <i>V.V. Halyan, V.V. Bozhko</i></p> |

- 76 **Electric and dielectric properties of glasses of Cu-Sb-S-I system**
V.M. Rubish
- 81 **Origin of surface layer on common substrates for functional material films probed by ellipsometry**
A.I. Belyaeva, A.A. Galuza, A.D. Kudlenko
- 86 **The way of photonic crystal formation in A^3B^5 and A^2B^6 semiconductors**
A.M. Kamuz, P.Ph. Oleksenko, O.A. Kamuz, V.G. Kamuz
- 91 **An arithmetic logic unit of a computer based on single electron transport system**
A.K. Biswas, S.K. Sarkar
- 97 **About manifestation of the piezjunction effect in diode temperature sensors**
V.L. Borblik, Yu.M. Shwarts, E.F. Venger
- 102 **Charge carrier generation in photosensitive amorphous molecular semiconductors**
M.A. Zabolotny
- 105 **Study of DNA interaction with carbon nanotubes**
G.I. Dovbeshko, O.P. Repnytska, E.D. Obraztsova, Ya.V. Shtogun, E.O. Andreev