

Contents

- 111 Nanoprobe spectroscopy of capillary forces and its application for a real surface diagnostics**
A.A. Efremov, P.M. Lytvyn, A.O. Anishchenko, O. M. Dyachyns'ka, T.A. Aleksyeyeva, I.V. Prokopenko
- 125 Mössbauer spectroscopy investigation of magnetic nanoparticles incorporated into carbon nanotubes obtained by the injection CVD method**
A.L. Prudnikava, J.A. Fedotova, J.V. Kasiuk, B.G. Shulitski, V.A. Labunov
- 132 Experimental studies of light-wave phase shift by polymer dispersed liquid crystal films**
S.M. Dmitriev, V.P. Dick, N.N. Kostyuk, T.A. Dick, V.A. Loiko
- 137 Composite nanostructure of vertically aligned carbon nanotube array and planar graphite layer obtained by the injection CVD method**
V.A. Labunov, B.G. Shulitski, A.L. Prudnikava, Y.P. Shaman, A.S. Basaev
- 142 Crystal lattice engineering the novel substrates for III-nitride-oxide heterostructures**
V. Osinsky, O. Dyachenko
- 145 LED lighting. Creation and application peculiarities**
Yu.V. Trofimov, S.I. Lishik, V.S. Posedko, V.I. Tsvirko, A.A. Pautino
- 151 SERS of dye film deposited onto gold nano-clusters**
K. Grytsenko, Yu. Kolomzarov, O. Lytvyn, T. Doroshenko, V. Strelchuk
- 154 Photoaligned liquid crystal lens with single low voltage electrode**
A.A. Muravsky, V.E. Agabekov, A.L. Tolstik, U.V. Mahilny
- 158 Optical properties of nematic liquid crystal doped by gold nanorods**
S. Torgova, E. Pozhidaev, A. Lobanov, M. Minchenko, B. Khlebtsov
- 161 Hydrogen gettering in annealed oxygen-implanted silicon**
A. Misiuk, A. Barcz, A. Ulyashin, I.V. Antonova, M. Prujarczyk
- 166 Zero bias terahertz and subterahertz detector operating at room temperature**
N. Momot, V. Zabudsky, Z. Tsybrii, M. Apats'ka, M. Smoliy, N. Dmytruk
- 170 Information security for optoelectronic ergatic system**
A.V. Bushma
- 173 Elimination of the data-dependent defects by doubling the frequency of driving signals for cholesteric LCDs**
A. Rybalochka
- 177 Growth and optical properties of dye films and dye-in-polymer matrix deposited by vacuum evaporation**
K. Grytsenko, T. Doroshenko, Yu. Kolomzarov, O. Lytvyn, M. Serik, O. Tolmachev, Yu. Slominski, S. Schrader
- 180 Effect of chemical modification of thin C₆₀ fullerene films on the fundamental absorption edge**
N.L. Dmitruk, O.Yu. Borkovskaya, T.S. Havrylenko, D.O. Naumenko, P. Petrik, V. Meza-Laguna, E.V. Basiuk (Golovataya-Dzhymbeyva)
- 186 Model of heterotransistor with quantum dots**
V.I. Timofeyev, E.M. Faleyeva
- 189 Wavelet analysis for polarization maps of networks formed by liquid biological crystals in blood plasma: statistical and fractal approaches**
V.T. Bachinsky, Yu.O. Ushenko, Yu.Ya. Tomka, O.V. Dubolazov, V.O. Balanets'ka, A.V. Karachevtsev

- 202 **Effect of thermal annealing on the luminescent characteristics of CdSe/ZnSe quantum dot heterostructure**
L.V. Borkovska, T.R. Stara, N.O. Korsunskya, K.Yu. Pechers'ka, L.P. Germash
- 209 **Structural changes in Cz-Si single crystals irradiated with high-energy electrons from data of high-resolution X-ray diffractometry**
I.M. Fodchuk, V.V. Dovganyuk, T.V. Litvinchuk, V.P. Kladko, M.V. Slobodian, O.Yo. Gudymenko, Z. Swiatek
- 214 **Impurity scattering of band carriers**
I.I.Boiko
- 221 **Mechanisms of carrier transport in CdTe polycrystalline films**
A.V. Sukach, V.V. Tetyorkin, N.M. Krolevac
- 226 **On the 60-year jubilee of Machulin Volodymyr Fedorovych, Academician of NAS of Ukraine**
- 228 **Contents**