Contents

Characterization and properties

| Dispersions of carbon nanotubes in cholesteric liquid crystals with photoactive components |
|---|
| A.N.Samoilov, S.S.Minenko, L.N.Lisetski, N.I.Lebovka, M.S.Soskin, S.I.Torgova 373 |
| Luminescence effects in Ag-doped cadmium bromide layered nanostructures N.V.Stetsyk, V.G.Antonyuk, M.M.Rudka |
| Features of active medium for wide-band spectrum tuned dye laser V.V.Maslov |
| Magnetic nano-ordering in polycrystal and monocrystal chromium T.Rozouvan, I.Yurgelevich, S.Rozouvan, L.Poperenko |
| Aging-effect in optimal doped $YBa_2Cu_3O_{7-\delta}$ single crystals $Z.F.Nazyrov,~A.V.Popova,~R.V.Vovk$ |
| Properties of internal (chemical) pressure in superconducting YBa ₂ Cu ₃ O _{7-y} perovskite created by oxygen V.F.Khirnyi |
| Effect of zirconia stabilized by ittria additions on the structure and mechanical properties of alumina based ceramics |
| B.Warcholinski, A.Gilewicz, O.Lupicka, J.Rochowicz, S.Sayenko, Y.Svitlychnyi, A.Zykova403 |
| Metal enhanced fluorescence of thiacyanine dye in layered polymer films N.V.Pereverzev, I.A.Borovoy, O.O.Sedyh, S.L.Yefimova, A.V.Sorokin |
| Plastic scintillator enriched Gd-containing nanoparticles O.V.Svidlo, P.N.Zhmurin, Yu.A.Gurkalenko |
| Effect of nucleation mechanism on the structure of polyfunctional calcium phosphate glass materials |
| O.V.Savvova, O.V.Babich, G.N.Shadrina421 |
| Biomineralization and synthesis of biogenic magnetic nanoparticles and magnetosensitive inclusions in microorganisms and fungi |
| $O. Yu. Gorobets, \ S. V. Gorobets, \ L. V. Sorokina$ |
| Modeling and simulation |
| Effectively unpaired electrons in bipartite lattices within the generalized tight-binding approximation: application to graphene nanoflakes A.V.Luzanov |
| Properties of the volume phase in the layerwise growth |
| R.Brodskii, A.V.Tur, V.V.Yanovsky448 |
| Methods of constructing basis in solving inverse problems A.V.Mozgovoy, V.S.Abramchuk, I.V.Abramchuk457 |

Technology

| Composite scintillators for a wide range of problems in detection of ionizing radiation | |
|--|-------------|
| N.L.Karavaeva | 463 |
| Morphology of lead sulfide crystalline particles in size-limited state O.S.Bezkrovnyi, Yu.V.Yermolayeva, O.M.Vovk, M.V.Dobrotvorskaya, M.A.Chayka, A.V.Tolmachev | 467 |
| Features of YAG crystals growth by the Czochralski method in Mo crucibles P.Arhipov, S.Tkachenko, S.Vasyukov, M.Biatov, O.Sidletskiy, P.Mateychenko, E.Bryleva | 472 |
| Synthesis of nanocrystalline zirconia-based powder for surgery implants and study of radionuclides content in it A.V.Shevchenko, V.V.Lashneva, V.A.Dubok, E.V.Dudnik, V.V.Tsukrenko, A.K.Ruban, V.V.Trishin, I.A.Malyuk | 476 |
| Obtaining of hydration parameters of cesium halides in the processes of water absorption and desorption O.V.Vashchenko | 48 2 |
| Effect of microwave sintering temperature on structure and properties of bioceramics based on biogenic hydroxyapatite H.Tovstonoh, O.Sych, V.Skorokhod | 487 |
| Characterization and photocatalytic activity of $\text{Ti/Ti}_n \text{O}_m \cdot \text{Zr}_x \text{O}_y$ coatings for azo-dye degradation $N.D.Sakhnenko,\ M.V.Ved,\ V.V.Bykanova$ | 492 |
| Energy transfer in co-doped Nal:(Tl,Eu) crystals S.Gridin, S.Vasyukov, N.Shiran, A.Gektin | 498 |
| In memory | |
| Prof. V.M.Puzikov (14.08.1947-11.12.2014) | 503 |
| Author Index, Vol. 21, 1-4, 2014 | 505 |