

CONTENTS

Original articles

Goncharova S. S., Redko Yu. A., Lavlinskaya M. S., Sorokin A. V., Holyavka M. G., Kondratyev M. S., Artyukhov V. G.

Biocatalysts based on papain associates with chitosan nanoparticles

173

Grevtseva I. G., Smirnov M. S., Chirkov K. S., Ovchinnikov O. V.

Trap state and exciton luminescence of colloidal PbS quantum dots coated with thioglycolic acid molecules

182

Gurchenko V. S., Mazinov A. S., Smirnov M. S., Grevtseva I. G., Nesterenko L. P., Ovchinnikov O. V.

Photoelectric response in sandwich structures based on condensed layers of Ag₂S quantum dots passivated with thioglycolic acid

190

Lyapun D. V., Kruzhilin A. A., Shevtsov D. S., Potapov A. Yu., Shikhaliev Kh. S.

A comparison of the inhibitory activity of 3-alkyl- and 3-hydroxyalkyl-5-amino-1H-1,2,4-triazoles against copper corrosion in chloride-containing environments

198

Parinova E. V., Antipov S. S., Sivakov V., Belikov E. A., Chuvenkova O. A., Kakuliia I. S., Trebunskikh S. Yu., Skorobogatov M. S., Chumakov R. G., Lebedev A. M., Artyukhov V. G., Turishchev S. Yu.

Localization of the *E. coli* Dps protein molecules in a silicon wires matrix according to scanning electron microscopy and X-ray photoelectron spectroscopy

207

Perepelitsa A. S., Aslanov S. V., Ovchinnikov O. V., Smirnov M. S., Grevtseva I. G., Latyshev A. N., Kondratenko T. S.

Photosensitising reactive oxygen species with titanium dioxide nanoparticles decorated with PbS quantum dots

215

Samoylov A. M., Kopytin S.S., Ivkov S.A., Ratkov E. A., Tutov E. A.

The effect of the synthesis conditions on the crystal structure of palladium(II) oxide nanofilms

225

Sushkova T. P., Semenova G. V., Proskurina E. Yu.

Phase relations in the Si–Sn–As system

237

Tomina E. V., Vo Quang Mai, Kurkin N. A., Doroshenko A. V., Nguyen Anh Tien, Sinelnikov A. A.

Influence of UV radiation on the catalytic activity of nanosized cobalt ferrite in the oxidative degradation reaction of dinitrophenol

249

Fedorov P. P., Chernova E. V.

Phase diagrams of zirconium dioxide systems with yttrium and scandium oxides

257

Kharina A. Yu., Charushina O. E., Eliseeva T. V.

Organic fouling of anion-exchange and bipolar membranes during the separation of amino acid and sucrose by electrodialysis

268

Chetverikova A. G., Makarov V. N., Kanygina O. N., Seregin M. M., Stroganova E. A.

Specifying the structural formula of kaolinite from the Orenburg Region by means of spectroscopic methods

277

Ashirov G. M., Babanly K. N., Mashadiyeva L. F., Yusibov Y. A., Babanly M. B.

Phase equilibria in the Ag₂S–Ag₈GeS₆–Ag₈SiS₆ system and some properties of solid solutions

292