

CONTENTS

Space Research

RELIABILITY STUDY OF OPERATORS WITHIN A COMPLEX ERGATIC SYSTEM

Petar Getzov, Zoya Hubenova7

NICKEL-HYDROGEN COLD FUSION BY INTERMEDIATE RYDBERG STATE OF HYDROGEN: SELECTION OF THE ISOTOPES FOR ENERGY OPTIMIZATION AND RADIOACTIVE WASTE MINIMIZATION

Stoyan Sarg Sargoytchev15

ELEMENTARY PARTICLES, ATOMIC NUCLEI AND MOLECULES ACCORDING TO THE BSM – SUPERGRAVITATION UNIFIED THEORY

Stoyan Sarg Sargoytchev33

HEORETICAL FEASIBILITY OF COLD FUSION ACCORDING TO THE BSM - SUPERGRAVITATION UNIFIED THEORY

Stoyan Sarg Sargoytchev46

RESEARCH OF FACTORS WHICH INFLUENCE THE QUALITY OF OPTIC TELESCOPIC DEVICES

Stiliyan Stoyanov57

OPTICAL SCHEME FOR SPECTROPHOTOMETER

Petar Getzov, Stiliyan Stoyanov , Zhivko Zekov64

Technical Sciences

METHOD AND SPECTROPHOTOMETRIC EQUIPMENT FOR WATER RESEARCH

Zhivko Zhekov`70

RANDOMNESS TESTING OF SEQUENCES PRODUCED BY P-ARY GENERALIZED SELF-SHRINKING GENERATOR USING APPROXIMATE ENTROPY

Zhaneta Tasheva, Antoniya Tasheva76

VULNERABILITY PENETRATION TESTING THE COMPUTER AND NETWORK RESOURCES OF WINDOWS BASED OPERATING SYS-TEMS

Petar Boyanov85

USING THE COLASOFT CAPSA NETWORK ANALYZER TO DIAG-NOSE, PINPOINT AND DETECT A VIRIETY OF MALICIOUS CYBER-ATTACKS AND TO IMPROVE THE VULNERABILITIES FOR A SO-HO NETWORK

Petar Boyanov93

APPROACHES TO IDENTIFY VULNERABILITIES IN THE SECURITY SYSTEM OF THE SOCIAL ORGANIZATION AND COMPUTER RESOURCES

Hristo Hristov, Petar Boyanov, Tichomir Trifonov 101

METHOD FOR IDENTIFICATION OF SIGNALS

Zhivko Zhekov, Anton Antonov, Petar Boyanov, Dimitar Chervenkov, Tichomir Trifonov 108

Pedagogical

PHYSICAL READINESS OF CHILDREN FOR SCHOOL ACTIVITIES

Snezhana Vacheva 113

THE DEPLORABLE STATE OF THE BULGARIAN ECONOMY REQUIRES URGENT MEASURES FOR ITS MODERNIZATION, BUT CREATES ENORMOUS DIFFICULTIES FOR THE INVESTMENT PROCESS

Hristo Totev 117

PROBLEMS OF THE MODERNIZATION OF THE ECONOMY OF BULGARIA

Hristo Totev 121

BUILDING AN ONLINE SYSTEM FOR APPOINTMENTS TO MEDICAL SPECIALIST

Ivelina Vardeva 126

Formation

ASSESSMENT AND CONTROL OF QUALITY OF EDUCATION OF STUDENTS IN KONSTANTIN PRESLEVSKY UNIVERSITY OF SHUMEN

Bogdana Georgieva, Snezhana Nikolova 132

ASSESSMENT OF THE QUALITY OF THE ACADEMIC STAFF OF KONSTANTIN PRESLEVSKY UNIVERSITY OF SHUMEN AND ITS SIGNIFICANCE

Korneliya Todorova 139

Physics

Al³⁺ ACCEPTORS AND THE OPTICAL PROPERTIES OF Bi₁₂SiO₂₀:Cr+Al

P. Petkova, P. Vasilev 146

CALCULATION OF THE EINSTEIN COEFFICIENTS FOR CO DOPED (80 – x) Sb₂O₃–20Na₂O–xWO₃ (x% mol of WO₃) GLASSES

P. Petkova, P. Vasilev 154

THERMAL RESISTANCE OF POLYETHYLENE TEREPHTHALATE FIBRES

Valentin Velev, Anton Popov, Lyubomira Veleva, Nikola Todorov 162

MODELING OF THE INFLUENCE OF THE THERMOMECHANICAL MODIFICATION PARAMETERS ON THE STRUCTURAL CHANGES IN POLYESTER FIBERS

Valentin Velev, Valentin Grozev, Anton Popov, Rene Androsch, Todor Dimov, Lyubomira Veleva, Hans-Joachim Radusch 173

EFFECT OF PROTON IRRADIATION ON THE STRUCTURE DEVELOPMENT OF POLYETHYLENE TEREPHTHALATE FIBERS

Valentin VeleV, Anton Popov, Nina Arhangelova, Pencho Kyurkchiev, Hristo Hristov, Michele Bello, Giuliano Moschini, Nikolay Uzunov 181

Ecology

TRANSPPOSITION OF EU ENVIRONMENTAL LEGISLATION FOR PROTECTING WATERS IN BULGARIA

Ivanka Zheleva, Margarita Filipova, Petar Roussev, Kremena Rayanova 186

THE SPATIAL DISTRIBUTION OF NITROGEN DIOXIDE IN ATMOSPHERIC SURFACE LAYER OF ALMATY CITY

Daulbayeva Almira, Zhetpisbay Dinara, Margarita Filipova 195

DISPERSION MODELING OF ATMOSPHERIC EMISSIONS OF PARTICULATE MATTER (PM10) AND EVALUATION OF THE CONTRIBUTION OF DIFFERENT SOURCES OF AIR POLLUTION IN THE TOWN OF SVISHTOV, BULGARIA

Tsenislav Vlakenski, Pencho Stoychev, Rozalina Chuturkova 202

AIR POLLUTION WITH SULFUR OXIDES FROM INDUSTRY IN SOUTH-WESTERN AND SOUTH-EASTERN REGIONS OF BULGARIA

Mariana Todorova 213