
CONTENTS

DEVICES AND MEASURING METHODS FOR BIOCHEMISTRY

- Polymerase chain reaction: devices and methods. A systematic review of literature
*O. S. Antonova, G. E. Rudnitskaya, A. N. Tupik, A. L. Bulyanitsa, A. A. Evstrapov,
 V. E. Kurochkin* 5
- Analytical station for peptide amino acid sequencing
*I. V. Nazimov, N. V. Krasnov, A. V. Novikov, R. A. Bublyayev, S. V. Fironov,
 S. S. Prisyach, M. Z. Muradymov* 22
- Error analysis of real time PCR signals modeled by sigmoid function
Yu. V. Belov, A. I. Petrov, V. E. Kurochkin 28
- Instrument to measure intercellular potentials
V. V. Shugaylo, V. V. Kononenko, A. M. Khokhlov 35
- Alternating current coulometry technique with determination of total quantity of electricity
 by coulometric constant. Determination of benzoquinone and hydroquinone
I. M. Yasnev, S. S. Ermakov 41
- Study of the porogenic solvent effect upon the structure of the static monolith phase
 in quartz capillaries obtained in situ by electron beam initiated polymerization
*V. E. Kurochkin, S. V. Borisova, A. A. Evstrapov, I. V. Vasilieva, S. V. Myakin,
 L. M. Kuznetsov, A. Yu. Shmykov* 47

WORKS FOR MASS SPECTROMETRY

- Gas-dynamic interface for mass-spectrometer creeping discharge ion source for elemental
 analysis of dielectrics
A. G. Kuzmin, I. V. Kurnin, Yu. A. Titov 54
- Improvement of performances analytical quadrupole mass-analyzer performances in operation
 with low energy ions without prefilterers use
A. F. Kuzmin 60
- Discrimination on masses in the quadrupole mass-analyzer with prefilterers at various levels
 of resolving power
N. V. Krasnov, A. F. Kuzmin, A. N. Arsenyev 65
- New method for the monochromatization of ion beams of mass spectrometric sources
Z. Z. Latypov, G. K. Golikov 70
- Time-dependent pseudopotential and its application for the description of the charged
 particles averaged motion. Part 3. Time dependent signals characterized by "slow" and "fast"
 characteristic time
A. S. Berdnikov 75
- Time-dependent pseudopotential and its application for the description of the charged
 particles averaged motion. Part 4. Devices and instruments
A. S. Berdnikov 86

**INSTRUMENT RESEARCHES AND WORKINGS OUT
 FOR DIFFERENT AREAS**

- Solid body and liquid superficial structure study by ellipsometry considering mathematical
 inverse problem incorrectness. Part 4. Special features of the process of minimization
 of the functional of reverse task for semiconductors with transparent ultra thin films
A. I. Semenenko, I. A. Semenenko 103

CONTENTS

Generalized adaptive neural filters and filters based on neural network <i>A. V. Merkusheva, G. F. Malychina</i>	112
Decrease in distortions of registered distributions of time intervals by inspection of imposings <i>V. G. Demenkov, B. V. Zhuravlev, P. V. Demenkov</i>	122
Mathematical model of the mirror-symmetric imposed measuring condenser <i>A. A. Dzhezhora</i>	127
Mass air flow meter for the automotive industry on the basis of the flow micro sensor of the thermal type <i>O. V. Sazhin, Yu. V. Pervushin</i>	134
Background properties of si detector, due to electron transport and charge yield <i>A. Yu. Portnoy, G. V. Pavlinsky, M. S. Gorbunov, Yu. I. Sidorova</i>	145
Smart fluxgate type sensors <i>S. K. Prischepov, K. I. Vlaskin</i>	151
Volume 21 table of contents. The author's index of volume 21	156