

CONTENTS

Theory

- P.V. Gorsky, V.P. Mikhalchenko.* On the issue of the mechanism for increasing the thermoelectric figure of merit of the bulk nanostructured materials 5
- M.A. Korzhuev.* Thermoelectric nanostructures: pros and cons 10

Material Research

- S.I. Olkhovskaya, E.I. Rogacheva.* Size effects in lead telluride thin films and thermoelectric properties 22
- V.V. Shchennikov, I.V. Korobeynikov, G.V. Vorontsov.* Enhancement of power factor of thermoelectric element under pressure 28

Design

- L.I. Anatyshuk, Jenn-Dong Hwang, V.V. Lysko, A.V. Prybyla.* Thermoelectric heat recuperators for cement kilns 36
- S.O. Filin, B. Jasinska.* Experimental investigations of two-level temperature controllers for transport thermoelectric refrigerators 43
- L.I. Anatyshuk, L.N. Vikhor.* The limits of thermoelectric cooling for photodetectors 54
- R.G. Cherkez, P.P. Fenyak, D.D. Demyanyuk.* Computer simulation of permeable cooling thermoelement 59

Thermoelectric products

- L.I. Anatyshuk, R.R. Kobylyanskii.* On the accuracy of temperature measurement by electronic medical thermometer with thermoelectric power supply 68
- T.A. Ismailov, O.V. Yevdulov, D.V. Yevdulov.* Results of full-scale test of a prototype system for non-uniform cooling of electronic boards 73

News

- Yu.G. Gurevich* (Dedicated to 70-th birthday) 83