

# COMBUSTION AND EXPLOSION [GORENIE I VZRYV (MOSKVA)]

Vol. 16 No. 1 Year 2023

Editor-in-Chief S. M. Frolov

## In this issue:

Thermochemical properties of p-C <sub>6</sub> H <sub>5</sub> C(O <sub>2</sub> H)HC <sub>6</sub> H <sub>4</sub> OH and chain oxidation of p-benzylphenol G. A. Poskrebyshv and A. A. Poskrebyshv . . . . .	3
Refined data on O <sub>2</sub> dissociation rate measured by O-ARAS behind shock waves N. S. Bystrov, A. V. Emelianov, A. V. Eremin, and P. I. Yatsenko . . . . .	15
Effect of trifluoriodomethane additives on the ignition of multicomponent combustible mixtures behind shock waves A. V. Drakon, A. V. Eremin, M. R. Korshunova, and E. Yu. Mikheyeva . . . . .	23
New experimental data of child droplets identification after two-liquid droplet breakup D. V. Antonov, R. S. Volkov, D. S. Razumov, and P. A. Strizhak . . . . .	30
Gasification of organic waste by ultrasuperheated steam: The effect of steam mass flow rate A. S. Silantiev, I. A. Sadykov, V. A. Smetanyuk, F. S. Frolov, S. M. Frolov, Ya. K. Hasiak, A. B. Vorob'ev, A. V. Inozemtsev, and J. O. Inozemtsev . . . . .	38
Mathematical modeling of cellular detonation wave suppression by system of inert porous bodies D. A. Tropin and K. A. Vyshegorodcev . . . . .	55
Development of a model of hybrid detonation in a mixture of oxygen–hydrogen–argon with aluminum particles T. A. Khmel and S. A. Lavruk . . . . .	63
Numerical simulation of the interaction of heterogeneous detonation with the porous insert of different geometry D. A. Tropin and S. A. Lavruk . . . . .	70
Detonation wave velocity in the “liquid fuel – oxidizer” mixtures at $\varphi \leq 1$ in a small-sized pulsed combustor M. S. Assad and I. I. Chernukho . . . . .	76
Combustion of high-energy materials based on dispersed boron–aluminum fuels A. G. Korotkikh and I. V. Sorokin . . . . .	80
Specific features of burning of pasty condensed systems V. A. Babuk, D. I. Kuklin, S. Yu. Naryzhnyi, and A. A. Nizyaev . . . . .	88
Effect of ionizing radiation on the properties of components and the combustion rate of high-energy condensed systems based on them P. Kalmykov, E. Popenko, A. Sergienko, K. Sidorov, M. Mikhailenko, B. Tolochko, and Y. Chernousov . . . . .	94
Effect of additive particle size on impact sensitivity of ultra- and nanoscale ammonium perchlorate A. V. Dubovik . . . . .	102