

Section 2 EXPLOSION AND DETONATION PHENOMENA

MAY 20, TUESDAY

Afternoon session

Hall 1

Co-chairs: Eduard R. Prueel,
Alexey L. Zherebtsov

Presentations

- 2-13 14³⁰ **GROWTH OF CARBON PARTICLES IN A DETONATION WAVE**
Alexander P. Ershov, V. F. Anisichkin
Lavrentiev Institute of Hydrodynamics SB RAS, Novosibirsk, Russia
- 2-8 14⁵⁰ **EXPERIMENTAL GAS-DYNAMIC STUDY OF DIVERGING DETONATION WAVE INTERACTION**
Artyom G. Glushchenko, A. B. Syrtsov, Ya. M. Goropashny, A. S. Lobachev, M. S. Surov, N. Ya. Shishkin, A. N. Averin, D. A. Griбанov, S. M. Dolgikh, A. Yu. Garmashev
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 2-21 15¹⁰ **EXPERIMENTAL AND THEORETICAL STUDY OF COMBUSTION OF GRANULAR CHARGE IN A NOZZLE MANOMETRIC BOMB**
Alexey Yu. Krainov, A. N. Ishchenko, K. S. Rogaev, A. S. Diachkovskii
Tomsk State University, Tomsk, Russia
- 2-26 15³⁰ **EXPERIMENTAL STUDIES OF LARGE-SCALE COMBUSTION OF HYDROGEN-AIR MIXTURES**
Dmitry A. Mastjuk^{1,2}, E. V. Bezgodov¹, A. A. Tarakanov¹, S. D. Pasyukov¹, I. A. Popov¹
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²FSAEI HE «South – Ural state-run university (NRU)», Chelyabinsk, Russia
- 16⁰⁰ *Coffee-break*
- 2-53 16³⁰ **EFFECT OF ADDITIVE ALUMINUM PARTICLES ON DETONATION CHARACTERISTICS OF HYDROGEN-AIR MIXTURES**
Tatyana A. Khmel, A. A. Afanasenkov
Khristianovich Institute of Theoretical and Applied Mechanics SB RAS, Novosibirsk, Russia
- 2-39 16⁵⁰ **LOW-ENERGY POLYMORPHIC TRANSITIONS IN MOLECULAR CRYSTALS OF ENERGETIC MATERIALS: KINETICS AND MECHANISM**
Alexander V. Stankevich
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
Kazan National Research Technological University, Kazan, Russia
Postovsky Institute of Organic Synthesis, Ural Branch, Russian Academy of Sciences, Ekaterinburg, Russia

- 2-48 17¹⁰ **CRITERIA FOR RESTORING THE EQUATION OF STATE OF EXPLOSIVES FROM SMALL-ANGLE X-RAY SCATTERING DATA IN THE DETONATION CHEMICAL REACTION ZONE**
Boris P. Tolochko¹, A. P. Chernyshev¹, K. A. Ten², I. A. Rubtsov²
¹Institute of Solid State Chemistry and Mechanochemistry, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia
²Lavrentiev Institute of Hydrodynamics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia
- 2-46 17³⁰ **HIGH-SPEED RADIOGRAPHY OF SHOCK WAVE COMPRESSION OF GYROID ALUMINUM**
Konstantin A. Ten^{1, 2}, A. O. Kashkarov¹, E. R. Pruehl¹, I. A. Rubtsov¹, A. A. Studennikov¹, V. P. Khalemenchuk¹, A. S. Tumannik¹, L. I. Shekhtman², D. V. Petrov³, D. P. Kuchko³, E. B. Smirnov³, A. I. Klenov³, A. M. Asylkaev⁴
¹Lavrentiev Institute of Hydrodynamics, Novosibirsk, Russia
²Budker Institute of Nuclear Physics, Novosibirsk, Russia
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⁴Novosibirsk State University, Novosibirsk, Russia
- 2-50 17⁵⁰ **RECOVERY OF GAS DYNAMIC FLOW PARAMETERS USING PINN**
Alexander S. Tumanik^{1, 2}, E. R. Pruehl¹
¹Lavrentyev Institute of Hydrodynamics, Novosibirsk, Russia
²SRF «SKIF», Boreskov Institute of Catalysis, SB RAS, Kol'tsovo, Russia

Section 2 EXPLOSION AND DETONATION PHENOMENA

MAY 23, FRIDAY

Morning session

Hall 1

Co-chairs: Alexander P. Ershov,
Evgeny B. Smirnov

Presentations

- 2-1 9⁰⁰ **INHERENT IMPACT RESPONSE BEHAVIOR OF EXPLOSIVE CHARGE IN CONFINEMENT**
 Haibo Hu¹, Tao Li¹, Hua Fu¹, Xiaogan Dai², Tian Qiu², Kuiguang Yao²
¹Laboratory for Shock Wave and Detonation Physics Research, Institute of Fluid Physics, CAEP, Mianyang, Sichuan, China
²Institute of Chemical Materials, CAEP, Mianyang, Sichuan, China
- 2-49 9²⁰ **ELECTROPHYSICAL EQUIPMENT FOR PRODUCTION OF REACTIVE MULTILAYER NANOFILMS (RMNFS) FOR IGNITION OF PYROTECHNIC COMPOSITIONS USED IN SWITCHING DEVICES**
Sergey A. Trifonov², P. G. Gabdullin¹, O. E. Kvashenkina¹, N. A. Babinov², I. A. Khodunov²
¹SNDGroup LLC, Saint Petersburg, Russia
²NIA Engineering LLC, Saint Petersburg, Russia
- 2-11 9⁴⁰ **MULTICHANNEL HIGHLY EFFICIENT DETECTOR FOR X-RAY STUDIES**
Dmitry N. Grigoriev
Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia
Novosibirsk State Technical University, Novosibirsk, Russia
- 2-32 10⁰⁰ **OPTIMIZATION OF LIGHT COLLECTION FROM FIBER PROBES AND SIGNAL TRANSMISSION VIA DISORDERED FIBER BUNDLES IN GAS DYNAMIC EXPERIMENTS**
Nataliya A. Providenskaya, Yu. D. Arapov, V. G. Kamenev, D. E. Ergashev
Dukhov Automatics Research Institute, (VNIIA), Moscow, Russia
- 2-15 10²⁰ **METHOD OF REGISTRATION OF THE DIFFERENT TIMES OF OPTICAL SIGNALS IN MULTICHANNEL LASER SYSTEMS**
Igor V. Zaitsev, Yu. D. Arapov, A. E. Dormidonov, V. G. Kamenev, P. V. Kubasov, A. A. Tikhov
The Federal State Unitary Enterprise Dukhov Automatics Research Institute (VNIIA), Moscow, Russia
- 10⁴⁵ *Coffee-break*
- 2-33 11¹⁵ **SRF “SKIF” SYNCHROTRON RADIATION SOURCE: IMPLEMENTATION STATUS AND RESEARCH OPPORTUNITIES**
Ivan A. Rubtsov¹, A. V. Bukhtiyarov¹, V. I. Bukhtiyarov², E. B. Levichev¹
¹SRF “SKIF”, Boreskov Institute of Catalysis, SB RAS, Kol'tsovo, Russia
²Boreskov Institute of Catalysis, SB RAS, Novosibirsk, Russia

- 2-9 11³⁵ **EFFECT OF INITIAL PRESSURE ON FLAME FRONT PROPAGATION
IN HIGHLY POROUS METALS**
Viktor V. Golub, S. V. Golovastov, G. Yu. Bivol, F. S. Kuleshov
Joint Institute for High Temperatures, Russian Academy of Sciences, Moscow, Russia
- 2-30 11⁵⁵ **EXPERIMENTAL STUDY OF SHORT-BARREL SCATTERING-TYPE
LAUNCHING DEVICE**
Alexey G. Neskin, A. S. Kipkaev, A. N. Maloyaroslavtsev, O. A. Bychkov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 2-37 12¹⁵ **CATALYTIC EFFECTS FOR SUBSTITUENTS IN CRYSTALS
OF AZOLO-ANNELATED AND 3,6-DISUBSTITUTED 1,2,4,5-TETRAZINES
IN THERMAL DECOMPOSITION PROCESS**
Alexander V. Stankevich^{1, 2}, S. G. Tolshchina¹, A. V. Korotina¹, R. I. Ishmetova¹,
K. D. Kozhurkin¹, P. A. Slepukhin¹, G. L. Rusinov¹, V. N. Charushin¹
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Russia
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- 2-45 12³⁵ **NUMERICAL SIMULATION OF UNSTEADY DETONATION PROCESSES
IN A SHOCK-WAVE TUBE WITH A REACTING SUBSTANCE – HMX**
Vladimir V. Tashlanov, D. V. Begashev, A. V. Ershov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 2-33 12⁴⁵ **PHYSICAL AND MATHEMATICAL MODELING OF THE PROPAGATION
OF HETEROGENEOUS DETONATION THROUGH A LAYER
OF GAS SUSPENSION OF ALUMINUM PARTICLES**
Sergey A. Lavruk, A. A. Afanasenkov
Khristianovich Institute of Theoretical and Applied Mechanics SB RAS
- 13⁰⁰ *Lunch*

Section 2P

EXPLOSION AND DETONATION PHENOMENA

MAY 20, TUESDAY 14³⁰ TO 18⁰⁰
MAY 21, WEDNESDAY 8⁴⁰ TO 13⁰⁰

Foyer

Posters

2-2 **SYNCHROTRON DIAGNOSTICS OF SHOCK-WAVE COMPRESSION OF 3D STRUCTURED ALUMINUM**

Artur M. Asylkaev^{1, 2, 3}, K. A. Ten¹, E. R. Prueel¹, A. O. Kashkarov¹, I. A. Rubtsov^{1, 3},
V. P. Khalemenchuk¹, A. S. Tumanik^{1, 3}, A. A. Studennikov¹

¹Lavrentiev Institute of Hydrodynamics, Novosibirsk, Russia

²State University, Novosibirsk, Russia

³«Siberian Circular Photon Source» (SKIF) Collective Use Center, Novosibirsk, Russia

2-3 **LOW-RATE DETONATION OF TATB HIGH-EXPLOSIVE**

Il'ya A. Akhlyustin, I. E. Kosolapov, A. S. Gremitskykh, K. V. Eganov, K. M. Prosvirnin, K. M. Miroshkin, Yu. A. Belenovsky

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2-4 **STUDY OF FACTORS AFFECTING THE ONSET AND DEVELOPMENT OF EXPLOSIVE TRANSFORMATION IN HIGHLY DISPERSED SECONDARY EXPLOSIVES INITIATED BY LASER RADIATION**

Sergey V. Batalov, I. A. Maltsev, S. S. Ustinov

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2-5 **EFFECT OF IMPURITIES IN TATB COMPOSITION ON ITS STRESS-STRAIN AND GAS-DYNAMIC CHARACTERISTICS**

Irina A. Batalova, I. A. Akhlyustin, Yu. A. Belenovsky, I. G. Galiullin, A. Yu. Garmashev, G. A. Grebyonkin, A. V. Karypova, A. E. Klischenko, K. M. Prosvirnin, T. V. Tikhonova, L. N. Shinkareva, I. R. Shakirov

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Section 2P

EXPLOSION AND DETONATION PHENOMENA

MAY 22, THURSDAY 14³⁰ TO 18⁰⁰MAY 23, FRIDAY 8⁴⁰ TO 13⁰⁰

Foyer

*Posters***2-6 STUDY OF PROPERTIES OF CAST EXPLOSIVES BASED ON FLAMMABLE BINDERS WITH AZOLE POLYMERS**

Dmitry M. Gagarkin¹, A. V. Klepinin¹, D. P. Dudnik¹, S. V. Shakhmaev¹, A. V. Karypova¹,
T. V. Tikhonova¹, L. N. Shinkareva¹, I. V. Chemagina¹, D. V. Petrov¹, A. Yu. Garmashev¹,
Yu. A. Belenovsky¹, E. B. Smirnov¹, K. M. Prosvirnin¹, A. V. Sarafannikov¹, A. G. Sukhanova²

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2-7 DECELERATION OF EXPLOSIVE PRODUCTS OF HMX-BASED HE IN COOPER AND ALUMINUM BARRIERS

Igor G. Galiullin, E. B. Smirnov, A. V. Sarafannikov, D. P. Kuchko, K. M. Prosvirnin,
D. G. Pankratov, D. T. Yusupov, A. V. Vorobyev, A. G. Poptsov

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2-10 SHOCK-WAVE SENSITIVITY OF THE MODIFIED HE TATB

Grigori A. Grebyonkin, A. V. Sarafannikov, K. M. Prosvirnin, I. G. Galiullin, K. V. Eganov,
A. Yu. Tarasov, I. A. Batalova, A. S. Gremitskikh, A. V. Karypova, T. V. Tikhonova

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2-12 EFFECT OF LONG-TERM WAREHOUSE STORAGE AND ACCELERATED THERMAL AGING ON CERTAIN RDX CHARACTERISTICS

Darya P. Dudnik, D. M. Gagarkin, A. V. Sarafannikov, A. V. Karypova, T. V. Tikhonova,
L. N. Shinkareva, O. D. Vaganova, A. Yu. Golovatova, N. Yu. Gorbova, T. V. Shantsyna,
I. V. Chemagina, A. V. Borodin

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2-14 COMPUTATIONAL MODELING OF EXPERIMENTS ON STUDYING DETONATION CHARACTERISTICS OF TG46 AND TG55 TNT-RDX COMPOSITIONS

Alexey L. Zhrebtsov, E. A. Archakova, N. A. Andreeva, L. R. Islamova

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2-16 CONDENSED CARBON IN THE DETONATION PRODUCTS OF MIXED COMPOSITIONS BASED ON BTF

Alexey O. Kashkarov¹, E. R. Pruel¹, E. Yu. Gerasimov², Ya. L. Lukyanov¹, A. S. Tumanik¹,
N. A. Khlebanovskii^{1,3}, A. A. Studennikov¹

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²Boreskov Institute of Catalysis, SB RAS, Novosibirsk, Russia

³Novosibirsk State University, Novosibirsk, Russia

2-17 A METHOD TO ESTIMATE HE DETONABILITY BY DETONATION TURN ANGLE CRITERION

Alexander E. Klischenko, E. B. Smirnov, A. V. Sarafannikov, K. M. Prosvirnin,
I. G. Galiullin, K. V. Eganov

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- 2-19 **STUDY OF SAFETY CHARACTERISTICS AND PHYSICAL-CHEMICAL PROPERTIES OF CL-20 HIGH EXPLOSIVE**
Kseniya V. Kovaleva, D. P. Dudnik, A. V. Klepinin, S. V. Shakhmaev, K. M. Prosvirnin, A. V. Sarafannikov, E. B. Smirnov, T. V. Tikhonova, I. V. Chemagina, D. M. Gagarkin
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- 2-20 **A REACTIVITY AND PHYSICOCHEMICAL CHARACTERISTICS OF ACTIVATED ALUMINUM POWDERS**
Alla V. Konyukova, V. G. Shevchenko, D. A. Eselevich, V. N. Krasilnikov
Institute of Solid State Chemistry UB RAS, Ekaterinburg, Russia
- 2-22 **SIMULATION OF EXPERIMENTS FOR STUDYING THE RELATION BETWEEN DETONATION FRONT VELOCITY AND CURVATURE IN CYLINDRICAL LOW-SENSITIVE HE SAMPLES**
Dmitry N. Kupriyanets, A. L. Zherebtsov, M. V. Taranik, L. R. Islamova, E. B. Grachova
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- 2-24 **INVESTIGATION INTO 2,4-DINITROANISOLE – PENTAERYTHRITROL TETRANITRATE MIXED COMPOSITIONS**
Alexander N. Maloyaroslavtsev, A. V. Sarafannikov, A. I. Akhmetzyanov, A. Yu. Tarasov, K. A. Gaisina
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 2-25 **INVESTIGATION INTO EUTECTIC 2,4-DINITROANISOLE–BENZOTRIFUROXANE COMPOSITIONS**
Alexander N. Maloyaroslavtsev, A. V. Sarafannikov, A. I. Akhmetzyanov, A. Yu. Tarasov, K. A. Gaisina
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 2-29 **ESTIMATED STRENGTH OF BURSTING STUD OF THE LANDING EXPLOSIVE DEVICE VPU-82**
Alexey G. Neskin, V. V. Dotsenko, O. Yu. Zhabunina, Yu. Yu. Lushina, O. A. Bychkov, A. N. Maloyaroslavtsev
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 2-31 **STUDY OF SHOCK-WAVE SENSITIVITY USING GAP-TEST METHOD. SIMPLE METHOD FOR ESTIMATING DEPTH OF DETONATION FORMATION**
Kirill O. Ogorodov, D. M. Gagarkin, S. V. Shakhmaev, A. V. Klepinin, K. M. Prosvirnin
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 2-34 **THE MECHANISM OF AMMONIUM PERCHLORATE DECOMPOSITION INITIATED WITH VARYING INTENSITY OF THERMAL ACTION**
Anisa Kh. Rudina, A. V. Stankevich, A. V. Sobolevskaya, I. V. Chemagina
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 2-35 **ANALYSIS OF THE RELATIONSHIP BETWEEN CHANGES IN THE STRUCTURE AND MORPHOLOGY OF MOLECULAR CRYSTALS FOR ENERGETIC MATERIALS UNDER THERMAL INFLUENCE**
Alexander V. Stankevich
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Kazan National Research Technological University, Kazan, Russia
Postovsky Institute of Organic Synthesis, Ural Branch, Russian Academy of Sciences, Ekaterinburg, Russia

- 2-36 **CATALYTIC EFFECTS FOR ANIONS IN MOLECULAR CRYSTALS OF 3-NITRO-4,5-DIHYDRO-1,2,4-TRIAZOL-5-ONE SALTS IN THERMAL DECOMPOSITION PROCESS**
Alexander V. Stankevich^{1,2}, D. S. Yachevskii¹, V. I. Filyakova¹, G. L. Rusinov¹, I. V. Chemagina²
¹Postovsky Institute of Organic Synthesis, Ural Branch, Russian Academy of Sciences, Ekaterinburg, Russia
²FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 2-38 **LOCALIZATION AND DISTRIBUTION OF THE THRESHOLD ENERGY OF LASER INITIATION OF CHEMICAL DECOMPOSITION REACTIONS IN THE VOLUME OF A TATB CRYSTAL**
Alexander V. Stankevich
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
Kazan National Research Technological University, Kazan, Russia
Postovsky Institute of Organic Synthesis, Ural Branch, Russian Academy of Sciences, Ekaterinburg, Russia
- 2-40 **THE RATE OF EXPANSION AND THE CHEMICAL COMPOSITION OF THE DECOMPOSITION PRODUCTS OF HETEROCYCLIC COMPOUNDS BASED ON 1,2,4,5-TETRAZINES**
Alexander V. Stankevich^{1,2}, S. G. Tolshchina², A. V. Korotina², R. I. Ishmetova², G. L. Rusinov²
¹FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
²Postovsky Institute of Organic Synthesis, Ural Branch, Russian Academy of Sciences, Ekaterinburg, Russia
- 2-41 **PHOTOPHYSICAL ACTIVITY OF PRODUCTS OF SLOW THERMAL DECOMPOSITION OF 3-NITRO-4,5-DIHYDRO-1,2,4-TRIAZOLE-5-ONE (NTO)**
Alexander V. Stankevich^{1,2}, D. S. Yachevskii¹, G. L. Rusinov¹
¹Postovsky Institute of Organic Synthesis, Ural Branch, Russian Academy of Sciences, Ekaterinburg, Russia
²FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 2-42 **THE EFFECT OF THE BIMODAL FRACTION DISTRIBUTION OF NITRAMINE-CLASS HE ON PLASTIC EXPLOSIVE COMPOSITION DETONABILITY**
Alexander Yu. Tarasov, E. B. Smirnov, A. V. Sarafannikov, A. I. Akhmetzyanov, A. V. Karypova, T. V. Tikhonova, L. N. Shinkareva, I. A. Makarchev, K. A. Gaisina, R. N. Valiev, A. V. Molteninov
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- 2-43 **THE EFFECT OF CONTRIBUTION OF DIFFERENT FRACTIONS OF NITRAMINE-CLASS HE ON PLASTIC EXPLOSIVE COMPOSITION DETONABILITY**
Alexander Yu. Tarasov, E. B. Smirnov, A. V. Sarafannikov, A. I. Akhmetzyanov, A. V. Karypova, T. V. Tikhonova, L. N. Shinkareva, I. A. Makarchev, K. A. Gaisina, R. N. Valiev, A. V. Molteninov
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- 2-44 **THE EFFECT OF TEMPERATURE DIFFERENCE PRETREATMENT OF NITRAMINE-CLASS HE ON PLASTIC EXPLOSIVE COMPOSITION DETONABILITY**
Alexander Yu. Tarasov, E. B. Smirnov, A. V. Sarafannikov, A. I. Akhmetzyanov, I. A. Makarchev, K. A. Gaisina, R. N. Valiev, A. V. Molteninov
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- 2-47 **DETERMINATION OF THE CRITICAL DETONATION THICKNESS OF THERMOPLASTIC EXPLOSIVES**
Alexander E. Teplyakov, A. V. Sarafannikov, K. M. Prosvirnin, I. G. Galiullin
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia

- 2-51 **STUDY OF THE INFLUENCE OF THE STRUCTURE AND COMPOSITION OF THE CHARGE OF CONDENSED EXPLOSIVE ON THE STRUCTURE OF THE DETONATION WAVE**
Alexander S. Tumanik¹, A. M. Asylkaev^{1,2}, M. P. Devushkin¹, A. O. Kashkarov¹, A. A. Studennikov¹, A. A. Pluman¹, N. P. Satonkina^{1,2}
¹Lavrentyev Institute of Hydrodynamics SB RAS, Novosibirsk, Russia
²Novosibirsk State University, Novosibirsk, Russia
- 2-52 **SPECIAL ASPECTS OF ONSET AND DEVELOPMENT OF EXPLOSIVE TRANSFORMATION AND DETONATION IN DEFLAGRATING HES UNDER DIFFERENT INITIATING PULSES**
Sergey S. Ustinov, S. V. Batalov, A. A. Borisov, I. V. Ovcharov, V. M. Khasanov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 2-54 **ANALYSIS OF ALUMINUM POWDER WITH IMPROVED REACTION PROPERTIES**
Andrey D. Chermenin¹, D. M. Gagarkin¹, O. V. Frolova¹, K. N. Berkutova¹, I. V. Chemagina¹, N. A. Alekhina¹, A. Kh. Rudina¹, K. M. Prosvirnin¹, A. V. Sarafannikov¹, K. V. Kovaleva¹, V. G. Shevchenko²
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²Federal State Budgetary Scientific Institution «Institute of Solid State Chemistry» of Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russia
- 2-55 **EXPERIMENTAL STUDY OF PROPERTIES OF THREE DIFFERENT GRADES OF TNT**
Mariya A. Chirkina^{1,2}, A. V. Sarafannikov¹, K. M. Prosvirnin¹, I. G. Galiullin¹, K. V. Eganov¹, A. I. Akhmetzyanov¹, I. V. Chemagina¹, O. A. Frolova¹, K. N. Berkutova¹, Yu. A. Shakhtorin¹, A. V. Karypova¹, T. V. Tikhonova¹, L. N. Shinkareva¹, I. I. Davydov¹, N. S. Tsepennikova¹
¹FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
²SPTI NRNU MEPhI, Snezhinsk, Russia
- 2-56 **COMPUTATIONAL-EXPERIMENTAL METHOD TO DETERMINE HIGH EXPLOSIVE CRITICAL DIAMETER**
Viktor I. Chufarov, E. B. Smirnov, Yu. A. Belenovsky, I. A. Akhlyustin
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- 2-57 **ISENTROPES OF DETONATION PRODUCTS FOR HE WITH SMALL CRITICAL DETONATION DIAMETER**
Semyon V. Shakhmaev, A. G. Poptsov, V. M. Volkov, D. M. Gagarkin, E. B. Smirnov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 2-58 **INVESTIGATION OF THERMAL PROPERTIES OF ACTIVATED ALUMINUM POWDERS**
Ekaterina N. Shakhmaeva, I. V. Chemagina, A. V. Sarafannikov
FSUE «RFNC – VNIITF named after Academ. E. I. Zababakhin», Snezhinsk, Russia
- 2-59 **DETERMINATION OF SHOCK COMPRESSION CONDITIONS FOR POROUS NIAL SAMPLES BELOW THE MELTING CURVE**
Vladislav V. Yakushev, V. V. Vilkov, A. V. Utkin, A. N. Zhukov, A. V. Darovskikh
Federal Research Center of Problems of Chemical Physics and Medicinal Chemistry of the Russian Academy of Sciences, Chernogolovka, Russia
- 6-25 **NUMERICAL SIMULATION OF THREE-TEMPERATURE GAS DYNAMICS AND THERMAL CONDUCTIVITY IN THE ONE-DIMENSIONAL CASE**
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