Nikita V Muravyev

List of Publications by Year
in descending order

66 papers	1,523 citations	279487 23 h-index	344852 36 g-index
67 all docs	67 docs citations	67 times ranked	689 citing authors

#	Article	IF	Citations
1	The power of model-fitting kinetic analysis applied to complex thermal decomposition of explosives: reconciling the kinetics of bicyclo-HMX thermolysis in solid state and solution. Journal of Thermal Analysis and Calorimetry, 2022, 147, 3195-3206.	2.0	16
2	HMX surface modification with polymers via sc-CO2 antisolvent process: A way to safe and easy-to-handle energetic materials. Chemical Engineering Journal, 2022, 428, 131363.	6.6	34
3	Regioisomeric 3,5-di(nitropyrazolyl)-1,2,4-oxadiazoles and their energetic properties. Chemistry of Heterocyclic Compounds, 2022, 58, 37-44.	0.6	9
4	Mechanical stimulation of energetic materials at the nanoscale. Physical Chemistry Chemical Physics, 2022, 24, 8890-8900.	1.3	4
5	Progress and performance of energetic materials: open dataset, tool, and implications for synthesis. Journal of Materials Chemistry A, 2022, 10, 11054-11073.	5.2	52
6	Neural networks applied in kinetic analysis of complex nucleation-growth processes: Outstanding solution for fully overlapping reaction mechanisms. Journal of Non-Crystalline Solids, 2022, 588, 121640.	1.5	5
7	Autocatalytic decomposition of energetic materials: interplay of theory and thermal analysis in the study of 5-amino-3,4-dinitropyrazole thermolysis. Physical Chemistry Chemical Physics, 2022, 24, 16325-16342.	1.3	11
8	Atomic force microscopy in energetic materials research: A review. Energetic Materials Frontiers, 2022, 3, 290-302.	1.3	5
9	Bis-(2-difluoroamino-2,2-dinitroethyl)nitramine â€" Energetic oxidizer and high explosive. Chemical Engineering Journal, 2022, 449, 137816.	6.6	14
10	Nitrogen-rich metal-free salts: a new look at the 5-(trinitromethyl)tetrazolate anion as an energetic moiety. Dalton Transactions, 2021, 50, 13778-13785.	1.6	14
11	Apparent autocatalysis due to liquefaction: thermal decomposition of ammonium 3,4,5-trinitropyrazolate. Physical Chemistry Chemical Physics, 2021, 23, 11797-11806.	1.3	10
12	Learning to fly: thermochemistry of energetic materials by modified thermogravimetric analysis and highly accurate quantum chemical calculations. Physical Chemistry Chemical Physics, 2021, 23, 15522-15542.	1.3	38
13	What Shall We Do with the Computed Detonation Performance? Comment on â€œ1,3,4â€Oxadiazole Bridges: A Strategy to Improve Energetics at the Molecular Levelâ€• Angewandte Chemie - International Edition, 2021, 60, 11568-11570.	7.2	8
14	What Shall We Do with the Computed Detonation Performance? Comment on â€œ1,3,4â€Oxadiazole Bridges: A Strategy to Improve Energetics at the Molecular Levelâ€• Angewandte Chemie, 2021, 133, 11672-11674.	1.6	3
15	Artificial Neural Networks for Pyrolysis, Thermal Analysis, and Thermokinetic Studies: The Status Quo. Molecules, 2021, 26, 3727.	1.7	30
16	Sensitivity of energetic materials: Evidence of thermodynamic factor on a large array of CHNOFCl compounds. Chemical Engineering Journal, 2021, 421, 129804.	6.6	69
17	Prospects of Using Boron Powders As Fuel. III. Influence of Polymer Binders on the Composition of Condensed Gasification Products of Model Boron-Containing Compositions. Combustion, Explosion and Shock Waves, 2021, 57, 547-558.	0.3	6
18	Two sides of thermal stability of energetic liquid: Vaporization and decomposition of 3-methylfuroxan. Journal of Molecular Liquids, 2021, 348, 118059.	2.3	6

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19	Thermally induced dehydration reactions of monosodium <scp>l</scp>-glutamate monohydrate: dehydration of solids accompanied by liquefaction. Physical Chemistry Chemical Physics, 2021, 24, 129-141.	1.3	4
20	Synthesis of New Energetic Materials Based on Furazan Rings and Nitroâ€<i>NNO</i>â€azoxy Groups. ChemistrySelect, 2020, 5, 12243-12249.	0.7	19
21	Delving into Autocatalytic Liquid-State Thermal Decomposition of Novel Energetic 1,3,5-Triazines with Azido, Trinitroethyl, and Nitramino Groups. Journal of Physical Chemistry B, 2020, 124, 11197-11206.	1.2	5
22	Prospects of Using Boron Powders As Fuel. II. Influence of Aluminum and Magnesium Additives and Their Compounds on the Thermal Behavior of Boron Oxide. Combustion, Explosion and Shock Waves, 2020, 56, 148-155.	0.3	29
23	4<i>H</i>-[1,2,3]Triazolo[4,5-<i>c</i>][1,2,5]oxadiazole 5-oxide and Its Salts: Promising Multipurpose Energetic Materials. ACS Applied Energy Materials, 2020, 3, 9401-9407.	2.5	22
24	Nitro-, Cyano-, and Methylfuroxans, and Their Bis-Derivatives: From Green Primary to Melt-Cast Explosives. Molecules, 2020, 25, 5836.	1.7	20
25	Pressure DSC for energetic materials. Part 2. Switching between evaporation and thermal decomposition of 3,5-dinitropyrazole. Thermochimica Acta, 2020, 690, 178697.	1.2	28
26	Time for quartet: the stable 3â€‰:â€‰1 cocrystal formulation of FTDO and BTF â€“ a high-energy-density material. CrystEngComm, 2020, 22, 4823-4832.	1.3	20
27	Pushing the Energy-Sensitivity Balance with High-Performance Bifuroxans. ACS Applied Energy Materials, 2020, 3, 7764-7771.	2.5	39
28	Pyrotechnic approach to space debris destruction: From thermal modeling to hypersonic wind tunnel tests. Acta Astronautica, 2020, 172, 47-55.	1.7	6
29	Critical Appraisal of Kinetic Calculation Methods Applied to Overlapping Multistep Reactions. Molecules, 2019, 24, 2298.	1.7	65
30	Supercritical Antisolvent Processing of Nitrocellulose: Downscaling to Nanosize, Reducing Friction Sensitivity and Introducing Burning Rate Catalyst. Nanomaterials, 2019, 9, 1386.	1.9	38
31	Kinetic Parameters of Thermal Decomposition of Furazano-1,2,3,4-Tetrazine-1,3-Dioxide and a Binary Solution Based on It. Combustion, Explosion and Shock Waves, 2019, 55, 629-631.	0.3	3
32	An Energetic (Nitroâ€<i>NNO</i>â€azoxy)triazoloâ€1,2,4â€triazine. European Journal of Organic Chemistry, 2019, 2019, 4189-4195.	1.2	27
33	Progress in Additive Manufacturing of Energetic Materials: Creating the Reactive Microstructures with High Potential of Applications. Propellants, Explosives, Pyrotechnics, 2019, 44, 941-969.	1.0	77
34	Crystal Solvates of Energetic 2,4,6,8,10,12-Hexanitro-2,4,6,8,10,12-hexaazaisowurtzitane Molecule with [bmim]-Based Ionic Liquids. Crystal Growth and Design, 2019, 19, 3660-3669.	1.4	15
35	Assembly of Tetrazolylfuroxan Organic Salts: Multipurpose Green Energetic Materials with High Enthalpies of Formation and Excellent Detonation Performance. Chemistry - A European Journal, 2019, 25, 4225-4233.	1.7	60
36	NITRONIUM BORATES. , 2019, , .		0

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37	INTERPLAY OF THERMAL ANALYSIS AND PREDICTIVE ELECTRONIC STRUCTURE THEORY IN THE STUDY OF SOLID-STATE THERMOCHEMISTRY AND PHASE TRANSITIONS OF ENERGETIC MATERIALS. , 2019, , .		1
38	KINETICS AND MECHANISM PRIMARY DECOMPOSITION CHANNELS OF BCHMX FROM HIGH ACCURACY QUANTUM CHEMISTRY CALCULATIONS. , 2019, , .		0
39	ENVIRONMENT-FRIENDLY SYNTHESIS OF ENERGETIC COMPOUNDS AND MATERIALS IN SUSTAINABLE LIQUID GAS. , 2019, , .		0
40	Pyrazoleâ€"Tetrazole Hybrid with Trinitromethyl, Fluorodinitromethyl, or (Difluoroamino)dinitromethyl Groups: Highâ€Performance Energetic Materials. Chemistry - an Asian Journal, 2018, 13, 1165-1172.	1.7	71
41	Exploring enhanced reactivity of nanosized titanium toward oxidation. Combustion and Flame, 2018, 191, 109-115.	2.8	14
42	Rare-Earth Complexes with the 5,5â€²-Bitetrazolate Ligand - Synthesis, Structure, Luminescence Properties, and Combustion Catalysis. European Journal of Inorganic Chemistry, 2018, 2018, 805-815.	1.0	11
43	Thermochemistry, Tautomerism, and Thermal Decomposition of 1,5-Diaminotetrazole: A High-Level ab Initio Study. Journal of Physical Chemistry A, 2018, 122, 3939-3949.	1.1	24
44	Toward reliable characterization of energetic materials: interplay of theory and thermal analysis in the study of the thermal stability of tetranitroacetimidic acid (TNAA). Physical Chemistry Chemical Physics, 2018, 20, 29285-29298.	1.3	24
45	Pyrotechnic heater setup as a calorimeter: Micro- vs. nano- Mg/Fe2O3 thermites. MATEC Web of Conferences, 2018, 243, 00004.	0.1	1
46	Azasydnone â€" novel â€œgreenâ€•building block for designing high energetic compounds. Journal of Materials Chemistry A, 2018, 6, 18669-18676.	5.2	49
47	Comparative Analysis of Boron Powders Obtained by Various Methods. I. Microstructure and Oxidation Parameters during Heating. Combustion, Explosion and Shock Waves, 2018, 54, 450-460.	0.3	24
48	Kinetic analysis of overlapping multistep thermal decomposition comprising exothermic and endothermic processes: thermolysis of ammonium dinitramide. Physical Chemistry Chemical Physics, 2017, 19, 3254-3264.	1.3	59
49	Cheaper, Faster, or Better: Are simple estimations of safety parameters of hazardous materials reliable? Comments on â€œThermal behaviors, nonisothermal decomposition reaction kinetics, thermal safety and burning rates of BTATz-CMDB propellantâ€•by Zhao et al. (2010). Journal of Hazardous Materials, 2017, 334, 267-270.	6.5	5
50	Comment on â€œStudies on Thermodynamic Properties of FOX-7 and Its Five Closed-Loop Derivativesâ€• Journal of Chemical & Engineering Data, 2017, 62, 575-576.	1.0	21
51	Optimization of the key steps of synthesis and study of the fundamental physicochemical properties of high energy compounds â€" 4-(2,2,2-trinitroethyl)-2,6,8,10,12-pentanitrohexaazaisowurtzitane and 4,10-bis(2,2,2-trinitroethyl)-2,6,8,12-tetranitrohexaazaisowurtzitane. Russian Chemical Bulletin, 2017, 66, 1066-1073.	0.4	16
52	Macro- vs Microcrystalline Wax: Interplay of Evaporation and Decomposition under Pressure Variation. Energy & Fuels, 2017, 31, 8534-8539.	2.5	7
53	Assembly of Nitrofurazan and Nitrofuroxan Frameworks for Highâ€Performance Energetic Materials. ChemPlusChem, 2017, 82, 1315-1319.	1.3	51
54	Pursuing reliable thermal analysis techniques for energetic materials: decomposition kinetics and thermal stability of dihydroxylammonium 5,5â€²-bistetrazole-1,1â€²-diolate (TKX-50). Physical Chemistry Chemical Physics, 2017, 19, 436-449.	1.3	88

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55	Synergistic Effect of Ammonium Perchlorate on HMX: From Thermal Analysis to Combustion. Springer Aerospace Technology, 2017, , 365-381.	0.2	5
56	5-Amino-3,4-dinitropyrazole as a Promising Energetic Material. Propellants, Explosives, Pyrotechnics, 2016, 41, 999-1005.	1.0	22
57	New concept of thermokinetic analysis with artificial neural networks. Thermochimica Acta, 2016, 637, 69-73.	1.2	19
58	HP-DSC study of energetic materials. Part I. Overview of pressure influence on thermal behavior. Thermochimica Acta, 2016, 631, 1-7.	1.2	36
59	Catalysis of HMX Decomposition and Combustion. , 2016, , 193-230.		10
60	Ð¡ombustion of Micro- and Nanothermites under Elevating Pressure. Physics Procedia, 2015, 72, 362-365.	1.2	11
61	Thermal Decomposition of Nitropyrazoles. Physics Procedia, 2015, 72, 358-361.	1.2	18
62	Aluminum/HMX nanocomposites: Synthesis, microstructure, and combustion. Combustion, Explosion and Shock Waves, 2015, 51, 100-106.	0.3	25
63	CATALYTIC INFLUENCE OF NANOSIZED TITANIUM DIOXIDE ON THE THERMAL DECOMPOSITION AND COMBUSTION OF HMX. International Journal of Energetic Materials and Chemical Propulsion, 2014, 13, 211-228.	0.2	7
64	Comparative study of HMX and CL-20. Journal of Thermal Analysis and Calorimetry, 2011, 105, 529-534.	2.0	44
65	Physicochemical characteristics of the components of energetic condensed systems. Russian Journal of Physical Chemistry B, 2010, 4, 916-922.	0.2	11
66	Influence of Particle Size and Mixing Technology on Combustion of HMX/Al Compositions. Propellants, Explosives, Pyrotechnics, 2010, 35, 226-232.	1.0	38