ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ БЮДЖЕТНОЕ УЧРЕЖДЕНИЕ НАУКИ ИНСТИТУТ ОБЩЕЙ И НЕОРГАНИЧЕСКОЙ ХИМИИ ИМ. Н.С. КУРНАКОВА РОССИЙСКОЙ АКАДЕМИИ НАУК

Центр коллективного пользования физическими методами исследования веществ и материалов

Перечень публикаций, подготовленных по результатам работ, выполненных с использованием научного оборудования ЦКП за 2024 год

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
1	5635	журнал	Synergism of primary and secondary interactions in a crystalline hydrogen peroxide complex with tin	10.1038/s41467-024-50164-9	Kirsanova Anna A, Prikhodchenko Petr V, Lev Ovadia, Medvedev Alexander G, Egorov Pavel A, Mikhaylov Alexey A, Belyaev Evgeny S, Kirakosyan Gayane A, Babak Maria V, Gorbunova Yulia G, Filippov Oleg A, Belkova Natalia V, Shubina Elena S, Brekhovskikh Maria N	Nature Communications, 1, 2024	2041-1723	РИНЦ, Белый список	<jats:title>Abstract</jats:title><jats:p>Despite the significance of H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub>-metal adducts in catalysis, materials science and biotechnology, the nature of the interactions between H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub> and metal cations remains elusive and debatable. This is primarily due to the extremely weak coordinating ability of H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub>, which poses challenges in characterizing and understanding the specific nature of these interactions. Herein, we present an approach to obtain H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub>–metal complexes that employs neat H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub> as both solvent and ligand. SnCl<jats:sub>4</jats:sub> effectively binds H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub>, forming a SnCl<jats:sub>4</jats:sub>(H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub>)<jats:sub>2</jats:sub> complex, as confirmed by <jats:sup>119</jats:sup>Sn and <jats:sup>17</jats:sup>O NMR spectroscopy. Crystalline adducts, SnCl<jats:sub>4</jats:sub>(H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub>)<jats:sub>2</jats:sub>·H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub>·18-crown-6 and 2[SnCl<jats:sub>4</jats:sub>(H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub>)(H<jats:sub>2</jats:sub>O)]·18-crown-6, are isolated and characterized by X-ray diffraction, providing the complete characterization of the hydrogen bonding of H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub> ligands	Да	5758

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1	1A	2	3	4	5	6	7	8	9	10	11
									including geometric parameters and energy values. DFT analysis reveals the synergy between a coordinative bond of H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub> with metal cation and its hydrogen bonding with a second coordination sphere. This synergism of primary and secondary interactions might be a key to understanding H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub> reactivity in biological systems.</jats:p>		
2	5667	журнал	Submicron Barium Hexaferrite Ceramics Manufactured by Low-Temperature Liquid-Phase Sintering of BaFe12O19 Nanoparticles	10.1134/s0036023624602630	Savchenko E S, Mironovich A Yu, Kostishin V G, Al-Khafaji H I, Timofeev A V, Ril A I	Russian Journal of Inorganic Chemistry, 11, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	1638
3	5708	журнал	Rational Design of the Carbamazepine Ternary Cocrystals	10.1021/acs.cgd.4c00529	Boycov Denis E, Drozd Ksenia V, Manin Alex N, Churakov Andrey V, Perlovich German L	Crystal Growth & Design, 11, 2024	1528-7505	РИНЦ, Белый список	Не указано	Да	4871
4	5725	журнал	Coordination ability of the dodecachloro-closo-dodecaborate anion [B12Cl12]2– in silver(I) complexation in the presence of S-donor ligands	10.1016/j.ica.2024.122344	Kubasov Alexey S, Malinina Elena A, Nikiforova Svetlana E, Avdeeva Varvara V, Goeva Lyudmila V, Bykov Alexander Yu, Zhizhin Konstantin Yu, Kuznetsov Nikolay T, Golubev Alexey V	Inorganica Chimica Acta, 2024	0020-1693	РИНЦ, Белый список	Не указано	Да	2
5	5949	журнал	Coordination of Fluorine-Substituted 1,10-Phenanthroline Diphosphonates with Americium(III) and Lanthanides(III): Solvent Extraction, Complexation, XRD, and Theoretical Study	10.1021/acs.inorgchem.4c03978	Korinskiy Nikolay A, Kalle Paulina, Evsiunina Mariia V, Huang Pin-Wen, Lanin Leonid O, Kirsanova Anna A, Borisova Nataliya E, Shi Wei-Qun, Matveev Petr I, Konopkina Ekaterina A, Abel Anton S	Inorganic Chemistry, 50, 2024	1520-510X	РИНЦ, Белый список	Не указано	Да	23799
6	5950	журнал	Disclosing the mechanism of uranium(VI) solvent extraction by polydentate ligands in a polar solvent: The role of ion pairs	10.1016/j.molliq.2024.126382	Poliakova T R, Gutorova S V, Novichkov D A, Trigub A L, Wang Q, Gerasimov M A, Kalle P, Arkhipova E A, Ivanov A S, Evsiunina M V, Averin A A, Petrov V G, Khvostov A V, Kirsanova A A, Borisova N E, Matveev P I	Journal of Molecular Liquids, 2024	0167-7322	РИНЦ, Белый список	Не указано	Да	9

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1	1A	2	3	4	5	6	7	8	9	10	11
7	5951	журнал	Highly Efficient Removal of Americium(III) from High-Level Waste Using Novel Phenanthroline Diamide Ligands	10.1021/acs.iecr.4c03051	Ustynyuk Yuri A, Nenajdenko Valentine G, Gloriozov Igor P, Evsiunina Mariia V, Matveev Peter I, Kalle Paulina, Lemport Pavel S, Avagyan Nane A, Lyssenko Konstantin A, Belousov Alexandr V, Petrov Vladimir G	Industrial & Engineering Chemistry Research, 44, 2024	1520-5045	РИНЦ, Белый список	Не указано	Да	19246
8	5953	журнал	Diphosphonic ionic liquids as anion-exchangers for palladium(II) and platinum(IV): Synthesis, complexation and selective extraction from hydrochloric solutions	10.1016/j.jece.2024.114184	Kalle Paulina, Starostin Leonid Yu, Huang Pin-Wen, Fominykh Anna Yu, Matveev Petr I, Shi Wei-Qun, Borisova Natalia E	Journal of Environmental Chemical Engineering, 6, 2024	2213-3437	РИНЦ, Белый список	Не указано	Да	10
9	5954	журнал	Influence of Diluent on Extraction Parameters of Systems for Separation Am(III) and Ln(III) Based on 1,10-Phenanthroline-2,9-Diamide	10.3390/molecules29153548	Kostikova Galina V, Ustynyuk Yuri A, Nenajdenko Valentine G, Gerasimov Mikhail A, Matveev Petr I, Petrov Valentine S, Kalle Paulina, Khult Enni K, Evsiunina Mariia V, Lemport Pavel S, Petrov Vladimir G	Molecules, 15, 2024	1420-3049	РИНЦ, Белый список	<jats:p>A systematic study of extraction systems for the separation of f-elements using the tetradentate N,O-donor diamide of 1,10-phenanthroline-2,9-dicarboxylic acid (L) in various molecular and ionic solvents was performed. It was demonstrated that the nature of a diluent has a significant impact on solvent extraction of Am(III) and Ln(III) and the stoichiometry of formed complexes with f-elements. The mechanism of complexation and forms of complexes in different diluents were investigated by radiometric methods, UV-vis titration, and XRD.</jats:p>	Да	15
10	5955	журнал	Unravelling the mechanism of f-element extraction by phenanthroline-diamides: A case of 4,7-substituted 1,10-phenanthroline-2,9-diamides	10.1016/j.seppur.2024.126621	Koshelev Daniil S, Nelyubina Yulia V, Aksenova Svetlana A, Petrov Valentine S, Lemport Pavel S, Kalle Paulina, Matveev Petr I, Khult Enni K, Evsiunina Mariia V, Utochnikova Valentina V, Petrov Vladimir G, Ustynyuk Yury A, Nenajdenko Valentine G	Separation and Purification Technology, 2024	1383-5866	РИНЦ, Белый список	Не указано	Да	12
11	5956	журнал	Ionic Liquid as a N,O-Donor Ligand-Based Extraction System Modifier: Establishing the Mechanism of Am(III)-Selectivity Increasing	10.1021/acs.inorgchem.3c03944	Borisova N E, Yarenkov N R, Kalle P, Evsiunina M V, Gerasimov M A, Pozdeev A S, Matveev P I	Inorganic Chemistry, 4, 2024	1520-510X	РИНЦ, Белый список	Не указано	Да	2119
12		журнал					1463-9084			Да	2556

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1	1A	2	3	4	5	6	7	8	9	10	11
	5957		Kinetic features of solvent extraction by N,O-donor ligands of f-elements: a comparative study of diamides based on 1,10-phenanthroline and 2,2′-bipyridine	10.1039/d3cp05081e	Borisova Nataliya E, Petrov Vladimir G, Kalmykov Stepan N, Pavlova Elizaveta A, Kalle Paulina, Matveev Petr I, Chernysheva Maria G, Pozdeev Anton S, Gopin Alexander V, Konopkina Ekaterina A, Guda Alexander A	Physical Chemistry Chemical Physics, 3, 2024		РИНЦ, Белый список	<jats:p>A variant of microfluidic setup design for the study of extraction kinetics has been proposed.</jats:p>		
13	5958	журнал	Small Cyclic Diglycolamides: Tautomerism, Solvent Extraction and Coordination with f-Elements: One Strain to Rule Them All	10.1021/acs.inorgchem.3c03488	Kalinin Mikhail A, Evsiunina Mariia V, Kalle Paulina, Lyssenko Konstantin A, Matveev Petr I, Borisova Nataliya E	Inorganic Chemistry, 1, 2023	1520-510X	РИНЦ, Белый список	Не указано	Да	610
14	5959	журнал	Phase transitions and crystal structures of substituted alkoxyaryls	10.1007/s11172-024-4194-x	Tatarin S V, Smirnov D E, Kuzmina L G, Kalle P	Russian Chemical Bulletin, 4, 2024	1573-9171	РИНЦ, Белый список	Не указано	Да	812
15	5961	журнал	Novel lanthanide complexes with quinoline-2-carboxylic acid: Structural variety and magnetism	10.1016/j.poly.2024.116858	Ilyukhin Andrey B, Petrosyants Svetlana P, Babeshkin Konstantin A, Koroteev Pavel S, Efimov Nikolay N	Polyhedron, 2024	0277-5387	РИНЦ, Белый список	Не указано	Да	6
16	5962	журнал	Influence of the Coordination Environment on the EPR Spectra of Mononuclear Gd Thiocyanates	10.1134/s1070328423601413	Ugolkova E A, Minin V V, Koroteev P S, Efimov N N, Petrosyants S P, Ilyukhin A B, Babeshkin K A	Russian Journal of Coordination Chemistry/Koordinatsionnaya Khimiya, 4, 2024	1070-3284	РИНЦ, Белый список	Не указано	Да	255
17	5963	журнал	Union is strength: π–π stacking interactions are capable of preventing solid-state racemization of tris-chelate complexes	10.1039/d4ce00104d	Ilyukhin Andrey B, Gavrikov Andrey V	CrystEngComm, 12, 2024	1466-8033	РИНЦ, Белый список	<jats:p>The first reliable observation of the solid-phase racemization of the entire tris-chelate complex is reported. The decisive effect of the π–π stacking on this process is revealed.</jats:p>	Да	1681
18	5965	журнал	Solid solutions of pyridinium halobismuthates	10.31857/s0044457x24020046	Zhavoronkov A S, Buikin P A, Kotov V Yu, Ilyukhin A B	ЖУРНАЛ НЕОРГАНИЧЕСКОЙ ХИМИИ, 2, 2024	0044-457X	РИНЦ, Белый список	<jats:p>Solid solutions of pyridinium bromo-iodobismutates were isolated from aqueous solutions and structurally characterized. The composition of the resulting solid solutions [HPy]BiX4 and [HPy]3Bi2X9 (X = Br, I) was found to depend on the ratios of pyridinium/bismuth and bromine/iodine in the initial solution. The existence of five polymorphic modifications in the system for [HPy]BiX4 compounds was shown. Two different polymorphs were found for iodobismuthate [HPy]BiI4.</jats:p>	Да	176
19		журнал					1466-8033			Да	3499

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1	1A	2	3	4	5	6	7	8	9	10	11
	5966		Thermal decomposition of DMSO or DMF solvates: an advanced method for obtaining new hybrid bismuth(<scp>iii</scp>) halides	10.1039/d4ce00279b	Buikin Petr A, Ilyukhin Andey B, Korlyukov Alexander A, Kotov Vitalii Yu, Simonenko Nikolai P, Dorovatovskii Pavel V, Dudko Ekaterina M	CrystEngComm, 26, 2024		РИНЦ, Белый список	<jats:p>Producing new hybrid halobismuthates by the thermal decomposition of corresponding solvates.</jats:p>		
20	5967	журнал	4-Methylpyridinium bismuth(III) halides	10.1016/j.poly.2024.117223	Ilyukhin Andrey B, Buikin Petr A, Yu. Kotov Vitalii, Lunkov Ivan S	Polyhedron, 2024	0277-5387	РИНЦ, Белый список	Не указано	Да	6
21	5968	журнал	The Complexation in Co(NO₃)₂ · 6H₂O/2,2′-bipyridine/Y(NO₃)₃ · 6H₂O/MeOH System: Still More to Uncover	10.1002/zaac.202400156	Babeshkin Konstantin, Gavrikov Andrey, Ilyukhin Andrey, Buzoverov Mikhail	Zeitschrift für Anorganische und Allgemeine Chemie, 24, 2024	1521-3749	РИНЦ, Белый список	<jats:title>Abstract</jats:title><jats:p>The formation of novel uncommon heterodinuclear complex was detected in Co(NO<jats:sub>3</jats:sub>)<jats:sub>2</jats:sub> · 6H<jats:sub>2</jats:sub>O/2,2′-bipyridine/Y(NO<jats:sub>3</jats:sub>)<jats:sub>3</jats:sub> · 6H<jats:sub>2</jats:sub>O/MeOH system. The peculiarities of composition and structure of this new compound were found to alter its vibrational and thermal properties compared to those of reported major product formed in the same system.</jats:p>	Да	7
22	5969	журнал	Solid Solutions of Pyridinium Halobismuthates	10.1134/s0036023623 60288x	Buikin P A, Ilyukhin A B, Kotov V Yu, Zhavoronkov A S	Russian Journal of Inorganic Chemistry, 2, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	41
23	5970	журнал	Synthesis of magnesium ferrite by combustion of glycine-nitrate gel: the influence of reagents on the gel-precursor and the microstructure of nanopowders	10.17586/2220-8054-2024-15-2-224-232	Kondrat'eva O N, Smirnova M N, Nikiforova G E	НАНОСИСТЕМЫ: ФИЗИКА, ХИМИЯ, МАТЕМАТИКА, 2, 2024	2305-7971	РИНЦ, Белый список	Не указано	Да	224
24	5971	журнал	Polycation perovskites in the system Ba₂Y₂O₅–BaCuO₂–BaMoO₄–BaTiO₃	10.31857/s0044457x24070054	Nikiforova G E, Yapryntsev A D, Arkhipenko A A, Smirnova M N, Kopeva M A, Nipan G D	ЖУРНАЛ НЕОРГАНИЧЕСКОЙ ХИМИИ, 7, 2024	0044-457X	РИНЦ, Белый список	<jats:p>To maintain the single-phase nature of the cubic solid solution Ba2(Y,Cu,Mo)2O6, which is prone to polymorphism, titanium oxide was used. As a result of the synthesis by burning the gel, annealing at 1000*C and subsequent cooling in an inertial thermal mode, the cubic modification F3m without an admixture of perovskite Fm3m for the composition Ba5Y2CuMoTiO14 was obtained for the first time. A comparative study of samples Ba4Y2CuMoO11 and Ba5Y2CuMoTiO14 was carried out using the methods of X-ray phase analysis, X-ray fluorescence spectrometry, infrared spectroscopy and diffuse reflectance spectroscopy.</jats:p>	Да	984
25	5972	журнал	Solid Solution in	10.1134/s0	Nikiforova G E, Nipan G D,	Russian Journal of	0036-0236	РИНЦ, Белый список	Не указано	Да	1543

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1	1A	2	3	4	5	6	7	8	9	10	11
			Pseudobinary System Ba2YMoO6–[Ba2YCuO5]	036023624601466	Kop’eva M A, Smirnova M N, Arkhipenko A A, Tekshina E V	Inorganic Chemistry, 10, 2024					
26	5973	журнал	Perovskite-like limited solid solution in the BaO–Y₂O₃–CuO–MoO₃ system	10.31857/s2686953524020032	Archipenko A A, Smirnova M N, Kopeva M A, Nipan G D, Nikiforova G E, Yapryntsev A D	ДОКЛАДЫ РОССИЙСКОЙ АКАДЕМИИ НАУК. ХИМИЯ, НАУКИ О МАТЕРИАЛАХ, 1, 2024	2686-9535	РИНЦ, Белый список	<jats:p>A new phase Ba2(Y,Cu,Mo)2O6 with the cubic perovskite structure Fm-3m has been obtained in the BaO–CuO–Y2O3–MoO3 quasiquaternary system, and the possibility of coexistence of two limited solid solutions with cubic structures Fm-3m and F-43m has been established. The samples were synthesized by gel combustion followed by calcination at 1000*C and cooling in the inertial thermal regime. The studies were carried out by X-ray phase analysis, X-ray fluorescence spectrometry, infrared spectroscopy, and diffuse reflectance spectroscopy.</jats:p>	Да	35
27	5974	журнал	Thermodynamic Properties of Lutetium Stannate Lu₂Sn₂O₇ in the Temperature Range 0–1871 K	10.31857/s0044457x24080068	Nikiforova G E, Gavrichev K S, Ryumin M A, Tyurin A V, Khoroshilov A V	ЖУРНАЛ НЕОРГАНИЧЕСКОЙ ХИМИИ, 8, 2024	0044-457X	РИНЦ, Белый список	<jats:p>Lutetium stannate with a pyrochlore structure was synthesized using solid state reaction route. The heat capacity of the polycrystalline Lu2Sn2O7 in the temperature range 7.99–1871 K was measured by adiabatic and differential scanning calorimetry methods. Entropy, enthalpy change, and derived Gibbs energy were calculated from the smoothed heat capacity data. The Gibbs free energy of Lutetium stannate from simple substances was estimated, using the ΔfS*(T) values obtained in this work and the ΔfH*(T) values from the literature. The temperature dependence of the cubic crystal lattice parameter and the value of the coefficient of thermal expansion in the temperature range 300–1273 K were determined by high-temperature X-ray diffraction.</jats:p>	Да	1141
28	5975	журнал	Thermodynamic Properties of Y2Ti2O7 and Eu2Ti2O7 in the Temperature Range 7–1800 K	10.1134/s0036024424700973	Gus’kov A V, Gavrichev K S, Gagarin P G, Nikiforova G E, Ryumin M A, Kondrat’eva O N, Gus’kov V N, Khoroshilov A V	Russian Journal of Physical Chemistry A, 9, 2024	0036-0244	РИНЦ, Белый список	Не указано	Да	1893
29	5976	журнал	Dispersion of Carbon Nanotubes Using Multiple Rapid Expansion of Supercritical Suspensions	10.1134/s1990793124701318	Zuev Ya I, Parenago O O, Vorobei A M, Rubtsov Ya P	Russian Journal of Physical Chemistry B, 8, 2024	1990-7931	РИНЦ, Белый список	Не указано	Да	1773
30	5977	журнал	Synthesis of High Electroconductive ZnO/CNT Nanocomposites with Chemoresistive Response at Room Temperature	10.1134/s0036023624602782	Dmitrieva S A, Mokrushin A S, Simonenko E P, Averin A A, Vorobei A M, Simonenko N P, Nagornov I A	Russian Journal of Inorganic Chemistry, 12, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	1841
31	5978	журнал	Zinc peroxide as a	10.1039/d3nj05334b	Yaremenko Ivan A, Radulov	New Journal of Chemistry, 10, 2024	1369-9261	РИНЦ, Белый список	<jats:p>This study reports a convenient, safe and recyclable	Да	4292

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1	1A	2	3	4	5	6	7	8	9	10	11
			convenient and recyclable source of anhydrous hydrogen peroxide and its application in the peroxidation of carbonyls		Peter S, Mikhaylov Alexey A, Medvedev Alexander G, Barsegyan Yana A, Belyaev Evgeny S, Dmitrieva Victoria E, Tripol'skaya Tatyana A, Mel’nik Elena A, Vil’ Vera A, Prikhodchenko Petr V, Terent’ev Alexander O				source of anhydrous H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub> for organic peroxide synthesis. It is based on the generation of H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub> through the reaction of ZnO<jats:sub>2</jats:sub> with H<jats:sub>2</jats:sub>SO<jats:sub>4</jats:sub> and the recycling of ZnO<jats:sub>2</jats:sub> from ZnSO<jats:sub>4</jats:sub> and 1 wt% H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub>.</jats:p>		
32	5979	журнал	Dioxygen–halogen bonding exemplified by crystalline peroxosolvates of N,N′-bis(haloacetyl) bispidines	10.1039/d3cp05834d	Churakov Andrei V, Vener Mikhail V, Medved’ko Aleksei V, Vatsadze Sergey Z, Prikhodchenko Petr V, Medvedev Alexander G	Physical Chemistry Chemical Physics, 6, 2024	1463-9084	РИНЦ, Белый список	<jats:p>This work explores the halogen bonding of dioxygen species and the significant role it plays in new structural patterns.</jats:p>	Да	5204
33	5980	журнал	Monomerization of Binuclear Complex [Zn2(Piv)4(Phen)2] under the Action of Water	10.1134/s1070328424601006	Nikolaevskii S A, Prikhodchenko P V, Kiskin M A, Tripol’skaya T A, Eremenko I L, Medvedev A G, Samulionis A S	Russian Journal of Coordination Chemistry/Koordinatsionnaya Khimiya, 10, 2024	1070-3284	РИНЦ, Белый список	Не указано	Да	871
34	5982	журнал	Polymorphism of triphenylantimony(V) bis-cumylperoxide	10.1007/s11224-024-02434-x	Mayorov Nikita S, Medvedev Alexander G, Egorov Pavel A, Mikhaylov Alexey A, Fatyushina Elena V, Buldashov Ivan A, Prikhodchenko Petr V	Structural Chemistry, 2024	1572-9001	РИНЦ, Белый список	Не указано	Да	1175
35	5983	журнал	An Overlooked Supramolecular Synthon in Multicomponent Trimethylglycine Crystals: Moderate Hydrogen Bonding Between Carboxylate and H-N Groups of Guanidine Species	10.3390/cryst14121050	Vener Mikhail V, Medvedev Alexander G, Churakov Andrei V, Frolov Nikita E	Crystals, 12, 2024	2073-4352	РИНЦ, Белый список	<jats:p>Three novel multicomponent crystals of trimethylglycine with 2-cyanoguanidine, guanidinium and aminoguanidinium chlorides are synthesized and structurally characterized. All three crystal packings are based on the supramolecular synthon formed by two N–H groups of the guanidine species and carboxylate group of trimethylglycine (graph set notation R22(8)). Its enthalpy is about 50 kJ/mol. The three-dimensional structure of crystals is stabilized by intermolecular interactions of various types. The energy of C–H•••X− interactions, where X = O, Cl, reaches 16 kJ/mol due to the acidic nature of methyl hydrogens. The possible structure of the trimethylglycine–urea–2H2O complex is discussed. Its theoretical metric and spectroscopic parameters are in reasonable agreement with the available literature data on the deep eutectic solvent trimethylglycine–urea.</jats:p>	Да	1050
36	5984	журнал	Synthesis and phase composition of	10.1016/j.vacuum.2024.113692	Marenkin S F, Oveshnikov L N, Ril’ A I, Ovcharov A V	Vacuum, 2024	0042-207X	РИНЦ, Белый список	Не указано	Да	8

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1	1A	2	3	4	5	6	7	8	9	10	11
			Cd<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si110.svg" display="inline" id="d1e558"><mml:msub><mml:mrow/><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:math>As<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si111.svg" display="inline" id="d1e566"><mml:msub><mml:mrow/><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:math> > Dirac semimetal crystals doped with Cr								
37	5985	журнал	The influence of technological conditions on the electromagnetic properties of Cd3As2 – MnAs composite thin films	10.1016/j.tsf.2024.140440	Shoukavaya T V, Ril' A I, Zhaludkevich A L, Morchenko A T, Karpenkov D Yu, Marenkin S F, Al-Onaizan M H, Timofeev A V, Jaloliddinzoda M	Thin Solid Films, 2024	0040-6090	РИНЦ, Белый список	Не указано	Да	6
38	5986	журнал	Synthesis of Ferromagnetic Alloys of the InSb–Ni2 – yMnSb System (y = 0; 1)	10.1134/s0036023624600760x	Dmitryakov P V, Ril A I, Oveshnikov L N, Pashkova O N, Sanygin V P	Russian Journal of Inorganic Chemistry, 7, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	6
39	5987	журнал	Effect of Crystallite Size on the Magnetic Properties of GaSb/MnSb Semiconductor/Ferromagnet Composites	10.1134/s0020168524701073	Bikteev A A, Teplonogova M A, Dzhaloliddinzoda M, Ril A I, Zheludkevich A L, Marenkin S F	Inorganic Materials, 7, 2024	1608-3172	РИНЦ, Белый список	Не указано	Да	278
40	5989	журнал	Study of the magnetic and structural properties of BaFe12 – xCuxO19 ferrites obtained by hydrothermal synthesis	10.26896/1028-6861-2024-90-9-39-47	Ril A I, Mironovich A Yu, Savchenko E S, Al-Khafaji H I, Kostishin V G, Astakhov V A	ЗАВОДСКАЯ ЛАБОРАТОРИЯ. ДИАГНОСТИКА МАТЕРИАЛОВ, 9, 2024	2588-0187	РИНЦ, Белый список	<jats:p>Hexagonal ferrites of <jats:italic>M</jats:italic>-type (in particular, BaFe<jats:sub>12</jats:sub>O<jats:sub>19</jats:sub>) are magnetic materials with functional characteristics affected both by chemical composition and technology of their	Да	40

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
									synthesis. We present the results of studying the magnetic and structural properties of BaFe<jats:sub>12 – <jats:italic>x</jats:italic></jats:sub>Cu<jats:italic><jats:sub>x</jats:sub></jats:italic>O<jats:sub>19</jats:sub> hexaferrites (<jats:italic>x</jats:italic> = 0, 0.1, 0.2, 0.3, 0.4) obtained by hydrothermal synthesis with partial substitution of copper for iron. The composition of the synthesized samples was analyzed using X-ray diffraction, and the magnetic characteristics were measured using a vibration magnetometer. It has been revealed that the coercivity of the ferrite powders depends non-monotonically on the copper concentration and reaches the maximum (5629 Oe) and minimum (4698 Oe) values at <jats:italic>x</jats:italic> = 0 and <jats:italic>x</jats:italic> = 0.2. The presence of copper reduces the coercive force, but at the same time the values remain rather high compared to the results of similar studies. The saturation magnetization of the obtained ferrites gradually decreases (from 65.88 to 60.75 A · m<jats:sup>2</jats:sup>/kg at <jats:italic>x</jats:italic> = 0 and <jats:italic>x</jats:italic> = 0.4, respectively) with increasing. The distribution of Cu over ferrite sublattices was studied using Mössbauer spectroscopy. It is shown that in the hexaferrite structure, copper ions preferentially occupy 12<jats:italic>k</jats:italic> and 4<jats:italic>f</jats:italic><jats:sub>1</jats:sub> sites. Hence, a decrease in the saturation magnetization with increasing <jats:italic>x</jats:italic> is most likely attributed to the presence of side non-magnetic phases observed on X-ray diffraction patterns. It is also revealed that during synthesis, copper participates in the formation of low-melting phases on the surface of hexaferrite grains which promotes agglomeration of the particles. Thus, the resulting powders can potentially be sintered at lower temperatures and, therefore, without a significant increase in the size of crystallites. Herewith, the coercivity retains its original high values. The results obtained can be used in developing ferrite permanent magnets with improved characteristics.</jats:p>		
41	5990	журнал	Structural Features of Mg-Containing Solid Solutions Based on Y2FeTaO7	10.1134/s0036023624603234	Kulikova E S, Kottsov S Y, Egorysheva A V, Popova E F, Ellert O G, Khramov E V	Russian Journal of Inorganic Chemistry, 14, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	2001
42	5992	журнал	SiO2 Aerogels Prepared Using Different Solvents	10.1134/s0	Buznik V M, Polevoy L A,	Petroleum Chemistry, 11, 2024	0965-5441	РИНЦ, Белый список	Не указано	Да	1314

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
				96554412407017x	Sandzhieva D A, Baranchikov A E, Golikova M V, Kottsov S Yu, Khamova T V, Ubushaeva B V, Dedov A G						
43	5993	журнал	Aliquat 336@SiO2 ionogels: Synthesis of, and insight into, iron(III) extraction mechanisms	10.1016/j.molliq.2024.124354	Fatyushina E V, Levina A V, Baranchikov A E, Kottsov S Y, Voshkin A A, Arhipenko A A, Nikiforova M E, Ivanov V K, Badulina A O	Journal of Molecular Liquids, 2024	0167-7322	РИНЦ, Белый список	Не указано	Да	12
44	5995	журнал	One simple approach to novel germania and germanate aerogels	10.1016/j.micromeso.2024.113282	Golodukhina Svetlana V, Veselova Varvara O, Khvoshchevskaya Daria A, Kottsov Sergey Yu, Gajtko Olga M	Microporous and Mesoporous Materials, 2024	1387-1811	РИНЦ, Белый список	Не указано	Да	9
45	5996	журнал	Glycine-Assisted Formation of Nanorods from Rare Earth Oxides	10.1134/s0036023624603337	Teplonogova M A, Kozlova A A, Yapryntsev A D, Baranchikov A E, Khalisov M M, Ivanov V K	Russian Journal of Inorganic Chemistry, 14, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	1985
46	5997	журнал	A Comparative Study of Cerium(III) and Cerium(IV) Phosphates for Sunscreens	10.3390/molecules29092157	Vasilyeva Darya N, Kozlova Taisiya O, Kozlov Daniil A, Kolesnik Irina V, Teplonogova Maria A, Tronev Ilya V, Sheichenko Ekaterina D, Protsenko Maria R, Kolmanovich Danil D, Ivanova Olga S, Baranchikov Alexander E, Ivanov Vladimir K	Molecules, 9, 2024	1420-3049	РИНЦ, Белый список	<jats:p>Crystalline cerium(III) phosphate (CePO4), cerium(IV) phosphates, and nanocrystalline ceria are considered to be promising components of sunscreen cosmetics. This paper reports on a study in which, for the first time, a quantitative comparative analysis was performed of the UV-shielding properties of CePO4, Ce(PO4)(HPO4)0.5(H2O)0.5, and CePO4/CeO2 composites. Both the sun protection factor and protection factor against UV-A radiation of the materials were determined. Ce(PO4)(HPO4)0.5(H2O)0.5 was shown to have a sun protection factor of 2.9, which is comparable with that of nanocrystalline ceria and three times higher than the sun protection factor of CePO4. Composites containing both cerium dioxide and CePO4 demonstrated higher sun protection factors (up to 1.8) than individual CePO4. When compared with the TiO2 Aeroxide P25 reference sample, cerium(III) and cerium(IV) phosphates demonstrated negligible photocatalytic activity. A cytotoxicity analysis performed using two mammalian cell lines, hMSc and NCTC L929, showed that CePO4, Ce(PO4)(HPO4)0.5(H2O)0.5, and nanocrystalline ceria were all non-toxic. The results of this comparative study indicate that cerium(IV) phosphate Ce(PO4)(HPO4)0.5(H2O)0.5 is more advantageous for use in sunscreens than either cerium(III) phosphate or CePO4/CeO2 composites, due to its improved UV-shielding properties and low photocatalytic activity.</jats:p>	Да	1420
47		журнал				Molecules, 7, 2024	1420-3049			Да	181

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
	5999		Synthesis and Thermal Decomposition of High-Entropy Layered Rare Earth Hydroxychlorides	10.3390/molecules29071634	Teplonogova Maria A, Kozlova Anfisa A, Yapryntsev Alexey D, Baranchikov Alexander E, Ivanov Vladimir K			РИНЦ, Белый список	<jats:p>The synthesis of multicomponent and high-entropy compounds has become a rapidly developing field in advanced inorganic chemistry, making it possible to combine the properties of multiple elements in a single phase. This paper reports on the synthesis of a series of novel high-entropy layered rare earth hydroxychlorides, namely, (Sm,Eu,Gd,Y,Er)2(OH)5Cl, (Eu,Gd,Tb,Y,Er)2(OH)5Cl, (Eu,Gd,Dy,Y,Er)2(OH)5Cl, and (Eu,Gd,Y,Er,Yb)2(OH)5Cl, using a homogeneous hydrolysis technique under hydrothermal conditions. Elemental mapping proved the even distribution of rare earth elements, while luminescence spectroscopy confirmed efficient energy transfer between europium and other rare earth cations, thus providing additional evidence of the homogeneous distribution of rare earth elements within the crystal lattice. The average rare earth cation radii correlated linearly with the unit cell parameters (0.868 < R2 < 0.982) of the high-entropy layered rare earth hydroxychlorides. The thermal stability of the high-entropy layered rare earth hydroxychlorides was similar to that of individual hydroxychlorides and their binary solid solutions.</jats:p>		
48	6001	журнал	Mixed Yttrium and Dysprosium Lactates as the First Example of Rare-Earth Hydrogen-Bonded Organic Framework Solid Solutions	10.1134/s0036023624601946	Golikova M V, Yapryntsev A D, Teplonogova M A, Babeshkin K A, Efimov N N, Baranchikov A E, Ivanov V K	Russian Journal of Inorganic Chemistry, 10, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	1484
49	6002	журнал	Aluminum and titanium complexes bearing 2,6-Bis(2-hydroxyphenyl) pyridines for ring-opening polymerization of lactide, e-caprolactone and their copolymerization: Effect of a ligand on coordination chemistry and reactivity	10.1016/j.jorganchem.2023.122973	Mankaev Badma N, Serova Valeriia A, Agaeva Milana U, Lyssenko Konstantin A, Fakhrutdinov Artem N, Churakov Andrei V, Chernikova Elena V, Egorov Mikhail P, Karlov Sergey S	Journal of Organometallic Chemistry, 2024	0022-328X	РИНЦ, Белый список	Не указано	Да	6
50	6004	журнал	Novel peroxosolvates of quinolone antibiotics containing large	10.1016/j.mencom.2024.01.008	Kiseleva Marina A, Churakov Andrei V, Prikhodchenko Petr V	Mendeleev Communications, 1, 2024	1364-551X	РИНЦ, Белый список	Не указано	Да	25

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1	1A	2	3	4	5	6	7	8	9	10	11
			hydrogen peroxide clusters								
51	6005	журнал	The Effects of the Steroids 5-Androstenediol and Dehydroepiandrosterone and Their Synthetic Derivatives on the Viability of K562, HeLa, and Wi-38 Cells and the Luminol-Stimulated Chemiluminescence of Peripheral Blood Mononuclear Cells from Healthy Volunteers	10.3390/biom14030373	Ulchenko Darya N, Sokolov Mikhail N, Rozhkov Vladimir V, Uspenskaya Maria E, Shmygarev Vladimir I, Trukhan Vladimir M, Churakov Andrei V, Shimanovsky Nikolay L, Fedotcheva Tatiana A	Biomolecules, 3, 2024	2218-273X	РИНЦ, Белый список	<jats:p>In order to evaluate the role of substituents at 3-C and 17-C in the cytotoxic and cytoprotective actions of DHEA and 5-AED molecules, their derivatives were synthesized by esterification using the corresponding acid anhydrides or acid chlorides. As a result, seven compounds were obtained: four DHEA derivatives (DHEA 3-propionate, DHEA 3-butanoate, DHEA 3-acetate, DHEA 3-methylsulfonate) and three 5-AED derivatives (5-AED 3-butanoate, 5-AED 3,17-dipropionate, 5-AED 3,17-dibutanoate). All of these compounds showed micromolar cytotoxic activity toward HeLa and K562 human cancer cells. The maximum cytostatic effect during long-term incubation for five days with HeLa and K562 cells was demonstrated by the propionic esters of the steroids: DHEA 3-propionate and 5-AED 3,17-dipropionate. These compounds stimulated the growth of normal Wi-38 cells by 30–50%, which indicates their cytoprotective properties toward noncancerous cells. The synthesized steroid derivatives exhibited antioxidant activity by reducing the production of reactive oxygen species (ROS) by peripheral blood mononuclear cells from healthy volunteers, as demonstrated in a luminol-stimulated chemiluminescence assay. The highest antioxidant effects were shown for the propionate ester of the steroid DHEA. DHEA 3-propionate inhibited luminol-stimulated chemiluminescence by 73% compared to the control, DHEA, which inhibited it only by 15%. These data show the promise of propionic substituents at 3-C and 17-C in steroid molecules for the creation of immunostimulatory and cytoprotective substances with antioxidant properties.</jats:p>	Да	5
52	6006	журнал	Three peroxomorphic H₂O₂ adducts of antibiotic furacin: the first cases of 2D hydrogen-bonded peroxide layers and concerted flip-flop hydrogen disorder of peroxide species	10.1039/d4ce00822g	Churakov Andrei V	CrystEngComm, 42, 2024	1466-8033	РИНЦ, Белый список	<jats:p>The first case of flip-flop hydrogen disorder of H<jats:sub>2</jats:sub>O<jats:sub>2</jats:sub>.</jats:p>	Да	6000
53	6007	журнал	Crystal Structures of Sulfobetaine-8 Solvates:	10.3390/cryst14121062	Kalle Paulina, Kuz’mina Lyudmila G, Vener Mikhail V,	Crystals, 12, 2024	2073-4352	РИНЦ, Белый список	<jats:p>Three novel solvatomorphs (C13H29NO3S•CH3OH, 1; C13H29NO3S•0.113(H2O), 2; C13H29NO3S•0.038(H2O),	Да	2

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1	1A	2	3	4	5	6	7	8	9	10	11
			Bend Hydrophobic Chains and Doubly Charge-Assisted Hydrogen Bonds N+CH−O3S		Kiseleva Marina A, Churakov Andrei V, Anokhin Denis V				3) of zwitterionic sulfobetaine-8 were obtained and their structures were determined using single-crystal X-Ray diffraction. In all cases dimethyl–amino substituted hydrophobic chains -(CH2)3-N+Me2-(CH2)7-Me exhibit kinks at nitrogen atoms resulted from strong intra- and intermolecular CHO hydrogen bonds between negatively charged sulfonic anion -O3S- and positively charged tetraalkylammonium fragments. Periodic (solid state) DFT calculations for structure 1 showed that the energy of the intermolecular hydrogen bonds CH…O is very high, at about 17 kJ/mol. In hydrates 2 and 3, water molecules play the structure-forming role since they interconnect hydrophobic layers by HOH…-O3S hydrogen bonds. The location of only partially occupied water molecules in the interlayer space leads to low stability of both crystals 2 and 3 in open air.</jats:p>		
54	6009	журнал	New Insights into the Structure, Thermal Properties, and Photostability of Industrially Relevant Salts of Sorbic Acid	10.1021/acs.cgd.4c01197	Churakov Andrei V, Kuzmina Lyudmila G, Bezzubov Stanislav I, Kalle Paulina	Crystal Growth & Design, 21, 2024	1528-7505	РИНЦ, Белый список	Не указано	Да	9179
55	6011	журнал	Synthesis, Structure, and Properties of Nontrivial Iridium(III) Complexes Based on Anthracene-Decorated Benzimidazole Ligand	10.1021/acs.inorgchem.4c02414	Bezzubov Stanislav I, Tatarin Sergei V	Inorganic Chemistry, 40, 2024	1520-510X	РИНЦ, Белый список	Не указано	Да	18652
56	6012	журнал	Access to Bicyclo[3.1.0]hexane and Cyclopenta[c]pyrazole Scaffolds via Solvent-Directed Divergent Reactivity of 5-Iodotriazoles	10.1021/acs.orglett.4c03082	Beletskaya Irina P, Barashkova Xenia A, Gevondian Avetik G, Latyshev Gennadij V, Kotovshchikov Yury N, Bezzubov Stanislav I, Lukashev Nikolay V	Organic Letters, 45, 2024	1523-7052	РИНЦ, Белый список	Не указано	Да	9628
57	6013	журнал	Carboxonium derivatives based on closo-dodecaborate anions [1,2-B₁₂H₁₀O₂CR]<sup>−</su	10.1039/d4nj01048e	Bykov Alexander Yu, Zhizhin Konstantin Yu, Kuznetsov Nikolay T, Kolbunova Anastasia V, Klyukin Ilya N, Novikov Alexander S, Nelyubin Alexey V, Zhdanov Andrey P, Kubasov Alexey S, Selivanov Nikita A	New Journal of Chemistry, 18, 2024	1369-9261	РИНЦ, Белый список	<jats:p>Borylated carboxonium ions based on <jats:italic>closo</jats:italic>-dodecaborate anions were obtained. The nature of the interaction between the cluster cage and the organic moiety was analysed theoretically.</jats:p>	Да	8366

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1	1A	2	3	4	5	6	7	8	9	10	11
			p>: synthesis and molecular orbital analysis								
58	6015	журнал	Effect of the Presence of Oxysolvents on Compositions and Structures of Silver(I) Complexes with Boron Cluster Anion [B₁₂Cl₁₂]^{2–}	10.1021/acs.cgd.4c00049	Kuznetsov Nikolay T, Golubev Alexey V, Kubasov Alexey S, Malinina Elena A, Nikiforova Svetlana E, Goeva Lyudmila V, Avdeeva Varvara V, Bykov Alexander Yu, Novikov Roman A, Zhizhin Konstantin Yu	Crystal Growth & Design, 8, 2024	1528-7505	РИНЦ, Белый список	Не указано	Да	3320
59	6016	журнал	New approaches to the synthesis of substituted derivatives of the [B₃H₈][−] anion	10.32362/2410-6593-2024-19-1-61-71	Lukoshkova A A, Selivanov N A, Golubev A V, Kubasov A S, Bykov A Yu, Zhdanov A P, Zhizhin K Yu, Kuznetsov N T, Posypayko E E, Shulyak A T	ТОНКИЕ ХИМИЧЕСКИЕ ТЕХНОЛОГИИ, 1, 2024	2686-7575	РИНЦ, Белый список	<jats:p><jats:bold>Objectives.</jats:bold> To develop methods for the synthesis of substituted derivatives of the octahydrotriborate anion. Such compounds can be considered as hydrogen storage, components of ionic liquids, precursors for the production of boride coatings using the traditional chemical vapor deposition method, and also as a building material for the production of higher boron hydrogen clusters.</jats:p><jats:p><jats:bold>Methods.</jats:bold> Since substitution reactions are sensitive to moisture and atmospheric oxygen, the syntheses were carried out in a direct flow of argon or in a dry, sealed SPEKS GB02M glove box with a double gas purification unit and two airlocks. The reaction was initiated by cooling to 0*C, in order to avoid the formation of by-products. All the results were characterized using infrared (IR) and nuclear magnetic resonance (NMR) spectroscopies.</jats:p><jats:p><jats:bold>Results</jats:bold>. The study presents a detailed study of the known methods for preparing substituted derivatives of the octahydrotriborate(1−) anion using dry hydrogen chloride as an electrophilic inductor and makes recommendations for improvement. In this method it is advisable to use cesium octahydrotriborate which facilitates the yield of the target product. New methods were proposed to initiate the substitution reaction in the [B<jats:sub>3</jats:sub>H<jats:sub>8</jats:sub>]<jats:sup>−</jats:sup>-anion using N-chlorosuccinimide and bromine. Using these inductors, new substituted derivatives of the octahydrotriborate anion with N-nucleophiles were obtained and defined by means of IR and NMR spectroscopies: [B3H7NCR], (R = Et, i-Pr, Ph) and [B<jats:sub>3</jats:sub>H<jats:sub>7</jats:sub>NH<jats:s	Да	63

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
									ub>2</jats:sub>R], (R = C<jats:sub>9</jats:sub>H<jats:sub>19</jats:sub> (INA), Bn), [B<jats:sub>3</jats:sub>H<jats:sub>7</jats:sub>NHEt<jats:sub>2</jats:sub>], as well as Bu<jats:sub>4</jats:sub>N[B<jats:sub>3</jats:sub>H<jats:sub>7</jats:sub>Hal], Bu<jats:sub>4</jats:sub>N[B<jats:sub>3</jats:sub>H<jats:sub>6</jats:sub>Hal<jats:sub>2</jats:sub>], where Hal = Cl, Br. It was also established that hydrogen bromide is released during the reaction with bromine and amines. This immediately protonates the amine which requires additional heating of the reaction mixture. The study also established that the reaction mechanism with N-chlorosuccinimide is not radical.</jats:p><jats:p><jats:bold>Conclusions.</jats:bold> The main factors influencing the course of the substitution reaction are the possible occurrence of side interactions between the nucleophile and the inducer, steric possibilities, and subsequent isolation of the reactive reaction products.</jats:p>		
60	6018	журнал	New Method for the Synthesis of Acetylacetone-Based closo-Borate Anion Derivatives [BnHn – 1NH=C(R)C(C(OH)CH3)C(O)CH3]–, Where n = 10, 12, R = Me, Et	10.1134/s0036023624601910	Klyukin I N, Zhizhin K Yu, Kuznetsov N T, Nelyubin A V, Selivanov N A, Bykov A Yu, Kubasov A S, Zhdanov A P	Russian Journal of Inorganic Chemistry, 10, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	1473
61	6019	журнал	Iminoacylation Reaction of Iodoaniline with [2-B10H9NCCH3]– Anion as a Route to the Preparation of New Boron-Containing Synthons	10.1134/s0036023624601934	Zhdanov A P, Zhizhin K Yu, Kuznetsov N T, Nelyubin A V, Selivanov N A, Bykov A Yu, Kubasov A S, Klyukin I N	Russian Journal of Inorganic Chemistry, 10, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	1468
62	6020	журнал	Carboxonium Derivatives of closo-Decaborate Anion [2,6-B10H8O2CC6H4R]– Based on Aromatic Carboxylic Acids: Synthesis and	10.1134/s0036023624601480x	Bykov A Yu, Selivanov N A, Klyukin I N, Kolbunova A V, Kubasov A S, Zhdanov A P, Kuznetsov N T, Zhizhin K Yu	Russian Journal of Inorganic Chemistry, 9, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	1325

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
			Physicochemical Properties								
63	6021	журнал	Synthesis of New Boron-Containing Ligands Based on the Nucleophilic Addition of 1,10-Phenanthroline-5-Amine to Nitrile Derivatives of [2-B10H9NCR]– (R = Me, Et, nPr)	10.1134/s0036023624600758	Klyukin I N, Nelyubin A V, Selivanov N A, Bykov A Yu, Kubasov A S, Zhdanov A P, Zhizhin K Yu, Kuznetsov N T	Russian Journal of Inorganic Chemistry, 6, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	823
64	6022	журнал	Synthesis of 1,10-Disulfanyl-closo-Decaborate Anion and Its Disulfonium Tetraacetylamide Derivative	10.1134/s0036023624600059	Baltovskaya D V, Golubev A V, Kuznetsov N T, Zhizhin K Yu, Bykov A Yu, Kubasov A S	Russian Journal of Inorganic Chemistry, 5, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	655
65	6023	журнал	Reduction of Triple Bond in [B12H11NCR]− Anions by Lithium Aluminum Hydride: A Novel Approach to the Synthesis of N-Monoalkylammonio-Substituted closo-Dodecaborates	10.3390/inorganics12010002	Kuznetsov Nikolay T, Nelyubin Alexey V, Zhdanov Andrey P, Kubasov Alexey S, Novikov Alexander S, Klyukin Ilya N, Bykov Alexander Yu, Zhizhin Konstantin Yu, Selivanov Nikita A, Neumolotov Nikolay K	Inorganics, 1, 2023	2304-6740	РИНЦ, Белый список	<jats:p>By reacting nitrilium derivative of the closo-dodecaborate anion, Bu4N[B12H11N≡CR] (where R = Me, Et, nPr, iPr, p-tolyl), with lithium aluminum hydride (LiAlH4), N-alkylammonium derivatives of the closo-dodecaborate anion, and Bu4N[B12H11NH2CH2R], were obtained. The reduction reaction procedure was optimized, achieving yields close to quantitative (90–95%). The structure of the compound Bu4N[B12H11NH2CH2CH3] was determined using X-ray structural analysis. It was found that substituting lithium aluminum hydride (LiAlH4) with sodium borohydride (NaBH4) leads to the same products but only upon heating, while the reaction with LiAlH4 proceeds at room temperature.</jats:p>	Да	7
66	6024	журнал	Hydrothermal transformations of hydrated cerium(IV) fluoride in NaOH or HF media. The first crystal structure in the cerium tetrafluoride hydrate family	10.1016/j.jfluchem.2024.110337	Il'in Evgeny, Parshakov Artemy, Churakov Andrei, Iskhakova Ludmila, Filippova Arina, Kottsov Sergei, Demina Liudmila, Goeva Lyudmila, Simonenko Nikolai, Privalov Victor, Baranchikov Alexander, Ivanov Vladimir	Journal of Fluorine Chemistry, 2024	0022-1139	РИНЦ, Белый список	Не указано	Да	2
67	6027	журнал	Uncommon Phosphonylation of Pyrazine-2,3-dicarbonitrile Derivatives via	10.1002/ajoc.202400448	Chufarin Aleksey E, Wang Hailong, Stuzhin Pavel A, Grigoriev Mikhail S, Kirakosyan Gayane A, Tsivadze	Asian Journal of Organic Chemistry, 1, 2024	2193-5807	Белый список	<jats:title>Abstract</jats:title><jats:p>A direct phosphonylation of the C(sp<jats:sup>2</jats:sup>)−CN bond under mild catalytic and non-catalytic reaction conditions is disclosed. Pyrazine-2,3-dicarbonitriles are readily	Да	7

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1	1A	2	3	4	5	6	7	8	9	10	11
			C(sp²)−CN Bond Cleavage		Aslan Yu, Enakieva Yulia Yu, Volostnykh Marina V, Gorbunova Yulia G				coupled with HPO(OEt)<jats:sub>2</jats:sub> to produce the corresponding dialkoxyphosphoryl-substituted pyrazines. The phosphonylation reaction occurs in the presence of a base (Et<jats:sub>3</jats:sub>N, Cs<jats:sub>2</jats:sub>CO<jats:sub>3</jats:sub>) as nucleophilic substitution of the CN groups. The yield of target diphosphonates depends on the nature of substituents in the 5,6-positions of the pyrazine ring: it exceeds 90 % for di-5,6-aryl-substituted pyrazines and is significantly lower when electron-donating alkyl (<jats:italic>n</jats:italic>-propyl) groups are attached to the 5,6-positions. It should be noted that for pyrazine-2,3-dicarbonitriles bearing vicinal 4-bromophenyl groups, the nucleophilic phosphonylation leading to C−CN/P−H coupling in the pyrazine ring is predominant over Pd-catalyzed Hirao's C−Br/P−H coupling reaction in phenyl rings. Detailed structural characterization, both in solution by means of <jats:sup>1</jats:sup>H, <jats:sup>13</jats:sup>C and <jats:sup>31</jats:sup>P NMR spectroscopy and in the solid state by single crystal X-ray diffraction, of a series of newly synthesized pyrazine phosphonates is reported.</jats:p>		
68	6028	журнал	Study of the Reversible Hawthorne Rearrangement between Isomeric Forms of the Octadecahydroeicosaborate Anion Using Dynamic 11B NMR Spectroscopy	10.1134/s0036023624600345	Privalov V I, Dontsova O S, Matveev E Yu, Eshtukova-Shcheglova E A, Nichugovskii A I, Golubev A V, Avdeeva V V, Malinina E A, Zhizhin K Yu, Kuznetsov N T	Russian Journal of Inorganic Chemistry, 6, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	826
69	6030	журнал	Rhenium(V) Tris(pyrazolyl)borate Thiolate Complex with the Disulfide Bridging Ligand: Synthesis and Structure	10.1134/s1070328423601152	Shapovalov S S, Skabitskii I V	Russian Journal of Coordination Chemistry/Koordinatsionnaya Khimiya, 2, 2024	1070-3284	РИНЦ, Белый список	Не указано	Да	161
70	6032	журнал	Thermolysis of the NaCu[B10H10]/NaOH·SiO2 system: encapsulation of in situ formed Cu3Si into a sodium boron silicate matrix	10.1007/s11696-024-03490-7	Malinina Elena A, Myshletsov Ivan I, Buzanov Grigorii A, Kozerozhets Irina V, Nikiforova Svetlana E, Avdeeva Varvara V, Kuznetsov Nikolay T	Chemical Papers, 9, 2024	2585-7290	РИНЦ, Белый список	Не указано	Да	5704
71	6033	журнал	Specific features of	10.1016/j.ic	Shamsiev Ravshan S, Rukk	Inorganica Chimica Acta, 2024	0020-1693	РИНЦ, Белый список	Не указано	Да	8

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
			Copper(II) chloride complexes with Caffeine: Synthesis, Structure, DFT calculations	a.2024.122007	Nataliya S, Buzanov Grigorii A, Kabernik Nikita S, Kuzmina Lyudmila G, Efimov Nikolay N, Lazarenko Vladimir A, Ivanova Taisiya V, Kozhukhova Evgeniya I, Belus Svetlana K, Retivov Vasilii M, Ivanova Alexandra I						
72	6034	журнал	Coordination Compounds of Cobalt(II) Nitrate and Perchlorate with Acetamide and Carbamide: Precursors for the Synthesis of Catalytically Active Tricobalt Tetraoxide	10.1134/s1070328424600049	Buzanov G A, Retivov V M, Rodriguez Pineda R A, Karavaev I A, Savinkina E V, Kubasov A S, Volchkova E V, Pastukhova Zh Yu, Bruk L G	Russian Journal of Coordination Chemistry/Koordinatsionnaya Khimiya, 4, 2024	1070-3284	РИНЦ, Белый список	Не указано	Да	280
73	6036	журнал	Syntheses, Crystal Structures, and Dipole Moments of Zinc Halide Complexes with Methylurea and Dimethylacetamide	10.1134/s0036023624602502	Buzanov G A, Grigoriev M S, Davydova M N, Gerusova A E, Savinkina E V	Russian Journal of Inorganic Chemistry, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	1859
74	6037	журнал	Yttrium(III) Complexes with Carbamide and Dimethylacetamide: Composition, Structure, and Thermal Decomposition	10.1134/s0036023624602289	Polukhin M S, Retivov V M, Kubasov A S, Bettels E K, Buzanov G A, Savinkina E V, Karavaev I A	Russian Journal of Inorganic Chemistry, 10, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	1517
75	6039	журнал	One-Pot Synthesis of Heptanuclear Gold Cluster [Au7(Ph3P)7@C]2+ in the Presence of the Macropolyhedral Octadecahydroeicosaborate Anion [B20H18]2–	10.1134/s0036023624602605	Kuznetsov N T, Avdeeva V V, Vologzhanina A V, Novikov V V, Buzanov G A, Malinina E A	Russian Journal of Inorganic Chemistry, 13, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	1961
76	6042	журнал	Luminescence properties of complex fluoride Na3CaMg3AlF14 phosphors doped with cerium and europium ions	10.1016/j.jlumin.2024.120646	Kondratyuk Valentin A, Brekhovskikh Maria N, Khaidukov Nicholas M, Makhov Vladimir N, Kirikova Nataliia Yu	Journal of Luminescence, 2024	0022-2313	РИНЦ, Белый список	Не указано	Да	8
77		журнал					0937-9347	Белый список	Не указано	Да	1135

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1	1A	2	3	4	5	6	7	8	9	10	11
	6044		Synthesis of Yb3+-Doped Cs2NaScF6 Single Crystals and EPR Spectroscopy of the Dopant Yb3+ ion	10.1007/s00723-024-01656-w	Latypov V A, Falin M L, Khaidukov N M	Applied Magnetic Resonance, 9, 2024					
78	6046	журнал	Introducing Cationic Selenium-Containing Triazapentadiene Ligand Framework: Synthesis, Coordination Chemistry, and Antifungal Activity	10.1021/acs.inorgchem.4c01188	Kritchenkov Andreii S, Nenajdenko Valentine G, Gomila Rosa M, Frontera Antonio, Tskhovrebov Alexander G, Chusova Olga G, Kubasov Alexey S, Khrustalev Victor N, Sapronov Alexander A	Inorganic Chemistry, 30, 2024	1520-510X	РИНЦ, Белый список	Не указано	Да	13936
79	6047	журнал	Boron cluster anions [B H]2– (n = 10, 12) in design of polynuclear silver(I) and copper(II) complexes	10.1016/j.poly.2023.116710	Malinina Elena A, Kubasov Alexey S, Nikiforova Svetlana E, Goeva Lyudmila V, Avdeeva Varvara V, Kuznetsov Nikolay T	Polyhedron, 2024	0277-5387	РИНЦ, Белый список	Не указано	Да	7
80	6048	журнал	Sulfonium Derivatives of the closo-Decaborate Anion with Carbonyl Groups	10.1134/s0036023624602964	Kubasov A S, Golubev A V, Stepanova O M, Zhizhin K Yu, Kuznetsov N T	Russian Journal of Inorganic Chemistry, 14, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	2072
81	6052	журнал	Silver(I) Complexes with Azaheterocyclic Ligands (bipy, phen) and Perchloro-closo-Borate Anions [BnCln]2– (n = 10, 12)	10.1134/s0036023624602885	Kubasov A S, Avdeeva V V, Kuznetsov N T, Malinina E A, Nikiforova S E, Golubev A V	Russian Journal of Inorganic Chemistry, 14, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	2053
82	6054	журнал	Silver(I) complexation with N-donor heterocyclic ligands in the presence of boron cluster anions: Synthesis and coordination features	10.1016/j.poly.2024.117209	Mostovaya Alena S, Khan Nadezhda A, Nikiforova Svetlana E, Kubasov Alexey S, Burlov Anatolii S, Divaeva Lyudmila N, Goeva Lyudmila V, Avdeeva Varvara V, Malinina Elena A, Kuznetsov Nikolay T	Polyhedron, 2024	0277-5387	РИНЦ, Белый список	Не указано	Да	7
83	6055	журнал	Synthesis and Structures of Mixed-Ligand Lead(II) Complexes with Decahydro-closo-decaborate Anion and Azheterocyclic Ligands	10.1134/s1070328424600517	Kuznetsov N T, Avdeeva V V, Kubasov A S, Kozerozhets I V, Nikiforova S E, Malinina E A	Russian Journal of Coordination Chemistry/Koordinatsionnaya Khimiya, 8, 2024	1070-3284	РИНЦ, Белый список	Не указано	Да	588
84	6057	журнал	Structural variety of	10.1016/j.p	Kubasov Alexey S, Goeva	Polyhedron, 2024	0277-5387	РИНЦ, Белый список	Не указано	Да	9

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
			benzimidazole coordinated zinc(II) and cadmium(II) complexes with closo-decaborate anion	oly.2024.117012	Lyudmila V, Yarzhemsky Victor G, Malinina Elena A, Nikiforova Svetlana E, Kuznetsov Nikolay T						
85	6058	журнал	Unusual condensation of acetone giving η3-allyl ligand in the [Pd(η3-C6H9O)(μ-Cl)]2 complex	10.1016/j.mencom.2024.09.040	Demina Ludmila I, Efimenko Inessa A, Kubasov Alexey S, Ivanova Nina A, Erofeeva Olga S	Mendeleev Communications, 5, 2024	1364-551X	РИНЦ, Белый список	Не указано	Да	750
86	6059	журнал	Diverse Cyclization Pathways Between Nitriles with Active α-Methylene Group and Ambiphilic 2-Pyridylselenyl Reagents Enabled by Reversible Covalent Bonding	10.3390/ijms252312798	Artemjev Alexey A, Sapronov Alexander A, Kubasov Alexey S, Peregudov Alexander S, Novikov Alexander S, Egorov Anton R, Khrustalev Victor N, Tskhovrebov Alexander G, Borisov Alexander V, Matsulevich Zhanna V, Kritchenkov Andreii S, Frontera Antonio, Gomila Rosa M, Nenajdenko Valentine G, Shikhaliyev Namiq G	International Journal of Molecular Sciences, 23, 2024	1422-0067	РИНЦ, Белый список	<jats:p>Herein, we describe a novel coupling between ambiphilic 2-pyridylselenyl reagents and nitriles featuring an active α-methylene group. Depending on the solvent employed, this reaction can yield two distinct types of cationic pyridinium-fused selenium-containing heterocycles, 1,3-selenazolium or 1,2,4-selenadiazolium salts, in high yields. This is in contrast to what we observed before for other nitriles. Notably, the formation of selenadiazolium is reversible, gradually converting into the more thermodynamically stable selenazolium product in solution. Our findings reveal, for the first time, the reversible nature of 1,3-dipolar cyclization between the CN triple bond and 2-pyridylselenyl reagents. Nitrile substitution experiments in the adducts confirmed the dynamic nature of this cyclization, indicating potential applications in dynamic covalent chemistry. DFT calculations revealed the mechanistic pathways for new cyclizations, suggesting a concerted [3 + 2] cycloaddition for the formation of selenadiazolium rings and a stepwise mechanism involving a ketenimine intermediate for the formation of selenazolium rings. Natural bond orbital analysis confirmed the involvement of σ-hole interactions and lone pair to σ* electron donation in these processes. Additionally, theoretical investigations of σ-hole interactions were performed, focusing on the selenium-centered contacts within the new compounds.</jats:p>	Да	13
87	6061	журнал	Halogen Bond-Assisted Supramolecular Dimerization of Pyridinium-Fused 1,2,4-Selenadiazoles via Four-Center Se2N2 Chalcogen Bonding	10.3390/ijms25073972	Tskhovrebov Alexander G, Dukhnovsky Evgeny A, Novikov Alexander S, Kubasov Alexey S, Borisov Alexander V, Sikaona Nkumbu Donovan, Kirichuk Anatoly A, Khrustalev Victor N, Kritchenkov Andreii S	International Journal of Molecular Sciences, 7, 2024	1422-0067	РИНЦ, Белый список	<jats:p>The synthesis and structural characterization of α-haloalkyl-substituted pyridinium-fused 1,2,4-selenadiazoles with various counterions is reported herein, demonstrating a strategy for directed supramolecular dimerization in the solid state. The compounds were obtained through a recently discovered 1,3-dipolar cycloaddition reaction between nitriles and bifunctional 2-pyridylselenyl reagents, and their	Да	13

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1	1A	2	3	4	5	6	7	8	9	10	11
									structures were confirmed by the X-ray crystallography. α-Haloalkyl-substituted pyridinium-fused 1,2,4-selenadiazoles exclusively formed supramolecular dimers via four-center Se···N chalcogen bonding, supported by additional halogen bonding involving α-haloalkyl substituents. The introduction of halogens at the α-position of the substituent R in the selenadiazole core proved effective in promoting supramolecular dimerization, which was unaffected by variation of counterions. Additionally, the impact of cocrystallization with a classical halogen bond donor C6F3I3 on the supramolecular assembly was investigated. Non-covalent interactions were studied using density functional theory calculations and topological analysis of the electron density distribution, which indicated that all ChB, XB and HB interactions are purely non-covalent and attractive in nature. This study underscores the potential of halogen and chalcogen bonding in directing the self-assembly of functional supramolecular materials employing 1,2,4-selenadiazoles derived from recently discovered cycloaddition between nitriles and bifunctional 2-pyridylselenyl reagents.</jats:p>		
88	6066	журнал	Key features of perovskite solar cells operando stabilization with ionic liquid choline cinnamate	10.1016/j.mencom.2024.09.011	Nemygina Elizaveta M, Udalova Natalia N, Marchenko Ekaterina I, Moskalenko Alexandra K, Goodilin Eugene A, Tarasov Alexey B	Mendeleev Communications, 5, 2024	1364-551X	РИНЦ, Белый список	Не указано	Да	663
89	6068	журнал	Synergistic effect of ionic liquid and methylammonium chloride in crystallization of hybrid haloplumbate for perovskite solar cells	10.1016/j.mencom.2024.10.023	Udalova Natalia N, Petrov Andrey A, Nemygina Elizaveta M, Plukchi Karina R, Goodilin Eugene A, Tarasov Alexey B	Mendeleev Communications, 6, 2024	1364-551X	РИНЦ, Белый список	Не указано	Да	843
90	6070	журнал	Theoretical assessment of chloride ion influence on grain growth of hybrid perovskites	10.1016/j.mencom.2024.04.004	Marchenko Ekaterina I, Belich Nikolay A, Iosimovska Anastasia V, Misyutin Vladimir A, Goodilin Eugene A, Tarasov Alexey B	Mendeleev Communications, 3, 2024	1364-551X	РИНЦ, Белый список	Не указано	Да	323
91	6071	журнал	Bright luminescence of new low-melting copper(<scp>i</scp>) chlorides with compact organic cations	10.1039/d4tc02152e	Belikova Daria E, Fateev Sergey A, Khrustalev Victor N, Kozhevnikova Vladislava, Ordinartsev Artem A, Dzuban Alexander V, Goodilin Eugene A, Tarasov Alexey B	Journal of Materials Chemistry C, 34, 2024	2050-7534	РИНЦ, Белый список	<jats:p>In this paper, we comprehensively studied two ACl/CuCl systems with dimethylammonium (DMA<jats:sup>+</jats:sup>) and acetamidinium (Ac<jats:sup>+</jats:sup>) organic cations and proved the formation of five new crystalline phases: DMACu<jats:sub>2</jats:sub>Cl<jats:sub>3</jats:sub>,	Да	13543

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1	1A	2	3	4	5	6	7	8	9	10	11
									DMACuCl<jats:sub>2</jats:sub>, DMA<jats:sub>4</jats:sub>[Cu<jats:sub>2</jats:sub>Cl<jats:sub>6</jats:sub>], DMA<jats:sub>3</jats:sub>CuCl<jats:sub>4</jats:sub>, and AcCuCl<jats:sub>2</jats:sub>.</jats:p>		
92	6076	журнал	Gas sensing properties of AACVD-derived ZnO/Co3O4 bilayer thin film nanocomposites	10.1016/j.ceramint.2023.12.194	Gorobtsov Philipp Yu, Kuznetsov Nikolay T, Simonenko Elizaveta P, Simonenko Nikolay P, Mokrushin Artem S, Gorban Yulia M, Averin Aleksey A	Ceramics International, 6, 2024	0272-8842	РИНЦ, Белый список	Не указано	Да	8788
93	6085	журнал	Synthesis of Pd-decorated ZnO nanocomposites with improved gas-sensitive properties for acetone detection	10.1016/j.jallcom.2024.176856	Simonenko Elizaveta P, Vakhitov Iskander R, Nikitenko Mikhail S, Khudonogov Danila Yu, Vershinina Olesya V, Mokrushin Artem S, Nagornov Ilya A, Gorban Yulia M, Dmitrieva Sofia A, Simonenko Tatiana L, Simonenko Nikolay P, Doronina Marina S	Journal of Alloys and Compounds, 2024	0925-8388	РИНЦ, Белый список	Не указано	Да	12
94	6089	журнал	Chemical Precipitation of BaSn(OH)6 and Its Thermal Destruction in the Process of BaSnO3 Preparation	10.1134/s0036023624602940	Simonenko E P, Rebrov R A, Simonenko N P, Simonenko T L	Russian Journal of Inorganic Chemistry, 12, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	7
95	6091	журнал	Influence of the Composition of the MF–HCl (M = Li+, Na+, $${\text{NH}}_{4}^{+}$$) Etching System on the Gas-Sensing Properties of Ti3C2Tx/TiOx Nanocomposites	10.1134/s0036023624600837	Simonenko E P, Mokrushin A S, Nagornov I A, Sapronova V M, Gorban Yu M, Gorobtsov Ph Yu, Simonenko T L, Simonenko N P, Kuznetsov N T	Russian Journal of Inorganic Chemistry, 4, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	594
96	6092	журнал	Synthesis of Nb2AlC MAX Phase in KBr Protective Melt	10.1134/s0036023624602794	Nagornov I A, Kuznetsov N T, Simonenko E P, Simonenko N P, Mokrushin A S, Gorobtsov Ph Y, Sapronova V M, Barsukovsky K A	Russian Journal of Inorganic Chemistry, 12, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	9
97	6093	журнал	Synthesis and comparative study of (NHC_F)Pd	10.1039/d4dt01304b	Tarabrin Ignatii R, Ananikov Valentine P, Prima Darya O, Minyaev Mikhail E, Son Alexandra G, Pankov Roman O	Dalton Transactions, 30, 2024	1477-9234	РИНЦ, Белый список	<jats:p>Nickel and palladium NHC complexes with fluorine substituents have been synthesized. Their electronic parameters, including σ-donation and π-acceptance, were	Да	12515

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1	1A	2	3	4	5	6	7	8	9	10	11
			Cl₂Py and (NHC_F)Ni(Cp)Cl complexes: investigation of the electronic properties of NHC ligands and complex characteristics						evaluated, considering the position and number of substituents.</jats:p>		
98	6095	журнал	Synthesis, Structures, and Optical Properties of Semiconductor Perovskite Nanoparticles CsBX3 (B = Pb, Mn; X = Br, Cl)	10.1134/s0036023624600928	Kozyukhin S A, Gushchina V A, Son A G, Egorova A A, Arkhipenko A A, Teplonogova M A, Efimov N N	Russian Journal of Inorganic Chemistry, 6, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	947
99	6097	журнал	Low-Temperature Synthesis of Highly Dispersed Calcium Aluminate	10.1134/s0036023624601077	Voroshilov I L, Kozlova L O, Kozerozhets I V, Popova A S, Son A G, Ioni Yu V	Russian Journal of Inorganic Chemistry, 8, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	1139
100	6098	журнал	Синтез GeO2-аэрогелей, легированных празеодимом, методом пропитки	10.34984/scftp.2023.19.2.004	Веселова В О, Котцов С Ю, Сон А Г, Гайтко О М, Хвощевская Д А, Голодухина С В	СВЕРХКРИТИЧЕСКИЕ ФЛЮИДЫ: ТЕОРИЯ И ПРАКТИКА, 2(2), 2024	1992-8130	РИНЦ, Белый список	<jats:p>Предложена простая в исполнении методика получения легированных GeO2-аэрогелей. На начальном этапе получали гель состава (NH4)3H(Ge7O16)(H2O)x путем растворения диоксида германия в водном растворе аммиака с pH 8,2. Введение ионов допанта осуществляли пропиткой гидрогелей раствором нитрата празеодима в диметилсульфоксиде (ДМСО). Были определены оптимальные условия синтеза, позволяющие достичь равномерного распределение иона-допанта в матрице. Соотношение Pr/Ge в полученных аэрогелях составляло 0,1. Образцы аэрогелей были подробно охарактеризованы методами ИК, ИСП-АЭС, низкотемпературной адсорбции азота и др. Установлено влияние празеодима на люминесцентные характеристики GeO2-аэрогелей при возбуждении излучением с длиной волны 240, 255 и 390 нм.</jats:p><jats:p>An easy-to-implement technique for obtaining REE-doped GeO2 aerogels is proposed. Optimal synthesis conditions have been determined to achieve a uniform distribution of the ion-dopant in the matrix. The effect of praseodymium on the luminescent characteristics of GeO2 aerogels when excited by radiation with wavelengths of 240, 255 and 390 nm has been established.</jats:p>	Да	56
101	6100	журнал	Vaporization Thermodynamics of the Ga2O3-SnO2-ZnO System	10.1007/s11669-024-01145-4	Gribchenkova Nadezhda A, Smirnov Andrey S	Journal of Phase Equilibria and Diffusion, 5, 2024	1547-7037	РИНЦ, Белый список	Не указано	Да	878

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
102	6102	журнал	Side Interactions in High-Temperature Mass Spectrometric Studies of Metal Oxides	10.1134/s0036024424702832	Gribchenkova N A, Smirnov A S, Alikhanyan A S	Russian Journal of Physical Chemistry A, 14, 2024	0036-0244	РИНЦ, Белый список	Не указано	Да	3314
103	6103	журнал	High-Temperature Mass Spectrometric Study of the WO3–ZnO System: Enthalpy of Reactions Involving Nonstoichiometric Phases	10.1134/s0036024424702923	Smirnov A S, Alikhanyan A S, Gribchenkova N A	Russian Journal of Physical Chemistry A, 14, 2024	0036-0244	РИНЦ, Белый список	Не указано	Да	3383
104	6105	журнал	Cobalt(II) Paddle-Wheel Complex with 3,5-Di(tert-butyl)-4-hydroxybenzoate Bridges: DFT and ab initio Calculations, Magnetic Dilution, and Magnetic Properties	10.3390/cryst14010076	Eremenko Igor L, Astaf'eva Tatiana V, Nikolaevskii Stanislav A, Egorov Evgeniy N, Nikiforova Marina E, Matiukhina Anna K, Yambulatov Dmitriy S, Melnikov Stanislav N, Bogomyakov Artem S, Zorina-Tikhonova Ekaterina N, Kiskin Mikhail A, Veber Sergey L, Efimov Nikolay N, Kolchin Aleksandr V, Shmelev Maxim A	Crystals, 1, 2024	2073-4352	РИНЦ, Белый список	<jats:p>A new binuclear "paddle-wheel" complex, [Co2(bhbz)4(EtOH)2]·4EtOH (1, Hbhbz-3,5-di(tert-butyl)-4-hydroxybenzoic acid); an isostructural zinc complex (2); a and magnetically diluted sample of [Zn1.93Co0.07(bhbz)4(EtOH)2]·4EtOH (3) were obtained. Molecular structures of 1 and 2 were determined by single-crystal X-ray diffraction. DFT calculations for 1 indicate strong Co-Co antiferromagnetic exchange interactions in the binuclear fragment. It was shown that when one paramagnetic ion in the binuclear molecule is replaced by a diamagnetic zinc(II) ion, the remaining cobalt(II) ion can be considered as an isolated center with magnetic anisotropy, the parameters of which are determined by ab initio calculations. Magnetic properties for samples 1 and 3 were investigated and analyzed in detail.</jats:p>	Да	14
105	6106	журнал	Octahedral 3d-metal complexes of 4,6-di-tert-butyl-1,2-benzoquinone-2-monooxime: Synthesis, structure, and magnetic properties	10.1016/j.poly.2024.116876	Efimov Nikolay N, Kiskin Mikhail A, Lazarenko Vladimir A, Lyubchenko Sergey N, Yu. Shcherbakova Elena, Krotkii Ilya I, Knyazev Pavel A, Shcherbakov Igor N, Kubrin Stanislav P, Borodkin Gennady S	Polyhedron, 2024	0277-5387	РИНЦ, Белый список	Не указано	Да	11
106	6108	журнал	Pt5Mn2Si, the first platinum-rich ternary intermetallic of the Rh5Ge3 structure type: Synthesis, crystal and electronic structure, and magnetic properties	10.1016/j.intermet.2023.108130	Lyssenko Konstantin A, Makhaneva Anastasiya Yu, Zakharova Elena Yu, Nesterenko Sergey N, Kazakov Sergey M, Efimov Nikolay N, Kuznetsov Alexey N	Intermetallics, 2024	0966-9795	РИНЦ, Белый список	Не указано	Да	7
107	6110	журнал	Field induced slow	10.1039/d3dt04123a	Krotkii Ilya I, Kazachkova	Dalton Transactions, 16, 2024	1477-9234	РИНЦ, Белый список	<jats:p>First example of field-induced slow magnetization	Да	6863

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1	1A	2	3	4	5	6	7	8	9	10	11
			magnetic relaxation in a linear homotrinuclear manganese heterospin coordination compound with S = 7/2 ground state and intriguing spin density distribution		Victoria I, Lyubchenko Sergey N, Efimov Nikolay N, Tsaturyan Arshak A, Lazarenko Vladimir A, Shcherbakov Igor N				relaxation in the homotrinuclear linear heterospin manganese coordination compound with <jats:italic>S</jats:italic> = 7/2 ground state, based on the bidentate 3,5-di-<jats:italic>tert</jats:italic>-butyl-1,2-benzoquinone-1-monooxime ligand is reported.</jats:p>		
108	6111	журнал	Dynamic Magnetic Susceptibility Method in Studies of Coordination Compounds	10.1134/s1070328424600141	Babeshkin K A, Efimov N N, Rotov A V	Russian Journal of Coordination Chemistry/Koordinatsionnaya Khimiya, 6, 2024	1070-3284	РИНЦ, Белый список	<jats:sec> <jats:title>Abstract</jats:title> <jats:p>The measurement of the dynamic magnetic susceptibility is a universal method, which is used for the evaluation of magnetic properties of single molecule magnets by scientists all over the world. An information in the Russian scientific literature that can be useful for practical mastering of this method is presently insufficient. To fill this gap, in this work we present a detailed procedure of a magnetochemical experiment for observing slow magnetic relaxation in coordination compounds of 3<jats:italic>d</jats:italic>- and 4<jats:italic>f</jats:italic>-element ions and the complete characterization of the dynamics of the magnetic behavior. Special attention is given to usually omitted but important details related to all stages of studying the magnetic relaxation dynamics. The main variants of sample preparation are described, the logics of the construction of a measuring sequence and the procedure of experimental data processing are discussed, and advantages and drawbacks of some programs of the calculation of magnetic relaxation dynamics data are considered. The main concepts and equations used in experimental data analysis are presented, and the primary conclusions that can be made from the obtained results are proposed.</jats:p> </jats:sec>	Да	372
109	6114	журнал	Ternary intermetallic compounds R23Ru7In4 (R Ce, Pr): Synthesis, crystal structure and physical properties	10.1016/j.jssc.2024.124813	Efimov N, Kurenbaeva Zh, Pavlova V, Sedelnikov D, Murashova E	Journal of Solid State Chemistry, 2024	1095-726X	РИНЦ, Белый список	Не указано	Да	8
110	6115	журнал	Inductive detection of temperature-induced magnetization dynamics of molecular spin systems	10.1063/5.0211936	Babeshkin Konstantin A, Veber Sergey L, Fedin Matvey V, Eremenko Igor L, Kiskin Mikhail A, Efimov Nikolay N, Melnikov Anatoly R, Ivanov Mikhail Yu, Samsonenko	Journal of Chemical Physics, 22, 2024	1089-7690	РИНЦ, Белый список	<jats:p>The development and technological applications of molecular spin systems require versatile experimental techniques to characterize and control their static and dynamic magnetic properties. In the latter case, bulk spectroscopic and magnetometric techniques, such as AC magnetometry and pulsed electron paramagnetic resonance,	Да	11

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1	1A	2	3	4	5	6	7	8	9	10	11
					Arkady A, Getmanov Yaroslav V, Nikovskiy Igor A, Matiukhina Anna K, Zorina-Tikhonova Ekaterina N, Voronina Julia K, Goloveshkin Alexander S				are usually employed, showing high sensitivity, wide dynamic range, and flexibility. They are based on creating a nonequilibrium state either by changing the magnetic field or by applying resonant microwave radiation. Another possible source of perturbation is a laser pulse that rapidly heats the sample. This approach has proven to be one of the most useful techniques for studying the kinetics and mechanism of chemical and biochemical reactions. Inspired by these works, we propose an inductive detection of temperature-induced magnetization dynamics as applied to the study of molecular spin systems and describe the general design and construction of a particular induction probehead, taking into account the constraints imposed by the cryostat and electromagnet. To evaluate the performance, several coordination compounds of VO2+, Co2+, and Dy3+ were investigated using low-energy pulses of a terahertz free electron laser of the Novosibirsk free electron laser facility as a heat source. All measured magnetization dynamics were qualitatively or quantitatively described using a proposed basic theoretical model and compared with the data obtained by alternating current magnetometry. Based on the results of the research, the possible scope of applications of inductive detection and its advantages and disadvantages in comparison with standard methods are discussed.</jats:p>		
111	6116	журнал	Investigation of slow magnetic relaxation in a series of 1D polymeric cyclobutane-1,1-dicarboxylates based on Ln^{III}VIV2 units (Ln^{III} = Tb, Dy, Ho, Er, Tm, Yb): rare examples of V^{IV}-4f single-molecule magnets	10.1039/d4dt01779j	Fedin Matvey V, Kiskin Mikhail A, Eremenko Igor L, Bazhina Evgeniya S, Shmelev Maxim A, Gogoleva Natalia V, Babeshkin Konstantin A, Kurganskii Ivan V, Efimov Nikolay N	Dalton Transactions, 45, 2024	1477-9234	РИНЦ, Белый список	<jats:p>New rare Ln<jats:sup>III</jats:sup>–V<jats:sup>IV</jats:sup> single-molecule magnets (Ln = Dy, Er, Yb) were synthesized and characterized. For Dy<jats:sup>III</jats:sup>–V<jats:sup>IV</jats:sup> and Yb<jats:sup>III</jats:sup>–V<jats:sup>IV</jats:sup> complexes studied by EPR spectroscopy, the phenomenon of phase relaxation enhancement (PRE) was observed.</jats:p>	Да	18171
112	6118	журнал	Magnetic properties of Co1-xFexCr2S4 (x = 0–0.4) solid solutions	10.1016/j.physb.2024.416361	Busheva E V, Vasilev P N, Denishchenko A D, Golodukhina S V, Efimov N N, Shabunina G G	Physica B: Condensed Matter, 2024	0921-4526	РИНЦ, Белый список	Не указано	Да	6
113	6119	журнал	Imidazolium Salts with Heterometallic Complex Anions [Co2Li2(Piv)8]2–:	10.1134/s1070328424600256	Vasilyev P N, Voronina J K, Shmelev M A, Efimov N N, Nikolaevskii S A, Eremenko I L, Kiskin M A, Rubtsova I K	Russian Journal of Coordination Chemistry/Koordinat	1070-3284	РИНЦ, Белый список	Не указано	Да	253

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
			Synthesis, Structures, and Magnetic Properties			sionnaya Khimiya, 7, 2024					
114	6121	журнал	Lanthanide(<scp>iii</scp>) SMMs with cationic and anionic complex fragments formed by a Schiff base: structure, luminescence, magnetic properties and ab initio calculations	10.1039/d4dt01284d	Babeshkin Konstantin, Gusev Alexey, Nemec Ivan, Herchel Radovan, Baluda Yuriy, Efimov Nikolay, Kiskin Mikhail, Linert Wolfgang	Dalton Transactions, 27, 2024	1477-9234	РИНЦ, Белый список	<jats:p>A new series of cation-anionic Ln(<jats:sc>iii</jats:sc>) complexes with luminescent single-molecule magnets are reported.</jats:p>	Да	11541
115	6122	журнал	Synthesis, structure, and photoluminescent properties of a mixed carboxylate pentafluorobenzoate–phenylacetate complex of terbium	10.1016/j.mencom.2024.06.005	Razgonyaeva Galina A, Gogoleva Natalia V, Shmelev Maxim A, Eremenko Igor L, Sidorov Alexey A, Taydakov Ilya V, Chistyakov Aleksandr S, Tsorieva Alisia V, Korshunov Vladislav M	Mendeleev Communications, 4, 2024	1364-551X	РИНЦ, Белый список	Не указано	Да	486
116	6124	журнал	Coordination Polymer Based on a Triangular Carboxylate Core {Fe(μ3-O)(μ-O2CR)6} and an Aliphatic Diamine	10.3390/molecules29092125	Gogoleva Natalia V, Eremenko Igor L, Kiskin Mikhail A, Yambulatov Dmitriy S, Novichihin Sergey V, Nikolaevskii Stanislav A, Bushuev Vladimir A	Molecules, 9, 2024	1420-3049	РИНЦ, Белый список	<jats:p>Interaction of the pre-organized complex of iron(II) trimethylacetate and 1,10-phenanthroline (phen) [Fe2(piv)4(phen)2] (1) (piv = (Me)3CCO2−)) with 1,6-diaminohexane (dahx) in anhydrous acetonitrile yielded a 1D coordination polymer [Fe3O(piv)6(dahx)1.5]n (2) and an organic salt of pivalic acid (H2dahx)(piv)2 (3). The structure of the obtained compounds was determined by single-crystal X-ray diffraction analysis. The phase purity of the complexes was determined by powder X-ray diffraction analysis. According to the single-crystal X-ray analysis, coordination polymer 2 is formed due to the binding of a triangular carboxylate core {Fe3(μ3-O)(μ-piv)6} with an aliphatic diamine ligand. Thermal behavior was investigated for compounds 1 and 2 in an argon atmosphere.</jats:p>	Да	2125
117	6125	журнал	Bimetallic Ba(II)-Cr(III) and trimetallic Ba(II)-Ln(III)-Cr(III) (Ln(III) = Gd, Tb, Dy, Ho, Er, Yb, Y) coordination polymers formed by Cr(III)-containing building blocks with cyclopropane-1,1-dicarboxylate anions	10.1016/j.poly.2024.117114	Kiskin Mikhail A, Alexandrov Eugeny V, Eremenko Igor L, Bazhina Evgeniya S, Shmelev Maxim A, Voronina Julia K, Babeshkin Konstantin A, Gogoleva Natalia V, Efimov Nikolay N	Polyhedron, 2024	0277-5387	РИНЦ, Белый список	Не указано	Да	12
118	6126	журнал	0D and 1D-dimensional	10.1016/j.ic	Zakharov Konstantin, Linert	Inorganica Chimica Acta, 2024	0020-1693	РИНЦ, Белый список	Не указано	Да	122077

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1	1A	2	3	4	5	6	7	8	9	10	11
			Cu(I)-based halides pyridyltriazoles basis: Synthesis, Structures, and photophysical properties	a.2024.122077	Wolfgang, Kiskin Mikhail, Zamnius Ekaterina, Gusev Alexey, Braga Elena						
119	6127	журнал	Синтез, строение и свойства 4-метил-N-[2-(пентафторфенилиминометил)фенил]метилбензолсульфамида и комплекса меди(II) на его основе	10.26902/jsc_id121603	Кискин М А, Ширяева А А, Мащенко С А, Власенко В Г, Бурлов А С, Николаевский С А	ЖУРНАЛ СТРУКТУРНОЙ ХИМИИ, 2, 2024	2542-0976	РИНЦ, Белый список	<jats:p>Новые азометиновое соединение 4-метил-N-[2-(пентафторфенилиминометил)фенил]метилбензолсульфамид и комплекс Cu(II) на его основе получены и охарактеризованы методами 1Н ЯМР, ИК-спектроскопии и элементного анализа. Кристаллическая структура азометина и его комплекса изучены методом рентгеновской монокристальной дифракции. По данным РСА установлено, что комплекс Cu(II) кристаллизуется в триклинной пространственной группе P–1, элементарная ячейка содержит две кристаллографически независимые моноядерные молекулы с близкой геометрией. Ионы меди в комплексе имеют искаженное тетраэдрическое окружение из четырех атомов азота, сформированное двумя бидентатно координированными азометиновыми лигандами. По данным магнетохимических измерений установлено, что комплекс Cu(II) является парамагнитным.</jats:p>	Да	263
120	6129	журнал	Zinc (II) complexes with Schiff bases obtained from N-[2-(cyclohexyliminomethyl)- or 2-(4-cyclohexylphenylimi nomethyl) phenyl]-4-methylbenzene sulfonamides and their application as highly luminescent blue emitters for OLEDs	10.1002/aoc.7375	Braga Elena V, Gusev Alexey N, Kolodina Alexandra A, Garnovskii Dmitrii A, Kiskin Mikhail A, Chaltsev Bogdan V, Demidov Oleg P, Vlasenko Valery G, Burlov Anatolii S, Koshchienko Yurii V, Linert Wolfgang, Nauhatsky Igor A	Applied Organometallic Chemistry, 3, 2024	1099-0739	РИНЦ, Белый список	<jats:p>Two new Schiff base compounds of <jats:italic>N</jats:italic>-{2-[(<jats:italic>E</jats:italic>)-cyclohexyliminomethyl]phenyl}-4-methylbenzenesulfonamide, <jats:italic>N</jats:italic>-{2-[(<jats:italic>E</jats:italic>)-(4-cyclohexylphenyl)iminomethyl]phenyl}-4-methylbenzenesulfonamide and their Zn(II) complexes have been synthesized and characterized by elemental analysis, FT-IR and UV–Vis spectra, and single crystal X-ray determination. In both complexes, Zn<jats:sup>2+</jats:sup> ions have a tetrahedral environment with two nitrogen atoms of the tosylamide groups and two nitrogen atoms of the imine fragment. Time-dependent density functional theory calculations have been performed on two zinc(II) complexes in order to assign their experimental UV–visible absorption bands. Zinc(II) complexes showed thermal stability up to 335–340*C under a nitrogen atmosphere by thermogravimetric analysis (TGA). The photoluminescent spectra show that both Zn(II) complexes in the solid state at room temperature emit blue luminescence with high emission quantum yields of 20% and 29%. The doped devices with	Да	14

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1	1A	2	3	4	5	6	7	8	9	10	11
									configurations of indium tin oxide (ITO)/poly(3,4-ethylenedioxythiophene):poly(styrene sulfonate) (PEDOT:PSS)/<jats:italic>N</jats:italic>,<jats:italic>N′</jats:italic>-Di(1-naphthyl)-<jats:italic>N</jats:italic>,<jats:italic>N′</jats:italic>-diphenyl-(1,1′-biphenyl)-4,4′-diamine (NPD)/4,4′-<jats:italic>N</jats:italic>,<jats:italic>N′</jats:italic> -dicarbazolebiphenyl (CBP):Zinc(II) complex (5%)/1,3,5-tris(<jats:italic>N</jats:italic>-phenylbenzimidazole-2-yl) benzene (TPBI)/LiF/Al have been fabricated and investigated. The doped device based on the complex with the cyclohexylphenyl substituent of the ligand showed the best electroluminescent characteristics with maximum brightness L<jats:sub>max</jats:sub> of 3415 cd/m<jats:sup>2</jats:sup>, maximum current efficiency of 2.8 cd/A, and power efficiency of 1.9 lm/W, while the doped device with emitter on the base of the complex with the cyclohexyl substituent showed slightly worse electroluminescence (EL) performance with L<jats:sub>max</jats:sub> of 2105 cd/m<jats:sup>2</jats:sup>, maximum current efficiency of 2.1 cd/A, and power efficiency of 1.6 lm/W.</jats:p>		
121	6130	журнал	Crystal Structure of Lanthanide Salts with 2,4-Dichlorophenoxyacetic Acid	10.1134/s1070328424600030x	Gusev A N, Kiskin M A, Konnik O V, Shul’gin V F	Russian Journal of Coordination Chemistry/Koordinatsionnaya Khimiya, 7, 2024	1070-3284	РИНЦ, Белый список	Не указано	Да	481
122	6131	журнал	Lanthanum and some lanthanides 2,4-dichlorophenoxyactetates: Structure and luminescent properties	10.1016/j.poly.2023.116749	Gusev Alexey N, Linert Wolfgang, Kiskin Mikhail A, Pevzner Natalya S, Shul'gin Victor F, Konnik Oleg V	Polyhedron, 2024	0277-5387	РИНЦ, Белый список	Не указано	Да	116749
123	6132	журнал	Multistimuli Luminescence and Anthelmintic Activity of Zn(II) Complexes Based on 1H-Benzimidazole-2-yl Hydrazone Ligands	10.3390/inorganics12090256	Linert Wolfgang, Kaleukh Alexandr, Gusev Alexey, Braga Elena, Baevsky Michail, Kiskin Mikhail	Inorganics, 9, 2024	2304-6740	РИНЦ, Белый список	<jats:p>Three novel Zn(II) mononuclear complexes with the general formula ZnL2Cl2 (L = 2-(4-R-phenylmethylene)benzimidazol-2-hydrazines; R-H (1), R-CH3 (2), and R-OCH3 (3)) were synthesized and fully characterized by various means. These complexes demonstrate excitation-dependent emission, which is detected by a change in the emission color (from blue to green) upon an increase in the excitation wavelength. Moreover complex 1 shows reversible mechanochromic luminescence behavior due to the reversible loss of solvated methanol molecules upon the intense grinding of crystals. In addition, 1 exhibits	Да	11

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1	1A	2	3	4	5	6	7	8	9	10	11
									vapochromic properties, which originate from the adsorption methanol vapor on the crystal surface. The strengthening of anthelmintic activity at the transition from free hydrazones to zinc-based complexes is shown.</jats:p>		
124	6134	журнал	[CuII-Hfur–imidazole] compounds as precursors of efficient hydrogenation and reductive alkylation catalysts in flow systems	10.1016/j.poly.2023.116744	Khoroshilov Andrey V, Lutsenko Irina A, Shtyrlin Valery G, Simonenko Tatiana L, Simonenko Nikolay P, Baravikov Dmitriy E, Dolgushin Fedor M, Mokhov Vladimir M, Panov Alexandr O, Razvalyaeva Anastasia V, Koshenskova Kseniya A, Nebykov Denis N, Fedin Matvey V, Eremenko Igor L, Ermolaev Anton V	Polyhedron, 2024	0277-5387	РИНЦ, Белый список	Не указано	Да	116755
125	6135	журнал	Synthesis, Structure, Biological Activity, and Luminescence Properties of a “Butterfly”-Type Silver Cluster with 3-Benzyl-4-phenyl-1,2,4-triazol-5-thiol	10.3390/molecules29010105	Lutsenko Irina A, Yambulatov Dmitriy S, Baravikov Dmitry E, Dolgushin Fedor M, Astaf’eva Tatiana V, Bekker Olga B, Nersisyan Lusik G, Samvelyan Melanya A, Ghochikyan Tariel V, Kiskin Mikhail A, Eremenko Igor L, Ivanov Vladimir K	Molecules, 1, 2023	1420-3049	РИНЦ, Белый список	<jats:p>A new silver(I) cluster [Ag8L4(Py)(Pype)]·4Py·11H2O (I) with 3-benzyl-4-phenyl-1,2,4-triazol-5-thiol (L) was synthesized via the direct reaction of AgNO3 and L in MeOH, followed by recrystallization from a pyridine–piperidine mixture. The compound I was isolated in a monocrystal form and its crystal structure was determined via single crystal X-ray diffraction. The complex forms a “butterfly” cluster with triazol-5-thioles. The purity of the silver complex and its stability in the solution was confirmed via NMR analysis. Excitation and emission of the free ligand and its silver complex were studied at room temperature for solid samples. The in vitro biological activity of the free ligand and its complex was studied in relation to the non-pathogenic Mycolicibacterium smegmatis strain. Complexation of the free ligand with silver increases the biological activity of the former by almost twenty times. For the newly obtained silver cluster, a bactericidal effect was established.</jats:p>	Да	112
126	6136	журнал	Evaluation of the anionic effect on the formation of biologically active {CuII-phenx; x = 1, 2, 3} fragments - Synthetic and structural variations, antimycobacterial and antiblastoma effects	10.1016/j.poly.2024.116852	Aliev Teimur M, Koshenskova Kseniya A, Baravikov Dmitrii E, Kayukova Lyudmila A, Ergalieva Elmira M, Nelyubina Yulia V, Nikiforova Marina E, Dolgushin Fedor M, Fedin Matvey V, Bekker Olga B, Shender Victoria O, Malyants Irina K, Titov Konstantin O, Eremenko Igor L, Lutsenko Irina A	Polyhedron, 2024	0277-5387	РИНЦ, Белый список	Не указано	Да	116861

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1	1A	2	3	4	5	6	7	8	9	10	11
127	6137	журнал	Research of the influence of anions in complexes [CuPhen(Hpz)₂X₂] (X = CF₃COO[−], Otf[−], Cl[−]) on the structure and bioactivity	10.1039/d3nj04903e	Eremenko Igor L, Uvarova Marina A, Lutsenko Irina A, Shmelev Maxim A, Nefedov Sergey E, Bekker Olga B, Lashkin Arseniy I, Shender Victoria O	New Journal of Chemistry, 2, 2024	1369-9261	РИНЦ, Белый список	<jats:p>The antiproliferative and antibacterial effects of copper(<jats:sc>ii</jats:sc>) complexes with the same ligand environment have been studied depending on the anion.</jats:p>	Да	721
128	6138	журнал	Targeted design of heterotrimetallic 1-D coordination polymers based on functionalized metallocenes featuring antibacterial activity	10.1039/d4nj03598d	Shmelev Maxim A, Bekker Olga B, Lutsenko Irina A, Eremenko Igor L, Nefedov Sergey E, Uvarova Marina A	New Journal of Chemistry, 40, 2024	1369-9261	РИНЦ, Белый список	<jats:p>Heterotrimetallic coordination polymers with metal core FeCu<jats:sub>2</jats:sub>, FeCu<jats:sub>2</jats:sub>Mn<jats:sub>4</jats:sub>, FeCo<jats:sub>2</jats:sub>Mn<jats:sub>4</jats:sub>, FeNi<jats:sub>2</jats:sub>Mn<jats:sub>4</jats:sub> using functionalized cymantrene and ferrocene are synthesized and their antibacterial activity has been studied.</jats:p>	Да	17394
129	6140	журнал	Ways of enhancement of biological efficiency of copper(ii) and zinc(ii) complexes: synthetic and structural aspects, thermal properties, and antimycobacterial activity	10.1007/s11172-024-4299-2	Eremenko I L, Bekker O B, Khoroshilov A V, Dolgushin F M, Razvorotneva L S, Baravikov D E, Koshenskova K A, Lutsenko I A	Russian Chemical Bulletin, 6, 2024	1573-9171	РИНЦ, Белый список	Не указано	Да	1827
130	6145	журнал	Lanthanide furoate complexes as promising systems with double effects – From suppression of mycobacteria to potential bioimaging	10.1016/j.ica.2024.122066	Belyaev Danila V, Krasnoborova Svetlana Yu, Kiskin Mikhail A, Lutsenko Irina A, Eremenko Igor L, Nikiforova Marina E, Shmelev Maxim A, Aliev Teimur M, Metlin Mikhail T, Taydakov Ilya V, Bekker Olga B, Levitskiy Oleg A, Magdesieva Tatiana V, Rusinov Gennady L, Vakhrusheva Diana V, Uvarova Marina A	Inorganica Chimica Acta, 2024	0020-1693	РИНЦ, Белый список	Не указано	Да	122071
131	6148	журнал	Stability of Ionogels upon Contact with Water: Effect of Polymer Matrix Hydrophobicity and Ionic Liquid Solubility	10.1134/s1061933x24600453	Lermontov S A, Nikiforova M E, Malkova A N, Trufanova E A, Taran G S, Baranchikov A E, Nelyubin A V, Ivanov V K, Kottsov S Yu, Badulina A O	Colloid Journal of the Russian Academy of Sciences: Kolloidnyi Zhurnal, 5, 2024	1608-3067	РИНЦ, Белый список	Не указано	Да	716
132	6150	журнал	The Role of	10.1134/s1	Uvarova M A, Eremenko I L,	Russian Journal of	1070-3284	РИНЦ, Белый список	Не указано	Да	924

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1	1A	2	3	4	5	6	7	8	9	10	11
			2-Hydroxypyridine in the Formation of Pivalate Zn–Gd Complexes	070328424600839	Kiskin M A, Sidorov A A, Nikiforova M E	Coordination Chemistry/Koordinatsionnaya Khimiya, 11, 2024					
133	6153	журнал	2D Coordination Polymers of Zn(II) with Diethylmalonic Acid Dianions and 4,4'-bipyridine: Synthesis and Structure	10.1134/s1070328424600128	Chistyakov A S, Zorina-Tikhonova E N, Vologzhanina A V, Kiskin M A, Eremenko I L	Russian Journal of Coordination Chemistry/Koordinatsionnaya Khimiya, 7, 2024	1070-3284	РИНЦ, Белый список	Не указано	Да	474
134	6156	журнал	Synthesis and structure of copper(ii) and manganese(ii) diethylmalonates with 4,4′-bipyridine	10.1007/s11172-024-4400-x	Chistyakov A S, Knyazev D A, Zorina-Tikhonova E N, Kiskin M A, Vologzhanina A V, Eremenko I L	Russian Chemical Bulletin, 10, 2024	1573-9171	РИНЦ, Белый список	Не указано	Да	2842
135	6158	журнал	Polymeric cyclobutane-1,1-dicarboxylates based on mononuclear tris-chelate and binuclear methoxo-bridged chromium(iii) units	10.1007/s11172-024-4203-0	Bazhina E S, Shmelev M A, Korlyukov A A, Kiskin M A, Eremenko I L	Russian Chemical Bulletin, 4, 2024	1573-9171	РИНЦ, Белый список	Не указано	Да	904
136	6160	журнал	Coordination Polymers Ca(II)–Cr(III) and Ba(II)–Cr(III) with Cyclobutane-1,1-dicarboxylic Acid Anions	10.1134/s1070328424600566	Bazhina E S, Shmelev M A, Kiskin M A, Eremenko I L	Russian Journal of Coordination Chemistry/Koordinatsionnaya Khimiya, 8, 2024	1070-3284	РИНЦ, Белый список	Не указано	Да	610
137	6164	журнал	Structural Insight into Ionogels: A Case Study of 1-Methyl-3-octyl-imidazolium Tetrafluoroborate Confined in Aerosil	10.1021/acs.langmuir.4c03162	Pavlova Alina A, Kottsov Sergei Yu, Kopitsa Gennady P, Baranchikov Alexander E, Khamova Tamara V, Badulina Alexandra O, Gorshkova Yulia E, Selivanov Nikita A, Simonenko Nikolay P, Nikiforova Marina E, Ivanov Vladimir K	Langmuir, 45, 2024	1520-5827	РИНЦ, Белый список	Не указано	Да	8
138	6165	журнал	Stained Glass Effect in Anodic Aluminum Oxide Formed in Selenic Acid	10.1021/acs.jpclett.3c03287	Napolskii Kirill S, Stolyarov Vasily S, Lyskov Nikolay V, Roslyakov Ilya V, Devyanina Nadezhda P, Kushnir Sergey E	Journal of Physical Chemistry Letters, 1, 2024	1948-7185	РИНЦ, Белый список	Не указано	Да	306
139	6166	журнал	Three-Dimensional Photonic Crystals Based	10.1021/acs.jpclett.4c00537	Novikov Vladimir B, Murzina Tatiana V, Roslyakov Ilya V,	Journal of Physical Chemistry Letters, 16, 2024	1948-7185	РИНЦ, Белый список	Не указано	Да	4325

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1	1A	2	3	4	5	6	7	8	9	10	11
			on Porous Anodic Aluminum Oxide		Kushnir Sergey E, Stolyarov Vasily S, Napolskii Kirill S, Sapoletova Nina A, Tsymbarenko Dmitry M, Dotsenko Andrey A						
140	6167	журнал	Conductive polyaniline-based composition for spray coating	10.1016/j.colsurfa.2024.133903	Tverskoy Vladimir A, Gribkova Oxana L, Melnikova Ekaterina I, Teplonogova Maria A, Nekrasov Alexander A	Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2024	0927-7757	РИНЦ, Белый список	Не указано	Да	13
141	6170	журнал	Luminescent properties of Tm3+-activated phosphors with rosiaite structure	10.1016/j.optmat.2024.115425	Egorysheva A V, Ryabochkina P A, Popova E F, Khrushchalina S A, Yurlov I A, Golodukhina S V	Optical Materials, 2024	0925-3467	РИНЦ, Белый список	Не указано	Да	115431
142	6298	журнал	One-dimensional photonic crystals based on porous anodic alumina: Optical and morphology changes under thermal and chemical treatments	10.1016/j.optmat.2024.115518	Shirin Nikita A, Roslyakov Ilya V, Kushnir Sergey E, Napolskii Kirill S	Optical Materials, 2024	0925-3467	РИНЦ, Белый список	Не указано	Да	10
143	6303	журнал	High performance microheater-based catalytic hydrogen sensors fabricated on porous anodic alumina substrates	10.1016/j.snb.2023.135270	Kalinin I A, Roslyakov I V, Bograchev D, Kushnir S E, Ivanov I I, Dyakov A V, Napolskii K S	Sensors and Actuators, B: Chemical, 2024	0925-4005	РИНЦ, Белый список	Не указано	Да	2001
144	6304	журнал	Prolonged antibacterial action of CuO-coated cotton fabric in tropical climate	10.17586/2220-8054-2024-15-6-910-920	Veselova V O, Kostrov A N, Plyuta V A, Kamler A V, Nikonov R V, Melkina O E, Thu Vo Thi Hoai, Hue Le Thi, Trang Dinh Thi Thu, Khmel I A, Nadtochenko V A, Kiselev M G, Ivanov V K	НАНОСИСТЕМЫ: ФИЗИКА, ХИМИЯ, МАТЕМАТИКА, 6, 2024	2305-7971	РИНЦ, Белый список	Не указано	Да	920
145	6306	журнал	Highly dispersed anti-Stokes phosphors based on KGd2F7:Yb,Er single-phase solid solutions	10.17586/2220-8054-2024-15-5-702-709	Zakharova A S, Kuznetsov S V, Alexandrov A A, Pominova D V, Voronov V V, Fedorov P P, Ivanov V K	НАНОСИСТЕМЫ: ФИЗИКА, ХИМИЯ, МАТЕМАТИКА, 5, 2024	2305-7971	РИНЦ, Белый список	Не указано	Да	702
146	6307	журнал	Synthesis of strontium fluoride nanoparticles in a microreactor with intensely swirling flows	10.17586/2220-8054-2024-15-1-115-121	Abiev R Sh, Zdravkov A V, Kudryashova Yu S, Alexandrov A A, Kuznetsov S V, Fedorov P P	НАНОСИСТЕМЫ: ФИЗИКА, ХИМИЯ, МАТЕМАТИКА, 1, 2024	2305-7971	РИНЦ, Белый список	Не указано	Да	115

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
147	6308	журнал	Ultrasonic-assisted hydrothermal synthesis of nanoscale double ceric phosphates	10.17586/2220-8054-2024-15-2-215-223	Ivanov V K, Baranchikov A E, Teplonogova M A, Tronev I V, Kolesnik I V, Kozlov D A, Vasilyeva D N, Sheichenko E D, Kozlova T O	НАНОСИСТЕМЫ: ФИЗИКА, ХИМИЯ, МАТЕМАТИКА, 2, 2024	2305-7971	РИНЦ, Белый список	Не указано	Да	222
148	6310	журнал	Synthesis of redox-active Ce0.75Bi0.15Tb0.1F3 nanoparticles and their biocompatibility study in vitro	10.17586/2220-8054-2024-15-2-260-267	Filippova A D, Chukavin N N, Kolmanovich D D, Teplonogova M A, Ivanov V K, Popov A L	НАНОСИСТЕМЫ: ФИЗИКА, ХИМИЯ, МАТЕМАТИКА, 2, 2024	2305-7971	РИНЦ, Белый список	Не указано	Да	266
149	6313	журнал	Ionogels in Aqueous Media: From Conductometric Probing of the Ionic Liquid Washout to the Design of More Stable Materials	10.3390/chemengineering8060111	Selivanov Nikita A, Ivanov Vladimir K, Badulina Alexandra O, Kottsov Sergei Yu, Simonenko Nikolay P, Tsivadze Aslan Yu, Nelyubin Aleksey V, Baranchikov Alexander E, Nikiforova Marina E	ChemEngineering, 6, 2024	2305-7084	РИНЦ, Белый список	<jats:p>Although the most promising applications of ionogels require their contact with aqueous media, few data are available on the stability of ionogels upon exposure to water. In this paper, a simple, easy-to-setup and precise method is presented, which was developed based on the continuous conductivity measurements of an aqueous phase, to study the washout of imidazolium ionic liquids (IL) from various silica-based ionogels immersed in water. The accuracy of the method was verified using HPLC, its reproducibility was confirmed, and its systematic errors were estimated. The experimental data show the rapid and almost complete (>90% in 5 h) washout of the hydrophilic IL (1-butyl-3-methylimidazolium dicyanamide) from the TMOS-derived silica ionogel. To lower the rate and degree of washout, several approaches were analysed, including decreasing IL content in ionogels, using ionogels in a monolithic form instead of a powder, constructing ionogels by gelation of silica in an ionic liquid, ageing ionogels after sol–gel synthesis and constructing ionogels from both hydrophobic IL and hydrophobic silica. All these approaches inhibited IL washout; the lowest level of washout achieved was ~14% in 24 h. Insights into the ionogels’ structure and composition, using complementary methods (XRD, TGA, FTIR, SEM, NMR and nitrogen adsorption), revealed the washout mechanism, which was shown to be governed by three main processes: the diffusion of (1) IL and (2) water, and (3) IL dissolution in water. Washout was shown to follow pseudo-second-order kinetics, with the kinetic constants being in the range of 0.007–0.154 mol−1·s−1.</jats:p>	Да	111
150	6316	журнал	Hydrophilic and Hydrophobic: Modified GeO2 Aerogels by Ambient Pressure Drying	10.3390/nano14181511	Gajtko Olga M, Golodukhina Svetlana V, Kottsov Sergey Yu, Veselova Varvara O, Khvoshchevskaya Daria A	Nanomaterials, 18, 2024	2079-4991	РИНЦ, Белый список	<jats:p>An ever-increasing number of applications of oxide aerogels places a high demand on wettability-tuning techniques. This work explores the possibility to cheaply	Да	1512

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
									prepare GeO2 aerogels with controlled wettability by an ambient pressure drying (APD) method. GeO2 aerogels are prepared via two synthetic routes. Surface modification is carried out by soaking the gels in a silylating agent solution; type and concentration of the modifier are optimized to achieve a large surface area. The aerogels have been characterized by Fourier transform infrared spectroscopy, scanning electron microscopy, nitrogen adsorption and contact angle measurements. The effect of surface modification on the phase composition and particle size of the aerogels is described. In summary, the work provides a new cheap production method for the preparation of both hydrophobic and hydrophilic GeO2 aerogels with contact angle varying from 30* to 141* and with surface area of 90–140 m2/g, which facilitates the expansion of their diverse applications. GeO2 aerogel synthesis by APD is reported for the first time.</jats:p>		
151	6317	журнал	Ligand-to-Metal Ratio Governs Radical-Scavenging Ability of Malate-Stabilised Ceria Nanoparticles	10.3390/nano14231908	Baranchikov Alexander E, Ivanov Vladimir K, Popov Anton L, Savintseva Irina V, Teplonogova Maria A, Filippova Arina D	Nanomaterials, 23, 2024	2079-4991	РИНЦ, Белый список	<jats:p>Cerium dioxide sols stabilised with L-malic acid were shown to exhibit significant antioxidant activity towards alkyl peroxyl radicals in the range of ligand:CeO2 molar ratios of 0.2–1 (0.2:1, 0.4:1, 0.5:1, 0.6:1, 0.8:1 and 1:1). The antioxidant activity of cerium dioxide nanoparticles greatly depended on L-malic acid content and increased by 8 times when the ligand:CeO2 molar ratio increased from 0.2:1 to 0.4:1. An estimate of the ligand:CeO2 molar ratio required to ensure complete surface coverage of CeO2 nanoparticles with malate anions resulted in a value of 0.2. Aggregation degree of CeO2 nanoparticles depends on the ligand:CeO2 molar ratio. In the range of ligand:CeO2 molar ratios 0.2–0.4, the size of aggregates decreased by an order of magnitude. The antioxidant capacity of 1 mM malate-stabilised cerium dioxide (0.2:1) relative to sodium ascorbate was 0.012 ± 0.001 mM. The antioxidant activity of cerium dioxide stabilised with L-malic acid at a ligand:CeO2 molar ratio of 0.2:1 was 80 times less than the antioxidant activity of sodium ascorbate. Cerium dioxide nanoparticles stabilised with L-malic acid did not demonstrate a cytotoxic effect against human mesenchymal stem cells, in a wide range of concentrations (10−3–10−5 M), and their proliferation was stimulated after 72 h of cultivation. The results obtained show new possibilities for the design of biocompatible ceria-based nanomaterials with tunable pro- and antioxidant properties; these materials	Да	13

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
									can further be assessed in view of their potential for treating oxidative stress-related disorders.</jats:p>		
152	6319	журнал	An Antimicrobial Copper–Plastic Composite Coating: Characterization and In Situ Study in a Hospital Environment	10.3390/ijms25084471	Avetisyan Lusine R, Emelyanenko Alexandre M, Omran Fadi S, Teplonogova Maria A, Chernukha Marina Y, Tselikina Eugenia G, Putsman Gleb A, Zyryanov Sergey K, Butranova Olga I, Emelyanenko Kirill A, Boinovich Ludmila B	International Journal of Molecular Sciences, 8, 2024	1422-0067	РИНЦ, Белый список	<jats:p>A method has been proposed for creating an operationally durable copper coating with antimicrobial properties for the buttons of electrical switches based on the gas dynamic spray deposition of copper on acrylonitrile butadiene styrene (ABS) plastic. It is shown that during the coating process, a polymer film is formed on top of the copper layer. Comparative in situ studies of microbial contamination have shown that the copper-coated buttons have a significant antimicrobial effect compared to standard buttons. Analysis of swabs over a 22-week study in a hospital environment showed that the frequency of contamination for a copper-coated button with various microorganisms was 2.7 times lower than that of a control button. The presented results allow us to consider the developed copper coating for plastic switches an effective alternative method in the fight against healthcare-associated infections.</jats:p>	Да	12
153	6363	журнал	Reactive Spark Plasma Sintering and Oxidation of ZrB2-SiC and ZrB2-HfB2-SiC Ceramic Materials	10.3390/ceramics7040101	Shichalin Oleg O, Belov Anton A, Nagornov Ilya A, Papynov Eugeniy K, Simonenko Tatiana L, Gorobtsov Philipp Yu, Simonenko Elizaveta P, Teplonogova Maria A, Mokrushin Artem S, Simonenko Nikolay P, Kuznetsov Nikolay T	Ceramics, 4, 2024	2571-6131	РИНЦ, Белый список	<jats:p>This study presents the fabrication possibilities of ultra-high-temperature ceramics of ZrB2-30 vol.%SiC and (ZrB2-HfB2)-30 vol.% SiC composition using the reaction spark plasma sintering of composite powders ZrB2(HfB2)-(SiO2-C) under two-stage heating conditions. The phase composition and microstructure of the obtained ceramic materials have been subjected to detailed analysis, their electrical conductivity has been evaluated using the four-contact method, and the electron work function has been determined using Kelvin probe force microscopy. The thermal analysis in the air, as well as the calcination of the samples at temperatures of 800, 1000, and 1200 *C in the air, demonstrated a comparable behavior of the materials in general. However, based on the XRD data and mapping of the distribution of elements on the oxidized surface (EDX), a slightly higher oxidation resistance of the ceramics (ZrB2-HfB2)-30 vol.% SiC was observed. The I-V curves of the sample surfaces recorded with atomic force microscopy demonstrated that following oxidation in the air at 1200 *C, the surfaces of the materials exhibited a marked reduction in current conductivity due to the formation of a dielectric layer. However, data obtained from Kelvin probe force microscopy indicated that (ZrB2-HfB2)-30 vol.% SiC ceramics also demonstrated enhanced resistance to oxidation.</jats:p>	Да	1583
154		журнал					2079-4983			Да	373

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
	6364		Novel Flavin Mononucleotide-Functionalized Cerium Fluoride Nanoparticles for Selective Enhanced X-Ray-Induced Photodynamic Therapy	10.3390/jfb15120373	Popkov Matvei A, Kornienko Anastasia I, Teplonogova Maria A, Shevelyova Marina P, Popov Anton L, Ivanov Vladimir E, Popova Nelli R	Journal of Functional Biomaterials, 12, 2024		РИНЦ, Белый список	<jats:p>X-ray-induced photodynamic therapy (X-PDT) represents a promising new method of cancer treatment. A novel type of nanoscintillator based on cerium fluoride (CeF3) nanoparticles (NPs) modified with flavin mononucleotide (FMN) has been proposed. A method for synthesizing CeF3-FMN NPs has been developed, enabling the production of colloidal, spherical NPs with an approximate diameter of 100 nm, low polydispersity, and a high fluorescence quantum yield of 0.42. It has been demonstrated that CeF3-FMN NPs exhibit pH-dependent radiation-induced redox activity when exposed to X-rays. This activity results in the generation of reactive oxygen species, which is associated with the scintillation properties of cerium and the transfer of electrons to FMN. The synthesized NPs have been demonstrated to exhibit minimal cytotoxicity towards normal cells (NCTC L929 fibroblasts) but are more toxic to tumor cells (epidermoid carcinoma A431). Concurrently, the synthesized NPs (CeF3 and CeF3-FMN NPs) demonstrate a pronounced selective radiosensitizing effect on tumor cells at concentrations of 10−7 and 10−3 M, resulting in a significant reduction in their clonogenic activity, increasing radiosensitivity for cancer cells by 1.9 times following X-ray irradiation at a dose of 3 to 6 Gy. In the context of normal cells, these nanoparticles serve the function of antioxidants, maintaining a high level of clonogenic activity. Functional nanoscintillators on the basis of cerium fluoride can be used as part of the latest technologies for the treatment of tumors within the framework of X-PDT.</jats:p>		
155	6365	журнал	Synthesis of Praseodymium-Doped GeO2 Aerogels by Impregnation	10.1134/s1990793124701343	Gaitko O M, Khvoshchevskaya D A, Veselova V O, Golodukhina S V, Kottsov S Yu, Son A G	Russian Journal of Physical Chemistry B, 8, 2024	1990-7931	РИНЦ, Белый список	Не указано	Да	1793
156	6366	журнал	Solvent, Catalyst, and Precursor: Parameters of Ge(OR)4 Hydrolysis for GeO2 Aerogels Production	10.1134/s0036023624603349	Kottsov S Yu, Golodukhina S V, Piryazev A A, Gajtko O M, Veselova V O	Russian Journal of Inorganic Chemistry, 14, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	2170
157	6367	журнал	Epoxide-Assisted Synthesis of Photocatalytically Active TiO2 and Pt/TiO2 Aerogels	10.1134/s0023158424601980	Polevoi L A, Kozlova E A, Zhurenok A V, Gerasimov E Yu, Saraev A A, Golikova M V, Baranchikov A E	Kinetics and Catalysis, 5, 2024	1608-3210	РИНЦ, Белый список	Не указано	Да	576
158	6368	журнал	CO Oxidation Catalysts	10.1134/s0	Egorysheva A V, Golodukhina S	Russian Journal of	0036-0236	РИНЦ, Белый список	Не указано	Да	1617

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1	1A	2	3	4	5	6	7	8	9	10	11
			Based on the Complex Antimonates of La2O3–CoO–Sb2O5 System	036023624602563	V, Razvorotneva L S, Liberman E Yu, Chistyakov A V, Naumkin A V, Ellert O G	Inorganic Chemistry, 11, 2024					
159	6369	журнал	Hydrothermal Synthesis of Aqueous Sols of Lactic Acid-Stabilized Nanocrystalline Hafnium Dioxide and Their Enzyme-Like Activity	10.1134/s0036023624602927	Taran G S, Sheichenko E D, Popkov M A, Novoselova K N, Kochenkova Yu A, Filippova A D, Baranchikov A E, Ivanov V K	Russian Journal of Inorganic Chemistry, 14, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	2106
160	6370	журнал	Layered Europium and Yttrium Hydroxychlorides: Thermal Decomposition and Rehydration	10.1134/s0036023624603106	Teplonogova M A, Kovalenko A S, Yapryntsev A D, Simonenko N P, Kozlova A A, Baranchikov A E, Ivanov V K	Russian Journal of Inorganic Chemistry, 14, 2024	0036-0236	РИНЦ, Белый список	Не указано	Да	2001
161	6371	журнал	Stability of Ionogels upon Contact with Water: Effect of Polymer Matrix Hydrophobicity and Ionic Liquid Solubility	10.31857/s0023291224050063	Malkova A N, Kotsov S Yu, Badulina A O, Trufanova E A, Taran G S, Baranchikov A E, Nelyubin A V, Nikiforova M E, Lermontov S A, Ivanov V K	КОЛЛОИДНЫЙ ЖУРНАЛ, 5, 2024	0023-2912	РИНЦ, Белый список	<jats:p>New composite materials (ionogels) have been obtained based on imidazolium ionic liquids immobilized in highly porous polymers, i.e., polyamide 6,6 (nylon 6,6) and low-density polyethylene. A method has been proposed for determining the rate of ionic liquid removal from an ionogel upon contact with water, with this method being based on continuous measuring the conductivity of an aqueous phase. The results of the conductometric measurements have been confirmed by high-performance liquid chromatography data. It has been shown that the stability of ionogels upon contact with water is determined by both the hydrophobicity of a polymer matrix and the solubility of an ionic liquid in water. The highest degree of ionic liquid removal (more than 80%) has been observed for composites based on porous polyamide 6,6 (hydrophilic matrix) and dicyanimide 1-butyl-3-methylimidazolium (completely miscible with water). Ionogels based on lowdensity polyethylene (hydrophobic matrix) and bis(trifluoromethylsulfonyl)imide 1-butyl-3-methylimidazolium (poorly soluble, 1 wt %, in water) have shown the highest stability (washout degree of no more than 53% over 24 h). The method proposed for analyzing the rate of ionic liquid dissolution in water has been used to discuss the mechanism of this process.</jats:p>	Да	591
162	6372	журнал	Новые гидрофобные нефтесорбенты на основе кремнийоксидных аэрогелей	10.31857/s0040357124010137	Убушаева Б В, Иванов В К, Бузник В М, Дедов А Г, Полевой Л А, Санджиева Д А, Баранчиков А Е, Гайзуллин А Д	ТЕОРЕТИЧЕСКИЕ ОСНОВЫ ХИМИЧЕСКОЙ ТЕХНОЛОГИИ, 1, 2024	0040-3571	РИНЦ, Белый список	Не указано	Да	112

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
163	6373	журнал	Sodium Cerium Phosphate, (Na,Ce)₂Ce(PO₄)₂ · xH₂O, with Mixed Cerium Oxidation States	10.1002/slct.202401010	Vasilchikova Tatyana M, Mironov Andrey V, Ivanov Vladimir K, Vasilyeva Darya N, Plakhova Tatiana V, Gippius Andrei A, Baranchikov Alexander E, Kozlova Taisiya O, Istomin Sergey Ya	ChemistrySelect, 17, 2024	2365-6549	РИНЦ, Белый список	<jats:title>Abstract</jats:title><jats:p>A previously unknown double ceric sodium phosphate hydrate Na<jats:sub>1.97</jats:sub>Ce<jats:sub>1.03</jats:sub>(PO<jats:sub>4</jats:sub>)<jats:sub>2</jats:sub> · <jats:italic>x</jats:italic>H<jats:sub>2</jats:sub>O containing both ceric and cerous cations was obtained by the hydrothermal treatment of amorphous ceric phosphate mixed with a sodium hydroxide aqueous solution. The presence of Ce<jats:sup>3+</jats:sup> in the structure was proved by HERFD-XANES and ESR spectroscopy. Iterative transformation factor analysis of HERFD-XANES data allowed estimating the content of Ce<jats:sup>3+</jats:sup> as 10 % of the total cerium. Water content of <jats:italic>x</jats:italic>=0.55 has been determined by thermogravimetric analysis combined with mass-spectrometry data. The structure of the compound was solved from powder X-ray diffraction data (S.G. <jats:italic>P</jats:italic>2<jats:sub>1</jats:sub><jats:italic>/c a</jats:italic>=6.9441(2) Å, <jats:italic>b</jats:italic>=11.6805(3) Å, <jats:italic>c</jats:italic>=9.3434(3) Å, <jats:italic>β</jats:italic>=111.6827(18)*). The new ceric sodium phosphate hydrate has a tunnel structure, where Ce<jats:sup>3+</jats:sup> cations most likely partially occupy Na<jats:sup>+</jats:sup> positions. The crystal structure of the novel compound has no direct analogues among the crystal structures of double tetravalent metal phosphates.</jats:p>	Да	10
164	6395	журнал	Development of a technique for X-ray fluorescence analysis of zinc-aluminum-magnesium alloys	10.26896/1028-6861-2024-90-2-5-11	Ermolaeva T N, Lepilina M Yu, Yakubenko E V, Baranovskaya V B	ЗАВОДСКАЯ ЛАБОРАТОРИЯ. ДИАГНОСТИКА МАТЕРИАЛОВ, 2, 2024	2588-0187	РИНЦ, Белый список	<jats:p>A technique for X-ray fluorescence spectral analysis of zinc-aluminum- magnesium alloys has been developed, which allows the determination of Mg, Al, Pb, Si, Cu, Mn, Fe, Ni content in the alloy. The effect of the sample preparation method on the linearity of calibration graphs is revealed. The conditions for determining the main alloying (Al, Mg) and impurity (Pb, Fe, Cu, Si, Mn, Ni) elements by X-ray fluorescence spectrometry were studied. It is proposed to use the correction of the matrix effect by selecting alpha coefficients for the intensity of X- ray radiation with subsequent automatic conversion of the function into a linear form. Calibration graphs for determination of the elements in the corresponding ranges, i.e., Mg (0.00019 – 5.04%), Al (0.0002 – 12.4%), Pb (0.0012 – 2.07%), Si (0.0005 – 0.12%), Cu	Да	10

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
									(0.0006 – 5.95%), Mn (0.0004 – 0.00524%), Fe (0.0009 – 0.41%), Ni (0.0009 – 0.27%), were obtained using standard reference samples and production samples of the alloys, the chemical composition of which was previously determined by inductively coupled plasma atomic emission spectrometry (ICP-AES). The correctness of the developed methodology was confirmed by analysis of standard samples and comparative analysis of the obtained results using the Student’s t-test.</jats:p>		
165	6396	журнал	X-Ray fluorescence analysis of paraniobate based ceramics of composition Y_{3–x}Yb_xNbO₇	10.26896/1028-6861-2024-90-5-12-19	Ryumin M A, Arkhipenko A A, Marina G E, Baranovskaia V B	ЗАВОДСКАЯ ЛАБОРАТОРИЯ. ДИАГНОСТИКА МАТЕРИАЛОВ, 5, 2024	2588-0187	РИНЦ, Белый список	<jats:p>A two-stage technique for X-ray fluorescence analysis of ceramic samples of composition Y<jats:sub>3–<jats:italic>x</jats:italic></jats:sub>Yb<jats:italic><jats:sub>x</jats:sub></jats:italic>NbO<jats:sub>7</jats:sub> (where <jats:italic>x</jats:italic> = 0 – 3) has been developed. At the first stage, using the method of fundamental parameters (FPM), a rapid semi-quantitative analysis of ceramic samples and products of intermediate synthesis was carried out to determine their preliminary composition. At the second stage, the quantitative composition of the samples was determined using the constructed calibration dependencies. To construct calibration dependencies a series of reference samples containing 3.16 – 56.55% Y, 8.78 – 71.0% Yb, and 12.83 – 19.70% Nb was synthesized using a method similar to that used for preparation of the ceramic samples under study. Analytical lines of elements free from spectral overlaps and XRF conditions (current and voltage of an X-ray tube, exposure time, method of taking into account the background near the analytical line) were selected. The relative standard deviation of the results of Y, Yb, and Nb determination in ceramic samples did not exceed 0.66%, the relative error was no more than 1.63%. The results obtained were compared with the calculated content of analytes in the samples of stoichiometric composition and with the results of ICP-AES analysis of real ceramic samples. The developed technique provides determination of the main components of ceramic samples and can be used for analytical control of synthesis of rare earth paraniobates.</jats:p>	Да	18
166	6397	журнал	Analytical control of functional materials based on rare earth metals by mass spectrometry methods	10.15826/analitika.2024.28.3.001	Korotkova N A, Petrova K V, Baranovskaya V B, Doronina M S	АНАЛИТИКА И КОНТРОЛЬ, 3, 2024	2073-1450	РИНЦ, Белый список	<jats:p>Rare earth metals and compounds based on them are in demand for development and production of functional materials, such as optical ceramics, permanent magnets, phosphors, catalysts, glasses, alloys, etc. Unique physical and chemical properties of these materials largely depend on the	Да	243

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
									elemental composition (panoramic and target), which must be controlled at all stages of production, from initial compounds to intermediate and final products. The mass spectrometry method with various ionization sources (inductively coupled plasma, vacuum spark discharge, glow discharge, laser source, secondary ion source) and a sample introduction system (solutions' spraying, laser sampling, electrothermal evaporation) is one of the most promising and in demand for determining target elements with high sensitivity in materials of complex composition. There are a number of other advantages offered by this method, namely selectivity of the signal from the elements being determined, the possibility of conducting multi-element analysis, and the accuracy of the analysis results. However, materials of complex composition, including those containing rare earth metals as main elements, require studying the influence of analysis conditions and other factors in order to obtain reliable results and to develop analytical procedures. The article provides a review of publications containing methodological solutions and approaches to overcome the limitations of mass spectrometry with various ionization sources in relation to the analysis of rare earth metals and functional materials based on them. The review includes Russian and foreign publications from 2014 to 2023.</jats:p>		
167	6398	журнал	Determination of rare earth elements in synthetic calcium phosphates by high-resolution continuum source electrothermal atomic absorption spectrometry	10.26896/1028-6861-2024-90-10-15-23	Ksenofontova T D, Baranovskaia V B, Doronina M S, Shevchenko A S	ЗАВОДСКАЯ ЛАБОРАТОРИЯ. ДИАГНОСТИКА МАТЕРИАЛОВ, 10, 2024	2588-0187	РИНЦ, Белый список	<jats:p>Ceramic, cement and composite biomaterials have been developed based on hydroxyapatites (HA) and tricalcium phosphates (TCP), which are analogous in phase and chemical composition to the mineral component of bone tissue. The crystal structures of HA and TCP are arranged in isomorphic substitutions. Recently, research has focused on the modification of HA and TCP structures with ions of various metals, including rare earth ions (REEs), with the aim of creating materials with a range of beneficial properties for medical applications. REEs are known to have a number of useful properties, including antibacterial, antitumour, catalytic, magnetic and luminescent properties. The replacement of some of the Ca ions in the structures of HA and TCP with REE ions therefore makes it possible to obtain a material with biocompatibility and biological activity, giving it the required properties depending on the REE used and its concentration. In order to achieve the specified properties, it is necessary to control not only the structure (phase	Да	23

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
									composition, lattice parameters of the powders) and the presence of characteristic functional groups, but also the chemical elemental composition. Modifications of hydroxyapatites and tricalcium phosphates containing from one to several different alloying elements are currently being developed. Various analytical methods are used for this purpose, including X-ray, atomic emission and a number of others. This article is devoted to the study of the analytical capabilities of the method of atomic absorption spectrometry with electrothermal atomization and a continuous spectrum source in relation to the determination of Eu and Yb in hydroxyapatites and tricalcium phosphates. The article considers the optimal conditions and modes of analysis, including temperature-time programs, the use of modifiers, the construction of calibration curves, and other factors that can be adjusted for more precise results. The results demonstrated the possibility of simultaneous determination of both Eu and Yb in the concentration range of 0.09 to 2 wt.%, with a relative standard deviation of less than 6 rel.%.</jats:p>		
168	6399	журнал	Rapid and Precise Approaches for XRF Analysis of Rare Earth Niobates	10.3390/analytica5030022	Korotkova Natalia Alexandrovna, Arkhipenko Alexandra Alexandrovna, Ryumin Mikhail Alexandrovich, Marina Galina Evgenievna, Doronina Marina Sergeevna, Baranovskaya Vasilisa Borisovna, Ksenofontova Tatiana Dmitrievna	Analytica, 3, 2024	2673-4532		<jats:p>This work describes a two-stage technique of X-ray fluorescence (XRF) analysis of rare earth niobates. A comparison between the two approaches revealed that the Fundamental Parameters Method (FPM) can be employed for a rapid preliminary assessment of the composition of the resulting material and the construction of calibration curves can be used to determine the contents of the major elements with precision. The results of the relative standard deviation (RSD) for FPM were no more than 7%, while the approach to construct calibration curves had an RSD of no more than 1%. Calibration samples were prepared using the same synthesis method as the study samples to construct the calibration curves. The possibility of constructing calibration dependencies using mixtures of oxides was assessed, but this approach could not provide the desired accuracy. The obtained results have been shown to have a good correlation with inductively coupled plasma optical emission spectrometry. The developed technique enables the determination of the major components in niobates containing two and three rare earth elements, which are used as optical materials and medium-entropy ceramics.</jats:p>	Да	357
169	6402	журнал	Study of the Elemental	10.3390/solids5040041	Baranovskaya Vasilisa B,	Solids, 4, 2024	2673-6497		<jats:p>For the first time, inductively coupled plasma mass	Да	623

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
			Composition of Gadolinium–Aluminum Garnets—Obtaining Predictable Optical Properties		Korotkova Natalia A, Arkhipenko Alexandra A, Doronina Marina S, Petrova Kseniya V				spectrometry (ICP-MS) was developed for determining the target elemental composition of gadolinium–aluminum garnets with the varying composition Gd3–xCexScyAl5–yO12, where x = 0.01–0.16 and y = 0.25–1.75. This fact has a fundamental importance for obtaining optical ceramics with predictable properties. Using the proposed acid mixture and temperature-time program, microwave digestion of these materials and complete transfer of the sample’s components into solution were possible. Moreover, we estimated the influence of the matrix composition, sample introduction system and collision cell on the limits of determination (LOD) of impurity elements by ICP-MS (Mg, Si, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Y, La, Pr, Nd, Sm, Eu, Tb, Er, Ho, Tm, Yb, and Lu). It has been shown that the conditions of mass spectral analysis proposed in this work provide LOD of target analytes in the range of 1•10−6–4.15•10−3 wt.%. The accuracy of the obtained results has been confirmed by the added-found method and by analyzing samples with known chemical composition. The standard deviation of repeatability (Sr) of the developed technique lies in the range from 1 to 6%. The developed analysis method is characterized by sensitivity, robustness and multi-elementality. It has application potential for other optical and ceramic materials of similar composition.</jats:p>		
170	6403	журнал	Rare Earth Elements Determination by Arc Atomic Emission Spectrometry after Sorption Preconcentration from Solutions containing Calcium and Phosphorus	10.26896/1028-6861-2024-90-11-5-16	Arkhipenko Alexandra A, Baranovskaia Vasilisa B, Doronina Marina S, Ivanov Vladimir N, Ksenofontova Tatiana D, Kottsov Sergey Yu	ЗАВОДСКАЯ ЛАБОРАТОРИЯ. ДИАГНОСТИКА МАТЕРИАЛОВ, 11, 2024	2588-0187	РИНЦ, Белый список	Не указано	Да	16
171	6404	журнал	Development of spectral methods for the analysis of nanocized ferrogarnets of the Y3-xCexFe5-yGayO12 composition	10.17586/2220-8054-2024-15-6-855-866	Ketsko V A, Baranovskaya V B, Smirnova M N, Arkhipenko A A, Korotkova N A, Marina G E, Doronina M S	НАНОСИСТЕМЫ: ФИЗИКА, ХИМИЯ, МАТЕМАТИКА, 6, 2024	2305-7971	РИНЦ, Белый список	Не указано	Да	864
172	6405	журнал	Хлорогеновая и кофейная кислоты: области применения и методы определения	10.22184/2227-572x.2024.14.4.312.321	Барановская В Б, Ксенофонтова Т Д	ANALYTICS Russia, 4, 2024	2227-572X	РИНЦ	<jats:p>Хлорогеновая и кофейная кислоты – одни из самых распространенных гидроксикоричных кислот. Они присутствуют в различных растениях, например, в кофе, чае и фруктах. Эти соединения активно исследуются на	Да	321

No	ID	Вид публикации	Наименование публикации	DOI публикации	Автор(ы)	Издание, номер, год	ISSN / ISBN издания	Индексация издания	Краткое описание научных результатов	Наличие в публикации ссылки на ЦКП	Страница, содержащая ссылку на ЦКП
1	1A	2	3	4	5	6	7	8	9	10	11
									предмет их биологической активности и возможного применения для поддержания здоровья человека. В обзоре рассматриваются сферы применения кофейной и хлорогеновой кислот и методы их определения в различных объектах. Особое внимание уделяется источникам этих кислот, их биологической активности и влиянию на здоровье человека. Обсуждаются современные подходы к определению содержания кофейной и хлорогеновой кислот в пищевых продуктах, напитках и лекарственных средствах.</jats:p>		

Заведующая Центром _____ (Барановская В. Б.)