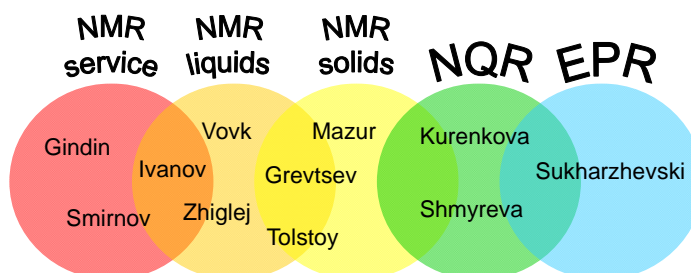










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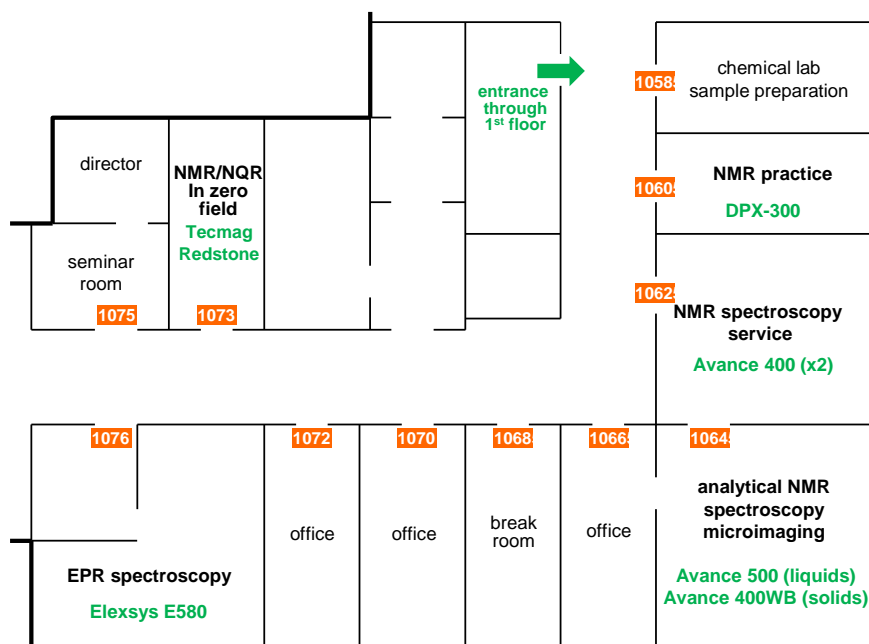
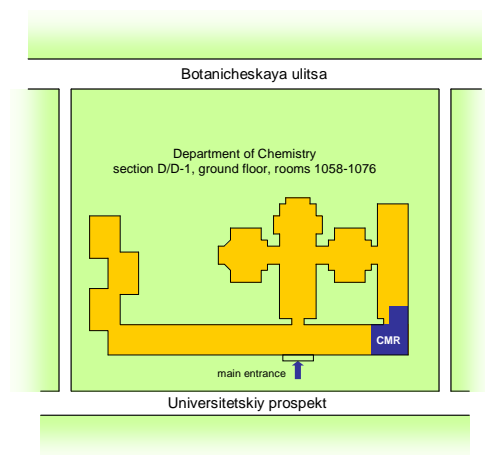
	<p>Peter Tolstoy, director, associate professor at Physical Organic Chemistry department NMR spectroscopy of liquids, solutions and solids Research interests: cryospectroscopy, combined NMR/UV spectroscopy, optical spectroscopy, hydrogen bonding, intermolecular interactions, non-covalent interactions e-mail: peter.tolstoy@spbu.ru Phone (cell): +7 (921) 430-81-91 Phone (room 1075): +7 (812) 363-68-99</p>
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	<p>Sergey Smirnov, lead specialist NMR spectroscopy of liquids and solutions, NMR-service Research interests: high-resolution NMR spectroscopy, study of hydrogen bonds by low-temperature NMR in solutions in liquified Freons e-mail: sergey.smirnov@spbu.ru Phone (room 1062): +7 (812) 428-95-63 Phone (room 1070): +7 (812) 324-12-70, extension 5916</p>
	<p>Alexander Ivanov, lead specialist NMR spectroscopy of liquids and solutions, NMR-service, project management electronic system support Research interests: structure elucidation of organic compounds using modern NMR spectroscopy techniques e-mail: alexander.ivanov@spbu.ru Phone (room 1062): +7 (812) 428-95-63 Phone (room 1070): +7 (812) 324-12-70, extension 5916</p>
	<p>Mikhail Vovk, specialist NMR spectroscopy of liquids and solutions, NMR relaxation, diffusion measurements Research interests: NMR relaxation, hydration of organic molecules in aqueous solutions e-mail: m.vovk@spbu.ru Phone (room 1066): +7 (812) 363-69-25</p>

	<p>Anton Mazur, specialist NMR spectroscopy of solids Research interests: NMR of magnetically ordered systems, spin echo method, nanostructured materials, NMR relaxation in solids e-mail: a.mazur@spbu.ru Phone (room 1066): +7 (812) 363-69-25</p>
	<p>Artem Grevtsev, specialist NMR spectroscopy of liquids and solutions Research interests: organic-inorganic composite materials for solar elements, thin film solar elements based on chalcopyrite nanoparticles e-mail: a.grevtsev@spbu.ru Phone (room 1066): +7 (812) 363-69-25</p>
	<p>Elvira Zhiglej, specialist NMR spectroscopy of liquids and solutions Research interests: NMR, laser-induced metal deposition, physical-chemical analytical methods e-mail: e.zhigley@spbu.ru Phone (room 1066): +7 (812) 363-69-25</p>
	<p>Elena Kurenkova, specialist NMR spectroscopy of magnetically ordered systems, NQR spectroscopy Research interests: NQR, NMR in magn. materials, HFI in magn. ordered alloys, NMR relaxation in solids e-mail: e.kurenkova@spbu.ru Phone (room 1073): +7 (812) 428-95-64 Phone (room 1072): +7 (812) 324-12-70, extension 5917</p>
	<p>Anna Shmyreva, specialist NMR spectroscopy of magnetically ordered systems, NQR spectroscopy Research interests: NMR of magnetic ordered systems, spin echo method, nanostructured materials, NQR spectroscopy e-mail: anna.shmyreva@spbu.ru Phone (room 1073): +7 (812) 428-95-64 Phone (room 1072): +7 (812) 324-12-70, extension 5917</p>
	<p>Stanislav Sukharzhevskii, specialist EPR spectroscopy spectrometers: Bruker Elexsys E580 Research interests: EPR theory, application of magnetic resonance in natural sciences, use of spectroscopic methods in geology and ecology e-mail: stanislav.sukharzhevskii@spbu.ru Phone (cell): +7 (921) 422-09-08 Phone (room 1076): +7 (812) 428-95-65</p>

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Phones

Room nr.	Room purpose	Phone nr.	Local phone nr.
1058	Chemical lab		
1060	NMR Service	428-43-25	4325
1062	NMR Service	428-95-63	9563
1064	Analytical NMR spectroscopy		
1066	Office	363-69-25	5915 (IP phones only)
1068	Break room		5662 (IP phones only)
1070	Office		5916 (IP phones only)
1072	Office		5917 (IP phones only)
1073	NQR and zero-field NMR spectroscopy	428-95-64	9564
1075	Director	363-68-99	5661 (IP phones only)
1076	EPR spectroscopy	428-95-65	9565

Equipment

The Center for Magnetic Resonance provides access to the instrumentation, expertise, and infrastructure to carry out and support fundamental, applied and innovative research projects utilizing NMR, NQR and EPR spectroscopy as well as magnetic resonance microimaging. On commercial basis, all services of the Center could be provided to external users, such as medical, pharmacological and forensic organisations, as well as museums, technological and research centers, industry etc.



Bruker 300 MHz DPX and two Bruker 400 MHz Avance NMR spectrometers are dedicated to service routine measurements of 1D and 2D NMR spectra of liquids and solutions.

Selected features:

- Direct and inverse detection probes.
- Observed nuclei range from ^1H to ^{109}Ag .
- Possible $^1\text{H}\{^{19}\text{F}\}$ and $^{19}\text{F}\{^1\text{H}\}$ measurements.
- Possible ^2H measurements with ^{19}F lock.
- Temperature range from 120 to 390 K.



Bruker 500 MHz Avance NMR spectrometer is suited for measurements of 1D, 2D and 3D NMR spectra of liquids and solutions.

Selected features:


- Long measurements at low temperature (down to 110 K).
- Three-channel architecture (from ^1H to ^{109}Ag).
- Diffusion measurements at temperatures up to 470 K.




Bruker 400 MHz WB Avance NMR spectrometer is dedicated to the studies of samples in solid state: crystallines, powders, weakly ordered materials, gels, liquid crystals, amorphous compounds, nanostructures (zeolites, silicates) etc. The spectrometer allows one to study diffusion processes and obtain micro-tomographic image

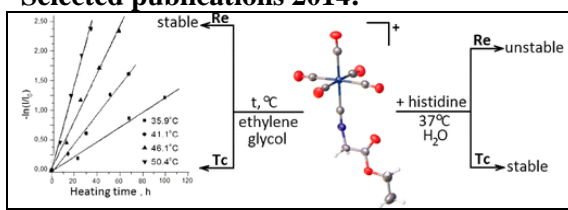
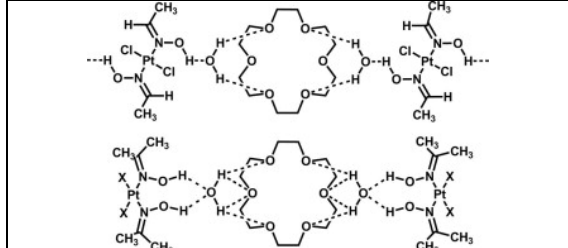
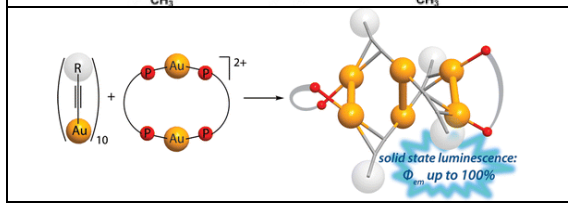
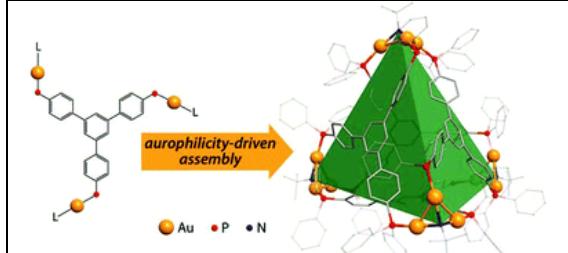
Selected features:

- Long measurements at temperatures from 130 K to 870 K.
- Microtomography of objects up to 30 mm in linear size.
- Magic angle spinning up to 30 kHz.
- Diffusion measurements (gradients up to 3000 G/cm).

	<p>EPR spectrometer Bruker Elexsys E580 ($\lambda = 3.2$ cm, X-band) for studies of paramagnetic centers in solids, liquids, solutions, including aqueous solutions, and gases. Spectrometer is capable of measurements in CW-mode as well as in FT-mode.</p> <p><i>Selected features:</i></p> <ul style="list-style-type: none"> • UV-irradiation of the samples (100 W, 200-2000 nm). • Temperature range from 3.7 K to 500 K. • ENDOR/TRIPLE measurements. • Planned: micro-tomographic measurements. • Planned: working in L-band (32 cm) and W-band (10 mm).
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	<p>Tecmag Redstone NMR/NQR 1-500 MHz spectrometer allows one to obtain spectral and relaxation NMR and NQR parameters for solids, polymers, metals, glass and magnetically ordered systems.</p> <p><i>Selected features:</i></p> <ul style="list-style-type: none"> • Observed frequencies in a zero external magn. field 20-120 MHz. • Temperature range from 4 K to 500 K. • Acquisition of weak NQR signals by multiple scans • NQR spectra of ^7Li, ^{27}Al, ^{35}Cl, $^{63,65}\text{Cu}$, ^{75}As, ^{93}Nb, ^{183}Ta etc nuclei. • NMR of ^{11}B, ^{57}Fe, ^{59}Co, ^{61}Ni etc. nuclei. • Investigation of orientation dependence for monocrystals.
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Selected publications 2014:

	<p>A. Miroslavov, Y. Polotskii, V. Gurzhiy, A. Ivanov, A. Lumpov, M. Tyupina, G. Sidorenko, P. Tolstoy, D. Maltsev, D. Suglobov «Technetium and Rhenium Pentacarbonyl Complexes with C2 and C11 ω-Isocyanocarboxylic Acid Esters» <i>Inorg. Chem.</i> 2014, 53, 7861-7869 DOI: 10.1021/ic500327s</p>
	<p>E.Yu. Bulatov, T.G. Chulkova, I.A. Boyarskaya, V.V. Kondratiev, M. Haukka, V.Yu. Kukushkin «Triple associates based on (oxime)Pt(II) species, 18-crown-6, and water: Synthesis, structural characterization, and DFT study» <i>J. Molec. Struct.</i> 2014, 1068, 176-181 DOI: 10.1016/j.molstruc.2014.04.010</p>
	<p>I.O. Koshevoy, Y.-C. Chang, Y.-A. Chen, A.J. Karttunen, E.V. Grachova, S.P. Tunik, J.Janis, T.A. Pakkanen, P.-T. Chou «Luminescent Gold(I) Alkynyl Clusters Stabilized by Flexible Diphosphine Ligands» <i>Organometallics</i>, 2014, 33, 2363-2371 DOI: 10.1021/om5002952</p>
	<p>Julia R. Shakirova, Elena V. Grachova, Antti J. Karttunen, Vladislav V. Gurzhiy, Sergey P. Tunik and Igor O. Koshevoy «Metallophilicity-assisted assembly of phosphine-based cage molecules» <i>Dalton Trans.</i>, 2014, 43, 6236-6243 DOI: 10.1039/c3dt53645a</p>

Selected publications 2015

1	M.Ya. Demakova, D.S. Bolotin, N.A. Bokach, G.L. Starova, V.Yu. Kukushkin, "Metal-mediated cyanamide-hydroxyguanidine coupling"	Inorg Chim. Acta, 2015, 425, 114-117 DOI: 10.1016/j.ica.2014.10.015
2	A. Ya. Bespalov, T. L. Gorchakova, A. Yu. Ivanov, M. A. Kuznetsov, L. M. Kuznetsova, A. S. Pankova, L. I. Prokopenko, M. S. Avdontceva, «Alkylation and Aminomethylation of 1,3-Dihydro-2H-Benzimidazole-2-Thione».	Chem. Heterocycl. Compd., 2015, 50(11), ASAP. DOI: 10.1007/s10593-014-1623-z
3	S. Pylaeva, C. Allolio, B. Koeppel, G.S. Denisov, H.-H. Limbach, D. Sebastiani, P.M. Tolstoy, "Proton transfer in hydrogen bonded complex caused by solvation shells fluctuations: ab initio MD study of anionic phenolate-carboxylic acid and neutral pyridine-carboxylic acid systems"	Phys. Chem. Chem. Phys., 2015, accepted. DOI: 10.1039/C4CP04727C
4	E.Yu. Tupikina, G.S. Denisov, P.M. Tolstoy, "NMR Study of CHN Hydrogen Bond and Proton Transfer in 1,1-dinitroethane Complex with 2,4,6-trimethylpyridine "	J. Phys. Chem. A, 2014, accepted. DOI: 10.1021/jp511493m
5	M.S. Novikov, A.F. Khlebnikov, N.V. Rostovskii, S.Tcyrulnikov, A.A. Suhanova, K.V. Zavyalov, D.S. Yufit, " Pseudopericyclic 1,5- versus Pericyclic 1,4- and 1,6- Electrocyclization in Electron-Poor 4- Aryl-2-azabuta-1,3-dienes: Indole Synthesis from 2H-Azirines and Diazo Compounds"	J Org. Chem. 2015, 80, 18-29 DOI: 10.1021/jo501051n
6	A. Penkova, G. Polotskaya, A. Toikka, "Pervaporation composite membranes for ethyl acetate production"	Chem. Eng. Process., 2015, 87, 81-87 DOI: 10.1016/j.cep.2014.11.015
7	A.I. Solomatina, D.V. Krupenya, V.V. Gurzhiy, I. Zlatkin, A.P. Pushkarev, M.N. Bochkarev, N.A. Besley, E. Bichoutskaia, S.P. Tunik, "Cyclometallated platinum(II) complexes containing NHC ligands; synthesis, characterization, photophysics and their application as emitters in OLEDs"	Dalton Trans. 2015, accepted
8	A.K. Sánchez Lafarga, F.P. Pacheco Moisés, A. Gurinov, G.G. Ortiz, G.G. Carbajal Arizaga, "Dual responsive dysprosium-doped hydroxyapatite particles and toxicity reduction after functionalization with folic and glucuronic acids"	Mat. Sci. Eng. C, 2015, 48, 541-547 DOI: 10.1016/j.msec.2014.12.033
9	A.S. Bogachenkov, A.V. Dogadina, V.P. Boyarskiy, A.V. Vasilyev, "Acid-promoted transformations of 1-(diphenylphosphoryl)allenes: synthesis of novel 1,4-dihydrophosphinoline 1-oxides"	Org. Biomol. Chem. 2015, 13, 1333-1338 DOI: 10.1039/c4ob02269f
10	D. Boyarskaya, M. Avdontceva, T. Chulkova, "Synthesis and crystal structure of 2-isocyano-4-methylphenyl diphenylacetate: a rare case of an easily accessible odourless isocyanide"	Acta Cryst. C 2015, C71, 155-158 DOI: 10.1107/S2053229615001588
11	J.J. Medvedev, O.S. Galkina, A.A. Klinkova, D.S. Giera, L. Hennig, C. Schneider, V.A. Nikolaev, "Domino [4 + 1]-annulation of α,β -unsaturated δ -amino esters with Rh(II)-carbenoids – a new approach towards multi-functionalized N-aryl pyrrolidines"	Org. Biomol. Chem. 2015, 13, 2640-2651 DOI: 10.1039/C4OB02454K
12	N.V. Rostovskii, M.S. Novikov, A.F. Khlebnikov, G.L. Starova, M.S. Avdontseva, "Azirinium ylides from α -diazoketones and 2H-azirines on the route to 2H-1,4-oxazines: three-membered ring opening vs 1,5-cyclization"	Bellstein J. Org. Chem. 2015, 11, 302-312 DOI: 10.3762/bjoc.11.35
13	K.S. Kisel, G. Linti, G.L. Starova, V.V. Sizov, A.S. Melnikov, A.P. Pushkarev, M.N. Bochkarev, E.V. Grachova, S.P. Tunik, "Syntheses, Structures, and Photophysical Properties of Eu and Lu Diketonates with a Neutral Polydentate Imidazolylmethanamine Ligand"	Eur. J. Inorg. Chem. 2015, accepted DOI:10.1002/ejic.201403186

Selected publications 2014

1	I.S. Krytchankou, D.V. Krupenya, A.J. Karttunen, S.P. Tunik, T.A. Pakkanen, P.-T. Choud, I.O. Koshevoy, "Triphosphine-supported bimetallic AuI-MI (M = Ag, Cu) alkynyl clusters"	Dalton Trans., 2014, 43, 3383-3394 DOI: 10.1039/C3DT52658E
2	A.S. Pankova, M.A. Kuznetsov, "Synthesis and thermal transformations of spiro-fused N-phthalimidoaziridines"	Tetrahedron Lett., 2014, 55, 2499-2503 DOI: http://dx.doi.org/10.1016/j.tetlet.2014.03.014
3	A.P. Molchanov, R.S. Savinkov, A.V. Stepanov, G.L. Starova, R.R. Kostikov, V.S. Barnakova, A.V. Ivanov, "A Highly Efficient and Stereoselective Cycloaddition of Nitrones to N-Vinylpyrroles"	Synthesis 2014, 46, 771-780 DOI: 10.1055/s-0033-1340479
4	A.V. Stepanov, A.G. Larina, V.M. Boitsov, V.V. Gurzhiy, A.P. Molchanov, R.R. Kostikov, "Synthesis of indene derivatives via reactions of vinylidenecyclopropanes with the N-acyliminium cations generated from hydroxylactams"	Tetrahedron Lett., 2014, 55, 2022-2026 DOI: 10.1016/j.tetlet.2014.02.039
5	M.T. Dau, J.R. Shakirova, A.J. Karttunen, E.V. Grachova, S.P. Tunik, A.S. Melnikov, T.A. Pakkanen, I.O. Koshevoy, "Coinage Metal Complexes Supported by the Tri- and Tetraphosphine Ligands"	Inorg. Chem., 2014, 53, 4705-4715 DOI: 10.1021/ic500402m
6	A.A. Melekhova, D.V. Krupenya, V.V. Gurzhiy, A.S. Melnikov, P.Yu. Serdobintsev, S.I. Selivanov, S.P. Tunik, "Synthesis, characterization, luminescence and non-linear optical properties of diimine platinum(II) complexes with arylacetylene ligands"	J. Organomet. Chem., 2014, 763-764, 1-5 DOI: 10.1016/j.jorganchem.2014.04.002
7	L.L. Rodina, J.J. Medvedev, O.S. Galkina, V.A. Nikolaev, "Thermolysis of 4-Diazotetrahydrofuran-3-ones: Total Change of Reaction Course Compared to Photolysis"	Eur. J. Org. Chem. 2014, 14, 2993-3000 DOI: 10.1002/ejoc.201400161
8	M.A. Kinzhalov, K.V. Luzyanin, I.A. Boyarskaya, G.L. Starova, V.P. Boyarskiy, "Synthetic and structural investigation of [PdBr ₂ (CNR) ₂] (R = Cy, Xyl)"	J Molec. Struct. 2014, 1068, 222-227 DOI: 10.1016/j.molstruc.2014.04.025
9	M.V. Popova, D. Michel, "Behavior of Sodium Lauroyl Sarcosinate in Solution and Binary Mixtures by Means NMR"	Appl. Magn. Reson. 2014, 45, 353-364 DOI: 10.1007/s00723-014-0531-9
10	P.R. Golubev, A.S. Pankova, M.A. Kuznetsov, "Transition-Metal-Free Approach to 4-Ethynylpyrimidines via Alkenynes"	Eur. J. Org. Chem. 2014, 3614-3621 DOI: 10.1002/ejoc.201402045
11	J. Malinina, T.Q. Tran, A.V. Stepanov, V.V. Gurzhiy, G.L. Starova, R.R. Kostikov, A.P. Molchanov, "[3+2] Cycloaddition reactions of arylallenes with C-(N-arylcarbonyl)- and C,C-bis(methoxycarbonyl)nitrones and subsequent rearrangements"	Tetrahedron Lett. 2014, 55, 3663-3666 DOI: 10.1016/j.tetlet.2014.04.107
12	V.A. Rassadin, E. Nicolas, Y. Six, "Ti(OiPr) ₄ /nBuLi: an attractive reagent system for [2+2+2] cyclootrimerisation reactions"	Chem. Commun. 2014, 50, 7666-7779 DOI: 10.1039/C4CC02698E

13	P.B. Davidovich, D.S. Novikova, V.G. Tribulovich, S.N. Smirnov, V.V. Gurzhiy, G. Melino, A.V. Garabadzhiu, "First X-ray Structural Characterization of Isatin Schiff-Base Derivative. NMR and Theoretical Conformational Studies"	J. Molec. Struct. 2014, Accepted
14	Dz.N. Konshina, A.V. Furina, Z.A. Temerdashev, A.A. Gurinov, V.V. Konshin, "Immobilization of Guanazyl Functional Groups on Silica for Solid-Phase Extraction of Metal Ions"	Analytical Lett. 2014, accepted DOI: 10.1080/00032719.2014.917421
15	A.V. Stepanov, V.M. Boitsov, A.G. Larina, A.P. Molchanov, "Acid-induced rearrangement of cycloadducts from N-aryl itaconimides and 1,3-diphenylisobenzofuran"	Tetrahedron Lett. 2014, 55, 4895-4897 DOI: 10.1016/j.tetlet.2014.06.107
16	D.S. Ryabukhin, L.Yu. Gurskaya, G.K. Fukin, A.V. Vasilyev, "Superelectrophilic activation of N-aryl amides of 3-arylpropynoic acids: synthesis of quinolin-2(1H)-one derivatives"	Tetrahedron 2014, 70, 6428-6443 DOI: 10.1016/j.tet.2014.07.028
17	O.Yu. Bakulina, A.Yu. Ivanov, D.V. Dar'in, P.S. Lobanov, "New transformations of 2-methylsulfanyl-4,6-dichloropyrimidine-5-carbaldehyde involving enamines: synthesis of condensed azines"	Mendeleev Commun. 2014, 24, 163-164. DOI: 10.1016/j.mencom.2014.04.013
18	I.I. Eliseev, P.V. Gushchin, Yi.-A. Chen, P.-T. Chou, M. Haukka, G.L. Starova, V.Yu. Kukushkin, "Phosphorescent Pt(II) Systems Featuring Both 2,2'-Dipyridylamine and 1,3,5-Triazapentadiene Ligands"	Eur. J. Inorg. Chem. 2014, 4101-4108 DOI:10.1002/ejic.201402364
19	E.A. Valishina, M.F.C. Guedes da Silva, M.A. Kinzhalov, S.A. Timofeeva, T.M. Buslaeva, M. Haukka, A.J.L. Pombeiro, V.P. Boyarskiy, V.Yu. Kukushkin, K.V. Luzyanin, "Palladium-ADC complexes as efficient catalysts in copper-free and room temperature Sonogashira coupling"	J. Molec. Catalysis A 2014, 395, 162-171 DOI: 10.1016/j.molcata.2014.08.018
20	O.Yu. Bakulina, A.Yu. Ivanov, P.S. Lobanov, D.V. Dar'in, "Synthesis of novel per-fused heterocyclic systemsdpyrimido [4,5,6-de][1,8]naphthyridines, based on interaction of 4,6-dichloro-2-methylthiopyrimidine-5-carbaldehyde with geminal enediamines"	Tetrahedron 2014, 70, 7900-7905 DOI: 10.1016/j.tet.2014.08.066
21	A.S. Smirnov, E.S. Butukhanova, N.A. Bokach, G.L. Starova, V.V. Gurzhiy, M.L. Kuznetsov, V.Yu. Kukushkin, "Novel (cyanamide)ZnII complexes and zinc(II)-mediated hydration of the cyanamide ligands"	Dalton Trans. 2014, 43, 15798-15811 DOI: 10.1039/c4dt01812e
22	M.Ya. Goikhmana, N.P. Yevlampieva, I.V. Podeshvo, S.A. Mil'tsov, V.S. Karavan, I.V. Gofman, A.P. Khurchak, A.V. Yakimansky, "Polymers with Cyanine Chromophore Groups in the Main Chain: Synthesis and Properties"	Polymer Science B, 2014, 56, 352-359 DOI: 10.1134/S1560090414030051
23	S. Miltsov, V. Karavan, M. Goikhman, I. Podeshvo, S. Gómez-de Pedro, M. Puyol, J. Alonso-Chamarro, "Synthesis of bis-aminosubstituted indocyanine dyes for their use in polymeric compositions"	Dyes and Pigments, 2014, 109, 34-41 DOI: 10.1016/j.dyepig.2014.05.002
24	M.Ya. Demakova, K.V. Luzyanin, G.L. Starova, V.Yu. Kukushkin, "Facile alternative route to cis-[PtCl ₂ (PTA) ₂] and [PtCl(PTA) ₃]Cl (PTA = 1,3,5-triaza-7-phosphaadamantane)"	Inorg. Chem. Commun., 2014, 50, 17-18 DOI: 10.1016/j.inoche.2014.10.002
25	D.S. Bolotin, K.I. Kulish, N.A. Bokach, G.L. Starova, V.V. Gurzhiy, V.Yu. Kukushkin, "Zinc(II)-Mediated Nitrile-Amidoxime Coupling Gives New Insights into H ⁺ -Assisted Generation of 1,2,4-Oxadiazoles"	Inorg. Chem., 2014, 53, 10312-10324 DOI: 10.1021/ic501333s
26	T.B. Anisimova, M. Fátima C. Guedes da Silva, V.Yu. Kukushkin, A.J. L. Pombeiro, K.V. Luzyanin, "Metal-mediated coupling of amino acid esters with isocyanides leading to new chiral acyclic aminocarbene complexes"	Dalton Trans., 2014, 43, 15861-15871 DOI: 10.1039/c4dt01917b
27	A.N. Kazakova, R.O. Iakovenko, V.M. Muzalevskiy, I.A. Boyarskaya, M.S. Avdontceva, G.L. Starova, A.V. Vasilyev, V.G. Nenajdenko, "Trifluoromethylated allyl alcohols: acid-promoted reactions with arenes and unusual 'dimerization'"	Tetrahedron Lett., 2014, 55, 6851-6855 DOI: 10.1016/j.tetlet.2014.10.083
28	A.F. Khlebnikov, M.S. Novikov, V.V. Pakalnis, R.O. Iakovenko, D.S. Yufit, "Domino reactions of 2H-azirines with acylketenes from furan-2,3-diones: Competition between the formation of ortho-fused and bridged heterocyclic systems"	Beilstein J. Org. Chem., 2014, 10, 784-793 DOI:10.3762/bjoc.10.74
29	A.S. Konev, A.F. Khlebnikov, P.I. Prolubnikov, A.S. Mereshchenko, A.V. Povolotskiy, O.V. Levin, A. Hirsch, "Synthesis of New Porphyrin-Fullerene Dyads Capable of Forming Charge-Separated States on a Microsecond Lifetime Scale"	Chem. Eur. J., 2014, 20,1-15 DOI: 10.1002/chem.201404435
30	N.A. Danilkina, A.E. Kulyashova, A.F. Khlebnikov, S. Bräse, I.A. Balova, "Electrophilic Cyclization of Aryldiacetylenes in the Synthesis of Functionalized Eneidyne Fused to a Heterocyclic Core"	J. Org. Chem., 2014, 79(19), 9018-9045 DOI: 10.1021/jo501396s
31	A.F. Khlebnikov, O.A. Tomashenko, L.D. Funt, M.S. Novikov, "Simple Approach to Pyrrolylimidazole Derivatives by Azirine Ring Expansion with Imidazolium Ylides"	Org. Biomol. Chem., 2014, 12, 6598-6609 DIO: 10.1039/c4ob00865k
32	A.S. Konev, D.A. Lukyanov, P.S. Vlasov, O.V. Levin, A.A. Virtsev, I.M. Kislyakov, A.F. Khlebnikov, "The Implication of 1,3-Dipolar Cycloaddition of Azomethine Ylides to the Synthesis of Main-Chain Porphyrin Oligomers"	Macromol. Chem. Phys., 2014, 215, 516-529 DOI: 10.1002/macp.201300679
33	A.F. Khlebnikov, A.S. Konev, A.A. Virtsev, D.S. Yufit, G. Mlostoń, H. Heimgartner, "Concerted vs. Non-Concerted 1,3-Dipolar Cycloadditions of Azomethine Ylides to Electron-Deficient Dialkyl 2,3-Dicyanobut-2-enedioates"	Helv. Chim. Acta., 2014, 97, 453-470 DOI: 10.1002/hlca.201300405
34	K.V. Zavyalov, M.S. Novikov, A.F. Khlebnikov, V.V. Pakalnis, "Selective syntheses of 2H-1,3-oxazines and 1H-pyrrol-3(2H)-ones via temperature-dependent Rh(II)-carbenoid-mediated 2H-azirine ring expansion"	Tetrahedron, 2014, 70(21), 3377-3384 DOI: 10.1016/j.tet.2014.03.101
35	P.V. Gushchin, M.L. Kuznetsov, M. Haukka, V.Yu. Kukushkin, "Anionic halide...alcohol clusters in the solid state"	J. Phys. Chem. A, 2014, 118, 9529-9539 DOI: 10.1021/jp506256a
36	T.M. Dau, Y.-A. Chen, A.J. Karttunen, E.V. Grachova, S.P. Tunik, K.-T. Lin, W.-Y. Hung, P.-T. Chou, T.A. Pakkanen, I.O. Koshevoy, "Tetragold(I) Complexes: Solution Isomerization and Tunable Solid-State Luminescence"	Inorg. Chem., 2014, 53, 9478-9488 DOI: 10.1021/ic501470v
37	A.S. Pankova, M.A. Samartsev, I.A. Shulgin, P.R. Golubev, M.A. Kuznetsov, "Synthesis of thiazolidines via regioselective addition of unsymmetric thioureas to maleic acid derivatives"	RSC Advances, 2014, 4, 51780-51786 DOI 10.1039/c4ra07840c

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