

## Официальные оппоненты:

Заслуженный деятель науки РФ, доктор химических наук, профессор **Зык Николай Васильевич**, профессор кафедры органической химии Химического факультета Московского государственного университета имени М.В. Ломоносова.

### Контактные данные:

Адрес: 119991, г. Москва, Ленинские горы, д. 1, стр. 3, ГСП-1, МГУ, химический факультет.

Телефон: (495) 939-46-52. E-mail: zyk@org.chem.msu.ru.

### Список основных публикаций

#### в рецензируемых научных изданиях за последние 5 лет:

1. Beloglazkina, E.K., Krasnovskaya, O.O., Guk, D.A., Tafeenko, V.A., Moiseeva, A.A., Zyk, N.V., Majouga, A.G. Synthesis, characterization, and cytotoxicity of binuclear copper(II) complexes with tetradentate nitrogen-containing ligands bis-5-(2-pyridylmethylidene)-3,5-dihydro-4*H*-imidazol-4-ones (2018) Polyhedron, 148, pp. 129-137.

2. Vorozhtsov, N.I., Sviridova, L.A., Grigorkevich, O.S., Korablina, D.D., Beloglazkina, E.K., Majouga, A.G., Zyk, N.V. Synthesis 5-(pyrazolin-3-ylmethylidene)-2-thiohydantoin and 2-alkylsulfanyl-5-(pyrazolin-3-ylmethylidene)-3,5-dihydro-4*H*-imidazol-4-ones (2017) Russian Chemical Bulletin, 66 (3), pp. 506-510.

3. Beloglazkina, E.K., Vorozhtsov, N.I., Sviridova, L.A., Grigorkevich, O.S., Korablina, D.D., Moiseeva, A.A., Zyk, N.V., Majouga, A.G. The first example of Cu(I) complex with 5-pyrazolyl-2-thioxotetrahydro-4*H*-imidazol-4-one: Synthesis and structural characterization (2016) Inorganic Chemistry Communications, 71, pp. 86-89.

4. Beloglazkina, E.K., Korablina, D.D., Vorozhtsov, N.I., Sviridova, L.A., Moiseeva, A.A., Skvortsov, D.A., Rybakov, V.B., Majouga, A.G., Zyk, N.V. Synthesis of 3-(pyridine-2-yl)-4,5-dihydro-1*H*-pyrazole-1-thiocarboxamides and their copper(II) complexes (2016) Arabian Journal of Chemistry, Article in Press.

5. Beloglazkina, A.A., Wobith, B., Barskaia, E.S., Zefirov, N.A., Majouga, A.G., Beloglazkina, E.K., Zyk, N.V., Kuznetsov, S.A., Zefirova, O.N. Synthesis and biological testing of (5*Z*)-2-aryl-5-arylmethylidene-3,5-dihydro-4*H*-imidazol-4-ones as antimetabolic agents (2016) Medicinal Chemistry Research, 25 (6), pp. 1239-1249.

6. Tishchenko, K.I., Beloglazkina, E.K., Proskurnin, M.A., Mazhuga, A.G., Muratova, M.E., Skvortsov, D.A., Zyk, N.V. Synthesis of (5*Z*,5'*Z*)-3,3'-(alkane- $\alpha,\omega$ -diyl)bis[5-(2-pyridylmethylidene)-2-methylthio-3,5-dihydro-4*H*-imidazol-4-ones] and their coordination compounds with copper(II) (2016) Russian Chemical Bulletin, 65 (5), pp. 1254-1259.

7. Dlin, E.A., Averochkin, G.M., Finko, A.V., Vorobyeva, N.S., Beloglazkina, E.K., Zyk, N.V., Ivanenkov, Y.A., Skvortsov, D.A., Koteliansky, V.E., Majouga, A.G. Reaction of arylboronic acids with 5-aryl-3-substituted-2-thioxoimidazolin-4-ones (2016) *Tetrahedron Letters*, 57 (49), pp. 5501-5504.

8. Barskaia, E.S., Beloglazkina, A.A., Wobith, B., Zefirov, N.A., Majouga, A.G., Beloglazkina, E.K., Zyk, N.V., Kuznetsov, S.A., Zefirova, O.N. Synthesis and biotests of 2-aryl-5-arylmethylidene-substituted 1,3-oxazol-5(4*H*)-ones and N-methyl-3,5-dihydro-4*H*-imidazol-4-ones as combretastatin A-4 analogs (2015) *Russian Chemical Bulletin*, 64 (7), pp. 1560-1563.

9. Majouga, A.G., Beloglazkina, E.K., Yudina, A.V., Mironov, A.V., Zyk, N.V. Oxidative dehydrogenation of 5-(pyridine-2-yl-methyl)-2-thioxo-4-imidazolidinones in complexation reaction with copper(II) chloride (2015) *Inorganic Chemistry Communications*, 51, pp. 114-117.

10. Vorozhtsov, N.I., Majouga, A.G., Beloglazkina, E.K., Moiseeva, A.A., Golubeva, G.A., Evstafev, I.V., Sviridova, L.A., Zyk, N.V. Copper(II) complexes with 3-(2-pyridyl)-4,5-dihydro-1*H*-pyrazoles: Synthesis, structural and electrochemical studies (2014) *Russian Chemical Bulletin*, 63 (3), pp. 657-661.

Кандидат химических наук **Львов Андрей Геннадьевич**, старший научный сотрудник лаборатории гетероциклических соединений №3 Института органической химии имени Н.Д. Зелинского Российской академии наук (ИОХ РАН).

Контактные данные:

Адрес: 119991, г. Москва, Ленинский проспект, д. 47.

Телефон: (499) 135-88-38. E-mail: lvov-andre@yandex.ru.

Список основных публикаций

в рецензируемых научных изданиях за последние 5 лет:

1. Lvov, A.G., Khusniyarov, M.M., Shirinian, V.Z. Azole-based diarylethenes as the next step towards advanced photochromic materials (2018) Journal of Photochemistry and Photobiology C: Photochemistry Reviews, 36, pp. 1-23.

2. Glebov, E.M., Ruban, N.V., Pozdnyakov, I.P., Grivin, V.P., Plyusnin, V.F., Lvov, A.G., Zakharov, A.V., Shirinian, V.Z. Mechanistic Aspects of Photoinduced Rearrangement of 2,3-Diarylcyclopentenone Bearing Benzene and Oxazole Moieties (2018) Journal of Physical Chemistry A, Article in Press.

3. Zakharov, A.V., Gaeva, E.B., Lvov, A.G., Metelitsa, A.V., Shirinian, V.Z. Photochemical Rearrangement of Diarylethenes: Reaction Efficiency and Substituent Effects (2017) Journal of Organic Chemistry, 82 (16), pp. 8651-8661.

4. Lvov, A.G., Milevsky, N.A., Yanina, A.M., Kachala, V.V., Shirinian, V.Z. Aerobic Dimerization of Ethyl 4-Thienyl-3-ketobutanoate toward a Modifiable Photochromic Diarylethene Precursor (2017) Organic Letters, 19 (16), pp. 4395-4398.

5. Lvov, A.G., Kavun, A.M., Kachala, V.V., Nelyubina, Y.V., Metelitsa, A.V., Shirinian, V.Z. Structural and Spectral Properties of Photochromic Diarylethenes: Size Effect of the Ethene Bridge (2017) Journal of Organic Chemistry, 82 (3), pp. 1477-1486.

6. Migulin, V.A., Lvov, A.G., Krayushkin, M.M. Photoisomerization of cyclopentene-based  $\beta$ -(2-furanyl)- and  $\beta$ -(2-thienyl)enones (2017) Tetrahedron, 73 (30), pp. 4439-4449.

7. Lvov, A.G., Shirinyan, V.Z. Photoinduced Rearrangements of Diarylethenes (2016) Chemistry of Heterocyclic Compounds, 52 (9), pp. 658-665.

8. Shirinian, V.Z., Lonshakov, D.V., Lvov, A.G., Kavun, A.M., Yadykov, A.V., Krayushkin, M.M. Photo- and PH-switchable fluorescent diarylethenes based on 2,3-diarylcyclopent-2-en-1-ones with dialkylamino groups (2016) Dyes and Pigments, 124, pp. 258-267.

9. Lvov, A.G., Shirinian, V.Z., Zakharov, A.V., Krayushkin, M.M., Kachala, V.V., Zavarzin, I.V. General Photoinduced Sequential Electrocyclization/[1,9]-Sigmatropic Rearrangement/Ring-Opening Reaction of Diarylethenes (2015) Journal of Organic Chemistry, 80 (22), pp. 11491-11500.

10. Shirinian, V.Z., Lvov, A.G., Bulich, E.Y., Zakharov, A.V., Krayushkin, M.M. Novel photochromic diarylethenes bearing an imidazole moiety (2015) Tetrahedron Letters, 56 (40), pp. 5477-5481.

## **Ведущая организация:**

Федеральное государственное бюджетное учреждение науки Институт элементоорганических соединений имени А.Н. Несмеянова Российской академии наук (ИНЭОС РАН).

### Контактные данные:

Адрес: 119991, ГСП-1, г. Москва, улица Вавилова, д. 28.

Телефон: (499) 135-92-02. Факс: (499) 135-50-85. E-mail: larina@ineos.ac.ru.

### Список основных публикаций

#### в рецензируемых научных изданиях за последние 5 лет:

1. Metlina, D.A., Metlin, M.T., Ambrozevich, S.A., Taydakov, I.V., Lyssenko, K.A., Vitukhnovsky, A.G., Selyukov, A.S., Krivobok, V.S., Aminev, D.F., Tobokhova, A.S. Luminescence and electronic structure of Nd<sup>3+</sup> complex with pyrazole-substituted 1,3-diketone and 1,10-phenanthroline (2018) Journal of Luminescence, 203, pp. 546-553.

2. Rumyantseva, M., Nasriddinov, A., Vladimirova, S., Tokarev, S., Fedorova, O., Krylov, I., Drozdov, K., Baranchikov, A., Gaskov, A. Photosensitive organic-inorganic hybrid materials for room temperature gas sensor applications (2018) Nanomaterials, 8 (9), 671.

3. Panchenko, P.A., Fedorov, Y.V., Fedorova, O.A. Selective fluorometric sensing of Hg<sup>2+</sup> in aqueous solution by the inhibition of PET from dithia-15-crown-5 ether receptor conjugated to 4-amino-1,8-naphthalimide fluorophore (2018) Journal of Photochemistry and Photobiology A: Chemistry, 364, pp. 124-129.

4. Loginov, D.A., Molotkov, A.P., Shepel', N.E. Synthesis and fluorescence of 3,4,6,7,8,9-hexaphenyl-1*H*-benzo[*g*]isochromen-1-one (2018) Journal of Organometallic Chemistry, 867, pp. 67-70.

5. Motornov, V.A., Tabolin, A.A., Novikov, R.A., Shepel, N.E., Nenajdenko, V.G., Ioffe, S.L. Synthesis of 2,5-diaryl-4-halo-1,2,3-triazoles and comparative study of their fluorescent properties (2018) Tetrahedron, 74 (28), pp. 3897-3903.

6. Utochnikova, V.V., Grishko, A., Vashchenko, A., Goloveshkin, A., Averin, A., Kuzmina, N. Lanthanide Tetrafluoroterephthalates for Luminescent Ink-Jet Printing (2017) European Journal of Inorganic Chemistry, 2017 (48), pp. 5635-5639.

7. Farat, O.K., Farat, S.A., Ananyev, I.V., Okovytyy, S.I., Tatarets, A.L., Markov, V.I. Novel xanthene push-pull chromophores and luminophores: Synthesis and study of their spectral properties (2017) Tetrahedron, 73 (51), pp. 7159-7168.

8. Pakhomov, A.A., Mironiuk, V.B., Kononevich, Y.N., Korlyukov, A.A., Volodin, A.D., Pryakhina, T.A., Martynov, V.I., Muzafarov, A.M. Synthesis and crystal structure of a meso-decene-BODIPY dye as a functional bright fluorophore for silicone matrices (2017) Mendeleev Communications, 27 (4), pp. 363-365.

9. Panchenko, P.A., Arkhipova, A.N., Zakharko, M.A., Jonusauskas, G., Fedorov, Y.V., Fedorova, O.A. Synthesis and spectral properties of fluorescent dyes

based on 4-styryl-1,8-naphthalimide (2016) *Russian Chemical Bulletin*, 65 (10), pp. 2444-2451.

10. Keshtov, M.L., Godovsky, D.Y., Kuklin, S.A., Lee, J., Kim, J., Lim, B., Lee, H.K., Biswas, S., Koukaras, E.N., Sharma, G.D. Design, synthesis and photophysical properties of D1-A-D2-A-D1-type small molecules based on fluorobenzotriazole acceptor and dithienosilole core donor for solution processed organic solar cells (2016) *Dyes and Pigments*, 132, pp. 387-397.