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Dr. Volodymyr I. Musatov
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PERSONAL:

Born: April 22, 1963; Kostanay Region, Denisovsky District, z/s Sverdlov, Kazakhstan

Citizenship Ukraine

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Affiliation : Institute of Functional Materials Chemistry, SSI "Institute for Single Crystals" of the National Academy of Science of Ukraine (60 Nauky Avenue, Kharkiv, 61072)

Positions:

Phone / Fax

Researcher Senior researcher, head of the Applied NMR Group

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EDUCATION AND ACADEMIC STATUSES:

Specialist (M.Sc.) Biophysicist, June 1985, Kharkiv State University

Candidate of Candidate of biological sciences, 03.00.19 – cryobiology, 1992.

Science

(PhD) Chemistry, February 2016 SSI "Institute for Single Crystals" of the National Academy of Science of Ukraine

Senior researcher

PROFESSIONAL CAREER:

1980-1985 Student of Kharkov State University

November 1988 – Postgraduate student, SSI "Institute for Single Crystals" NAS of
October 1992 Ukraine, Kharkiv

December 2000-present Senior Researcher, Department of Organic and Bioorganic Chemistry,
time SSI "Institute for Single Crystals" NAS of Ukraine, Kharkiv

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RESEARCH INTERESTS: Research on the structure of organic compounds of various origins using nuclear magnetic resonance spectroscopy methods.

EXPERIMENTAL EXPERIENCE: Application of NMR Spectrometer Varian 400-MR for establishing the structure of organic compounds.

PUBLICATIONS: Total number: 90 articles in Ukrainian and International scientific journals, 16 patents of Ukraine, 10 theses of Ukrainian and international conferences.

Selected publications:

1. Chebanov V.A., Desenko S.M., Sakhno Y.I., Panchenko E.S., Saraev V.E., **Musatov V.I.**, Konev V.F. Study of heterocyclization products of arylidenepyruvic acids with 5-aminotetrazole and 2-aminobenzoimidazole // *Phizyologichno Actyvni Spoluky*, **2002**, 33, 10-13.
2. Chebanov V.A., Sakhno Ya.I., Desenko S.M., Shishkina S.V., **Musatov V.I.**, Shishkin O.V., Knyazeva I.V. Three-Component Procedure for the Synthesis of 5-Aryl-5,8-dihydroazolo[1,5-a]pyrimidine-7-carboxylic Acids // *Synthesis*, **2005**, 2597 – 2602.
3. Chebanov V.A., Sakhno Ya.I., Desenko S.M., Chernenko V.N., **Musatov V.I.**, Shishkina S.V., Shishkin O.V., Kappe C.O. Cyclocondensation Reactions of 5-Aminopyrazoles, Pyruvic Acids and Aldehydes. Multicomponent Approaches to Pyrazolopyridines and Related Products // *Tetrahedron*, **2007**, 63, 1229-1242.
4. Sakhno Ya.I., Shishkina S.V., Shishkin O.V., **Musatov V.I.**, Vashchenko E.V., Desenko S.M., Chebanov V.A. Diversity oriented heterocyclizations of pyruvic acids, aldehydes and 5-amino-N-aryl-1H-pyrazole-4-carboxamides: catalytic and temperature control of chemoselectivity // *Molecular Diversity*, **2010**, 14, 523-531.
5. Sakhno Ya. I., Desenko S. M., Shishkina S. V., Shishkin O. V., **Musatov V. I.** and Chebanov V. A. Unusual Direction of Cyclocondensation of 1-(4-Chlorophenyl)-3,5-diamino-1,2,4-triazole, Pyruvic Acids and Aldehydes Synthesis // *Synthesis*, **2011**, 7, 1120–1124.
6. Sakhno Y. I., Kozyryev A. V., Desenko S. M., Shishkina S. V., **Musatov V. I.**, Sysoiev D. O., Chebanov V. A. Features of two- and multicomponent heterocyclization

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- reactions involving 3,4-disubstituted 5-aminopyrazoles and alkyl pyruvates *Tetrahedron* **2018**, 74, 564-571.
7. Sakhno Y. I., Murlykina M. V., Zbruyev O. I., Kozyryev A. V., Shishkina S. V., Sysoiev D., **Musatov V. I.**, Desenko S. M., Chebanov V. A. Ultrasonic-assisted unusual four-component synthesis of 7-azolylamino-4,5,6,7-tetrahydroazolo[1,5-a]pyrimidines *Beilstein J. Org. Chem.* **2020**, 16, 281–289.
 8. Sakhno Y. I., Mykhailenko M. V., Kolosov M. A., Shvets E. H., **Musatov V. I.**, Chorna N. V., Desenko S. M., Chebanov V. A. Condition-based switching the multicomponent reactions of 5-amino-3-(methylthio)-1,2,4-triazole, aromatic aldehydes, and pyruvic acid *Ukr. Bioorg. Acta* **2020**, Vol. 15, N2, 22-26.
 9. Sakhno Y. I., Radchenko O. V., Muravyova E. A., Sirko S. M., Shishkina S. V., **Musatov V. I.**, Desenko S. M., Chebanov V. A. Synthesis of Isoxazolylpyrrolones by Three-component Reactions of α -Keto-glutaric Acid or Its Diethyl Ester with 3-Amino-5-methylisoxazole and Aromatic Aldehydes *Chem. Heterocycl. Compd.* **2021**, 57(3), 261–265.
 10. Sakhno Yana, Radchenko Oleksandr, Saraev Vyacheslav, Shliapkina Yuliia, Kaidash Mariia, Shyshkina Mariia, Shishkina Svitlana, **Musatov Vladimir**, Desenko Sergey, Chebanov Valentyn Temperature-Controlled Diastereoselective Doebner/Ugi Tandem Reaction *SynOpen* **2023**, 7, 258–266.
 11. Kolomiets O.V., Kornet M.N., Tsygankov A.V., A.A. Brazhko, **V.I Musatov**, V.A Chebanov Synthesis of imidazo[1,2-a]pyridine-containing peptidomimetics by tandem of Groebke–Blackburn–Bienaymé and Ugi reactions // *Beilstein Journal of Organic Chemistry*, **2023**, 19, P. 727–735.
 12. Murlykina M., Pavlovska T., Semenenko O., Kolomiets O., Sanin E., Morozova A., Kornet M., **Musatov V.**, Kulyk K., Mazepa A., Lipson V., and Chebanov V. Effective Three-Step Construction of Betulonic Acid Hybrids with Heterocycle-Containing Peptidomimetic Fragments // *Chemistry Select*, **2023**, 8, e202301250.
 13. Lipson V.V., Zhikol O.A., Shishkina S.V., Semenenko A.N., Kulyk K.V., Mateychenko P.V., **Musatov V.I.**, Mazepa A.V., Vakula V.N., Kyrychenko A.V., Borisov A. V. Low molecular weight supramolecular allobetulin-based gelators: Synthesis and molecular dynamics study // *SynOpen*, **2023**, 07(04):694-702.
 14. Miasnikova D.Yu., Pinchukova N.A., Saraev V.E., **Musatov V.I.**, Vlasenko A.S., Shlyapkina Yu.V., Zbruyev O.I., Chebanov V.A. Chemical modification and quantification of 1-methylcyclopropene in supramolecular complex with cucurbit[6]uril

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- by high performance liquid chromatography // *Chromatographia*, **2022**, 85, 1009-1016 (doi: 10.1007/s10337-022-04199-z, Scopus, WoS)
15. Nesterkina M., **Musatov V.**, Honcharova O., Kravchenko I. (1R,2S,5R)-5-Methyl-2-(propan-2-yl)cyclohexyl 4-amino-3-phenylbutanoate hydrochloride: Synthesis and anticonvulsant activity // *Open Chemistry*, **2022**, Vol. 20 (1), 703-707.
16. Mazur M.O., Zhelavskiy O.S., Zviagin E.M., Shishkina S.V., **Musatov V.I.**, Kolosov M.A., Shvets E.H., Andryushchenko A.Yu., Chebanov V.A. Effective Microwave-Assisted Approach to 1,2,3-triazolobenzodiazepinones via Tandem Ugi-Reaction / Catalyst-Free Intramolecular Azide-Alkyne Cycloaddition // *Beilstein Journal of Organic Chemistry*, **2021**, 17, 678-687.
17. Miasnikova D.Yu., Pinchukova N.A., Saraev V.E., **Musatov V.I.**, Vlasenko A.S., Shlyapkina Yu.V., Zbruyev O.I., Chebanov V.A. Chemical modification and quantification of 1-methylcyclopropene in supramolecular complex with cucurbit[6]uril by high performance liquid chromatography // *Chromatographia*, 85, **2022**, 1009–1016.