



Dr. Mykola Gorobets

Nationality: Ukraine **Date of birth:** 19/09/1977

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Post: Nauky ave. 60, 61072 Kharkiv, Ukraine

WORK EXPERIENCE - Career

Chemical researcher

SSI "Institute for Single Crystals" NAS of Ukraine [02/01/2004 – Current]

City: Kharkiv | **Country:** Ukraine | **Website:** <https://www.isc.kh.ua/en/activity/about> | **Email address:** gorobets@isc.kh.ua | **Name of unit or department:** Department of Organic and Bioorganic Chemistry - **Business or sector:** Professional, scientific and technical activities

Research in Organic Chemistry, Microwave Chemistry and related areas, research group leader.
Supervision of Master and Bachelor students, Supervision of PhD students (3 PhD thesis defended).
Holding an authorized course "How to write articles and present scientific results" for PhD students.

Organic chemist

PerioTrap Pharmaceuticals [01/04/2022 – 31/12/2022]

City: Halle (Saale) | **Country:** Germany

Internship in Medicinal Chemistry: lead optimization is to identify candidate drugs.

Lecturer

V.N. Karazin Kharkiv National University [01/09/2018 – 01/07/2019] **City:** Kharkiv |

Country: Ukraine

Seminar classes, laboratory practice and tests (in English) on Bioorganic and Biochemistry for the 1st year international students of School of Medicine (part-time work, 8 groups, weekly, 2nd semester);

Chemical researcher

Artvin Coruh University [05/08/2019 – 09/08/2019]

City: Artvin | **Country:** Türkiye

Invited Researcher supported by Erasmus.
Research in Organic Chemistry and Microwave Chemistry.
Collaboration with Dr. Mustafa Kemal Gümüş.

Chemical researcher

Artvin Coruh University [03/08/2018 – 18/08/2018]

City: Artvin | **Country:** Türkiye

Invited Researcher supported by Mevlana.
Research in Organic Chemistry and Microwave Chemistry.
Collaboration with Dr. Mustafa Kemal Gümüş.

Chemical researcher

Artvin Coruh University [01/03/2017 – 30/03/2017]

City: Artvin | **Country:** Türkiye

Invited Researcher supported by Mevlana.
Research in Organic Chemistry and Microwave Chemistry.
Collaboration with Dr. Mustafa Kemal Gümüş.

Chemical researcher

University of Leuven [01/07/2011 – 30/07/2011]

City: Leuven | **Country:** Belgium

Invited Researcher supported by University of Leuven.
Research in Organic Chemistry and Microwave Chemistry.
Collaboration with Prof. Dr. Erik Van der Eycken.

Chemical researcher

Free University of Berlin [01/09/2008 – 31/01/2009]

City: Berlin | **Country:** Germany

Scholarship supported by DAAD continued as invited researcher.
Research in Organic Chemistry, Hydrogen bonding in
research group of Prof. Dr. Hans-Heinrich Limbach.

Chemical researcher

University of Leuven [01/03/2008 – 31/05/2008]

City: Leuven | **Country:** Belgium

Invited Researcher supported by University of Leuven.
Research in Organic Chemistry and Microwave Chemistry.
Collaboration with Prof. Dr. Erik Van der Eycken.

Teacher at the university

V.N. Karazin Kharkiv National University [01/09/2000 – 25/05/2002] **City:** Kharkiv |

Country: Ukraine

Co-authorship and lecturing of Organic and Bioorganic Chemistry course for 1 year students of School ofst
Fundamental Medicine (part time).
Lecturing of special course “Bases of Organic Reaction” for 5 year students of Department of Organic Chemistry,th
School of Chemistry (part time).

EDUCATION AND TRAINING

International PhD student

Karl-Franzens University of Graz [01/10/2002 – 30/06/2003]

City: Graz | **Country:** Austria | **Website:** <https://www.uni-graz.at/>

Synthesis of Heterocycles, Microwave Chemistry.
Postgraduate study, a scholarship supported by OeAD.

PhD Student

V.N. Karazin Kharkiv National University [01/11/2000 – 01/11/2003]

City: Kharkiv | **Country:** Ukraine | **Website:** <https://karazin.ua/en/> | **Field(s) of study:** Natural sciences, mathematics and statistics: ●
Chemistry | **Final grade:** PhD | **Thesis:** Reactions of 2-Iminocoumarins with Nucleophiles and Electrophiles

Organic Chemistry, October 13, 2004, V.N. KarazinKharkiv NationalUniversity (PhD-diploma DK 26065)
Thesis under supervision of Prof. Viktor Nikitchenko (Department for Organic Chemistry)

V.N. Karazin Kharkiv National University [01/09/1994 – 22/06/2000]

City: Kharkiv | **Country:** Ukraine | **Website:** <https://karazin.ua/en/> | **Field(s) of study:** Natural sciences, mathematics and statistics: ●
Chemistry

Specialist (M.Sc.), diploma with honor

LANGUAGE SKILLS

Mother tongue(s): Ukrainian

Other language(s):

English

LISTENING C2 READING C2 WRITING C2

SPOKEN PRODUCTION C2 SPOKEN INTERACTION C2

German

LISTENING B1 READING A2 WRITING A2

SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1

Turkish

LISTENING A1 READING A2 WRITING A2

SPOKEN PRODUCTION A1 SPOKEN INTERACTION A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

PROFESSIONAL SKILLS

- All necessary daily and chemical software
- Synthesis of heterocyclic compounds and their synthetic precursors
- Microwave-assisted methods in organic
- IR-, UV-, MS- and NMR-spectroscopy
- HPLC analysis, preparative chromatography, solid phase extraction
- Writing scientific articles, patents, reports

AWARDS, GRANTS AND SCHOLARSHIPS

- **1993** – Winner of National Olympiad for Young Chemists (II diploma)
- **1994** – Personal Soros Grant for Young Chemists
- **2000** – Graduation with honors from V.N. Karazin Kharkiv National University
- **2002 – 2003** – ÖAD scholarship for research at Karl-Franzens University of Graz, Austria
- **2005 – 2006** – Grant of National Academy of Sciences of Ukraine (Microwave Irradiation)
- **2006** – Grant of the President of Ukraine (Microwaves)
- **2007** – The Science & Technology Center in Ukraine (STCU) Travel Grant to London (5th Microwaves in Chemistry Conference)
- **2008 – 2009** – DAAD grant for work in Free University of Berlin (AG Limbach)
- **2011** – Laureate of the annual Prize of the President of Ukraine for young scientists for a series of works entitled “Control of Direction and Selectivity of the Reactions of Polyfunctional Organic Compounds Using Modern Activation Methods”
- **2012-2014** – Coordinator from Ukrainian side of India-Ukraine Bilateral Scientific Cooperation supported by Department of Science & Technology, Ministry of Science & Technology, India and The Ukrainian State Agency for Science, Innovation, and Informatization (0114U003690)

INDEPENDENT EXPERTISE

- National Research Foundation of Ukraine (2020, 2023, 2024)
- European Commission – Horizon Europe (2021-2022)

PARTICIPATION IN PEER-REVIEW PROCESS FOR THE JOURNALS:

Chemical Communications; Organic & Biomolecular Chemistry; RSC Advances; New Journal of Chemistry; MedChemComm; Molecular Diversity; Journal of Combinatorial Chemistry/ACS Combinatorial Science; Synthesis; Tetrahedron; Tetrahedron Letters; Journal of Heterocyclic Chemistry; Molbank; Molecules; Chemistry of Heterocyclic Compounds; Functional Materials; Comptes Rendus Chimie; Beilstein Journal of Organic Chemistry; PLOS ONE; Research on Chemical Intermediates; Current Organic Chemistry; French-Ukrainian Journal of Chemistry; Ultrasonics Sonochemistry; Research on Chemical Intermediates; Current Chemistry Letters; Current Topics in Medicinal Chemistry; Thin Solid Films; ACS Omega; Medicinal Chemistry Research; ACS Infectious Diseases; Journal of Organic and Pharmaceutical Chemistry; Drug Discovery Today; Journal of Biomolecular Structure & Dynamics; Journal of Chemical Information and Modeling; Advanced Synthesis & Catalysis, Carbohydrate Research.

RESEARCHER PROFILES

ORCID	https://orcid.org/0000-0001-8089-4646
Scopus	https://www.scopus.com/authid/detail.uri?authorId=7003374032
Google Scholar	https://scholar.google.com.ua/citations?user=PeH_29AAAAAJ&hl
Researchgate	https://www.researchgate.net/profile/Nikolay-Gorobets-2

PUBLICATIONS

Total amount:	Referred in SciFinder	71 publications
	Scopus	64 publications (1274 citations, <i>h</i> -index = 18)
		4 Chapters in edited books
		6 patents of Ukraine
		87 abstracts of conference reports

Top cited:

1. N.Yu. Gorobets, B.H. Yousefi, F. Belaj, C.O. Kappe. Rapid microwave-assisted solution phase synthesis of substituted 2-pyridone libraries. *Tetrahedron* 2004, 60 (39), 8633-8644
<https://doi.org/10.1016/j.tet.2004.05.100>
2. D. Dallinger, N. Yu. Gorobets, C. O. Kappe. High-throughput synthesis of N3-acylated dihydropyrimidines combining microwave-assisted synthesis and scavenging techniques *Org. Lett.* 2003, 5(8), 1205-1208
<https://doi.org/10.1021/ol034085v>
3. V.V. Lipson, N. Yu. Gorobets. One hundred years of Meldrum's acid: advances in the synthesis of pyridine and pyrimidine derivatives (Review). *Mol. Divers.* 2009, 13, 399-419
<https://doi.org/10.1007/s11030-009-9136-x>

The earliest:

4. A. V. Silin, N. Yu. Gorobets, A. V. Sytnik, V. M. Nikitchenko. Recyclization of substituted 2-iminocoumarin-3-carboxamides in aprotic basic solvents. *Visn. Khark. Univ.* 1997, 395, 274-277;
Chem. Abstr. 1998, 129, 290037.

The newest:

5. M. K. Gümüş, N. Yu. Gorobets, Uludag, N. Microwave-assisted synthesis of 5-substituted 3-amino-1, 2, 4-triazoles from aminoguanidine bicarbonate and carboxylic acids. *Processes* 2024, 12 (3), 573 (1-12)
<https://doi.org/10.3390/pr12030573>

Selected:

6. S. M. Desenko, M. Yu Gorobets, V. V. Lipson, Y. I. Sakhno, V. A. Chebanov. Dihydroazolopyrimidines: Past, present and perspectives in synthesis, green chemistry and drug discovery. *Chem. Rec.* 2023, 24(2), e202300244
<https://doi.org/10.1002/tcr.202300244>
7. M. K. Gümüş, N. Yu. Gorobets, Y. V. Sedash, S. V. Shishkina, S. M. Desenko. Rapid formation of chemical complexity *via* a modified Biginelli reaction leading to dihydrofuran-2(3*H*)-one spiro-derivatives of triazolo[1,5-*a*]pyrimidine. *Tetrahedron Lett.* 2017, 58(35), 3446-3448
<https://doi.org/10.1016/j.tetlet.2017.07.071>
8. N.Yu.Gorobets, S.A. Yermolayev, T. Gurley, A.A.Gurinov, P.M. Tolstoy, I.G. Shenderovich, N.E. Leadbeater. Difference between ¹H NMR signals of primary amide protons as a simple spectral index of the amide intramolecular hydrogen bond strength. *J. Phys. Org. Chem.* 2012, 25, 287-295
<https://doi.org/10.1002/poc.1910>
9. S. A. Yermolayev, N. Yu. Gorobets, O. V. Shishkin, S. V. Shishkina and N. E. Leadbeater. Pathways for cyclizations of hydrazine-derived 2-(2-cyanovinyl)-3-oxo-cyclohex-1-ene enolates. *Tetrahedron* 2011, 67, 2934-2941
<https://doi.org/10.1016/j.tet.2011.02.052>
10. N. Yu. Gorobets, Yu. V. Sedash, K. S. Ostras, O. V. Zaremba, S. V. Shishkina, V. N. Baumer, O. V. Shishkin, S. M. Kovalenko, S. M. Desenko, E. V. Van der Eycken. Unexpected alternative direction of a Biginelli-like multicomponent reaction with 3-amino-1,2,4-triazole as the urea component. *Tetrahedron Lett.* 2010, 51, 2095-2098 <https://doi.org/10.1016/j.tetlet.2010.02.045>