

# Gayane Gevorg Tokmajyan

## Research Center of Chemistry

Օրգանական քիմիայի լաբորատորիա  
Senior researcher

☎ 34-05  
(060) 71-04-05  
✉ tokmajyang@ysu.am

## Education

|             |                                       |
|-------------|---------------------------------------|
| Institution | Institute of Organic Chemistry NAS RA |
| Faculty     | Fragrances Laboratory                 |
| Date        | 1973 - 1977                           |
| Degree name | PhD student                           |

|             |                          |
|-------------|--------------------------|
| Institution | Yerevan State University |
| Faculty     | Faculty of Chemistry     |
| Date        | 1968 - 1973              |
| Degree name | Qualified specialist     |

## Scientific Rank/degree

|             |                          |
|-------------|--------------------------|
| Institution | Yerevan State University |
| Date        | 2013                     |
| Degree name | Professor                |
| Specialty   | Chemical sciences        |

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|----------------|---------------------------------------------------------------------------------------------------------------|
| Institution    | Yerevan State University                                                                                      |
| Date           | 2012                                                                                                          |
| Degree name    | Doctor                                                                                                        |
| Specialty      | Chemical sciences                                                                                             |
| Research Topic | Investigations in the field of chemistry of 2-oxo-(2,5-dihydro-, tetrahydro)furans and 2-oxo-5,6-dihdropyrans |

|             |                          |
|-------------|--------------------------|
| Institution | Yerevan State University |
| Date        | 2002                     |
| Degree name | Associate professor      |
| Specialty   | Chemical sciences        |

|                       |                          |
|-----------------------|--------------------------|
| Institution           | Yerevan State University |
| Date                  | 1979                     |
| Degree name           | Candidate                |
| Specialty             | Chemical sciences        |
| Scientific Supervisor | Gevorkyan Alexandr       |

**Research Topic**

Recyclization of 1,3-dioxanes to derivatives of di- and tetrahydropyrans and 5,6-dihydro-1,3-oxazines

**Language skills**

Русский Deutsch

**Work experience**

|                       |                          |
|-----------------------|--------------------------|
| <b>Institution</b>    | Yerevan State University |
| <b>Period of time</b> | 2013 till now            |
| <b>Rank/degree</b>    | Professor                |

|                       |                          |
|-----------------------|--------------------------|
| <b>Institution</b>    | Yerevan State University |
| <b>Period of time</b> | 2000 - 2013              |
| <b>Rank/degree</b>    | Associate Professor      |

|                       |                          |
|-----------------------|--------------------------|
| <b>Institution</b>    | Yerevan State University |
| <b>Period of time</b> | 1990 till now            |
| <b>Rank/degree</b>    | Senior Researcher        |

**Scientific interests**

- Chemistry of five- and six-membered saturated and unsaturated lactones and their derivatives, synthesis of biologically active compounds on their basis.
- Chemistry of unsaturated iminolactones and their derivatives, synthesis of biologically active compounds on their basis.

**Participation in international conferences and seminars**

|                                |                                                                                                                                                                                              |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>07/10/2019 - 11/10/2019</b> | Armenian Chemical Society VI scientific conference (with international participation) "Challenges of the XXI century"<br>Organic and Pharmaceutical Chemistry RT Center of RA NAS<br>Armenia |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>28/09/2017 - 30/09/2017</b> | IV International Conference of Young Scientists "Biotechnology: science and practice"<br>Institute of Armibiotechnology of RA NAS<br>Armenia |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|

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|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>03/10/2017 - 07/10/2017</b> | V SCIENTIFIC CONFERENCE OF ARMENIAN CHEMICAL SOCIETY (with international participation) "Actual Problems of Fundamental and Applied Chemistry"<br>RA NAS of Organic and Pharmaceutical Chemistry RT Center |
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**18/10/2015 - 23/10/2015** International Congress on Heterocyclic Chemistry "KOST-2015"  
Moscow State University  
Russian Federation (the)

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## Membership

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|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Institution</b>    | Member of the Specialized Council 010 on Chemistry of the Supreme Certifying Committee of the RA at the RT Center of Organic and Pharmaceutical Chemistry of NAS RA |
| <b>Period of time</b> | 2021 till now                                                                                                                                                       |

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## Publications

### Article

**SYNTHESIS, MOLECULAR DOCKING AND in-vitro ANTIMICROBIAL ACTIVITY STUDY OF IMINODIHYDROFURANS CONTAINING 4-THIAZOLIDINONE RING [ СИНТЕЗ, МОЛЕКУЛЯРНЫЙ ДОКИНГ И ИЗУЧЕНИЕ in-vitro АНТИМИКРОБНОЙ АКТИВНОСТИ ИМИНОДИГИДРОФУРАНОВ, СОДЕРЖАЩИХ 4-ТИАЗОЛИДИНОВОЕ КОЛ**

G.G. Tokmajyan, L.V. Karapetyan, A.G. Sukiasyan, S.G. Chailyan, R. Kapavarapu, R.A. Madoyan

Известия высших учебных заведений. Серия: химия и химическая технология (Izvestiya Vysshikh Uchebnykh Zavedenii, Seriya Khimiya i Khimicheskaya Tekhnologiya) 2026 78-91

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### Article

**Efficient Synthesis and Biological Evaluation of 1,4-Disubstituted 3-Cyanopyridin-2(1H)-ones as Selective Inhibitors of the Post-Acid Activity of Mammalian 20S Proteasomes**

L. V. Karapetyan, G. G. Tokmajyan, G. S. Melikyan, M. Bouvier-Durand, M. Reboud-Ravaux, T. H. Pham

Russian Journal of Organic Chemistry (Журнал органической химии) 2025 449-455

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### Article

**Methods of synthesis of furan-2(5H)-ones**

Gayane G. Tokmajyan, Lusine V. Karapetyan

Chemistry of Heterocyclic Compounds 2025 73-100

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### Article

**Chemical transformations of furan-2(5H)-ones**

Gayane G. Tokmajyan, Lusine V. Karapetyan

Chemistry of Heterocyclic Compounds 2025 101-129

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### Article

**Synthesis of New Furan-2(5H)-one Derivatives Containing a 4-Oxothiazolidine Ring**

L. V. Karapetyan, G. G. Tokmajyan

Russian Journal of Organic Chemistry (Журнал органической химии) 2024 650-654

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### Article

**Synthesis of New Derivatives of 2-Imino-2,5-dihydrofurans Containing 4-Oxothiazolidine Ring**

L.V. Karapetyan, G. G. Tokmajyan

Russian Journal of General Chemistry (Журнал общей химии) 2023 506-512

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*Article*

**Synthesis and Chemical Transformations of 2-imino-2,5-dihydrofurans**

Lousine V. Karapetyan, Gayane G. Tokmajyan

Chemistry of Heterocyclic Compounds 2022 371-383

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*Article*

**Synthesis of New Heterocyclic Systems Based on 2-Imino-2,5-dihydrofuran-3-carboxamides**

L. V. Karapetyan, G. G. Tokmajyan

Russian Journal of Organic Chemistry (Журнал органической химии) 2022 1250-1253

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*Article*

**Catalyst-Free Synthesis of New Iminodihydrofurans Containing Thiazolidinone Ring**

Lusine V. Karapetyan, Gayane G. Tokmajyan

ChemistrySelect 2022 e202202745

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*Article*

**Synthesis and Antibacterial Activity of New Polyheteroconjugated and Dinuclear Systems Based on N-Substituted 2-Imino-2,5-dihydrofuran-3-carboxamides**

L.V. Karapetyan, G.G. Tokmajyan, R.V. Paronikyan

Russian Journal of Organic Chemistry (Журнал органической химии) 2021 131-134

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*Article*

**Synthesis of New Polyconjugated Systems Containing Iminodihydrofuran and Benzene Rings**

L.V.Karapetyan, G.G.Tokmajyan

Russian Journal of Organic Chemistry (Журнал органической химии) 2021 661-663

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*Article*

**Synthesis and Antibacterial Activity of N-Substituted 2-(Benzylimino)-4-styryl-2,5-dihydrofuran-3-carboxamides**

L.V. Karapetyan, G.G. Tokmajyan, H. M. Stepanyan

Russian Journal of Organic Chemistry (Журнал органической химии) 2021 1974-1978.

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*Manual*

**ՄԱՆԴԻ ԲԻՄԻԱ: ՄԱՆԴԱՍԹԵՐԻԻ ԲԱՆԱԴՐՈՒԹՅԱՆ ԵՎ ՈՐԱԿԻ ՌԵՍՈՒՄԱՍԻՐՈՒԹՅՈՒՆ ԿԱՐԱՊԵՏՅԱՆ Լ.Վ., ԹՈՔՄԱՅՅԱՆ Գ.Գ.**

2021 92

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*Article*

**SYNTHESIS AND ANTIBACTERIAL ACTIVITY OF NEW DERIVATIVES OF 2-OXO-2,5-DIHYDROFURANS CONTAINING AN OXOTHIAZOLIDINYLIDENE RING**

L.V. KARAPETYAN, G. G. TOKMAJYAN, R.V. PARONIKYAN, H. M. STEPANYAN

Proceedings of the YSU B: Chemical and Biological Sciences 2020 12-16

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*Article*

**Interaction of 2-Imino-2,5-dihydrofuran-3-carboxamides with Anthranilic Acid**

L. V. Karapetyan, G. G. Tokmajyan

*Article*

**Reaction of 2-Imino-2,5-dihydrofuran-3-carboxamides with Benzaldehyde**

L. V. Karapetyana, G. G. Tokmajyan

Russian Journal of Organic Chemistry (Журнал органической химии) 2020 1844-1846

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*Article*

**2-(2,2-Диметил-5-оксотетрагидрофуран-3-ил)-N-(2-(2-  
цианоацетил)гидразинкарбонотиол)ацетамид.**

Л.В. Карапетян, Г.Г. Токмаджян

Синтезы гетероциклических соединений 2020 87-88

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*Article*

**2-(2-(2-Имино-4,5,5-триметил-2,5-дигидрофуран-3-карбонил)гидразоно)-4,5,5-триметил-  
2,5-дигидрофуран-3-карбоксамид**

Л.В. Карапетян, Г.Г. Токмаджян

Синтезы гетероциклических соединений 2020 95-96

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*Article*

**Synthesis of New Derivatives of 2-Imino-2,5-dihydrofuran-3- carboxamides, Containing  
Aromatic Substituents**

L. V. Karapetyan, G. G. Tokmajyan

Russian Journal of Organic Chemistry (Журнал органической химии) 2019 727-729

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*Article*

**Synthesis of Novel 2-(N-Substituted)imino-2,5-dihydrofuran- 3-carboxamides Containing a  
Thiourea Residue and an Oxothiazolidinylidene Ring**

L.V.Karapetyan, G.G. Tokmajyan, G. M. Makaryan

Russian Journal of Organic Chemistry (Журнал органической химии) 2019 1806-1808

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*Article*

**SYNTHESIS AND ANTIBACTERIAL ACTIVITY STUDIES OF NEW 2-N-SUBSTITUTED 2,5-  
DIHYDROFURANS**

L.V. KARAPETYAN, G.G. TOKMAJYAN, R.V. PARONIKYAN, H.M. STEPANYAN

Proceedings of the YSU B: Chemical and Biological Sciences 2019 156-160

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*Manual*

**Մանրի քիմիա**

ԹՈՔՄԱԶՅԱՆ Գ.Գ., ԿԱՐԱՊԵՏՅԱՆ Լ.Վ.

2019 190

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*Article*

**SYNTHESIS AND ANTIBACTERIAL ACTIVITY OF NEW COMPOUND COMPRISING BUTANOLIDE  
AND BENZIMIDAZOLE RINGS**

Karapetyan Lusine Vladimirovna, Tokmajyan Gayane Gevorkovna, Paronikyan Rima Vardkesovna,

Stepanyan Hrachya Movsesovich

Научные горизонты 2018 195-200

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*Article*

**SYNTHESIS AND ANTIBACTERIAL ACTIVITY STUDIES OF NEW 2-N-SUBSTITUTED-2,5-DIHYDROFURAN-3-CARBOXAMIDES**

Karapetyan Lusine, Tokmajyan Gayane, Paronikyan Rima, Stepanyan Hrachya

POLISH SCIENCE JOURNAL 2018 7-11

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*Article*

**A Convenient and Efficient Approach for the Synthesis of New 2-Nsubstituted 2,5-dihydrofuran-3-carboxamides**

Gayane Tokmajyan, Lusine Karapetyan

Journal of Heterocyclic Chemistry 2017 1636-1639

[http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1943-5193](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1943-5193)

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*Article*

**Synthesis of New Bis-Iminodihydrofurans**

Gayane G.Tokmajyan, Lusine V. Karapetyan

Journal of the Brazilian Chemical Society 2016 967-970

<http://jbcs.sbq.org.br/>

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*Article*

**Selective Reduction of C=C Bond in Iminolactone Ring by a System Magnesium-Methanol**

G.G.Tokmajyan, L.V. Karapetyan

Russian Journal of Organic Chemistry (Журнал органической химии) 2016 759-761

<http://link.springer.com/journal/11178>

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*Article*

**SYNTHESIS OF NEW DERIVATIVES OF 5-OXOTETRAHYDROFURAN**

G.G. Tokmajyan, L.V. Karapetyan

Proceedings of the YSU B: Chemical and Biological Sciences 2015 14-17

<http://www.ysu.am/science/hy/journals>

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*Monograph*

**Չհագեցած միացությունների քիմիա**

Գ.Գ.Թոքմաճյան, Լ.Վ.Կարապետյան

2015 228

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*Article*

**СИНТЕЗ АНИЛИНИЕВЫХ, МОРФОЛИНИЕВЫХ, ПИПЕРИДИНИЕВЫХ И ПИРИДИНИЕВЫХ СОЛЕЙ 2,3,4,5-ТЕТРАГИДРО- И 2,5-ДИГИДРО- -4,5,5-ТРИМЕТИЛ-2-ОКСОФУРАН-3-КАРБОНОВЫХ КИСЛОТ И ИЗУЧЕНИЕ ИХ АНТИМИКРОБНОЙ АКТИВНОСТИ**

Г. Г. ТОКМАДЖЯН, А. А. МНАЦАКАНЯН, Л. С. БАЛАЯН, М. БИДАР, Р. В. ПАРОНИКЯН

ԵՊՀ գիտական տեղեկագիր. Քիմիա և կենսաբանություն: 2011 35-38

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*Article*

**СИНТЕЗ И НЕКОТОРЫЕ ХИМИЧЕСКИЕ ПРЕВРАЩЕНИЯ БИЦИКЛИЧЕСКИХ СОЕДИНЕНИЙ, СОДЕРЖАЩИХ КОНДЕНСИРОВАННЫЕ БУТАНОЛИДНОЕ И ОКСИРАНОВОЕ КОЛЬЦА**

А. А. Аветисян, Г. Г. Токмаджян, Л. В. Карапетян, Л. С. Балаян

Հայաստանի քիմիական հանդես 2010 101-106

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*Article*

**Синтез и некоторые химические превращения бициклических γ-лактонов, содержащих**

**конденсированное циклопропановое кольцо**

А. А. Аветисян, Г. Г. Токмаджян, Л. В. Карапетян, Л. С. Балаян

Russian Journal of Organic Chemistry (Журнал органической химии) 2008 1822-1825

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*Article*

**Новый метод синтеза 2-функционально замещенных 2-бутен-4-олидов**

Ա. Ա. Ավետիսյան, Գ. Գ. Թոքմաջյան, Լ. Վ. Կարապետյան, Լ. Ս. Բալայան

ԵՊՀ Գիտական տեղեկագիր, Բնական գիտություններ 2005 84-87

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*Conference*

**SYNTHESIS OF NEW BIS-IMINODIHYDROFURANS**

Gayane G.Tokmajyan, Lusine V. Karapetyan

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*Conference*

**SYNTHESIS OF NEW DERIVATIVES OF SATURATED  $\gamma$ -LACTONES COMPRISING 5-OXOTETRAHYDROFURAN, AROMATIC, SULFAMOYL AND HETEROAROMATIC FRAGMENTS**

Karapetyan Lusine V., Tokmajyan Gayane G.

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*Conference*

**Synthesis and antibacterial activity of new 2-N-substituted 2,5-dihydrofurans**

L. Karapetyan, G. Tokmajyan

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*Conference*

**Synthesis and antibacterial activity of new compound comprising butanolide and benzimidazole rings**

L. Karapetyan, G. Tokmajyan

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*Conference*

**SYNTHESIS OF NEW 2-N-SUBSTITUTED 2,5-DIHYDROFURAN-3-CARBOXAMIDES**

L.V. Karapetyan, G.G. Tokmajyan

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*Conference*

**SYNTHESIS OF NEW DERIVATIVES OF 5-OXOTETRA-HYDROFURAN-3-CARBOXAMIDES**

L.V. Karapetyan, G.G. Tokmajyan

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*Conference*

**SYNTHESIS OF NEW 2-{BENZYLIMINO}4-STYRYL- 2,5-DIHYDROFURAN-3-CARBOXAMIDES**

L.V. Karapetyan, G.G. Tokmajyan

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*Conference*

**SYNTHESIS OF NEW 2-AMINO-2,5-DIHYDROFURAN-3-CARBOXAMIDES**

G.G. Tokmajyan, L.V. Karapetyan

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*Material*

**Կենցաղային քիմիա**

Գ.Գ.Թոքմաջյան

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*Material*

**Չհագեցած միացությունների քիմիա**

*Ematerial*

**Սննդի քիմիա**

Թոքմաջյան Գ.Գ., Կարապետյան Լ.Վ.,

130

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*Conference*

**SYNTHESIS OF NEW POLYCONJUGATED SYSTEMS CONTAINING IMINODIHYDROFURAN AND BENZENE RINGS**

Karapetyan L.V., Tokmajyan G.G.

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*Conference*

**SYNTHESIS OF POTENTIALLY BIOACTIVE 1,4-DISUBSTITUTED 3-CYANOPYRIDIN-2(1H)-ONES**

Karapetyan L.V., Tokmajyan G.G., Melikyan G. S.

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*Conference*

**A RAPID, CONVENIENT AND EFFICIENT APPROACH FOR THE SYNTHESIS OF NEW 2-N-SUBSTITUTED 2,5-DIHYDROFURANS**

L.V. Karapetyan, G. G. Tokmajyan

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*Conference*

**Synthesis of NEW Furan-2(5H)-one Derivatives, containing diverse heterocyclic systems**

Karapetyan L.V., Tokmajyan G.G.

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*Conference*

**A convenient synthesis of new 2-oxo-2,5-dihydrofuran derivatives**

Karapetyan V. L., Tokmajyan G. G.

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*Conference*

**Synthesis of Potentially Bioactive Functionalized Furopyrimidines**

Karapetyan L.V., Tokmajyan G.G., Mkrtchyan S.V.

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