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Образование

Учреждение	НПЦ "Армбиотехнология" НАН РА
Факультет	НПЦ "Армбиотехнология" НАН РА
Дата	2008 - 2012
Степень / Звание	Аспирант

Учреждение	Ереванский государственный университет
Факультет	Факультет химии
Дата	2003 - 2008
Степень / Звание	Квалифицированный специалист

Знание языков

Հայերեն Русский English

Научные интересы

- стехиометрический и катализитический асимметрический синтез

Государственные награды и почетные звания

2015 государственная награда

2019 золотая медаль ЕГУ

2023 Памятная медаль премьер-министра

Публикации

Статья

Sequential Michael addition, cross-coupling and [3 + 2] cycloaddition reactions within the coordination sphere of chiral Ni(II) Schiff base complexes derived from dehydroamino acids: pathways to the asymmetric synthesis of structurally diverse O-substituted

Emma A. Khachatryan, Lusine Yu. Sahakyan, Anna S. Tovmasyan, Gagik S. Melikyan,

Henrik A. Panosyan, Anna F. Mkrtchyan, Norio Shibata, Andrei V. Malkov, Ashot S. Saghyan

RSC Advances 2025 10558-10564

Статья

Glaser Heterocoupling Reaction for the Synthesis of Enantiomerically Enriched Unnatural α -Amino Acids Incorporating Asymmetric Diyne Moieties: Mechanistic Insights and Optimization
Liana Hayriyan, Anna Tovmasyan, Anna Grigoryan, Karapet Ghazaryan, Barbara Biondi,
Olgert L. Dallakyan, Mikayel S. Chobanyan, Hayk Zaqaryan, Ashot Saghyan, Anna Mkrtchyan
ACS Omega 2025 A-G

Статья

Synthesis and Biological Activity of Ultrashort Antimicrobial Peptides Bearing a Non-Coded Amino Acid
Cristina Peggion, Andrea Schivo, Martina Rotondo, Simona Oancea, Lucia-Florina Popovici,
Teodora Călin, Anna Mkrtchyan, Ashot Saghyan, Liana Hayriyan, Emma Khachatryan,
Fernando Formaggio, Barbara Biondi
Journal of Peptide Science 2025 8

Статья

Strategy for synthesizing O-protected (S)- α -substituted serine analogs via sequential Ni(ii)-complex-mediated cross-coupling and cycloaddition reactions
Anna S. Tovmasyan, Anna F. Mkrtchyan, Avetis H. Tsaturyan, Peter Langer, Andrei V. Malkov,

Ashot S. Saghyan
New Journal of Chemistry 2025 11640-11645

Статья

Unnatural Phosphorus-Containing α -Amino Acids and Their N-FMOC Derivatives: Synthesis and In Vitro Investigation of Anticholinesterase Activity
Ani S. Dadayan, Anna F. Mkrtchyan, Atravazd S. Poghosyan, Slavik A. Dadayan, Lala A. Stepanyan,
Monika H. Israyelyan, Anna S. Tovmasyan, Avetis H. Tsaturyan, Nona A. Hovhannisyan,
Vigen O. Topuzyan, Tatevik H. Sargsyan, Ashot S. Saghyan
ChemistrySelect 2024 1-10

Статья

BSA Binding and Aggregate Formation of a Synthetic Amino Acid with Potential for Promoting Fibroblast Proliferation: An In Silico, CD Spectroscopic, DLS, and Cellular Study
Hayarpi Simonyan, Rosanna Palumbo, Satenik Petrosyan, Anna Mkrtchyan, Armen Galstyan,
Ashot Saghyan, Pasqualina Liana Scognamiglio, Caterina Vicedomini, Marta Fik-Jaskólká,
Giovanni N. Roviello
Biomolecules 2024 579

Статья

Synthesis and evaluation of new mono- and binuclear salen complexes for the $\text{C}\alpha$ -alkylation reaction of amino acid substrates as chiral phase transfer catalysts
Anahit M. Hovhannisyan, Anna S. Tovmasyan, Anna F. Mkrtchyan, Karapet R. Ghazaryan,
Ela V. Minasyan, Olgert L. Dallakyan, Mikayel S. Chobanyan, Hayk Zakaryan, Giovanni N. Roviello,
Ashot S. Saghyan
Molecular Catalysis 2024 114618

Статья

Synthesis of enantiomerically enriched β -substituted analogs of (S)- α -alanine containing 1-phenyl-1H-1,2,3-triazole groups
Artavazd S. Poghosyan, Ashot S. Saghyan, Peter Langer, Ela V. Minasyan, Karapet R. Ghazaryan,

Статья

Synthesis, Characterization, and Study of Catalytic Activity of Chiral Cu(II) and Ni(II) Salen Complexes in the α -Amino Acid C- α Alkylation Reaction

Anna S. Tovmasyan, Anna F. Mkrtchyan, Hamlet N. Khachatryan, Mary V. Hayrapetyan, Robert M. Hakobyan, Artavazd S. Poghosyan, Avetis H. Tsaturyan, Ela V. Minasyan, Viktor I. Maleev, Vladimir A. Larianov, Armen G. Ayvazyan, Norio Shibata, Giovanni N. Roviello, Ashot S. Saghyan
Molecules 2023 1180

Статья

Asymmetric Synthesis of Derivatives of Alanine via Michael Addition Reaction and their Biological Study

Mkrtchyan Anna, Tovmasyan Anna, Paloyan Ani, Sargsyan Armen, Simonyan Hayarpi, Sahakyan Lusine, Petrosyan Satenik, Hayriyan Liana, Sargsyan Tatevik
Synlett 2022 2013-2018

Статья

Synthesis of enantiomerically enriched non-protein α -amino acids and their study as aldose reductase inhibitors

Anna F. Mkrtchyan, Liana A. Hayriyan, Armen S. Sargsyan, Ani M. Paloyan, Anna S. Tovmasyan, Ani J. Karapetyan, Artur A. Hambardzumyan, Nelli A. Hovhannisyan, Henrik A. Panosyan, Hamlet N. Khachatryan, Ani S. Dadayan, Ashot S. Saghyan
Synthetic Communications 2021 1433-1450

Статья

Synthesis of Biomimetic Polymers Based on Nonproteinogenic α -Amino Acids

Nino Zavradashvili, Giuli Otinashvili, David Tugushi, Tengiz Kantaria, Temur Kantaria, Nino Kupatadze, Ekaterina Chkhaidze, Nino Neparidze, Ashot Saghyan, Anna Mkrtchyan, Artavazd Poghosyan
BULLETIN OF THE GEORGIAN NATIONAL ACADEMY OF SCIENCES 2021 41-47

Статья

New Cationic Polymers Composed of Non-Proteinogenic α -Amino Acids

NINO ZAVRADASHVILI, GIULI OTINASHVILI, TEMUR KANTARIA, NINO KUPATADZE, DAVID TUGUSHI, ASHOT SAGHYAN, ANNA MKRTCHYAN, SERGEY POGHOSYAN, RAMAZ KATSARAVA

Advanced Materials, Polymers, and Composites: New Research on Properties, Techniques, and Applications
2021 277-287

Статья

Spectroscopic and SEM evidences for G4-DNA binding by a synthetic alkyne-containing amino acid with anticancer activity

Marta A. Fik-Jaskółka, Anna F. Mkrtchyan, Ashot S. Saghyan, Rosanna Palumbo, Agnieszka Belter, Liana A. Hayriyan, Hayarpi Simonyan, Valentina Roviello, Giovanni N. Roviello
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY 2020 117884

Статья

Asymmetric synthesis, biological activity and molecular docking studies of some unsaturated

α -amino acids, derivatives of glycine, allylglycine and propargylglycine

A. F. Mkrtchyan, A. S. Saghyan, L. A. Hayriyan, A. S. Sargsyan, A. J. Karapetyan, A. S. Tovmasyan,

A. H. Tsaturyan, E. V. Minasyan, A. S. Poghosyan, A. M. Paloyan, H. A. Panosyan, Lu. Yu. Sahakyan

Journal of Molecular Structure 2020 127850

Статья**Biological macromolecule binding and anticancer activity of synthetic alkyne-containing L-phenylalanine derivatives**

Marta A. Fik-Jaskółka, Anna F. Mkrtchyan, Ashot S. Saghyan, Rosanna Palumbo, Agnieszka Belter,

Liana A. Hayriyan, Hayarpi Simonyan, Valentina Roviello, Giovanni N. Roviello

Amino Acids 2020 755-769

Статья**Asymmetric Synthesis of Tailor-Made Amino Acids Using Chiral Ni(II) Complexes of Schiff Bases. An Update of the Recent Literature**

Yupiao Zou, Jianlin Han, Ashot S. Saghyan, Anna F. Mkrtchyan, Hiroyuki Konno, Hiroki Moriwaki,

Kunisuke Izawa, Vadim A. Soloshonok

Molecules 2020 2739

Статья**Using the Ni-[(Benzylprolyl)amino]benzophenone complex in the Glaser reaction for the synthesis of bis α -amino acids**

Anna F. Mkrtchyan, Liana A. Hayriyan, Ani J. Karapetyan, Anna S. Tovmasyan, Avetis H. Tsaturyan,

Victor N. Khrustalev, Viktor I. Maleev, Ashot S. Saghyan

New Journal of Chemistry 2020 8

Статья**Исследование асимметрического нуклеофильного бис-присоединения
дегидроаланиновых комплексов Ni(II)**

Петросян С. Г., Симонян А. М., Мкртчян А. Ф., Саакян Л. Ю., Цатуриян А. О., Сагян А. С.

Հայաստանի քիմիական հանդես 2020 213-222

Статья**Synthesis of Enantiomerically Enriched Non-Proteinogenic α -Amino Acids Using the Suzuki Reaction**

Saghyan Ashot, Mkrtchyan Anna, Mardiyan Zorayr, Hayriyan Liana, Yuri N. Belokon, Peter Langer

ChemistrySelect 2019 4686-4688

Статья**Synthesis of enantiomerically enriched alkynylaryl-substituted α -amino acids through Sonogashira reactions**

Ashot S. Saghyan, Anna F. Mkrtchyan, Zorayr Z. Mardiyan, Liana A. Hayriyan, Ani J. Karapetyan,

Yuri N. Belokon, Peter Ehlers, Peter Langer

ChemistrySelect 2019 13806-13809

Статья**Synthesis of Optically Pure (S,E)-2-Amino-5-arylpent-4-enoic Acids by Heck Reactions of Nickel Complexes**

Mkrtchyan Anna F, Saghyan Ashot S, Mardiyan Zorayr Z, Parpart Silvio, Ehlers Peter, Petrosyan Andranik,

Статья

СИНТЕЗ ЭНАНТИОМЕРНО ОБОГАЩЕННОЙ (S)-2-АМИНО-5-(4-ФТОРФЕНИЛ)ПЕНТ-4-ЕНОВОЙ КИСЛОТЫ И ЕЕ α -АЛЛИЛЗАМЕЩЕННОГО АНАЛОГА

А. С. САГЯН, З. З. МАРДИЯН, А. Ф. МКРТЧЯН, А. О. ЦАТУРЯН

Химический Журнал Армении 2018 107-116

Статья

Nickel-coordinated chiral enols and Michael addition intermediate stabilized by the Ni-C bond

Liana A. Hayriyan, Anna F. Mkrtchyan, Margarita Moskalenko, Viktor Maleev, Zalina Gugkaeva,

Mikhail Il'in, Kirill Babiyevski, Pavel Dorovatorskiy, Viktor Khrustalev, Aleksandr Peregudov, Yu. Belokon

Mendeleev Communications 2018 464-466

Образовательный Руководство

Ամինաթթուների ֆիզիկաքիմիական, օպտիկական հատկությունները և ստացման եղանակները
Հ.Մ. Սիմոնյան, Ա.Ֆ. Մկրտչյան

2018 40

Образовательный Руководство

ՊԵՊՏԻԴՆԵՐ, ՖԵՐՈՒԵԼՏՆԵՐ

Ա. Ֆ. Մկրտչյան, Հ.Մ. Սիմոնյան

2018 36

Статья

Five-year achievements in the field of the asymmetric synthesis of unsaturated amino acids

Saghyan A.S., Belokon, Yu.N., Mkrtchyan, A.F., Langer P, Mardiyan Z.Z.

Chemical Journal of Armenia 2017 54-71

<http://www.flib.sci.am/eng/Qimia/Frame.html>

Статья

Асимметрический синтез новых гетероциклически замещенных аналогов α -аминомасляной кислоты, содержащих замещенные триазольные группы в боковом радикале

А.С.Сагян, Л.Ю.Саакян, А.М.Симонян, С.Г.Петросян, А.Ф.Мкртчян, М.А.Самвелян, Т.В.Кочикян,

П.Лангер

Химический Журнал Армении 2017 71-81

<http://www.flib.sci.am/eng/Qimia/Frame.html>

Статья

New generations of optically active non-proteinogenic α -amino acids, synthesis and study

Hovhannisyan A. M., Saghyan A. S., Mkrtchyan A. F., Simonyan H. M

Հայաստանի քիմիական հանդես 2016 81-101

<http://www.flib.sci.am/eng/Qimia/Frame.html>

Статья

Synthesis of enantiomerically enriched amino acids containing acetylenic bond in the side-chain radical

Hayarpi M. Simonyan, Ashot. S. Saghyan, Anna F. Mkrtchyan, Ani J. Karapetyan, Zorayr Z. Mardiyan,

Liana A. Hayriyan

International Journal of Chemical Engineering and Applications 2016 413-416

<http://www.ijcea.org/>

Статья

Synthesis of optically pure (S)-2-amino-5-arylpent-4-ynoic acids by Sonogashira reactions and their potential use as highly selective potent inhibitors of aldose reductase

Silvio Parpart, Andranik Petrosyan, Syed Jawad Ali Shah, Raji Akeem Adewale, Peter Ehlers,

Tatevik Grigoryan, Anna F. Mkrtchyan, Zorayr Z. Mardiyan, Ani J. Karapetyan, Avetis H. Tsaturyan,

Ashot S. Saghyan, Jamshed Iqbal, Peter Langer

RSC Advances 2015 107400-107412

<http://pubs.rsc.org/en/journals/journalissues/ra?e=1#!subjects>

Статья

Синтез положительно заряженных комплексов ColII и их исследование в качестве

хиральных катализаторов в реакциях асимметрического генерирования С-С связи.

Мкртчян А. Ф., Геолчанян А. В., Симонян А. М., Петросян С. Г., Сагиян А. С., Малеев В. И.,

Белоконь Ю. Н., Хрусталев В. Н

Химический Журнал Армении 2015 108-121

<http://www.flib.sci.am/eng/Qimia/Frame.html>

Конференция

Asymmetric synthesis of new enantiomerically enriched α -amino acids

A.S. Saghyan, A.F. Mkrtchyan, S.G. Petrosyan, J.A. Yedoyan, A.M. Simonyan, A.V. Geolchanyan,

P. Langer, A.M. Petrosyan

Конференция

Metallocomplex precursors for the synthesis of 18f-fluorinated aromatic amino acids labelled in alpha fluoromethyl moiety

A. V. Geolchanyan, A. S. Saghyan, A. F. Mkrtchyan, S. G. Petrosyan, H. M. Simonyan, V. I. Maleev,

Yu. N. Belokon, R. Schibli, R. N. Krasikova

Конференция

Asymmetric synthesis of new enantiomerically enriched α -amino acids

A.S. Saghyan, S.Gh. Petrosyan, A.V. Geolchanyan, A.F. Mkrtchyan, Z.Z. Mardiyan

Конференция

Efficient method for the synthesis of novel enatiomerically enriched derivatives of propargylglycine

Anna F. Mkrtchyan, Ashot S Saghyan, Liana A Hayriyan, Ani J Karapetyan, Zorayr Z Mardiyan,

Hayarpi M Simonyan, Adonc Hovhannes

Конференция

Asymmetric synthesis of potential biologically active new heterocyclic analogs of (S)- α -alanine containing 3,4-substituted 5-thioxo-1,2,4-triazoles in the side-chain radical

H.M. Simonyan, L.Yu. Sahakyan, S.Gh. Petrosyan, A.F. Mkrtchyan, N.N. Baghyan,, J.N. Saribekyan,

A.S. Saghyan

Конференция

Asymmetric synthesis of new heterocyclic analogs of alpha-aminopropionic acid and alpha-**aminobutyric acid via Michael nucleophilic addition reactions**

Hayarpi Simonyan, Lusine Sahakyan, Anna Mkrtchyan, Satenik Petrosyan, Ashot Saghyan

Конференция

Efficient method for the synthesis of novel enantiomerically enriched derivatives of unsaturated amino acids

Ashot Saghyan, Anna Mkrtchyan, Liana Hayriyan, Zorayr Mardiyan, Hayarpi Simonyan

Конференция

Asymmetric synthesis of enantiomerically enriched analog of α -aminobutyric acid containing heterocycle in the side chain radical .

L.Yu.Sahakyan, A.S. Saghyan, H.M. Simonyan, S.Gh.Petrosyan, A.F.Mkrtchyan

Конференция

Asymmetric synthesis and biological activity of novel heterocycle substituted analogues of α -aminobutyric acid

Sahakyan L.Yu., Simonyan H. M, Petrosyan S. Gh., Mkrtchyan A. F., Simonyan M. A., Saghyan A. S., Sekoyan E. S.

Конференция

Asymmetric synthesis of potential biologically active new analogs of (S)-alanine containing nitrogenous bases in the side-chain radical

H.M.Simonyan, L.Yu. Sahakjan, A.F.Mkrtchyan, S.Gh.Petrosyan, N.N.Baghyan, A.O.Voskanyan, J.N.Saribekyan, A.S.Saghyan

Конференция

Асимметрический синтез новых производных (S)- α -аланина, содержащих 3-замещенные 4-изобутил-5-тиоксо-1,2,4-триазолы в боковом радикале

А.М.Симонян, Н.Н.Багян, А.О.Восканян, Ж.Н.Сарібекян, Л.Ю.Саакян, А.Ф.Мкртчян, С.Г.Петросян, А.С.Сагян

Конференция

Asymmetric synthesis of enantiomerically enriched analogs of Nill complexes of (S)-allylglycine

L.A.Hayriyan, A.F.Mrkrtchyan, Z.Z.Mardiyan, A.J.Karapetyan, H.V. Adonc, H.M. Simonyan, S.Gh. Petrosyan, L.Yu.Sahakyan, A.S. Saghyan

Конференция

Synthesis of optically pure (S)-2-amino-5-(3-fluorophenyl)-2-(prop-2-yn-1-yl)pent-4-yonic acid by using Sonogashira reaction

Z.Z. Mardiyan, L.A. Hayriyan, A.F.Mkrtchyan, A.X.Tsaturyan, A.J. Karapetyan, H.V. Adonc, H.M. Simonyan, S.Gh.Petrosyan, L.Yu.Sahakyan, A.S. Saghyan

Конференция

FIVE-YEAR ACHIEVEMENTS IN THE FIELD OF THE ASYMMETRIC SYNTHESIS OF UNSATURATED AMINO ACIDS

A. S. Saghyan, L.A. Hayriyan, Z.Z. Mardiyan, A.F. Mkrtchyan

Конференция

**THE SYNTHESIS OF POTENTIALLY ACTIVE NEW ENANTIOMERICALLY ENRICHED DERIVATIVES
OF GLYCINE THROUGH CLICK REACTION**

H.V. Adonts, A.S. Saghyan, L.A.Hayriyan, A.F. Mkrtchyan

Конференция

**Asymmetric synthesis of enantiomerically enriched new analogs of Ni II complexes of (S)-
propargylglycine**

L. Hayriyan, A. Saghyan, H. Simonyan, A. Karapetyan, Z. Mardiyan, A. Mkrtchyan

Конференция

Asymmetric synthesis of new enantiomerically enriched α -amino acids

A.S. Saghyan, A.F. Mkrtchyan, Z.Z. Mardiyan, L.A. Hayriyan, H.V. Adonts

Конференция

**Synthesis and reactivity of chiral enols coordinated with Ni²⁺ ions and a case of a Michael
adduct intermediate stabilized by the Ni-C bond**

L. A. Hayriyan, A. F. Mkrtchyan, Y. N. Belokon, A. S. Saghyan

Конференция

**Asymmetric synthesis of enantiometrically enriched new analogs of Ni II complexes which
contain unsaturated alkene groups**

L. Hayriyan, A. Mkrtchyan, A. Saghyan

Конференция

**Asymmetric synthesis of optically active derivatives of α -aminobutyric acid containing triazole
groups in the side chain radical**

L.Sahakyan, H.Simonyan, S. Petrosyan, A. MKrtchyan, A. Saghyan, E. Sekoyan

Конференция

**SYNTHESIS OF A NOVEL HETEROCYCLIC AMINO ACID AND ITS USE FOR THE SYNTHESIS OF
SUGAR-AMINO ACID CONJUGATES**

Hayarpi Simonyan, Giovanni Roviello, Anna Mkrtchyan, Lusine Sahakyan, Satenik Petrosyan,

Ashot Saghyan

Конференция

**Asymmetric synthesis of new enantiomerically enriched unsaturated α -amino acids by
promotion of cross-coupling reactions**

Liana Hayriyan, Anna Mkrtchyan, Ashot Saghyan

Конференция

Asymmetric synthesis and biological activity of some unsaturated α -amino acids

L. Hayriyan, A. Karapetyan, A. Tovmasyan, A. Mkrtchyan, A. Sargsyan, A. Saghyan