

Shiraz Alexander Markarian

Research Center of Chemistry

Ֆիզիկական քիմիայի լաբորատորիա
Chief Researcher

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Education

Institution	Institute of Chemical Physics of the USSR Academy of Sciences, Moscow
Faculty	Chemistry
Date	1970 - 1974
Degree name	PhD student

Institution	Yerevan State University
Faculty	Department of Chemistry
Date	1965 - 1970
Degree name	Qualified specialist

Scientific Rank/degree

Institution	Institute of Physical Organic Chemistry of the University Rostov-Don, Russia
Date	1989
Degree name	Doctor
Specialty	Chemical sciences
Research Topic	molecular interactions and reactions of sulfoxides, sulfides and amines

Institution	Yerevan State University
Date	1975
Degree name	Candidate
Specialty	Chemical sciences
Scientific Supervisor	Բուլազենկո
Research Topic	Quantitative study of nuclea polarization and magnetic effects in chemical reactions

Language skills

English Русский Deutsch

Work experience

Institution	Yerevan State University
Period of time	2000 till now

 **Scientific interests**

- Physicochemical studies of chemical and biological systems.
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 **Membership**

Institution	Member of editorial board
Period of time	1992 - 2004

 **State awards and honorary titles**

2010 Best Scientific Work of the Republic of Armenia in area of natural sciences
2002 Presidential award of the Republic of Armenia

 **Publications**

Article

Study of p-Nitroaniline Binding to Diethyl Sulfoxide-Containing AOT Reverse Micelles: Comparison to Dimethyl Sulfoxide

Hasmik R. Sargsyan, Heghine H. Ghazoyan, Shiraz A. Markarian, Gevorg S. Grigoryan

Journal of Solution Chemistry 2025 1-13

Article

Diphenyl selenoxide: Unraveled peculiarities in methanol and acetonitrile solutions

Vitaly V. Chaban, Shiraz A. Markarian, Heghine H. Ghazoyan, Hasmik R. Sargsyan, Gevorg S. Grigoryan, Adrine D. Sahakyan, Levon A. Tavadyan

Journal of Molecular Liquids 2024 125331

Article

СПЕКТРОСКОПИЧЕСКОЕ ИССЛЕДОВАНИЕ КОМПЛЕСООБРАЗОВАНИЯ МЕДИ(II) С (S)-β-[3-ИЗОБУТИЛ-4-(2-МЕТАЛЛИЛ)-5-ТИОКСО-1,2,4-ТРИАЗОЛ-1-ИЛ]-α-АЛАНИНОМ В ВОДНОМ РАСТВОРЕ

А.Р. Саркисян, Г.С. Григорян, Ш.А. Маркарян

Известия высших учебных заведений. Серия: химия и химическая технология (Izvestiya Vysshikh Uchebnykh Zavedenii, Seriya Khimiya i Khimicheskaya Tekhnologiya)
2023 62-69

Article

Dimethyl sulfoxide fosters larger micelles of docusate sodium in the mixed solutions with water

S.A. Markarian, H.R. Sargsyan, G.S. Grigoryan, H.H. Ghazoyan, V.V. Chaban

Journal of Molecular Liquids 2023 120960

Article

Dimethyl sulfoxide heavily extends homogeneous regions of the Propionitrile/DMSO/Water mixtures

Heghine H. Ghazoyan, Zara L. Grigoryan, Shiraz A. Markarian, Vitaly V. Chaban

Journal of Molecular Liquids 2023 121734

Article

The Effect of Dimethylsulfoxide (or Diethylsulfoxide) on Methylene Blue-Calf Thymus DNA Binding in Aqueous Solutions by Fluorescence Polarization and Steady-State Fluorescence Quenching

Gohar A. Shahinyan, Heghine H. Ghazoyan, Shiraz A. Markarian

Journal of Solution Chemistry 2023 708-719

Article

Diphenylsulfoxide exhibits an outstanding solubility in Methanol: Physicochemical and quantum chemical evidences. Comparison to acetonitrile

Shiraz A. Markarian, Heghine H. Ghazoyan, Hasmik R. Sargsyan, Gevorg S. Grigoryan, Vitaly V. Chaban,

Adrine D. Sahakyan, Levon A. Tavadyan

Journal of Molecular Liquids 2023 122924

Article

The Study of the Effect of Dimethylsulfoxide (or Diethylsulfoxide) on Quinine Sulfate-DNA Binding by UV-Vis and Steady-State Fluorescence Spectroscopies

Gohar A. Shahinyan, Shiraz A. Markarian

Journal of Fluorescence 2023 1-12

Article

FTIR ATR SPECTRAL AND THEORETICAL VIBRATIONAL STUDIES OF URACIL IN DIMETHYLSULFOXIDE OR DIETHYLSULFOXIDE SOLUTIONS

A.L. Zatikyan, Sh.A. Markarian

Journal of Structural Chemistry 2022 388-406

Article

Citrullination of adenosine deaminase impairs its binding to dipeptidyl peptidase IV

Luiza Karapetyan, Svetlana Sharoyan, Sona Mardanyan, Giulio Lupidi, Massimiliano Cuccioloni,

Mauro Angeletti, Shiraz Markarian, Hasmik Shilajyan, Alvard Antonyan

Biophysical Chemistry 2022 106820

Article

Volumetric Properties of Butyronitrile-Dimethyl Sulfoxide and Butyronitrile-Diethyl Sulfoxide Binary Mixtures

H.H. Ghazoyan, Sh.A. Markaryan

Журнал физической химии (Russian Journal of Physical Chemistry A) 2021 1811-1820

Article

Study of the Interaction of Novel Nonprotein Amino Acids with Trypsin by Steady-State Fluorescence Spectroscopy

Gohar A. Shahinyan, Ani S. Dadayan, Nelli A. Hovhannisyan, Shiraz A. Markarian

Journal of Fluorescence 2020 229-233

Article

ИССЛЕДОВАНИЕ ВЗАИМОДЕЙСТВИЯ ПОЛИАКРИЛОНИТРИЛА С ДИМЕТИЛСУЛЬФОКСИДОМ МЕТОДАМИ ДТА/ТГ И ИК-СПЕКТРОСКОПИИ

Յ. Լ. ԳՐԻԳՐՅԱՆ, Շ. Ա. ՄԱՐԿԱՐՅԱՆ

Հայաստանի քիմիական հանդես 2020 8-14

Article

Dielectric relaxation and proton field-cycling NMR relaxometry study of dimethyl sulfoxide/glycerol mixtures down to glass-forming temperatures

Max Flämig, Liana Gabrielyan, Rafael Minikejew, Shiraz Markarian, Ernst A. Rössler

Physical Chemistry Chemical Physics 2020 9014-9028

Article

Fluorescence anisotropy studies on the Hoechst 33258-DNA interaction: the solvent effect

Karen Yu. Amirbekyan, Gohar A. Shahinyan, Heghine H. Ghazoyan, Hasmik R. Sargsyan,

Shiraz A. Markarian

Journal of Biomolecular Structure and Dynamics 2020 1-5

Article

Volumetric, UV-Vis and FT IR Studies of Isoniazid in Diethylsulfoxide Solutions

Shiraz A. Markarian, Zakar K. Papanyan, Gohar A. Shahinyan

Journal of Solution Chemistry 2020 1-13

Manual

Ֆիզիկական քիմիայի խնդիրների ժողովածու

Գաբրիելյան Լ. Ս., Խաչատրյան Ա. Գ., Մարգարյան Շ. Ա.

2020 222

Article

Photophysical properties of methylene blue in water and in aqueous solutions of dimethylsulfoxide

Gohar A. Shahinyan, Aren Yu. Amirbekyan, Shiraz A. Markarian

SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY 2019 170-175

Article

Study of thermodynamic properties of binary mixtures of propionitrile with dimethylsulfoxide (or diethylsulfoxide) at temperatures from (298.15 to 323.15)K

Heghine H. Ghazoyan, Zara L. Grigoryan, Liana S. Gabrielyan, Shiraz A. Markarian

Journal of Molecular Liquids 2019 147-156

Article

DENSITIES AND ELECTRICAL CONDUCTIVITIES OF COPPER(II) CHLORIDE SOLUTIONS IN DIMETHYL SULFOXIDE AND WATER-DIMETHYL SULFOXIDE EQUIMOLAR MIXTURE AT THE TEMPERATURES 298.15, 308.15 AND 318.15 K

H. H. GHAZOYAN, Sh. A. MARKARIAN

Proceedings of the YSU B: Chemical and Biological Sciences 2019 3-9

Article

Synthesis, Structure, and Properties of Novel Enamine Containing Coumarin and Phosponium Fragments

L. D. Popov, I. N. Scherbakov, S. A. Borodkin, Yu. V. Revinskii, E. A. Kazoyan, G. A. Shaginyan, A. R. Sarkisyan, Sh. A. Markaryan

Russian Journal of General Chemistry (Журнал общей химии) 2019 906-912

Article

Synthesis of Phosponium Enamines: Physicochemical Properties of Dimethyl Sulfoxide Solutions

S. A. Borodkin, E. A. Kazoyan, L. D. Popov, G. A. Shaginyan, A. R. Sarkisyan, I. N. Shcherbakov,

Sh. A. Markaryan

Russian Journal of Physical Chemistry A 2019 2187-2191

Article

Thermodynamic and Spectroscopic (UV-Vis, FT IR) Studies of Solutions of CoCl₂ (or NiCl₂) in Diethylsulfoxide

Shiraz A. Markarian, Heghine H. Ghazoyan, Hasmik R. Sargsyan, Gohar A. Shahinyan

Journal of Solution Chemistry 2019 1378-1392

Article

Study of thermodynamic properties of binary mixtures of propionitrile with dimethylsulfoxide (or diethylsulfoxide) at temperatures from (298.15 to 323.15)K

H.H. Ghazoyan, Z.L. Grigoryan, L.S. Gabrielyan, S.A. Markarian

Journal of Molecular Liquids 2019 147-156

Article

Densities and volumetric properties of L-ascorbic acid solutions in water-ethanol mixtures at temperatures from 298.15 to 318.15 K

H.H. Ghazoyan, Sh.A. Markarian

Proceedings of the YSU B: Chemical and Biological Sciences 2018 3-9

<http://www.y-su.am/science/hy/1520431333>

Article

Dielectric Relaxation Spectroscopy Study of the Structure and Dynamics of Dialkyl Sulfoxide Solutions

L.S. Gabrielyan, Sh.A. Markaryan

Russian Journal of Physical Chemistry A 2018 205-213

Article

Theoretical ab initio calculation of entropy and heat capacity of dialkylsulfones in the gas phase

A.S. Mkhitarian, Z.K. Papanyan, L.S. Gabrielyan, S.A. Markarian

Chemical Journal of Armenia 2018 13-22

Article

Template directed excimer formation via specific non-covalent interactions between pyrene guanidinium derivatives and nucleic acids

Karen Amirbekyan, Justine Mansot, Keiichiro Ohara, Shiraz A. Markarian, Jean-Jacques Vasseur,

Michael Smietana

Tetrahedron Letters 2018 295-298

Article

КВАНТОВО-ХИМИЧЕСКОЕ ОПРЕДЕЛЕНИЕ ТЕПЛОТЫ ГИДРАТАЦИИ ДИЭТИЛСУЛЬФОНА

Л.С. Габриелян, Ш.А. Маркарян, Э.Х. Папанян, А.С. Мхитарян

Известия высших учебных заведений. Серия: химия и химическая технология (Izvestiya Vysshikh Uchebnykh Zavedenii, Seriya Khimiya i Khimicheskaya Tekhnologiya)
2018 17-21

Article

DETERMINATION OF THE REACTION RATE CONSTANT FOR THE INTERACTION OF DIETHYL SULFOXIDE WITH THE HYDROXYL RADICAL ON THE BASIS OF COMPETITIVE KINETICS

A.I. MARTIRYAN, T.M. AYVAZYAN, Sh.A. MARKARIAN

Proceedings of the YSU B: Chemical and Biological Sciences 2018 80-82

Article

ОБЪЕМНЫЕ СВОЙСТВА ОБРАЩЕННОЙ МИЦЕЛЛЯРНОЙ СИСТЕМЫ n-ГЕПТАН - БИС-(2-ЭТИЛГЕКСИЛ) СУЛЬФОСУКЦИНАТ НАТРИЯ - ПОЛЯРНАЯ ФАЗА (ВОДА+ДИМЕТИЛФОРМАМИД (ИЛИ АЦЕТОНИТРИЛ))

Г. А. ШАГИНЯН, Ш. А. МАРКАРЯН

Հայաստանի քիմիական հանդես 2018 280-291

Article

Изучение диэлектрической релаксации бинарной системы сульфолан/диметилсульфоксид.

Л.С. ГАБРИЕЛЯН, Ш.А. МАРКАРЯН

Հայաստանի քիմիական հանդես 2017 37-44

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

Article

ОБЪЕМНЫЕ СВОЙСТВА РАСТВОРОВ ДИМЕТИЛСУЛЬФОНА В СМЕШАННОМ РАСТВОРИТЕЛЕ (ЭТАНОЛ-ВОДА) В ИНТЕРВАЛЕ ТЕМПЕРАТУР 298,15-323,15 К

Е.А. Казоян, Ш.А. Маркарян

Известия высших учебных заведений. Серия: химия и химическая технология (Izvestiya Vysshikh Uchebnykh Zavedenii, Seriya Khimiya i Khimicheskaya Tekhnologiya)
2017 27-33

<http://ctj.isuct.ru/>

Article

Volumetric Properties and Viscosity of Diethylsulfoxide in Acetonitrile at Different Temperatures

Z.L. Grigoryan, H.H. Ghazoyan, Sh.A. Markarian

Proceedings of the YSU B: Chemical and Biological Sciences 2017 147-155

<http://www.ysu.am/science/hy/1511853083>

Article

Volumetric properties of binary mixtures of acrylonitrile with dimethylsulfoxide (or diethylsulfoxide) at temperatures from 298.15 to 323.15 K

H.H. Ghazoyan, Z.L. Grigoryan, Sh.A. Markarian

Chemical Journal of Armenia 2017 462-476

<http://chemjournal.sci.am>

Article

VOLUMETRIC PROPERTIES AND VISCOSITY OF DIETHYL SULFOXIDE IN ACETONITRILE AT

DIFFERENT TEMPERATURES

Z.L. Grigoryan, H.H. Ghazoyan, S.A. Markarian

ԵՊՀ Գիտական տեղեկագիր, Բնական գիտություններ 2017 147-155

Manual

Մոլեկուլային ֆլուորեսցենցիայի հիմունքները

Շ. Ա. Մարգարյան, Կ. Ռ. Գրիգորյան

2017 132

Article

The study of n-heptane/AOT/water+ dimethylsulfoxide reverse micelles using acridine orange base as molecular probe

G.A. SHAHINYAN, S.A. MARKARIAN

Հայաստանի քիմիական հանդես 2016 33-46

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

Article

Effect of diethylsulfoxide on volumetric properties of sodium bis (2-ethylhexyl) sulfosuccinate microemulsions

G.A. SHAHINYAN, H.R. SARGSYAN, A.M. KOLKER, S.A. MARKARIAN

Հայաստանի քիմիական հանդես 2016 407-415

<http://chemistry.asj-oa.am/view/year/2016.html>

Article

Excess Gibbs Energy and Local Compositions in the Mixtures C2, C3 Alkane Diols and Triols with Water at Various Pressures

Dmitriy M. Makarov, Gennadiy I. Egorov, Shiraz A. Markarian, Arkadiy M. Kolker

Journal of Solution Chemistry 2016 1679-1688

<http://link.springer.com/journal/10953>

Article

Design, Synthesis, and Binding Affinity Evaluation of Hoechst 33258 Derivatives for the Development of Sequence-Specific DNA-Based Asymmetric Catalysts

Karen Amirbekyan, Nicolas Duchemin, Erica Benedetti, Rinah Joseph, Aude Colon, Shiraz A. Markarian,

Lucas Bethge, Stephan Vonhoff, Sven Klusmann, Janine Cossy, Jean-Jacques Vasseur,

Stellios Arseniyadis, Michael Smietana

ACS Catalysis 2016 3096–3105

<http://pubs.acs.org/journal/accacs>

Article

Влияние концентрации Na-сульфосукцината (НАС) на свойства мицеллярной системы НАС-н-гептан-ДМСО-вода

Մ.Ա. Մարգարյան, Ա.Ր. Տարկիսյան, Գ.Ա. Շահինյան

Журнал физической химии (Russian Journal of Physical Chemistry A) 2015 1606-1611

<http://www.maik.ru/ru/journal/fizkhim/>

Article

The effect of dimethylsulfoxide on absorption and fluorescence spectra of aqueous solutions of acridine orange base

Shiraz A. Markarian, Gohar A. Shahinyan

Article

Thermodynamics of Liquid-Vapor Phase Equilibrium in Dimethyl Sulfoxide-Alkanol Systems in the Range of 293.15-323.15 K

Grigoryan Z.L., Ghazoyan H.H., Markarian S.A.

Russian Journal of Physical Chemistry A 2015 1790-1794

<http://link.springer.com/journal/11504>

Article

Effect of the Dioctyl Sodium Sulfosuccinate (AOT) Concentration on the Properties of the AOT-n-Heptane-DMSO-Water Micellar System

Sh. A. Markaryan, A. R. Sarkisyan, G. A. Shaginyan

Russian Journal of Physical Chemistry A 2015 1808-1813

<http://link.springer.com/journal/11504>

Article

Thermodynamics of Liquid-Vapor Phase Equilibrium in Dimethyl Sulfoxide-Alkanol Systems in the Range of 293.15-323.15 K

Z. L. Grigoryan, E. A. Kazoyan, Sh. A. Markaryan

Russian Journal of Physical Chemistry A 2015 1588-1592

<http://link.springer.com/journal/11504>

Article

Thermodynamics of Liquid-Gas Phase Equilibria of Diisopropyl and Dibutyl Sulfoxides

G. S. Grigoryan, Sh. A. Markarian

Журнал физической химии (Russian Journal of Physical Chemistry A) 2014 1071-1072

Article

ИССЛЕДОВАНИЕ РАВНОВЕСИЯ ЖИДКОСТЬ-ПАР В БИНАРНОЙ СИСТЕМЕ ДИМЕТИЛСУЛЬФОКСИД-ЭТАНОЛ

Е. А. КАЗОЯН, З. Л. ГРИГОРЯН, Ш. А. МАРКАРЯН

Chemical Journal of Armenia 2014 36-42

Article

DENSITIES, EXCESS MOLAR AND PARTIAL MOLAR VOLUMES FOR DIETHYLSULFOXIDE WITH METHANOL OR ETHANOL BINARY SYSTEMS AT TEMPERATURE RANGE 298.15-323.15 K

H. H. GHAZOYAN, Sh. A. MARKARIAN

Proceedings of the YSU B: Chemical and Biological Sciences 2014 17-25

Article

Volume Properties of Reverse Micellar Systems AOT/nHeptane/DMSO-Water

A. R. Sargsyan, G. A. Shahinyan, S. A. Markarian

Журнал физической химии (Russian Journal of Physical Chemistry A) 2014 858-862

Article

Low temperature dielectric relaxation study of aqueous solutions of diethylsulfoxide

Liana Gabrielyan, Shiraz Markarian, Peter Lunkenheimer, Alois Loidl

European Physical Journal Plus 2014 245

Article

Dielectric spectroscopy of dimethylsulfone solutions in water and dimethylsulfoxide

Liana S. Gabrielyan, Shiraz A. Markarian, Hermann Weingärtner

Journal of Molecular Liquids 2014 37-40

Article

IR SPECTROSCOPY DETERMINATION OF THE COMPLEXATION CONSTANT FOR A CHOLESTEROL-DIISOPROPYL SULFOXIDE COMPLEX

L. S. Gabrielyan, L. G. Melik-Ohanjanyan, S. A. Markarian

Журнал прикладной спектроскопии (Journal of Applied Spectroscopy) 2013 135-137

Article

Thermodynamics of Liquid-Gas Phase Equilibria in the Dipropylsulfoxide-Water System in the Range of 303.15 to 323.15 K

G. S. Grigoryan, Sh. A. Markaryan

Журнал физической химии (Russian Journal of Physical Chemistry A) 2013 191-193

Article

DETECTION OF OXIDATION OF L-CYSTEINE BY DIMETHYL SULFOXIDE IN AQUEOUS SOLUTIONS BY IR SPECTROSCOPY

PAPANYAN Z., MARKARIAN S.

Журнал прикладной спектроскопии (Journal of Applied Spectroscopy) 2013 775-778

Article

Molecular Interactions between Benzimide Trichloride (Hoechst 33258) and DNA in Dimethyl Sulfoxide Aqueous Solutions, According to Spectroscopy Data

K. Yu. Amirbekyan, A. P. Antonyan, P. O. Vardevanyan, Sh. A. Markarian

Журнал физической химии (Russian Journal of Physical Chemistry A) 2013 2027-2029

Article

Влияние диметилсульфоксида на электрохимические и антирадикальные свойства аскорбиновой кислоты

Ш. А. Маркарян, Л. А. Тавадян, Г. Г. Кочарян, Г. А. Шагинян

Известия Академии наук. Серия химическая 2013 1625-1629

Article

Densities and thermochemical properties of dimethylsulfone in dimethylsulfoxide and dimethylsulfoxide/water equimolar mixture

Heghine H. Ghazoyan, Shiraz A. Markarian

Journal of Molecular Liquids 2013 85-88

Article

The properties of solutions of isoniazid in water and dimethylsulfoxide

Markaryan S.A., Harutyunyan L.R., Pepoyan E.K., Evangelopoulos D., Guzman J.D., McHugh T.D.,

Bhakta S.

Journal of Solution Chemistry 2012 1462-1476

<http://link.springer.com/journal/10953>

Article

SPECTROSCOPIC DETERMINATION OF BINDING BETWEEN HUMAN SERUM ALBUMIN AND A

PLATINUM(II) DIMETHYLSULFOXIDE COMPLEX

K. R. Grigoryan, M. G. Aznauryan, N. A. Bagramyan, L. G. Gevorkyan,, Sh. A. Markaryan

Журнал прикладной спектроскопии (Journal of Applied Spectroscopy) 2008 593-596

Article

Investigation of the Effect of Dimethyl Sulfoxide and Diethyl Sulfoxide on Sodium Dodecyl Sulfate Micellization in Aqueous Solutions by Fluorescence Method

Harutyunyan L.R., Markarian S.A.

Colloid Journal 2007 407-410

<http://www.springer.com/chemistry/polymer+science/journal/10595>

Article

Complexation and Reactions of Molecular Iodine with Dimethyl and Diethyl Sulfoxides

Grigoyan K. R., Sh. A. Markaryan, A. R. Sarkisyan,, A. M. Asatryan,, Ts. A. Adamyan

Russian Journal of General Chemistry (Журнал общей химии) 2006 1801-1803

Article

Effect of Diethylsulfoxide on the Thermal Denaturation of DNA

Karine R. Grigoryan, Arpine M. Asatryan, Shiraz A. Markarian, Hasmik R. Sargsyan

Biopolymers 2006 1-5

Article

The properties of mixtures of sodium dodecylsulfate and diethylsulfoxide in water

Harutyunyan L.R., Markarian S.A., Harutyunyan R.S.

Journal of Solution Chemistry 2005 361-368

<http://link.springer.com/journal/10953>

Article

DSC study on the effect of dimethylsulfoxide (DMSO) and diethylsulfoxide (DESO) on phospholipid liposomes

Grigorian K. R., Markarian S. A., S. Bonora, A. Trincherо

Thermochimica Acta 2005 19-26

Article

FT IR ATR Study of Molecular Interactions in the Urea/Dimethyl Sulfoxide and Urea/Diethyl Sulfoxide Binary Systems

Karine R. Grigoryan, Shiraz A. Markarian, Liana S. Gabrielyan

Journal of Solution Chemistry 2004 1005-1015

Conference

Диэлектрические и релаксационные характеристики водных растворов диэтилсульфоксида

Л.С. Габриелян, Ш.А. Маркарян

Conference

Medium effect on hydrogen bonded complexes of L-ascorbic acid with diethylsulfoxide: quantum chemical calculations

A.L. Zatikyan, S.A.Markarian

Conference

Ab initio study of molecular interactions in ascorbic acid dimethylsulfoxides/water mixture
A.L. Zatikyan, S.A. Markarian

Conference

Study the effect of sulfoxides on micellar properties of surfactant aqueous solutions
Harutyunyan L.R., Markarian S.A.

Conference

Molecular interaction between nitrile group containing compounds (acetonitrile, acrylonitrile, polyacrylonitrile) and dimethylsulfoxide
Grigoryan Z.L., Ghazoyan H.H., Markarian S.A.

Conference

The structural and dynamical peculiarities of sulfoxides and sulfones solutions
Markarian S.A.

Conference

Physicochemical properties of n-heptane/AOT/water+ sulfoxide microemulsions
G.A. Shahinyan, H.R. Sargsyan, S.A. Markarian

Conference

Фазовые равновесия жидкость-газ дипропил-, диизопропил- и дибутилсульфоксидов.
Григорян Г.С., Маркарян Ш.А.

Conference

Volumetric properties of diethylsulfoxide-alkanol binary mixtures
H.H. Ghazoyan, S.A. Markarian

Conference

Liquid-vapor equilibrium, volumetric and transport properties of dimethylsulfoxide-acetonitrile system
H.H. Ghazoyan, Z.L. Grigoryan, S.A. Markarian

Conference

Viscosity and volumetric properties of acrylonitrile+ dimethylsulfoxide binary mixtures at T= (298.15-318.15)K
Ghazoyan H.H., Grigoryan Z.L., Markarian S.A.

Conference

ИЗУЧЕНИЕ КОМПЛЕКСООБРАЗОВАНИЯ ХЛОРИДА И НИТРАТА МЕДИ (II) С ДИЭТИЛСУЛЬФОКСИДОМ МЕТОДОМ УФ СПЕКТРОСКОПИИ
А.Р. Саркисян, Г.А. Щагинян, Е.А. Казоян, И.Н. Щербаков, Ш.А. Маркарян

Conference

The study of thermodynamic properties of binary mixtures diethylsulfoxide-acetonitrile (or propionitrile)
Ghazoyan H.H., Grigoryan Z.L., Sargsyan H.R., Markarian S.A.

Conference

THE STUDY OF MOLECULAR INTERACTIONS IN DIMETHYLSULFOXIDE AQUEOUS SOLUTIONS OF ACRIDINE ORANGE BASE BY UV-VIS AND FLUORESCENCE SPECTROSCOPY

Markarian S.A., Shahinyan G.A.

Conference

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H. Sargsyan, G. Grigoryan, H. Ghazoyan, Sh. Markarian

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Heghine Ghazoyan, Shiraz Markarian

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Heghine H. Ghazoyan, Shiraz A. Markarian

Conference

The effect of dimethylsulfoxide (or diethylsulfoxide) on the properties of DNA solutions

Shiraz A. Markarian, Gohar A. Shahinyan, Heghine H. Ghazoyan

Conference

Volumetric Properties of Solutions of Dimethylsulfone and Diethylsulfone

Grigoryan Z., Markarian Sh.
