

Professor Omar Mukbaniani



Tbilisi State University

Faculty of Exact and Natural Sciences, Department of chemistry,

Macromolecular chemistry

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Relevant educational background

1957-1966 Graduated 15th secondary school of Tbilisi, (silver medalist).

1966-1971 Undergraduate Student, Tbilisi State University , Faculty of Chemistry (TSU).

1972-1973 Research worker, Faculty of Chemistry, Department of High Molecular Compounds (TSU).

1973-1976 Post-graduated from A.N. Nesmianov Institute of Organo element Compounds Academy of Sciences USSR (INEOS, Moscow, Russia).

Relevant work experience

In 1977 – O. Mukbaniani defends his candidate dissertation: "Synthesis of polycyclic organosilixane compounds and block-copolymers on their Bases" (Certificate of diploma XM №002211).

1977-1985 – Senior research worker, of Chemistry Faculty, Department of High Molecular Compounds of TSU.

1983 – Certificate of diploma of Senior research worker (CH №032401).

1985-1993 – Associate Professor (Docent) of the Department of High Molecular Compounds of Chemistry Faculty (TSU). Certificate of diploma of Associate Professor (ДЦ №009457).

1993 – O. Mukbaniani defends his doctor thesis: "Organosilicon copolymers and block-copolymers with various cyclic structure of macromolecules" (TSU) (Certificate of diploma №000179).

Since 1994 – Professor of the Department of High Molecular Compounds of Faculty of Chemistry (TSU) (Certificate of diploma №000288 professor of organic chemistry).

Further activity of O. Mukbaniani is narrowly connected with polymer sciences, first of all with synthesis, investigation properties and application of heat resistance, thermal stable organo/inorganic polymers and composite materials.

1997-2006 – Head of the department of organic chemistry of Sokhumi State University, branch of Tbilisi State University (combine jobs).

2002-2006 - Head of the scientific laboratory "hetero chain polymers and composite materials".

2002-2006. – Head of the Department of chemistry of High Molecular Compounds of Faculty of Chemistry (TSU).

2006 – Professor of macromolecular chemistry.

2009 – Director of the Institute of Macromolecular Chemistry and Polymeric Materials.

2009 – Chair Professor of macromolecular chemistry.

Trainings:

- 2008** – Invited expert in siliconorganic polymers of Muenster University, Institute of Inorganic and Analytical Chemistry with Prof. Dr. Hans-Dieter Wiemhoefer: “Energy Storage – Siliconorganic polymer-polyelectrolyte’s for lithium batteries” (DFG – 2 months)
- 1998** – Invited professor of the Polymeric Research Institute of Mainz, Max-Plank Institute (MPI) with Prof. K. Meullen. Subject: “Conjugated polyheteroarylenes” (DFG – 3 months).
- 1998** – Invited professor of Pharmaceutical University of Muenster with Prof. G. Blashke. Subject: “Negative and positive charged β -cyclodextrines for capillary electrophoresis” (DFG – 3 months).
- 1995** – Invited professor of Saarbruken University with Prof. Engelhard. Subject: "Siliconorganic compounds for capillary electrophoresis".
- 1992** – Research Associate of the Technical University of Dresden (FRG), with Prof. K Ruhlmann. Subject: "Synthesis of polysilanes for ceramic materials". Nuncritz Gmbh, Subject: "Modification siliconorganic elastomers".
- 1987** – Scholarship of the University of Iena (GDR) on the Department of Organic Chemistry, with Prof. H.H. Kherchold. Subject: "Epoxy containing organosiloxanes and copolymers on their bases".
- 1987** – Scholarship of the Technical University of Rostok (GDR), with Prof. H. Kelling. Subject: “Synthesis and investigation of properties of new polyorganosiloxanes”.
- 1987** – Scholarship of the Technical University of Dresden (GDR) on the Department of Organic Chemistry, with Prof. K. Ruehlmann. Subject: "Synthesis of new epoxy containing organosiloxanes".
- 1983 –1984** – Scholarship of Budapest Polytechnic University (Hungary). Department of inorganic Chemistry, with Prof. I. Nagy. Subject: "Novel organosiloxane copolymers containing cyclosiloxane rings as a pendant groups" (10 months).

Research interests in the present:

Polymer chemistry. Chemistry of organosilicon compounds.

Modification of organo/inorganic monomers and polymers.

Kinetics and mechanisms of chemical reactions.

Modification of industrial polymers.

Modification of mineral resources of Georgia (active fillers) for polymer composites.

Polymer electrolytes for Lithium ion batteries.

The synthesis of silicon based polymers and copolymers including polysiloxanes, polysilanes, organic polysilicates and polycarbosilanes is investigated. Methods of precision synthesis to build

block, graft and comb-type structure are developed. The mechanisms of reactions leading to these polymers are also studied. Some effort is devoted to the synthesis of various types of functionalized silicon polymers with “living reaction able groups”. Organic functions are introduced to polymer chain ends or to side groups. In this way reactive polymers are obtained which are further used for synthesis of block and graft copolymers or for modification to give them specific properties. Kinetic methods are employed to determine the structures of intermediate products. Theoretical methods (molecular modelling) are used in addition to physical-chemical techniques to study the mechanistic problem.

Particular attention is paid to the ionic ring opening polymerization of cyclic silicon monomers and to polycondensation processes of various silicon-functional monomers and oligomers.

O. Mukbaniani displays everywhere inquisitiveness and are interested in all novelties, which have place generally in nature.

The research groups of macromolecular chemistry of Tbilisi State University works in the following fields: Synthesis of new organic and organo-inorganic monomers and oligomers with various reactionable functional groups.

Synthesis and investigation of properties of siloxane, carbosiloxane and silylene copolymers linear and cycloliner structure.

Synthesis and investigation of properties silicon containing conjugated polyarylene-vinylenes and oligomers with cumulenenic sequences in the main chain.

Polymerization of cyclic diorganosiloxane and silanes in the presence of catalyst received from macro porous zeolite and laminated compounds of graphite (LCG) with alkali metals.

Synthesis and kinetic investigation of formation of high thermal and chemical stability silicon-organic and organoinorganic polymers and block-copolymers of different classes. Promising materials for numerous practical applications in industry as a thermoresistant greases, oils, coating compositions, coupling agents, binders, rubbers and so on.

languages

Georgian (native), Russian, English.

Membership of organizations:

- **1971** – Member of D. Mendeleev Chemical Society of Georgia;
- **1996** – Active member of New York Academy of Science;
- **1993-2006** – Member of Scientific Degree Award Council of Iv. Javakhishvili Tbilisi State University;
- **2001-2006** – Member of Iv. Javakhishvili Tbilisi State University Council;
- **2002-2006** – Contributing Editor of the “Journal Polymer News”.

- **Since 2006** – Member of Advisor board of the Journal Proceeding of Iv. Javakhishvili Tbilisi State University (Chemical Series).
- **2007** – Member of Advisor board of "Polymers Research Journal".
- **2008** – Member of Advisor board of Scientific Journal “Khandzta”;
- **2008** – Member of Academy of Natural Sciences of Georgian.

Prizes:

In 1983 – awarded of the Premium Petre Melikishvili for "Best scientific work in the Natural Sciences of Georgia" Academy of Sciences of Georgia.

Honors received

2003.24.02 - Honor order of Georgia (№06099 surrender warrant №182).

International grants:

2002-2003 – Scholarship of World Federation of Scientists (Lausane-Switzerland): „Utilization of Georgian Natural Raw Materials for Purpose to obtain New Composites“.

1996 – 1998 – scholar of International Science Foundation (J. Soros).

1995 - Individual Grant of International Science Foundation (ISSF).

Local grants:

1998-2001 – Grant of Georgian Science and Technology: [#52 (3135)] “Synthesis of sili-conorganic monomers and polymers on their basis with practical values” – chief of the project.

2005 - Financing of Research works of Georgian State institution, “Synthesis and Investigation of Properties of New Organo/inorganic Polymers on the Basis of Functional Group Containing Monomers” – Chief of the Project #91.

2006-2009 - Grant of Georgian Science Foundation: “Synthesis of new organo/inorganic polymers on the base of functional group containing monomers and composition materials on their basis” – Chief of the Project GNSF/ST06/4-070.

2007- Grant of Georgian National Science Foundation for creation of the center of instrumental analysis (with the head).

He is an author more than 300 publication, 4 books, 3 monographs and 5 inventions and 2 patents. Under guidance of Prof. O. Mukbaniani 16 candidate dissertations and 14 magistrate works has been prepared.

2000-2010 works

Monographs and books

1. G. Andronikashvili, **O. Mukbaniani**, B. Arziani, L. Beridze. «**Chemistry**» – The Textbook for University Preparatory Branch and Entrants, Tbilisi, 2000, pp. 1-540.
2. **O.V. Mukbaniani** and G.E. Zaikov. New Concepts in Polymer Science, «Cycloliner Organosilicon Copolymers: Synthesis, Properties, Application». Printed in Netherlands, //VSP//, Utrecht, Boston – 2003, pp. 1-499.
<http://www.brill.nl/default.aspx?partid=18&searchtext=mukbaniani&type=1>
3. **O.V. Mukbaniani**, T.N. Tatrishvili. «Polysilylenes». //Auxiliary Textbook, Publisher Tbilisi State University, Tbilisi 2004, pp. 1-168.
4. G. Andronikashvili, **O. Mukbaniani**, B. Arziani, L. Beridze. «**Chemistry**» – The Textbook for University Preparatory Branch and Entrants, Tbilisi 2004, pp. 1-455.
5. L.M. Khananashvili, **O.V. Mukbaniani** and G.E. Zaikov. New Concepts in Polymer Science, «Elementorganic Monomers: Technology, Properties, Applications». Printed in Netherlands, //VSP//, Utrecht, 2006, pp.1-496.
<http://www.brill.nl/default.aspx?partid=18&pid=24311>
6. **O.V. Mukbaniani**, T.N. Tatrishvili and G.E. Zaikov. «Modification Reactions of Oligomethylhydridesiloxanes». Nova Science Publisher, Inc. Huntington, New York, 2007, pp. 1-228.
https://www.novapublishers.com/catalog/product_info.php?products_id=4693
7. **O.V. Mukbaniani**, T.N. Tatrishvili. «Macromolecular Chemistry ». Publisher Tbilisi State University, Tbilisi 2010, pp. 1-768.

Scientific works, reviews, independent chapters in the books and abstracts of communications

2000

1. **O.V. Mukbaniani**, U. Scherf, M.G. Karchkhadze, Kh.E. Koberidze, M.O. Labartkava. «Hydride Addition of Methylhydridesiloxanes to Dicyclopentadiene». //Intern. J. of Polymeric Materials, 2000, v. 48, №2, pp. 177-191.
2. **O.V. Mukbaniani**, T.N. Tatrishvili, E.I. Chachua. «Comb-type Methylsiloxane Copolymers, with Rigid Polysilylene Fragments in the Side Chain». //Abstracts of Communications of All Russian Union Conferences Siliconorganic Compounds, Synthesis, Properties, Application», Moscow, 2000, C83.
3. **O.V. Mukbaniani**, T.N. Tatrishvili, E.I. Chachua. «Comb-type Methylsiloxane Copolymers, with Rigid Polysilylene Fragments in the Side Chain». //Abstracts of Communi-

cations devoted to 95 from birthday of Academician K.A. Andrianov. Russian Federation, Moscow, 1-4 February, 2000, C83.

4. **O.V. Mukbaniani**, Kh.E. Koberidze. «Hydride Addition of Methylhydridesiloxane to 1.3-Cyclohexadiene». //Abstracts of Communications devoted to 95 from birthday of Academician K.A. Andrianov. Russian Federation, Moscow, 1-4 February, 2000, C37.
5. G.N. Gurgenidze, S.M. Meladze, **O.V. Mukbaniani**, L.M. Khananashvili. «Hydride Addition of Methylhydridesiloxane to Allyl Glycidyl Ether». //Proceedings of the Georgian Academy of Sciences, 2000, v. 26, №1-2, pp. 78-82.
6. T.N. Tatrishvili, M.G. Karchkhadze, R.Sh. Tkeshelashvili, G. Kutateladze, **O.V. Mukbaniani**. «Polyphenyl- α -naphthylsilylene-Dimethylsilylene Copolymers». //Proceedings of the Georgian Academy of Sciences, 2000, v.26, №3-4, pp. 80-87.
7. **O.V. Mukbaniani**, M.G. Matsaberidze, M.G. Karchkhadze, L.M. Khananashvili, T. Nasuashvili. «1,3-Disila-1,3-diphenyl-2-oxaindane Fragments Containing Block-copolymers». //Proceedings of the Georgian Academy of Sciences, 2000, v. 26, №1-2, pp. 72-77.
8. A.Sh. Samsonia, **O.V. Mukbaniani** and M.G. Karchkhadze. «Dehydrocondensation Reactions of 1.1-dihydroxy-1-sila-2-oxadihydrophenantrene with 1.4-bis(dimethylsilyl)benzene». //Georgian Engineering News, 2000, №2, p.142-143.
9. T.N. Tatrishvili, M.G. Karchkhadze, **O.V. Mukbaniani**. «Synthesis of phenylarylenesilylene oligomers». //Abstracts of Communications of III Republican Scientific-methodical conference in chemistry devoted to 150 from birthday of P. Melikishvili, Tbilisi, 2000, 9-12 October, p. 54-55.
10. A.Sh. Samsonia, M.G. Karchkhadze, **O.V. Mukbaniani** and L.M. Khananashvili. «Synthesis and Investigation of Properties of Silaoxadihydrophenanthrene Diphenylsiloxane-dimethylsiloxane Block-Copolymers». //Georgian Engineering News, 2000, №2, p.144-147.
11. T.N. Tatrishvili, **O.V. Mukbaniani**, M.G. Karchkhadze. «Synthesis and Investigation of Properties of Oligophenylarylsilylenes». //Georgian Engineering News, 2000, №4, pp. 125-128.
12. J.N. Aneli, Kh.E. Koberidze, **O.V. Mukbaniani**, M.G. Karchkhadze and L.M. Khananashvili. «Influence of the Method of Vulcanization on Electroconductivity of Filled Silicon-organic Rubbers». //Polymer Yearbook, 2000, v.17, pp. 89-92.

13. T.N. Tatrishvili, S.M. Meladze, E.I. Chachua, **O.V. Mukbaniani**. «Methylsiloxane Copolymers with Rigid Oligophenyl- α -naphthylsilylene Fragments in the Side Chain». //Georgian Engineering News, 2000, №4, pp. 129-132.

2001

14. **O.V. Mukbaniani**, U. Scherf, A.Sh. Samsonia, M.G. Karchkhadze, L.M. Khananashvili. «Card-type Organosiloxane Copolymers with Siloxaphenanthrene Fragments in Dimethylsiloxane Chain». //International J. of Polymeric Materials 2001, v. 48, №4, p. 381-393.
15. **O.V. Mukbaniani**, N.A. Koiava, M.G. Karchkhadze, R.Sh. Tkeshelashvili, M. Shengelia, L.M. Khananashvili. «Arylenecyclosiloxane-Dimethylsiloxane Copolymers». //J. of Applied Polymer Science 2001, v. 82, p. 3142-3151.
16. **O.V. Mukbaniani**, U. Scherf, M.G. Karchkhadze, T.N. Tatrishvili. «Block-copolymers with Polyphenyl- α -Naphthylsilane Oligomers in Dimethylsiloxane Chain». //Intern. J. of Polymeric Materials 2001, v. 48, № 3, p.311-330.
17. «*Radical and Ion Reactions, Problems and Ways of their Solution*», Edited by G.E. Zaikov, Nova Science Publisher, Inc. Huntington, New York, **2001, Chapter 1. O. Mukbaniani**, A. Samsonia, M. Karchkhadze and L. Khananashvili. «Synthesis and Investigation of Properties of Siloxadihydrophenanthrene-Diphenylsiloxane Fragments Containing Block-Copolymers», pp. 1-11.
https://www.novapublishers.com/catalog/advanced_search_result.php?keywords=O.+Mukbaniani+&x=9&y=12
18. **O.V. Mukbaniani**, U. Scherf, G.N. Gurgenidze, M.G. Karchkhadze, S.M. Meladze, L.M. Khananashvili. «Comb-type Organosilicon Compounds with Epoxy Groups in the Side Chain». //Intern. Journ. of Polymeric Materials, 2001, v. 48, № 3, pp. 267-293 .
19. **O. Mukbaniani**, M. Karchkhadze, Kh. Koberidze, S. Meladze, R. Tkeshelashvili, J. Aneli. «Cyclic and Linear Organosiloxanes with Norbornene-2-yl Groups at Silicon Atom». //Proceedings of the Georgian Academy of Sciences, 2001, v. 27, №1-2, pp. 53-57.
20. Sh. Samsonia, N. Lekishvili, **O. Mukbaniani**. «Synthesis of Optically Purpose Copolymers Based on Fluoro- and Silicon Containing Vinyl Monomers». //Abstracts of Communications, Partnership Development in Russia/CIS, Proceedings of ISTC-Samsung Forum, October 9-10, 2001, Moscow, p. 250-251.
21. «*Radical and Ion Reactions, Problems and Ways of their Solution*», Editor G.E. Zaikov, **2001, Nova Science Publishers, Inc, Huntington, New York, Chapter 6. O. Mukbaniani**,

G. Gurgenidze, S. Meladze and L. Khananashvili. «Dehydrocondensation and Hydrosilylation Reactions of Methylhydridesiloxane to Allyl-Alcohol», pp. 79-93.

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22. «Radical and Ion Reactions, Problems and Ways of their Solution», Editor G.E. Zaikov, 2001, Nova Science Publishers, Inc, Huntington, New York, **Chapter 7. O.V. Mukbaniani**, N.A. Koiava, M.G. Karchkhadze, R.Sh. Tkeshelashvili, M. Shengelia and L.M. Khananashvili. «Arylenecyclosiloxane-Dimethylsiloxane Copolymers», pp. 95-106.

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23. «Perspectives on Chemical and Biochemical Physics», Edited by G.E. Zaikov, Nova Science Publishers, Inc. New York, 2002, **Chapter 1**, «Synthesis of Functional Groups Containing Organocyclosiloxanes and Copolymers on Their Base», (**O. Mukbaniani**, L.M. Khananashvili and et. al).

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24. **O.V. Mukbaniani**, G.N. Gurgenidze, S.M. Meladze and L.M. Khananashvili. «Dehydrocondensation and Hydrosilylation Reactions of Methylhydridesiloxane to Allyl Alcohol». //Russian Polymer News, 2001, v. 6, №4, p. 18-24.

2002

25. **O.V. Mukbaniani**, M.G. Matsaberidze, M.G. Karchkhadze, V.A. Achelashvili, L.M. Khananashvili. «Poly-1,3-disila-1,3-diphenyl-2-oxaindane-polydimethylsiloxane Block-copolymers». // J. of Applied Polymer Sciences, 2002, v. 84, Issue 7, pp. 1409-1417
26. **O.V. Mukbaniani**, M.G. Karchkhadze, M.G. Matsaberidze. «Poly-1,3-disila-1,3-diphenyl-2-oxaindane-Polydimethylsiloxane Block-copolymers». //Russian Polymer News, 2002, vol.7, p.7-15.
27. N.A. Pirtckheliani, S.M. Meladze, E.I. Chachua, **O.V. Mukbaniani**. «Hydrosilylation Reactions of Methylhydridesiloxane to Acrylic Acid». //Proceedings of the Georgian Academy of Sciences, 2002, v. 28, №1-2, pp.62-67.
28. N.A. Pirtskheliani, S.M. Meladze, E.I. Chachua, **O.V. Mukbaniani**. «Hydride Addition of Methylhydridesiloxane to Acrylic Esters». //Georgian Engineering News, 2002, №1, pp. 90-91.
29. N.A. Pirtskheliani., S.M. Meladze., E.I. Chachua, **O.V. Mukbaniani**. «Hydride Addition of Methylhydridesiloxane to Trimethylacryloxysilane». //Georgian Engineering News, 2002, №1, pp. 87-89.

30. **O.V. Mukbaniani**, T.N. Tatrishvili. «Synthesis and Investigation Properties of Poly(phenyl- α -naphthylsilylene)-Dimethylsilylene Copolymers». //Journal of Applied Polymer Science, 2002, v. 85, №5, pp.1047-1056.
31. **O.V. Mukbaniani**, A.Sh. Samsonia, M.G. Karchkhadze, L.M. Khananashvili. «Synthesis and Investigation of Properties of Siloxadihydrophenanthrene-Diphenylsiloxane Fragments Containing Block Copolymers». //J. of Applied Polymer Science, 2002, v. 84, pp. 9-16.
32. **O.V. Mukbaniani**, T.N. Tatrishvili. «Block-copolymers with Diphenylsilylene Fragments in Dimethylsiloxane Chain». //Abstracts of Communications of IV Republican Scientific-methodical conference in chemistry IV. Tbilisi, 29-31 October, 2002, pp. 41.
33. N. Pirtxeliani, **O. Mukbaniani**. «Hydride Addition of α,ω -Bis(trimethylsiloxy)methylhydridesiloxanes to Methacrylic Acid Esters». //Abstracts of Communications of IV Republican Scientific-methodical conference in chemistry IV, Tbilisi, 29-31 October, 2002, pp. 45.
34. **O. Mukbaniani**, I.G. Esartia, L.M. Khananashvili, V.G. Tsitsishvili. «Heterofunctional Condensation of Hydroxyphenylcyclosiloxanes with Chlorosilanes». // Proceedings of the Georgian Academy of Sciences, 2002, v. 28, №1-2, pp. 88-94.
35. G. Titvinidze, D. Gvencadze, **O. Mukbaniani**. «Modification of Andezite for Obtaining New Polymeric Composites». //Abstracts of Communications of IV Republican Scientific-methodical Conference in Chemistry, Tbilisi, 29-31 October, 2002, pp. 82-83.
36. T.P. Doksopulo, N.N. Gogesashvili, **O.V. Mukbaniani**. «Synthesis and Investigation of Properties of Some Silicon Containing Diacetyldicarboxylic Acids». //Georgian Chemical Journal, 2002, № 3, v. 2, pp. 220-221.
37. «Aging of Polymers, Polymer Blends and Polymer Composites», Edited by G.E. Zaikov, A.L. Buchachenko and V.B. Ivanov, Nova Science Publishers, Inc., New York, 2002, v. 1. **O. Mukbaniani** and et. al. «Synthesis of Functional Group Containing Organocyclosiloxanes and Copolymers on their Basis», pp. 99-136.

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2003

38. **O. Mukbaniani**, S.M. Meladze, G. Zaikov, L. Khananashvili. «Organosilicon Copolymers with Cyclosiloxane Fragments in the side chain». //Polymer Year Book, 2003, *Chapter 6*, pp. 141-184.

39. **O. Mukbaniani**, G. Gurgenzidze, L. Khananashvili, S. Meladze. «Dehydrocondensation and Hydrosilylation reactions of methylhydridesiloxane with Allyl alcohol». //Intern. J. of Polymeric Materials, 2003, v. 52, №10, pp. 861-876.
40. O. Mukbaniani, **T. Tatrishvili**, G. Titvinidze. «Hydrosilylation Reactions of Methylhydride-siloxane to n-Hexene-1». //Georgia Chemical Journal. 2003, v. 3, № 3, p. 214-215.
41. **O. Mukbaniani**, M. Karchkhadze, L. Khananashvili, N. Koiava. «Arylenecyclosiloxane-Dimethylsiloxane Copolymers». //Intern. J. of Polymeric Materials, 2003, v. 52, № 10, pp. 877-889.

2004

42. «*New Development in Polymer Research*», Edited by G.E. Zaikov and Makarov G.G., Nova Science Publishers, Inc. New York, **2004**, **Chapter 8**, «Hydrosilation And Dehydrocondensation Reactions Of Methylhydridesiloxane To Acrylic And Methacrylic Acids», O. Mukbaniani, and et. al. pp. 125-142.
https://www.novapublishers.com/catalog/product_info.php?products_id=183
43. **O. Mukbaniani**, M. Matsaberidze, M. Karchkhadze, V. Achelashvili, A. Chelidze. «Poly-1,3-disila-2-oxadienedimethylsiloxane Block-Copolymers». //Journal of the Balkan Tribological Association, 2004, v. 10, № 2, pp. 218-230.
44. T.P. Doksopulo, N.N. Gogesashvili, **O.V. Mukbaniani**, A.V. Vannikov. «Synthesis and Investigation of Properties of Some Polyshif Basis and Polyazines on the Bases Dibenzoyl ethylene and Dibenzoyl ethane». //Georgian Chemical Journal, 2004, 4(2), p. 123-125.
45. **O.V. Mukbaniani**, T.N. Tatrishvili, N.O. Mukbaniani, G.G. Titvinidze, S.G. Phatsatsia. «Synthesis of Comb-type oligomers via Hydride Addition Reaction Methylhydridesiloxane-dimethylsiloxane Oligomers to Unsaturated Organic Compounds». //Abstract of Communications of III All Russian Kargin Conference «Polymers-2004», devoted to the 250-anniversary of the Moscow state university, Moscow, the Moscow State University, 27 January – 1 February, 2004, v. 1, sect.1, p.112.
46. G. Titvinidze, T. Tatrishvili, N. Mukbaniani, **O. Mukbaniani**. «Hydride Addition of Methylhydridesiloxane to Styrene and α -Methylstyrene». //Proceedings of Georgian Academy of Sciences, 2004, v. 30, №1-2, pp. 53-56.
47. T. Tatrishvili, Kh. Koberidze, **O. Mukbaniani**, Z. Phachulia. «Synthesis of Methylsiloxane Oligomers with Unsaturated Bonds in the Side Chain». //Abstracts of Communications of V Republican Scientific Conference in Chemistry, Tbilisi, 2004, pp. 56.

48. N. Pirtskheliani, T. Tatrishvili, N. Mukbaniani, L. Khananashvili, M. Labartkava, **O. Mukbaniani**. «Hydride Addition of α,ω -bis(trimethylsiloxy)methylhydridesiloxanes to Silylated Esters of Methacrylic Acids». //Proceedings of Georgian Academy of Sciences, chem. ser., 2004, №3-4, pp. 261-265.
49. «Trends Molecular and High Molecular Science», Edited by G.E. Zaikov, Monakov, Yu. B. and Jiménez, A., Nova Science Publisher, Inc NY, 2004, **Chapter 20**, **O. Mukbaniani**, and et al. «Hydrosilylation Reactions of Methylhydridesiloxane to Acrylic and Methacrylic Acids», pp. 307-324.
https://www.novapublishers.com/catalog/product_info.php?products_id=269
50. «Focus on Polymer Research», Edited by Yu.B. Monakov and G.E. Zaikov, Nova Science Publishers, Inc. New York, 2004, **Chapter 5**. **O. Mukbaniani**, M. Matsaberidze, M. Karchkhadze, V. Achelashvili, and A. Chelidze, «Poly-1,3-Disila-2-Oxaindane-Dimethylsiloxane Block-Copolymers», pp.123-134.
https://www.novapublishers.com/catalog/product_info.php?products_id=271

2005

51. **O. Mukbaniani**, G. Zaikov, U. Scherf, S. Meladze, T. Tatrishvili, Z. Pachulia, Kh. Koberidze, M. Labartkava. «Hydride Addition of Methylhydridesiloxane to 1,3-Cyclohexadiene». //Journal of the Balkan Tribological Association 2005, v. 11, № 1, pp. 1-15
52. G. Titvinidze, T. Tatrishvili, **O. Mukbaniani**. «Hydrosilylation of Methylhydridesiloxane to Propargyl Alcohol and its Trimethylsilylated Ether». //Georgian Chemical Journal, 2005, v. 5, №3, p. 255-258.
53. M.K. Iskalova, E.G. Markarashvili, G.S. Mindiashvili, T.V. Chogovadze, Ts.N. Vardosanidze, **O.V. Mukbaniani**. «Composition Materials on the basis Epoxyorganosilicon Oligomers». //Abstract of Communications of X All Russian Conference «Organosilicon Compounds: Synthesis, Properties and Application», Moscow, 25-30 May, 2005, p. 3C27.
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