



# Curriculum vitae

## Sevinj N. Osmanova

### Profile

F/Name: **Sevinj N. Osmanova**

Date of Birth: 26<sup>th</sup> september 1985

Place of Birth - Baku, Azerbaijan

Citizenship: azerbaijanian

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### Contacts

Email:

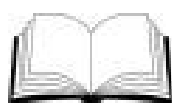
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### Languages

English, Russian, Turkish

### Hobbies



Reading



Music

### Education

- 2004-2008 Bachelor degree: Chemistry**  
Azerbaijan State Pedagogical University.
- 2009-2011 Master degree: Inorganic Chemistry**  
Azerbaijan State Pedagogical University.
- 2014-2018 Ph.D: Inorganic Chemistry**  
Institute of Catalysis and Inorganic Chemistry named after Acad. M.Naghiyev
- From 2019 PostDoc:**  
Institute of Catalysis and Inorganic Chemistry named after Acad. M.Naghiyev

### Research ambition

#### Main directions of scientific activity:

- synthesis and research of catalysts, chemistry of composite materials, physical-chemical research methods in chemistry catalysis; application of spectroscopic research methods in chemistry

### Work Experiences

- Institute of Catalysis and Inorganic Chemistry named after Acad. M.F.Naghiyev, “Molecular magnetics and conductors” laboratory;  
leading researcher, Ph.D (from 2003 – present)
- Khazar University – Chemistry and Chemical Engineering Department;  
teacher (from 2019- present)

### Technical/Experimental Lab Skills

- Synthesis inorganic compounds and catalysts;
- FTIR;
- DLS;
- UV-vis spectroscopy;
- SEM/EDS;
- XRD;
- TG/DTG analysis;

### Projects

- SOCAR Scientific Fund -2019
- “Horizon 2020” (European Commission) - 2020-2024

# Publications

## Conference participation

- Sevinj Osmanova Alumina based Nickel-Iron catalyst for methane pyrolysis. Synthesis and structural peculiarities. The International Symposium "PRIORITIES OF CHEMISTRY FOR A SUSTAINABLE DEVELOPMENT" PRIOCHEM XXI. 15-17 October 2025, Bucharest, Romania.  
<https://icechim.ro/en/institute/scientific-events/priochem-en/>
- Asgarova A.E., Rustamova A.İ, Mammadova Z.M., Abbasova T.A., Osmanova S.N. Alumina-Based Ni-Fe Catalysts for CO<sub>2</sub> Reforming: Toward Efficient Carbon Utilization. 16 th Students Congress of the Society of Chemists and Technologists of Macedonia (SCTM), Oct 27 – 28, 2025. Skopje, N. Macedonia.  
<https://congress.sctm.mk/event/5/>
- "Synergy for Sustainability: Advancing a Greener Future through Chemistry and Engineering" 3–5 November 2024, Doha, Qatar;
- CAMURE 12 & ISMR 11 "12th International Symposium on Catalysis in Multiphase Reactors" and "11th International Symposium in Multifunctional Reactor".8-11 sentyabr 2024;
- "Nanoscience & Nanotechnology 2024" 3–6 iyun 2024, Roma, İtaliya;
- Young Chemists Summit 2024 "Diversity in Chemistry" 14–16 February 2024, Salzburg, Austria
- S. Osmanova, G. Azimova, A. Mammadov, E. Ismailov, D. Taghiyev, J. Thybaut Phase composition of the MnO<sub>x</sub>-Na<sub>2</sub>WO<sub>4</sub>/SiO<sub>2</sub> catalyst and thermodynamics of its fluctuations under conditions of the oxidative conversion of methane /12 Chemistry Conference (12CC) October 13 - 14, 2023, Plovdiv, Bulgaria. p.151.
- S.N. Osmanova, G.R. Azimova, E.H. Ismailov, D.B. Taghiyev, J.W. Thybaut. Effect of pre- treatment conditions on the surface structure and activity of MnO<sub>x</sub>-Na<sub>2</sub>WO<sub>4</sub>/bentonite catalyst for direct conversion of methane to C<sub>2</sub> hydrocarbons/ "CHEMISTRY, PHYSICS AND TECHNOLOGY OF SURFACE" 11-12 October, 2023, Kyiv, Ukraine p.118. (online oral presentation)
- S. Osmanova, G. Azimova, A. Mammadov, E. Ismailov, D. Taghiyev, J. Thybaut Elemental composition of the surface and stability of MnO<sub>x</sub>-Na<sub>2</sub>WO<sub>4</sub>/SiO<sub>2</sub> catalyst under the conditions of oxidative conversion of methane, 17th International Conference of Physical Chemistry ROMPHYSICHEM-17 ABSTRACT BOOK September 25 - 27, 2023 Bucharest, ROMANIA, p.53.
- E.H. Ismailov, S.N.Osmanova, G.R. Azimova, A.N. Mammadov, D.B. Taghiyev, J.W. Thybaut Phase composition of MnO<sub>x</sub>-Na<sub>2</sub>WO<sub>4</sub>/SiO<sub>2</sub> catalyst and thermodynamics of the size dependent stability of manganese oxides nanoparticles in the oxidative condensation of methane to C<sub>2</sub> hydrocarbons International Conference «Current Problems in Catalysis» CPC-2023 Kyiv, Ukraine September 25-29, 2023 PROCEEDINGS p.79. (Online)
- S. Osmanova, G. Azimova, E. Ismailov, D. Taghiyev, J. Thybaut Effect Of The Complexing Agent - Precursor On The Activity Of MnNaW/SiO<sub>2</sub> catalysts for the oxidative conversion of methane / 13th Symposium on the Scientific Bases for the Preparation of Heterogeneous Catalysts (PREPA 13), University of Louvain (UCLouvain), Louvain la-Neuve, Belgium July 9 -13, 2023. P. 232-233.
- Osmanova S.N., Ismailov E.H., Taghiyev D.B., Thybaut J.W. Effect of reaction conditions on the phase composition, magnetic and catalytic properties of MnO<sub>x</sub>-Na<sub>2</sub>WO<sub>4</sub>/SiO<sub>2</sub> oxide system for oxidative conversion of methane Chemistry Conference for Young Scientists (CRF-ChemCYS) symposium 12-14 October 2022 Blankenberge, Belgium
- S.Osmanova, G.Azimova, S.Zulfugarova, E. Ismailov, D.Taghiyev, J.Thybaut Structure and Stability of MnO<sub>x</sub>-Na<sub>2</sub>WO<sub>4</sub>/SiO<sub>2</sub> Catalyst for Oxidative Conversion of Methane Ukrainian conference with international participation "CHEMISTRY, PHYSICS AND TECHNOLOGY OF SURFACE" 19-20 October, 2022, Kyiv pp.134
- Sevinj Osmanova, Etibar Ismailov, DilgamTaghiyev, Joris Thybaut Effect of Reaction Temperature on the Surface Structure and Phase Composition of MnO<sub>x</sub>-Na<sub>2</sub>WO<sub>4</sub>/SiO<sub>2</sub> Catalyst for Oxidative Conversion of Methane YOURHETCAT2022, 11–13 of July, 2022 in Szeged, Hungary pp.54

## Articles

- Tagiyeva, S., Osmanova, S., Rustamova, A., Pashayeva, F., Muradkhanov, R., Mammadov, A., & Ismailov, E. (2025). Two-Stage Conversion of Carbon Dioxide to Methanol on Co-Pd-Containing Catalysts Based on Aluminosilicates at Atmospheric Pressure. *Eurasian Chemico-Technological Journal*, 27(1), 35–44. <https://doi.org/10.18321/ectj1654>
- Rustamova A.I., Muradkhanov R.M., Osmanova S.N., Soloviev S.O., Ismailov E.H., Effect Of Calcination Temperature On The Phase Composition And Magnetic Properties Of The Boehmite With Adsorbed Ferrocene. *Chemical Problems*, 2025. V 23, (1), p.107 – 115.
- Huseynova, G., Gasimova, G., Aliyeva, N., & Osmanova, S. (2025). Technological Features of Producing High-Index Oils in the Alkylation Process. *Eurasian Chemico-Technological Journal*, 27(2), 149–158. <https://doi.org/10.18321/ectj1662>
- Ismailov, E.H., Tagiyeva, S.F., Osmanova, S.N. *et al.* Oxygen Anion-Radical Complexes with Mo(VI) on MoO<sub>x</sub>/SiO<sub>2</sub> Catalysts and Their Role in the Oxidation of Methane to Methanol. *Theor Exp Chem* **60**, 351–356 (2024). <https://doi.org/10.1007/s11237-025-09837-9>
- Alimardanov, H.M., Garibov, N.I., Huseynova, F.A. *et al.* Liquid-Phase Catalytic Oxidation of Cyclohexene and its Methyl Derivative with Hydrogen Peroxide into Aliphatic Hydroxy Aldehydes and Hydroxy Acids. *Theor Exp Chem* **60**, 217–225 (2024). <https://doi.org/10.1007/s11237-025-09824-0>
- Rustamova, A., Muradxanov, R., Osmanova, S., Pashayeva, F., Mammadov, A., Tagiyev, D., & Ismailov, E. (2024). Heteronuclear Fe-Mn Cyclopentadienyl Complexes Supported on Boehmite. Thermochemistry and Thermodynamics of their Decomposition. *Eurasian Chemico-Technological Journal*, 26(3), 161–168. <https://doi.org/10.18321/ectj1639>
- Tagiyeva, S., Osmanova, S.N., Rustamova, A.I. *et al.* Methanation of Carbon Dioxide on Co-Containing Aluminosilicate Catalysts. *Theor Exp Chem* **59**, 434–441 (2024). <https://doi.org/10.1007/s11237-024-09803-x>
- Rzayev Y, Osmanova S, Ismailov E. Structural And Mechanical Properties Of Oils From The Muradkhanly And Sangachal-Deniz Fields Of Azerbaijan. *Gazi University Journal of Science*. September 2024;37(3):1094-1105. <https://doi.org/10.35378/gujs.1349867>
- Osmanova, S.; Azimova, G.; Zulfugarova, S.; Ismailov, E.; Taghiyev, D.; Thybaut, J. Structure and Stability of MnO<sub>x</sub>-Na<sub>2</sub>WO<sub>4</sub>/SiO<sub>2</sub> Catalyst for Oxidative Condensation of Methane. *Him. Fiz. Tehnol. Poverhni* **2024**, 15, 130-136. <https://doi.org/10.15407/hftp15.01.130>
- Osmanova, S.N., Suleymanova, S.A., Zeynalova, T.G. *et al.* In Situ DLS/EPR/GC-MS Monitoring of the Catalytic Systems Based on Tungsten(VI) Hexachloride and Organo-Aluminum Compounds for Olefin Metathesis Reactions. *Theor Exp Chem* **59**, 343–349 (2023). <https://doi.org/10.1007/s11237-024-09793-w>
- Osmanova, S., Azimova, G., Zulfugarova, S., Ismailov, E., Taghiyev, D., & Thybaut, J. (2024). Structure and stability of MnO<sub>x</sub>-Na<sub>2</sub>WO<sub>4</sub>/SiO<sub>2</sub> catalyst for oxidative condensation of methane. *Chemistry, Physics and Technology of Surface*, 15(1), 130-136. <https://dx.doi.org/10.15407/hftp15.01.130>
- Sh. F. Tagiyeva, S. N. Osmanova, A. I. Rustamova, D. B. Tagiyev, and E. H. Ismailov Methanation of carbon dioxide on Co-containing aluminosilicate catalysts Theoretical and Experimental Chemistry, *Theor Exp Chem* **59**, 434–441 (2024). <https://doi.org/10.1007/s11237-024-09803-x>
- Rustamova A.I.; Gurbanov Z.G., Mammadova Z.M. Osmanova S.N., Guluzade A.Kh., Mammadov A.N., Ismailov E.H. Thermal Stability And Thermodynamics Of Pyrolysis Of Mono-, Bi-, And Trinuclear Carbinol Derivatives Of Ferrocene *Chemical Problems*, 2023, 21(3), p. 251–261. <https://doi.org/10.32737/2221-8688-2023-3-251-261>

- E. H. Ismailov, D. B. Taghiyev, S. M. Zulfugarova, S. N. Osmanova, G. R. Azimova & J. W. Thybaut Phase Composition and Catalytic Properties of MnNaW/SiO<sub>2</sub> Oxide System in Oxidative Conversion of Methane Theor Exp Chem 58, 61–69 (2022). <https://doi.org/10.1007/s11237-022-09723-8>
- Gurbanov, N., Gadimova, N., Osmanova, S., Ismailov, E., Akhundova, N. Chemical Composition, Thermal Stability Of Pomegranate Peel And Seed Powders And Their Application In Food Production Eastern-European Journal of Enterprise Technologies, 2022, 6(11-120), p. 24–33. <https://doi.org/10.15587/1729-4061.2022.268983>
- Ismailov, E.H., Abbasov, Y.A., Osmanova, S.N. et al. Oxidative Addition of C–H Acids to bis(1,5-cyclooctadiene) Ni(0)Ni(COD)<sub>2</sub> Complex. Theor Exp Chem. 2021. V.56, p.412-416. <https://doi.org/10.1007/s11237-021-09670-w>
- A.D. Valiyeva , E.H. Ismailov , S.N. Osmanova , R.D. Qasimov , P.A. Nadirov , J.I. Mirzai Phase Composition, Magnetic And Catalytic Properties Of Nanostructured Nickel-Containing Nax Zeolite In The Reaction Of Oxidative Conversion Of Propanol-1// J.Chemical Problems 2020, 3 (18),p.410-420.
- N.M. Aliyeva, A.A. Aliyeva, S.N.Osmanova, E.E.Mammadov, E.H. Ismayilov. Acidity of Zr/Al oxide catalysts for conversion of C<sub>2</sub>-C<sub>4</sub> alcohols to olefins based on the data of the EPR spectra of adsorbed spin probes // J. Processes of Petrochemistry and Oil Refining, 2018.vol 19, p.147-155.
- Azizova, A.N., Tagiev, D.B., Osmanova, S.N. et al. Crystal and Molecular Structure of a Platinum(II) Complex with β-Mercaptoethylamine Hydrochloride. J Struct Chem 2018. V. 59, p. 188-192. <https://doi.org/10.1134/S0022476618010298>
- S.N.Osmanova, E.H.Ismailov, U.A.Kerimova Oxidative conversion of methane over ReOx/Alumina catalysts // Russian Journal of Chemistry and Chemical technology 2017. V. 60. N 8. P. 65-69. <http://dx.doi.org/10.6060/tcct.2017608.5644>