

Виталий Степанович Музыкантов



(30.08.1934–25.07.2016)

Виталий Степанович стал сотрудником Института катализа в октябре 1958 года и проработал в институте 57 лет. Он был первым научным сотрудником, не только зачисленным в штат создаваемого института, но и непосредственно переехавшим сразу в Новосибирск. Незадолго до этого, в 1958 году, Виталий Степанович защитил дипломную работу на кафедре изотопов Менделеевского химико-технологического института под руководством В.В. Поповского (совместно с Г. Боресковым). Его ранние исследования завершились защитой кандидатской диссертации «Исследование изотопного обмена в системе молекулярный кислород - твердый окисел» (1965). Изотопная методика осталась ключевой в дальнейшей работе В.С. Музыкантова, который виртуозно владел разнообразными тонкостями этого сложного и любимого им эксперимента.

Виталий Степанович был преданным учеником и последователем идей Георгия Константиновича Борескова, с которым совместно проводил многие исследования. Он также отдавал много сил развитию физико-химического образования в НГУ, а в период с 1974 по 1978 г. исполнял обязанности заведующего кафедрой физической химии. Его учебные пособия для химиков и биологов неоднократно переиздавались и используются до сих пор. До конца своих дней Виталий Степанович оставался полным мудрости, идей, спешил поделиться своими знаниями, мыслями с учениками, коллегами, друзьями.

Текст составлен по материалам сайта института катализа с использованием [заметки в газете "Навигатор" № 29 \(1048\) от 29.07.16](#)

Учебные пособия

1. Д.Г. Кнорре, В.С. Музыкантов, Физическая химия. Новосибирск, НГУ, 1973 (позднее – переиздания, Д.Г. Кнорре, Л.Ф. Крылова, В.С. Музыкантов, М.: Высшая школа, 1981; 1990)
2. В.С. Музыкантов, Задачи по химической термодинамике. Новосибирск, НГУ, 1977 (позднее – переиздание с участием соавторов, М.: Химия, 2001; М.: Химия-КолосС, 2004).

3. В.С. Музыкантов, Н.Н. Булгаков, А.Н. Голубенко, Л.Ф. Крылов, Задачи по физической химии, Новосибирск, НГУ, 1977.

Избранные статьи

1. MUZYKANTOV, V. S.; POPOVSKI, V. S.; BORESKOV, G. K..
KINETICS OF ISOTOPE EXCHANGE IN MOLECULAR OXYGEN-SOLID OXIDE SYSTEM
KINET. KATAL. 5, 624 (1964)
2. MUZYKANTOV, VS; JIRU, P; KLIER, K; NOVAKOVA, J.
EXCHANGE REACTION OF OXYGEN WITH OXIDES COMPUTER DETERMINATION OF EXCHANGE RATES
COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS 33(3), 829 (1968)
3. POPOVSKII, V. V.; BORESKOV, G. K.; MUZYKANTOV, V. S.; SAZONOV, V. A.; SHUBNIKOV, S. G..
BINDING ENERGY OF OXYGEN AND CATALYTIC ACTIVITY OF SOME OXIDES
KINETIKA I KATALIZ 10, (1969)
4. MUZYKANTOV, VS; CHESHKOVA, KT; BORESKOV, GK.
OXYGEN HETEROEXCHANGE AND SELF-DIFFUSION IN O₂ - CO₂ - MOO₃SYSTEM
KINETCATAL 14, 432 (1973)
5. BORESKOV, GK; MUZYKANTOV, VS.
INVESTIGATION OF OXIDE-TYPE OXIDATION CATALYSTS BY REACTIONS OF OXYGEN ISOTOPIC-
EXCHANGE
ANNALS OF THE NEW YORK ACADEMY OF SCIENCES 213(NOV16), 137 (1973)
6. MUZYKANTOV, VS; BORESKOV, GK; PANOV, GI.
KINETICS OF EXCHANGE AND SPECIES OF OXYGEN ON SURFACE OF OXIDE CATALYSTS
REACTION KINETICS AND CATALYSIS LETTERS 1(3), 315 (1974)
7. MUZYKANTOV, VS; BULGAKOV, NN; VERSHININ, VG; BORESKOV, GK.
REACTION OF OXYGEN AND HYDROGEN ON AN ALUMINUM-OXIDE SURFACE
KINETICS AND CATALYSIS 16(3), 657 (1975)
8. MUZYKANTOV, VS.
DISTRIBUTION AND TRANSFER OF ATOMS BY ELEMENTARY REACTIONS
REACTION KINETICS AND CATALYSIS LETTERS 13(4), 419-424 (1980)
9. MUZYKANTOV, VS.
KINETICS OF ISOTOPIC EXCHANGE DUE TO ONE ELEMENTARY REACTION
REACTION KINETICS AND CATALYSIS LETTERS 14(3), 311-315 (1980)
10. MUZYKANTOV, VS.
KINETIC-EQUATIONS OF ISOTOPE TRANSFER BY ELEMENTARY REACTION
REACTION KINETICS AND CATALYSIS LETTERS 14(2), 161-167 (1980)
11. MUZYKANTOV, VS.
KINETIC-EQUATIONS OF ISOTOPE REDISTRIBUTION IN AN ELEMENTARY REACTION
REACTION KINETICS AND CATALYSIS LETTERS 14(1), 113-118 (1980)
12. MUZYKANTOV, VS; SHESTOV, AA.
KINETIC-EQUATIONS FOR THE REDISTRIBUTION OF ISOTOPIC MOLECULES DUE TO REVERSIBLE
DISSOCIATION - HOMOEXCHANGE OF METHANE
REACTION KINETICS AND CATALYSIS LETTERS 32(2), 307-312 (1986)
13. MUZYKANTOV, VS; SHESTOV, AA.
REDISTRIBUTION KINETICS OF ISOTOPE MOLECULES DUE TO REVERSIBLE BIMOLECULAR REACTIONS

WITH SEVERAL ATOMIC CHANNELS

REACTION KINETICS AND CATALYSIS LETTERS 33(1), 197-202 (1987)

14. MUZYKANTOV, VS.
ISOTOPIC STUDIES OF DIOXYGEN ACTIVATION ON OXIDE CATALYSTS FOR OXIDATION - PROBLEMS, RESULTS AND PERSPECTIVES
REACTION KINETICS AND CATALYSIS LETTERS 35(1-2), 437-447 (1987)
15. MUZYKANTOV, VS; EHWALD, H; SHESTOV, AA; BOGDANCHIKOVA, NE.
HYDROGEN AND OXYGEN EFFECT ON HOMOEXCHANGE RATE OF ETHYLENE OVER HIGHLY DISPERSED SILVER CATALYSTS
REACTION KINETICS AND CATALYSIS LETTERS 40(1), 31-34 (1989)
16. SHESTOV, AA; MUZYKANTOV, VS; TYULENIN, YP; KADUSHIN, AA.
EXCHANGE ISOTOPE KINETICS AND ACTIVATION MECHANISMS OF METHANE AND OXYGEN ON THE OXIDE CATALYSTS OF OXIDATIVE COUPLING OF METHANE SM_2O_3/MGO AND ND_2O_3/MGO
CATALYSIS TODAY 13(4), 579-580 (1992)
17. EHWALD, H; SHESTOV, AA; MUZYKANTOV, VS.
ETHYLENE HYDROGENATION MECHANISM ON Ag/SiO_2 CATALYSTS ELUCIDATED BY ISOTOPE KINETICS
CATALYSIS LETTERS 25(1-2), 149-155 (1994)
18. MUZYKANTOV, VS; SHESTOV, AA; EHWALD, H.
MECHANISMS OF CATALYTIC ACTIVATION OF METHANE AND ETHYLENE ON MAGNESIA SURFACE ELUCIDATED BY ISOTOPIC KINETICS
CATALYSIS TODAY 24(3), 243-244 (1995)
19. MUZYKANTOV, VS; ZUDIN, VN; ROGOV, VA; SHESTOV, AA; LIKHOLOBOV, VA.
KINETICS OF ISOTOPE EXCHANGE AND MECHANISMS OF CATALYTIC ACTIVATION OF DIHYDROGEN BY METAL COMPLEXES IN SOLUTIONS
KINETICS AND CATALYSIS 38(4), 532-540 (1997)
20. SHESTOV, AA; BURCH, R; SULLIVAN, JA; MUZYKANTOV, VS.
MODELLING TRANSIENT TRACER STUDIES OF COMPLEX ACTIVATION MECHANISMS OF TWO-ATOM LABELLED MOLECULES.
REACTION KINETICS AND THE DEVELOPMENT OF CATALYTIC PROCESSES 122, 447-450 (1999)
21. MUZYKANTOV, VS; KEMNITZ, E; SADYKOV, VA; LUNIN, VV.
INTERPRETATION OF ISOTOPE EXCHANGE DATA "WITHOUT TIME": NONISOTHERMAL EXCHANGE OF DIOXYGEN WITH OXIDES
KINETICS AND CATALYSIS 44(3), 319-322 (2003)
22. SADYKOV, VA; KUMETSOVA, TG; ALIKINA, GM; FROLOVA, Y; LUKASHEVICH, AI; POTAPOVA, YV; MUZYKANTOV, VS; ROGOV, VA; KRIVENTSOV, VV; KOCHUBEI, DI; MOROZ, EM; ZYUZIN, DI; ZAIKOVSKII, VI; KOLOMIICHUK, VN; PAUKSHTIS, EA; BURGINA, EB; ZYRYANOV, VV; UVAROV, NF; NEOPHYTIDES, S; KEMNITZ, E.
CERIA-BASED FLUORITE-LIKE OXIDE SOLID SOLUTIONS AS CATALYSTS OF METHANE SELECTIVE OXIDATION INTO SYNGAS BY THE LATTICE OXYGEN: SYNTHESIS, CHARACTERIZATION AND PERFORMANCE
CATALYSIS TODAY 93-5, 45-53 (2004)
23. SADYKOV, VA; FROLOVA, YV; KRIVENTSOV, VV; KOCHUBEI, DI; MOROZ, EM; ZYUZIN, DA; POTAPOVA, YV; MUZYKANTOV, VS; ZAIKOVSKII, VI; BURGINA, EB; BORCHERT, H; TRUKHAN, S; IVANOV, VP; NEOPHYTIDES, S; KEMNITZ, E; SCHEURELL, K.
SPECIFICITY OF THE LOCAL STRUCTURE OF NANOCRYSTALLINE DOPED CERIA SOLID ELECTROLYTES
SOLID STATE IONICS-2004 835, 199-204 (2005)

24. SADYKOV, VA; FROLOVA, YV; ALIKINA, GM; LUKASHEVICH, AI; MUZYKANTOV, VS; ROGOV, VA; MOROZ, EM; ZYUZIN, DA; IVANOV, VP; BORCHERT, H; PAUKSHTIS, EA; BUKHTIYAROV, VI; KAICHEV, VV; NEOPHYTIDES, S; KEMNITZ, E; SCHEURELL, K.
MOBILITY AND REACTIVITY OF LATTICE OXYGEN IN GD-DOPED CERIA PROMOTED BY PT
REACTION KINETICS AND CATALYSIS LETTERS 85(2), 367-374 (2005)
25. SADYKOV, VA; FROLOVA, YV; ALIKINA, GM; LUKASHEVICH, AI; MUZYKANTOV, VS; ROGOV, VA; MOROZ, EM; ZYUZIN, DA; IVANOV, VP; BORCHERT, H; PAUKSHTIS, EA; BUKHTIYAROV, VI; KAICHEV, VV; NEOPHYTIDES, S; KEMNITZ, E; SCHEURELL, K.
MOBILITY AND REACTIVITY OF THE LATTICE OXYGEN OF PR-DOPED CERIA PROMOTED WITH PT
REACTION KINETICS AND CATALYSIS LETTERS 86(1), 21-28 (2005)
26. SADYKOV, VA; PAVLOVA, SN; BUNINA, RV; ALIKINA, GM; TIKHOV, SF; KUZNETSOVA, TG; FROLOVA, YV; LUKASHEVICH, AI; SNEGURENKO, OI; SAZONOVA, NN; KAZANTSEVA, EV; DYATLOVA, YN; BOBROVA, LN; KUZ'MIN, VA; GOGIN, LL; VOSTRIKOV, ZY; POTAPOVA, YV; MUZYKANTOV, VS; PAUKSHTIS, EA; BURGINA, EB; ROGOV, VA; SOBYANIN, VA; PARMON, VN.
SELECTIVE OXIDATION OF HYDROCARBONS INTO SYNTHESIS GAS AT SHORT CONTACT TIMES: DESIGN
OF MONOLITH CATALYSTS AND MAIN PROCESS PARAMETERS
KINETICS AND CATALYSIS 46(2), 227-250 (2005)
27. SADYKOV, VA; KUZNETSOVA, TG; FROLOVA-BORCHERT, YV; ALIKINA, GM; LUKASHEVICH, AI; ROGOV, VA; MUZYKANTOV, VS; PINAEVA, LG; SADOVSKAYA, EM; IVANOVA, YA; PAUKSHTIS, EA; MEZENTSEVA, NV; BATUEV, LC; PARMON, VN; NEOPHYTIDES, S; KEMNITZ, E; SCHEURELL, K; MIRODATOS, C; VAN VEEN, AC.
FUEL-RICH METHANE COMBUSTION: ROLE OF THE PT DISPERSION AND OXYGEN MOBILITY IN A
FLUORITE-LIKE COMPLEX OXIDE SUPPORT
CATALYSIS TODAY 117(4), 475-483 (2006)
28. SMIRNOVA, A; SADYKOV, V; MUZYKANTOV, V; MEZENTSEVA, N; IVANOV, V; ZAIKOVSKII, V; ISHCENKO, A; SAMMES, N; VASYLYEV, O; KILNER, J; IRVINE, J; VERESCHAK, V; KOSACKI, I; UVAROV, N; ZYRYANOV, V.
SCANDIA-STABILIZED ZIRCONIA: EFFECT OF DOPANTS ON SURFACE/GRAIN BOUNDARY SEGREGATION
AND TRANSPORT PROPERTIES
SOLID-STATE IONICS-2006 972, 155-+ (2007)
29. SADYKOV, VA; BORCHERT, YV; ALIKINA, GM; LUKASHEVICH, AI; MEZENTSEVA, NV; MUZYKANTOV, VS; MOROZ, EM; ROGOV, VA; ZAIKOVSKII, VI; ZYUZIN, DA; UVAROV, NF; ISHCENKO, AV; ZYRYANOV, VV; SMIRNOVA, A.
SYNTHESIS AND PROPERTIES OF NANOCOMPOSITES WITH MIXED IONIC-ELECTRONIC CONDUCTIVITY
ON THE BASIS OF OXIDE PHASES WITH PEROVSKITE AND FLUORITE STRUCTURES
GLASS PHYSICS AND CHEMISTRY 33(4), 320-334 (2007)
30. KHARLAMOVA, T; PAVLOVA, S; SADYKOV, V; LAPINA, O; KHABIBULIN, D; KRIEGER, T; ZAIKOVSKII, V; ISHCENKO, A; SALANOV, A; MUZYKANTOV, V; MEZENTSEVA, N; CHAIKINA, M; UVAROV, N; FRADE, J; ARGIRUSIS, C.
LOW-TEMPERATURE SYNTHESIS AND CHARACTERIZATION OF APATITE-TYPE LANTHANUM SILICATES
SOLID STATE IONICS 179(21-26), 1018-1023 (2008)
31. SADYKOV, V; KHARLAMOVA, T; BATUEV, L; MUZYKANTOV, V; MEZENTSEVA, N; KRIEGER, T; ALIKINA, G; LUKASHEVICH, A; ROGOV, V; ZAIKOVSKII, V; ISHCENKO, A; SALANOV, A; BORONIN, A; KOSCHEEV, S; PAVLOVA, S; UVAROV, N; SMIRNOVA, A; VASYLYEV, O.
LA0.8SR0.2Ni0.4Fe0.6O3-CE0.8GD0.2O2-DELTA NANOCOMPOSITE AS MIXED IONIC-ELECTRONIC
CONDUCTING MATERIAL FOR SOFC CATHODE AND OXYGEN PERMEABLE MEMBRANES: SYNTHESIS AND

PROPERTIES

COMPOSITE INTERFACES 16(4-6), 407-431 (2009)

32. KHARLAMOVA, T; PAVLOVA, S; SADYKOV, V; KRIEGER, T; BATUEV, L; MUZYKANTOV, V; UVAROV, N; ARGIRUSIS, C.
FE- AND AL-DOPED APATITE-TYPE LANTHANUM SILICATES: STRUCTURE AND PROPERTY CHARACTERIZATION
SOLID STATE IONICS 180(11-13), 796-799 (2009)
33. SADYKOV, V; ZARUBINA, V; PAVLOVA, S; KRIEGER, T; ALIKINA, G; LUKASHEVICH, A; MUZYKANTOV, V; SADOVSKAYA, E; MEZENTSEVA, N; ZEVAK, E; BELYAEV, V; SMORYGO, O.
DESIGN OF ASYMMETRIC MULTILAYER MEMBRANES BASED ON MIXED IONIC-ELECTRONIC CONDUCTING COMPOSITES SUPPORTED ON NI-AL FOAM SUBSTRATE
CATALYSIS TODAY 156(3-4), 173-180 (2010)
34. SADYKOV, V; MUZYKANTOV, V; BOBIN, A; MEZENTSEVA, N; ALIKINA, G; SAZONOVA, N; SADOVSKAYA, E; GUBANOVA, L; LUKASHEVICH, A; MIRODATOS, C.
OXYGEN MOBILITY OF PT-PROMOTED DOPED CeO_2 - ZrO_2 SOLID SOLUTIONS CHARACTERIZATION AND EFFECT ON CATALYTIC PERFORMANCE IN SYNGAS GENERATION BY FUELS OXIDATION/REFORMING
CATALYSIS TODAY 157(1-4), 55-60 (2010)
35. SADYKOV, VA; KHARLAMOVA, TS; MEZENTSEVA, NV; PAVLOVA, SN; SADOVSKAYA, EM; MUZYKANTOV, VS; BESPALCO, YN; USOL'TSEV, VV; ZEVAK, EG; KRIGER, TA; ISHCHENKO, AV; UVAROV, NF; ULIKHIN, AS; CHAIKINA, MV; ARGIRUSIS, C.
STUDIES OF OXYGEN TRANSPORT MECHANISM IN ELECTROLYTES BASED ON DOPED LANTHANUM SILICATE WITH APATITE STRUCTURE USING TECHNIQUES OF OXYGEN ISOTOPIC HETEROEXCHANGE AND IMPEDANCE SPECTROSCOPY
RUSSIAN JOURNAL OF ELECTROCHEMISTRY 47(4), 427-441 (2011)
36. SADYKOV, V; ALIKINA, G; LUKASHEVICH, A; MUZYKANTOV, V; USOLTSEV, V; BORONIN, A; KOSCHEEV, S; KRIEGER, T; ISHCHENKO, A; SMIRNOVA, A; BOBRENOK, O; UVAROV, N.
DESIGN AND CHARACTERIZATION OF LSM/SCCESZ NANOCOMPOSITE AS MIXED IONIC-ELECTRONIC CONDUCTING MATERIAL FOR FUNCTIONALLY GRADED CATHODES OF SOLID OXIDE FUEL CELLS
SOLID STATE IONICS 192(1), 540-546 (2011)
37. SADYKOV, VA; SAZONOVA, NN; BOBIN, AS; MUZYKANTOV, VS; GUBANOVA, EL; ALIKINA, GM; LUKASHEVICH, AI; ROGOV, VA; ERMAKOVA, EN; SADOVSKAYA, EM; MEZENTSEVA, NV; ZEVAK, EG; VENIAMINOV, SA; MUHLER, M; MIRODATOS, C; SCHUURMAN, Y; VAN VEEN, AC.
PARTIAL OXIDATION OF METHANE ON PT-SUPPORTED LANTHANIDE DOPED CERIA-ZIRCONIA OXIDES: EFFECT OF THE SURFACE/LATTICE OXYGEN MOBILITY ON CATALYTIC PERFORMANCE
CATALYSIS TODAY 169(1), 125-137 (2011)
38. SADYKOV, VA; EREMEEV, NF; USOL'TSEV, VV; BOBIN, AS; ALIKINA, GM; PELIPENKO, VV; SADOVSKAYA, EM; MUZYKANTOV, VS; BULGAKOV, NN; UVAROV, NF.
MECHANISM OF OXYGEN TRANSFER IN LAYERED LANTHANIDE NICKELATES $\text{Ln}_{2-x}\text{NiO}_{4+\Delta}$ ($\text{Ln} = \text{La, Pr}$) AND THEIR NANOCOMPOSITES WITH $\text{Ce}_{0.9}\text{Gd}_{0.1}\text{O}_{2-\Delta}$ AND $\text{Y}_{2}(\text{Ti}_{0.8}\text{Zr}_{0.2})_{1.6}\text{Mn}_{0.4}\text{O}_{7-\Delta}$ SOLID ELECTROLYTES
RUSSIAN JOURNAL OF ELECTROCHEMISTRY 49(7), 645-651 (2013)
39. PAVLOVA, S; KHARLAMOVA, T; SADYKOV, V; KRIEGER, T; MUZYKANTOV, V; BESPALCO, Y; ISHCHENKO, A; ROGOV, V; BELYAEV, V; OKHLUPIN, Y; UVAROV, N; SMIRNOVA, A.
STRUCTURAL FEATURES AND TRANSPORT PROPERTIES OF $\text{La}(\text{Sr})\text{Fe}_{1-x}\text{Ni}_x\text{O}_{3-\Delta}$ - $\text{Ce}_{0.9}\text{Gd}_{0.1}\text{O}_{2-\Delta}$ NANOCOMPOSITES-ADVANCED MATERIALS FOR IT SOFC CATHODES
HEAT TRANSFER ENGINEERING 34(11-12), 904-916 (2013)

40. SADYKOV, V; USOLTSEV, V; YEREMEEV, N; MEZENTSEVA, N; PELIPENKO, V; KRIEGER, T; BELYAEV, V; SADOVSKAYA, E; MUZYKANTOV, V; FEDOROVA, Y; LUKASHEVICH, A; ISHCHENKO, A; SALANOV, A; OKHLUPIN, Y; UVAROV, N; SMORYGO, O; ARZHANNIKOV, A; KOROBAYNIKOV, M; THUMM, MKA.
FUNCTIONAL NANOCERAMICS FOR INTERMEDIATE TEMPERATURE SOLID OXIDE FUEL CELLS AND OXYGEN SEPARATION MEMBRANES
JOURNAL OF THE EUROPEAN CERAMIC SOCIETY 33(12), 2241-2248 (2013)
41. SADYKOV, V; MEZENTSEVA, N; ARAPOVA, M; KRIEGER, T; GERASIMOV, E; ALIKINA, G; PELIPENKO, V; BOBIN, A; MUZYKANTOV, V; FEDOROVA, Y; SADOVSKAYA, E; EREMEEV, N; BELYAEV, V; OKHLUPIN, Y; UVAROV, N.
FAST OXYGEN TRANSPORT IN BISMUTH OXIDE CONTAINING NANOCOMPOSITES
SOLID STATE IONICS 251, 34-39 (2013)
42. SADYKOV, VA; EREMEEV, NF; SADOVSKAYA, EM; BOBIN, AS; FEDOROVA, YE; MUZYKANTOV, VS; MEZENTSEVA, NV; ALIKINA, GM; KRIGER, TA; BELYAEV, VD; ROGOV, VA; ULIKHIN, AS; OKHLUPIN, YS; UVAROV, NF; BOBRENOK, OF; MCDONALD, N; WATTON, J; DHIR, A; STEINBERGER-WILCKENS, R; MERTENS, J; VINKE, IC.
CATHODIC MATERIALS FOR INTERMEDIATE-TEMPERATURE SOLID OXIDE FUEL CELLS BASED ON PRASEODYMIUM NICKELATES-COBALTITES
RUSSIAN JOURNAL OF ELECTROCHEMISTRY 50(7), 669-679 (2014)
43. SADYKOV, V; EREMEEV, N; ALIKINA, G; SADOVSKAYA, E; MUZYKANTOV, V; PELIPENKO, V; BOBIN, A; KRIEGER, T; BELYAEV, V; IVANOV, V; ISHCHENKO, A; ROGOV, V; ULIHIN, A; UVAROV, N; OKHLUPIN, Y; MERTENS, J; VINKE, I.
OXYGEN MOBILITY AND SURFACE REACTIVITY OF PRNI1 (-) XCOXO3+DELTA-CE0.9Y0.1O2 (-) (DELTA) CATHODE NANOCOMPOSITES
SOLID STATE IONICS 262, 707-712 (2014)
44. SADYKOV, V.A.; MUZYKANTOV, V.S.; YEREMEEV, N.F.; PELIPENKO, V.V.; SADOVSKAYA, E.M.; BOBIN, A.S.; FEDOROVA, Y.E.; AMANBAEVA, D.G.; SMIRNOVA, A.L..
SOLID OXIDE FUEL CELL CATHODES: IMPORTANCE OF CHEMICAL COMPOSITION AND MORPHOLOGY CATALYSIS FOR SUSTAINABLE ENERGY 2(1), 57 (2015)
45. SADYKOV, V; EREMEEV, N; SADOVSKAYA, E; BOBIN, A; ISHCHENKO, A; PELIPENKO, V; MUZYKANTOV, V; KRIEGER, T; AMANBAEVA, D.
OXYGEN MOBILITY AND SURFACE REACTIVITY OF PRNI(1-X)CO(X)O(3-DELTA)PEROVSKITES AND THEIR NANOCOMPOSITES WITH CE0.9Y0.1O2-DELTA BY TEMPERATURE-PROGRAMMED ISOTOPE EXCHANGE EXPERIMENTS
SOLID STATE IONICS 273, 35-40 (2015)
46. SADYKOV, V; MEZENTSEVA, N; FEDOROVA, Y; LUKASHEVICH, A; PELIPENKO, V; KUZMIN, V; SIMONOV, M; ISHCHENKO, A; VOSTRIKOV, Z; BOBROVA, L; SADOVSKAYA, E; MUZYKANTOV, V; ZADESENETS, A; SMORYGO, O; ROGER, AC; PARKHOMENKO, K.
STRUCTURED CATALYSTS FOR STEAM/AUTOTHERMAL REFORMING OF BIOFUELS ON HEAT-CONDUCTING SUBSTRATES: DESIGN AND PERFORMANCE
CATALYSIS TODAY 251, 19-27 (2015)
47. SADYKOV, VA; EREMEEV, NF; AMANBAYEVA, DG; KRIEGER, TA; FEDOROVA, YE; BOBIN, AS; PELIPENKO, VV; SADOVSKAYA, EM; MUZYKANTOV, VS; ISHCHENKO, AV.
SM-DOPED PRASEODYMIUM NICKELATES-COBALTITES AND THEIR NANOCOMPOSITES WITH Y-DOPED CERIA AS PROMISING CATHODE MATERIALS
INTEGRATED FERROELECTRICS 173(1), 71-81 (2016)
48. SADYKOV, VA; EREMEEV, NF; BOLOTOV, VA; TANASHEV, YY; FEDOROVA, YE; AMANBAYEVA, DG; BOBIN, AS; SADOVSKAYA, EM; MUZYKANTOV, VS; PELIPENKO, VV; LUKASHEVICH, AI; KRIEGER, TA; ISHCHENKO,

AV; SMIRNOVA, AL.

THE EFFECT OF MICROWAVE SINTERING ON STABILITY AND OXYGEN MOBILITY OF PRASEODYMIUM
NICKELATES-COBALTITES AND THEIR NANOCOMPOSITES

SOLID STATE IONICS 288, 76-81 (2016)