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- Kozhushner M.A., Trakhtenberg L.I., Bodneva V.L., Belisheva T.V., Landerville A.C., Oleynik I.I. Effect of temperature and nanoparticle size on sensor properties of nanostructured tin dioxide films (2014) *Journal of Physical Chemistry C*, 118 (21), pp. 11440 - 11444, Cited 41 times. DOI: 10.1021/jp501989k
- Trakhtenberg L.I., Fokeyev A.A., Zyubin A.S., Mebel A.M., Lin S.H. Matrix reorganization with intramolecular tunneling of H atom: Formic acid in Ar matrix (2009) *Journal of Chemical Physics*, 130 (14), art. no. 144502, Cited 13 times. DOI: 10.1063/1.3111263
- Rozenbaum V.M., Korochkova T.Ye., Shapochkina I.V., Trakhtenberg L.I. Exactly solvable model of a slightly fluctuating ratchet (2021) *Physical Review E*, 104 (1), art. no. 014133, Cited 7 times. DOI: 10.1103/PhysRevE.104.014133
- Trakhtenberg L.I., Fokeyev A.A., Dolin S.P., Mebel A.M., Lin S.H. Temperature and pressure dependences of tunneling rate constant: Density-functional theory potential-energy surface for H-atom transfer in the fluorene-acridine system (2005) *Journal of Chemical Physics*, 123 (11), art. no. 114508, Cited 12 times. DOI: 10.1063/1.2018636
- Trakhtenberg L.I., Axelrod E., Gerasimov G.N., Nikolaeva E.V., Smirnova E.I. New nano-composite metal-polymer materials: Dielectric behavior (2002) *Journal of Non-Crystalline Solids*, 305 (1-3), pp. 190 - 196, Cited 39 times. DOI: 10.1016/S0022-3093(02)01106-7
- Gerasimov G.N., Gromov V.F., Ikim M.I., Ilegbusi O.J., Trakhtenberg L.I. Effect of interaction between components of In₂O₃-CeO₂ and SnO₂-CeO₂ nanocomposites on structure and sensing properties (2019) *Sensors and Actuators, B: Chemical*, 279, pp. 22 - 30, Cited 33 times. DOI: 10.1016/j.snb.2018.09.093
- Gerasimov G.N., Gromov V.F., Belysheva T.V., Ikim M.I., Trakhtenberg L.I. Effect of the composition and structure of metal oxide nanocomposites on the sensor process when detecting reducing gases (2017) *Russian Journal of Physical Chemistry A*, 91 (9), pp. 1609 - 1620, Cited 6 times. DOI: 10.1134/S0036024417090114
- Kozhushner M.A., Trakhtenberg L.I. Conductivity of composites containing ferromagnetic nanoparticles: The role of a magnetic field (2010) *Journal of Experimental and Theoretical Physics*, 111 (6), pp. 1010 - 1018, Cited 6 times. DOI: 10.1134/S1063776110120149
- Gerasimov G.N., Gromov V.F., Ikim M.I., Ilegbusi O.J., Ozerin S.A., Trakhtenberg L.I. Structure and gas-sensing properties of SnO₂-In₂O₃ nanocomposites synthesized by impregnation method (2020) *Sensors and Actuators, B: Chemical*, 320, art. no. 128406, Cited 32 times. DOI: 10.1016/j.snb.2020.128406
- Gerasimov G.N., Grogor'ev E.I., Grigor'ev A.E., Vorontsov P.S., Zav'yalov S.A., Trakhtenberg L.N. The effect of radiation and gas adsorption on electric conductivity of metal-polymer materials with nano-size heterogeneity (1998) *Chemical Physics Reports*, 17 (6), pp. 1247 - 1255, Cited 7 times.
- Trakhtenberg L.I., Gerasimov G.N., Grigor'ev E.I. Nanoclusters of metals and semiconductors in polymeric matrices: Synthesis, structure, and physicochemical properties (1999) *Russian Journal of Physical Chemistry A*, 73 (2), pp. 209 - 220, Cited 30 times.
- Trakhtenberg L.I., Fokeyev A.A., Zyubin A.S., Mebel A.M., Lin S.H. Effect of the medium on intramolecular H-atom tunneling: Cis-trans conversion of formic acid in solid matrixes of

noble gases (2010) *Journal of Physical Chemistry B*, 114 (51), pp. 17102 - 17112, Cited 7 times. DOI: 10.1021/jp1073472

- Gerasimov G.N., Gromov V.F., Ikim M.I., Trakhtenberg L.I. Effect of Composition and Structure of Metal Oxide Composites Nanostructured on Their Conductive and Sensory Properties (2021) *Russian Journal of Physical Chemistry B*, 15 (6), pp. 1072 - 1083, Cited 11 times. DOI: 10.1134/S1990793121060038

- Kozhushner M.A., Trakhtenberg L.I., Landerville A.C., Oleynik I.I. Theory of sensing response of nanostructured tin-dioxide thin films to reducing hydrogen gas (2013) *Journal of Physical Chemistry C*, 117 (22), pp. 11562 - 11568, Cited 32 times. DOI: 10.1021/jp311847j

- Dolin S.P., Levin A.A., Mikhailova T.Yu., Solin M.V., Trakhtenberg L.I. Quantum chemistry of ferroelectric solids: Electronic structures and peculiar behavior of zero-dimensional $K_3H(SO_4)_2$ -like materials (2002) *International Journal of Quantum Chemistry*, 88 (4), pp. 463 - 471, Cited 13 times. DOI: 10.1002/qua.10223

- Trakhtenberg L.I., Gerasimov G.N., Gromov V.F., Belysheva T.V., Ilegbusi O.J. Conductivity and sensing properties of $In_2O_3 + ZnO$ mixed nanostructured films: Effect of composition and temperature (2013) *Sensors and Actuators, B: Chemical*, 187, pp. 514 - 521, Cited 39 times. DOI: 10.1016/j.snb.2013.03.017

- Rozenbaum V.M., Shapochkina I.V., Trakhtenberg L.I. Green's function method in the theory of Brownian motors (2019) *Physics-Uspekhi*, 62 (5), art. no. 496, pp. 496 - 509, Cited 17 times. DOI: 10.3367/UFNe.2018.04.038347

- Trakhtenberg L.I., Klochikhin V.L. Effect of pressure and temperature on the H-atom tunneling in solid phase chemical reactions. The acridine/fluorene system (1998) *Chemical Physics*, 232 (1-2), pp. 175 - 187, Cited 38 times. DOI: 10.1016/S0301-0104(98)00093-7

- Potapov V.K., Matyuk V.M., Baturin A.S., Trakhtenberg L.I. Adsorption of hydrogen on palladium film nanostructures (2008) *Russian Journal of Physical Chemistry A*, 82 (8), pp. 1415 - 1418, Cited 10 times. DOI: 10.1134/S0036024408080323

- Trakhtenberg L.I., Gerasimov G.N., Potapov V.K., Rostoyshchikova T.N., Smirnov V.V., Zufman V.Yu. Nanocomposite metal-containing polymer films: Sensory, catalytic, and electrophysical properties (2001) *Vestnik Moskovskogo Universiteta Seriya 2 Khimiya*, 42 (5), pp. 325 - 331, Cited 29 times.

- Gerasimov G.N., Gromov V.F., Ilegbusi O.J., Trakhtenberg L.I. The mechanisms of sensory phenomena in binary metal-oxide nanocomposites (2017) *Sensors and Actuators, B: Chemical*, 240, pp. 613 - 624, Cited 59 times. DOI: 10.1016/j.snb.2016.09.007

- Kurmangaleev K.S., Ikim M.I., Bodneva V.L., Posvyanskii V.S., Ilegbusi O.J., Trakhtenberg L.I. Sensor response and electron distribution in the systems of In_2O_3 nanoparticles decorated with CeO_2 nanoclusters (2023) *Sensors and Actuators B: Chemical*, 396, art. no. 134585, Cited 7 times. DOI: 10.1016/j.snb.2023.134585

- Ikim M.I., Gromov V.F., Gerasimov G.N., Spiridonova E.Y., Erofeeva A.R., Kurmangaleev K.S., Polunin K.S., Ilegbusi O.J., Trakhtenberg L.I. Structure, Conductivity, and Sensor Properties of Nanosized $ZnO-In_2O_3$ Composites: Influence of Synthesis Method (2023) *Micromachines*, 14 (9), art. no. 1685, Cited 8 times. DOI: 10.3390/mi14091685

- Trakhtenberg L.I., Gerasimov G.N., Gromov V.F., Belysheva T.V., Ilegbusi O.J. Effect of composition on sensing properties of $SnO_2 + In_2O_3$ mixed nanostructured films (2012) *Sensors and Actuators, B: Chemical*, 169, pp. 32 - 38, Cited 53 times. DOI: 10.1016/j.snb.2012.01.064

- Belysheva T.V., Gatin A.K., Grishin M.V., Ikim M.I., Matyuk V.M., Sarvadii S.Y., Trakhtenberg L.I., Shub B.R. Structure and physicochemical properties of nanostructured metal oxide films for use as the sensitive layer in gas sensors (2015) *Russian Journal of Physical Chemistry B*, 9 (5), pp. 733 - 742, Cited 17 times. DOI: 10.1134/S1990793115050048

- Goldanskii V.I., Kozhushner M.A., Trakhtenberg L.I. Polychronic kinetics of chemical reactions with the blending of rate constants (1997) *Journal of Physical Chemistry B*, 101 (48), pp. 10024 - 10027, Cited 9 times. DOI: 10.1021/jp972132t
- Prass B., Stehlik D., Chan I.Y., Trakhtenberg L.I., Klochikhin V.L. Vibration-assisted intermolecular hydrogen tunneling in photoreactive doped molecular crystals: effect of temperature and pressure (1998) *Berichte der Bunsengesellschaft/Physical Chemistry Chemical Physics*, 102 (3), pp. 498 - 503, Cited 23 times. DOI: 10.1002/bbpc.19981020332
- Gerasimov G.N., Ikim M.I., Gromov V.F., Ilegbusi O.J., Trakhtenberg L.I. Chemical modification of impregnated SnO₂-In₂O₃ nanocomposites due to interaction of sensor components (2021) *Journal of Alloys and Compounds*, 883, art. no. 160817, Cited 24 times. DOI: 10.1016/j.jallcom.2021.160817
- Rozenbaum V.M., Shapochkina I.V., Lin S.H., Trakhtenberg L.I. Theory of slightly fluctuating ratchets (2017) *JETP Letters*, 105 (8), pp. 542 - 547, Cited 9 times. DOI: 10.1134/S0021364017080069
- Trakhtenberg L.I., Gerasimov G.N., Grigoriev E.I., Zavjalov S.A., Zagorskaja O.V., Zufman V.Yu., Smirnov V.V. Nanoheterogeneous metal-polymer composites as a new type of effective and selective catalysts (2000) *Studies in Surface Science and Catalysis*, 130 B, pp. 941 - 946, Cited 25 times. DOI: 10.1016/s0167-2991(00)80319-5
- Ivanov G.K., Kozhushner M.A., Trakhtenberg L.I. Temperature dependence of cryochemical H-tunneling reactions (2000) *Journal of Chemical Physics*, 113 (5), pp. 1992 - 2002, Cited 38 times. DOI: 10.1063/1.482005
- Trakhtenberg L.I. Sensor Layers Based on Semiconductor Nanoparticles and Their Electronic Structure (2023) *Russian Journal of Physical Chemistry B*, 17 (3), pp. 600 - 607, Cited 29 times. DOI: 10.1134/S1990793123030144
- Rozenbaum V.M., Shapochkina I.V., Teranishi Y., Trakhtenberg L.I. Symmetry of Pulsating Ratchets (2018) *JETP Letters*, 107 (8), pp. 506 - 511, Cited 10 times. DOI: 10.1134/S0021364018080039
- Vasin M.G., Ignatyev Yu.V., Lakhtikov A.E., Morovov A.P., Nazarov V.V., Trakhtenberg L.I. X-ray fluorescence analysis with sample excitation using radiation from a secondary target (2007) *X-Ray Spectrometry*, 36 (4), pp. 270 - 274, Cited 8 times. DOI: 10.1002/xrs.969
- Gerasimov G.N., Trakhtenberg L.I. Chapter 10 Vapor Deposited Composite Films Consisting of Dielectric Matrix with Metal/Semiconductor Nanoparticles (2007) *Thin Films and Nanostructures*, 34, pp. 523 - 579, Cited 6 times. DOI: 10.1016/S1079-4050(06)34010-0
- Trakhtenberg L.I., Klochikhin V.L., Pshezhetsky S.Ya. Theory of tunnel transitions of atoms in solids (1982) *Chemical Physics*, 69 (1-2), pp. 121 - 134, Cited 113 times. DOI: 10.1016/0301-0104(82)88139-1
- Trakhtenberg L.I., Astapenko V.A., Sakhno S.V., Kozhushner M.A., Posvyanskii V.S., Ilegbusi O.J. Absorption of Infrared Radiation by an Electronic Subsystem of Semiconductor Nanoparticles (2016) *Journal of Physical Chemistry C*, 120 (41), pp. 23851 - 23857, Cited 9 times. DOI: 10.1021/acs.jpcc.6b08167
- Gerasimov G.N., Ikim M.I., Timashev P.S., Gromov V.F., Belysheva T.V., Spiridonova E.Yu., Bagratashvili V.N., Trakhtenberg L.I. Small CeO₂ clusters on the surface of semiconductor nanoparticles (2015) *Russian Journal of Physical Chemistry A*, 89 (6), pp. 1059 - 1064, Cited 8 times. DOI: 10.1134/S0036024415060126
- Trakhtenberg L.I., Fokeyev A.A., Dolin S.P., Mebel A.M., Lin S.H. Rate constant for H-atom tunneling in the fluorene-acridine system based on DFT potential energy surface (2004) *Chemical Physics*, 303 (1-2), pp. 107 - 113, Cited 6 times. DOI: 10.1016/j.chemphys.2004.04.014
- Gerasimov G.N., Gromov V.F., Trakhtenberg L.I., Belysheva T.V., Spiridonova E.Y., Rozenbaum V.M. Sensor properties of the nanostructured In₂O₃- CeO₂ system in detection of reducing

gases (2014) Russian Journal of Physical Chemistry A, 88 (3), pp. 503 - 508, Cited 8 times. DOI: 10.1134/S0036024414030066

- Kurmangaleev K.S., Ikim M.I., Kozhushner M.A., Trakhtenberg L.I. Electron distribution and electrical resistance in nanostructured mixed oxides CeO₂-In₂O₃ (2021) Applied Surface Science, 546, art. no. 149011, Cited 10 times. DOI: 10.1016/j.apsusc.2021.149011

- Vorontsov P.S., Gerasimov G.N., Golubeva E.N., Grigor'ev E.I., Zav'yalov S.A., Zav'yalova L.M., Trakhtenberg L.I. Gas-sensitive and catalytic properties of ensembles of interacting palladium nanoparticles (1998) Russian Journal of Physical Chemistry A, 72 (10), pp. 1742 - 1744, Cited 14 times.

- Trakhtenberg L.I., Gerasimov G.N. Metal-Containing Polymers: Cryochemical Synthesis, Structure, and Physicochemical Properties (2005) Metal-Polymer Nanocomposites, pp. 37 - 74, Cited 11 times. DOI: 10.1002/0471695432.ch2

- Trakhtenberg L.I., Fokeyev A.A. Pressure and temperature dependence of H-atom tunneling in the debye approximation. Barrier preparation and media reorganization (2007) Journal of Physical Chemistry A, 111 (38), pp. 9509 - 9515, Cited 10 times. DOI: 10.1021/jp0732581

- Pigalskiy K.S., Trakhtenberg L.I. Enhancement of intrinsic pinning in the high-temperature superconductor TmBa₂Cu₃O_y: Manifestation of the interaction between vortices and a magnetic rare-earth ion (2020) Journal of Magnetism and Magnetic Materials, 497, art. no. 165916, Cited 6 times. DOI: 10.1016/j.jmmm.2019.165916

- Trakhtenberg L.I., Ikim M.I., Ilegbusi O.J., Gromov V.F., Gerasimov G.N. Effect of Nanoparticle Interaction on Structural, Conducting and Sensing Properties of Mixed Metal Oxides (2023) Chemosensors, 11 (6), art. no. 320, Cited 17 times. DOI: 10.3390/chemosensors11060320

- Ikim M.I., Gerasimov G.N., Gromov V.F., Ilegbusi O.J., Trakhtenberg L.I. Synthesis, Structural and Sensor Properties of Nanosized Mixed Oxides Based on In₂O₃ Particles (2023) International Journal of Molecular Sciences, 24 (2), art. no. 1570, Cited 12 times. DOI: 10.3390/ijms24021570

- Ikim M.I., Spiridonova E.Y., Gromov V.F., Gerasimov G.N., Trakhtenberg L.I. Effect of the Type of the Crystal Phase of In₂O₃ On Its Conductivity and Sensor Properties in Hydrogen Detection (2023) Russian Journal of Physical Chemistry B, 17 (3), pp. 774 - 777, Cited 10 times. DOI: 10.1134/S199079312303003X

- Belysheva T.V., Gerasimov G.N., Gromov V.F., Spiridonova E.Yu., Trakhtenberg L.I. Conductivity of SnO₂-In₂O₃ nanocrystalline composite films (2010) Russian Journal of Physical Chemistry A, 84 (9), pp. 1554 - 1559, Cited 13 times. DOI: 10.1134/S0036024410090207

- Gromov V.F., Gerasimov G.N., Ikim M.I., Spiridonova E.Y., Trakhtenberg L.I. Sorption of Metal Ions from Aqueous Solutions by Crown Ethers (2020) Russian Journal of Physical Chemistry B, 14 (3), pp. 492 - 497, Cited 7 times. DOI: 10.1134/S1990793120030045

- Hopf H., Gerasimov G.N., Chvalun S.N., Rozenberg V.I., Popova E.L., Nikolaeva E.V., Grigoriev E.I., Zav'yalov S.A., Trakhtenberg L.I. Metal-Containing Poly(p-xylylene) Films by CVD: Poly(p-xylylene) with Germanium Crystals (1997) Chemical Vapor Deposition, 3 (4), pp. 197 - 200, Cited 26 times. DOI: 10.1002/cvde.19970030407

- Rozenbaum V.M., Shapochkina I.V., Teranishi Y., Trakhtenberg L.I. High-temperature ratchets driven by deterministic and stochastic fluctuations (2019) Physical Review E, 99 (1), art. no. 012103, Cited 11 times. DOI: 10.1103/PhysRevE.99.012103

- Fleurov V.N., Mikheikin I.D., Trakhtenberg L.I. A cluster simulation of the double-well potentials in glasses (1985) Solid State Communications, 55 (6), pp. 537 - 541, Cited 17 times. DOI: 10.1016/0038-1098(85)90330-8

- Fleurov V.N., Trakhtenberg L.I. Tunnel modes and kinetic properties of glasses at low and high temperatures (1986) Journal of Physics C: Solid State Physics, 19 (28), pp. 5529 - 5553, Cited 13 times. DOI: 10.1088/0022-3719/19/28/007

- Bodneva V.L., Ilegbusi O.J., Kozhushner M.A., Kurmangaleev K.S., Posvyanskii V.S., Trakhtenberg L.I. Modeling of sensor properties for reducing gases and charge distribution in nanostructured oxides: A comparison of theory with experimental data (2019) *Sensors and Actuators, B: Chemical*, 287, pp. 218 - 224, Cited 14 times. DOI: 10.1016/j.snb.2019.02.034
- Ikim M.I., Spiridonova E.Y., Gromov V.F., Gerasimov G.N., Trakhtenberg L.I. Structural Characteristics of In₂O₃-Based Nanocomposites Synthesized by the Hydrothermal Method (2022) *Russian Journal of Physical Chemistry B*, 16 (6), pp. 1180 - 1181, Cited 6 times. DOI: 10.1134/S1990793122060161
- Rozenbaum V.M., Dekhtyar M.L., Lin S.H., Trakhtenberg L.I. Photoinduced diffusion molecular transport (2016) *Journal of Chemical Physics*, 145 (6), art. no. 064110, Cited 21 times. DOI: 10.1063/1.4960622
- Trakhtenberg L.I., Klochikhin V.L., Pshezhetsky S.Ya. Tunneling of a hydrogen atom in low temperature processes (1981) *Chemical Physics*, 59 (1-2), pp. 191 - 198, Cited 45 times. DOI: 10.1016/0301-0104(81)80099-7
- Gatin A.K., Grishin M.V., Kirsankin A.A., Trakhtenberg L.I., Shub B.R. Adsorption of oxygen and hydrogen at the surface of nanostructured SnO₂ film (2012) *Nanotechnologies in Russia*, 7 (3-4), pp. 122 - 126, Cited 6 times. DOI: 10.1134/S1995078012020085
- Makhnovskii Y.A., Rozenbaum V.M., Sheu S.-Y., Yang D.-Y., Trakhtenberg L.I., Lin S.H. Fluctuation-induced transport of two coupled particles: Effect of the interparticle interaction (2014) *Journal of Chemical Physics*, 140 (21), art. no. 214108, Cited 8 times. DOI: 10.1063/1.4880416
- Smolyanskii A.S., Politova E.D., Koshkina O.A., Arsentyev M.A., Kusch P.P., Moskvitin L.V., Slesarenko S.V., Kiryukhin D.P., Trakhtenberg L.I. Structure of polytetrafluoroethylene modified by the combined action of γ -radiation and high temperatures (2021) *Polymers*, 13 (21), art. no. 3678, Cited 20 times. DOI: 10.3390/polym13213678
- Plakhutin B.N., Gorelik E.V., Breslavskaya N.N., Milov M.A., Fokeyev A.A., Novikov A.V., Prokhorov T.E., Polygalova N.E., Dolin S.P., Trakhtenberg L.I. Anomalous values of $\langle \hat{S}^2 \rangle$ before and after annihilation of the first spin contaminant in UHF wave function (2005) *Journal of Structural Chemistry*, 46 (2), pp. 195 - 203, Cited 7 times. DOI: 10.1007/s10947-006-0031-3
- Gerasimov G.N., Popova E.L., Nikolaeva E.V., Chvalun S.N., Grigoriev E.I., Trakhtenberg L.I., Rozenberg V.I., Hopf H. Ge- and Sn-containing poly(p-xylylene): Synthesis, structure and thermal behavior (1998) *Macromolecular Chemistry and Physics*, 199 (10), pp. 2179 - 2184, Cited 26 times.
- Belysheva T.V., Spiridonova E.Y., Gromov V.F., Gerasimov G.N., Trakhtenberg L.I. The sensor properties of SnO₂ • In₂O₃ nanocomposite oxides in the detection of hydrogen in air (2010) *Russian Journal of Physical Chemistry A*, 84 (12), pp. 2116 - 2121, Cited 10 times. DOI: 10.1134/S0036024410120198
- Grigor'ev E.I., Mikhailsyna O.V., Nesterov S.V., Trakhtenberg L.I. Radiation Stability of 15-Crown-5 Complexes with Alkaline Earth Metal Chlorides (1994) *Mendeleev Communications*, 4 (2), pp. 66 - 67, Cited 6 times. DOI: 10.1070/MC1994v004n02ABEH000352
- Trakhtenberg L.I., Gerasimov G.N., Aleksandrova L.N., Potapov V.K. Photo and radiation cryochemical synthesis of metal-polymer films: Structure, sensor and catalytic properties (2002) *Radiation Physics and Chemistry*, 65 (4-5), pp. 479 - 485, Cited 30 times. DOI: 10.1016/S0969-806X(02)00358-4
- Vorontsov P.S., Gerasimov G.N., Colubeva E.N., Grigor'ev E.I., Zav'yalov S.A., Zav'yalova L.M., Trakhtenberg L.I. Gas-sensitive and catalytic properties of the ensemble of noninteracting palladium nanoparticles(1998) *Zhurnal Fizicheskoi Khimii*, 72 (10), pp. 1912 - 1914, Cited 10 times.

- Gromov V.F., Ikim M.I., Gerasimov G.N., Trakhtenberg L.I. Effect of the Method for Producing the ZnO–In₂O₃ Composite on its Sensor Activity in Hydrogen Detection (2021) Russian Journal of Physical Chemistry B, 15 (6), pp. 1084 - 1086, Cited 8 times. DOI: 10.1134/S1990793121060166
- Ilegbusi O.J., Trakhtenberg L. Synthesis and conductometric property of sol-gel-derived ZnO/PVP nano hybrid films (2013) Journal of Materials Engineering and Performance, 22 (3), pp. 911 - 915, Cited 12 times. DOI: 10.1007/s11665-012-0336-7
- Mamsurova L.G., Trusevich N.G., Gavrilkin S.Y., Vishnev A.A., Trakhtenberg L.I. Peculiarities in the low-temperature specific heat related to nanoscale structural inhomogeneity in fine-crystalline YBa₂Cu₃O_{6.93} high-T_c superconductors (2017) JETP Letters, 105 (4), pp. 241 - 245, Cited 6 times. DOI: 10.1134/S0021364017040130
- Ilin A.S., Ikim M.I., Forsh P.A., Belysheva T.V., Martyshov M.N., Kashkarov P.K., Trakhtenberg L.I. Green light activated hydrogen sensing of nanocrystalline composite ZnO-In₂O₃ films at room temperature (2017) Scientific Reports, 7 (1), art. no. 12204, Cited 18 times. DOI: 10.1038/s41598-017-12547-5
- Kozhushner M.A., Lidskii B.V., Oleynik I.I., Posvyanskii V.S., Trakhtenberg L.I. Inhomogeneous charge distribution in semiconductor nanoparticles (2015) Journal of Physical Chemistry C, 119 (28), pp. 16286 - 16292, Cited 33 times. DOI: 10.1021/acs.jpcc.5b01410
- Kozhushner M.A., Bodneva V.L., Trakhtenberg L.I. Sensor effect theory for the detection of reducing gases (2012) Russian Journal of Physical Chemistry A, 86 (8), pp. 1281 - 1287, Cited 12 times. DOI: 10.1134/S0036024412080055
- Belysheva T.V., Ikim M.I., Il'in A.S., Kashkarov P.K., Martyshov M.N., Paltiel Y., Trakhtenberg L.I., Fantina N.P., Forsh P.A. Features of the electrical and photoelectrical properties of nanocrystalline indium and zinc oxide films (2016) Russian Journal of Physical Chemistry B, 10 (5), pp. 810 - 815, Cited 8 times. DOI: 10.1134/S1990793116050171
- Fleurov V.N., Trakhtenberg L.I. Ultrasonic attenuation in the amorphous dielectrics at low temperatures (1982) Solid State Communications, 44 (2), pp. 187 - 192, Cited 8 times. DOI: 10.1016/0038-1098(82)90427-6
- Ikim M.I., Gerasimov G.N., Gromov V.F., Ilegbusi O.J., Trakhtenberg L.I. Phase composition, conductivity, and sensor properties of cerium-doped indium oxide (2024) Nano Materials Science, 6 (2), pp. 193 - 200, Cited 10 times. DOI: 10.1016/j.nanoms.2023.09.001
- Song H., Ilegbusi O.J., Trakhtenberg L.I. Modeling vapor deposition of metal/semiconductor-polymer nanocomposite (2005) Thin Solid Films, 476 (1), pp. 190 - 195, Cited 9 times. DOI: 10.1016/j.tsf.2004.09.062
- Gromov V.F., Gerasimov G.N., Belysheva T.V., Ikim M.I., Spiridonova E.Y., Grekhov M.M., Ali-zade R.A., Trakhtenberg L.I. Sensor Properties of Nanostructured Systems Based on Indium Oxide with Co₃O₄ or ZrO₂ Additives (2018) Russian Journal of Physical Chemistry B, 12 (1), pp. 129 - 134, Cited 13 times. DOI: 10.1134/S1990793118010062
- Trakhtenberg L.I., Gerasimov G.N., Grigor'Ev E.I. Nanoclusters of metals and semiconductors in polymeric matrices: Synthesis, structure, and physicochemical properties (1999) Zhurnal Fizicheskoi Khimii, 73 (2), pp. 264 - 276, Cited 18 times.
- Gulyaev Y.V., Bugaev A.S., Rozenbaum V.M., Trakhtenberg L.I. Nanotransport controlled by means of the ratchet effect (2020) Physics-Uspekhi, 63 (4), pp. 311 - 326, Cited 26 times. DOI: 10.3367/UFNe.2019.05.038570
- Gromov V.F., Ikim M.I., Gerasimov G.N., Trakhtenberg L.I. Crown Ethers: Selective Sorbents of Radioactive and Heavy Metals (2021) Russian Journal of Physical Chemistry B, 15 (1), pp. 140 - 152, Cited 13 times. DOI: 10.1134/S1990793121010036
- Nikolaeva E.V., Ozerin S.A., Grigoriev A.E., Grigoriev E.I., Chvalun S.N., Gerasimov G.N., Trakhtenberg L.I. Formation, structure and photoelectrical properties of poly-p-xylylene-PbS

semiconductor nanocomposite films (1999) *Materials Science and Engineering C*, 8-9, pp. 217 - 223, Cited 46 times. DOI: 10.1016/S0928-4931(99)00008-9

- Sergeev G., Zagorsky V., Petrukhina M., Zav'yalov S., Grigor'ev E., Trakhtenberg L. Preliminary Study of the Interaction of Metal Nanoparticle-containing Poly-p-xylylene films with Ammonia (1997) *Analytical Communications*, 34 (4), pp. 113 - 114, Cited 30 times. DOI: 10.1039/a700431a

- Trakhtenberg L.I., Gerasimov G.N., Grigor'ev E.I., Zav'yalov S.A., Zagorskaya O.V., Zufman V.Yu., Smirnov V.V. Effect of interaction between copper nanoclusters on the catalytic rupture of the C-Cl bond in halogenated hydrocarbons(2000) *Russian Journal of Physical Chemistry A*, 74 (5), pp. 846 - 847, Cited 6 times.

- Brinzari V., Damaskin I., Trakhtenberg L., Cho B.K., Korotcenkov G. Thermoelectrical properties of spray pyrolyzed indium oxide thin films doped by tin (2014) *Thin Solid Films*, 552, pp. 225 - 231, Cited 38 times. DOI: 10.1016/j.tsf.2013.12.009

- Khatami S.M.N., Ilegbusi O.J., Trakhtenberg L. Modeling of aerosol spray characteristics for synthesis of sensor thin film from solution (2013) *Applied Mathematical Modelling*, 37 (9), pp. 6389 - 6399, Cited 7 times. DOI: 10.1016/j.apm.2013.01.009

- Belysheva T.V., Gerasimov G.N., Gromov V.F., Trakhtenberg L.I. The sensor properties of Fe₂O₃ • In 2O₃ films: The detection of low ozone concentrations in air (2008) *Russian Journal of Physical Chemistry A*, 82 (10), pp. 1721 - 1725, Cited 7 times. DOI: 10.1134/S0036024408100142

- Kozhushner M.A., Bodneva V.L., Oleynik I.I., Belysheva T.V., Ikim M.I., Trakhtenberg L.I. Sensor Effect in Oxide Films with a Large Concentration of Conduction Electrons (2017) *Journal of Physical Chemistry C*, 121 (12), pp. 6940 - 6945, Cited 13 times. DOI: 10.1021/acs.jpcc.6b10956

- Grigor'ev E.I., Nesterov S.V., Vorontsov P.S., Mikhalytsyna O.V., Trakhtenberg L.I. The influence of cation size on γ -radiolysis of 15-crown-5 complexes (1995) *Radiation Physics and Chemistry*, 46 (4-6 PART 1), pp. 553 - 556, Cited 10 times. DOI: 10.1016/0969-806X(95)00216-K

- Pigalskiy K.S., Vishnev A.A., Efimov N.N., Shabatin A.V., Trakhtenberg L.I. Enhancement of pinning and the peak effect in Y_{1-x}FexBa₂Cu₃O_y high-temperature superconductors (2022) *Current Applied Physics*, 41, pp. 116 - 122, Cited 7 times. DOI: 10.1016/j.cap.2022.06.019

- Tikhomirov V.A., Sudakov A.V., Bazilevskii M.V., Trakhtenberg L.I. Potential energy surfaces of hydrogen transfer in a molecular crystal (1999) *Russian Journal of Physical Chemistry A*, 73 (2), pp. 270 - 275, Cited 6 times.

- Trakhtenberg L.I., Gerasimov G.N., Gromov V.F., Belysheva T.V., Ilegbusi O.J. Effect of composition and temperature on conductive and sensing properties of CeO₂ + In₂O₃ nanocomposite films (2015) *Sensors and Actuators, B: Chemical*, 209, pp. 562 - 569, Cited 39 times. DOI: 10.1016/j.snb.2014.12.022

- Ikim M.I., Spiridonova E.Y., Gromov V.F., Gerasimov G.N., Trakhtenberg L.I. Effect of the Formation Method of ZnO–In₂O₃ Composites on Their Structural Characteristics and Conductivity (2024) *Russian Journal of Physical Chemistry B*, 18 (1), pp. 283 - 288, Cited 12 times. DOI: 10.1134/S199079312401010X

- Belysheva T.V., Spiridonova E.Y., Ikim M.I., Gerasimov G.N., Gromov V.F., Trakhtenberg L.I. ZnO Nanocomposite Film-Based Sensors for Ethanol in Air (2020) *Russian Journal of Physical Chemistry B*, 14 (2), pp. 298 - 301, Cited 7 times. DOI: 10.1134/S1990793120020190

- Rozenbaum V.M., Shapochkina I.V., Teranishi Y., Trakhtenberg L.I. Symmetry of deterministic ratchets (2019) *Physical Review E*, 100 (2), art. no. 022115, Cited 19 times. DOI: 10.1103/PhysRevE.100.022115

- Ikim M.I., Yu Spiridonova E., Belysheva T.V., Gromov V.F., Gerasimov G.N., Trakhtenberg L.I. Structural properties of metal oxide nanocomposites: Effect of preparation method(2016) *Russian Journal of Physical Chemistry B*, 10 (3), pp. 543 - 546, Cited 19 times. DOI: 10.1134/S1990793116030210

- Tikhomirov V.A., Sudakov A.V., Bazilevskii M.V., Trakhtenberg L.I. Potential energy surfaces of hydrogen transfer in a molecular crystal (1999) *Zhurnal Fizicheskoi Khimii*, 73 (2), pp. 332 - 337, Cited 6 times.
- Trakhtenberg L.I., Kozhushner M.A., Gerasimov G.N., Gromov V.F., Bodneva V.L., Antropova T.V., Axelrod E., Greenbaum (Gutina) A., Feldman Yu. Non-phenomenological description of complex dielectric permittivity of metal-containing porous glasses (2010) *Journal of Non-Crystalline Solids*, 356 (11-17), pp. 642 - 646, Cited 7 times. DOI: 10.1016/j.jnoncrysol.2009.06.051
- Dyakov Y.A., Toliautas S., Trakhtenberg L.I., Valkunas L. Excited state photodissociation dynamics of 2-, 3-, 4-hydroxyacetophenone: Theoretical study (2018) *Chemical Physics*, 515, pp. 672 - 678, Cited 8 times. DOI: 10.1016/j.chemphys.2018.07.020
- Gol'danskii V.I., Benderskii V.A., Trakhtenberg L.I. Quantum Cryochemical Reactivity of Solids (2006) *Advances in Chemical Physics*, 75, pp. 349 - 437, Cited 35 times. DOI: 10.1002/9780470141243.ch6
- Zav'yalov S.A., Vorontsov P.S., Grigor'ev E.I., Gerasimov G.N., Golubeva E.N., Zagorskaya O.V., Zav'yalo L.M., Trakhtenberg L.I. Effect of Nanoparticle Interaction on the Selectivity of a Catalytic Reaction (1998) *Kinetics and Catalysis*, 39 (6), pp. 831 - 833, Cited 2 times.
- Bondarenko V.E., Zhuravleva T.S., Misurkin I.A., Titov S.V., Trakhtenberg L.I. Relaxation of pulse photocurrent in polyaniline (1999) *Chemical Physics Reports*, 18 (2), pp. 289 - 306, Cited 2 times.
- Grigor'ev E.I., Mikhailitsyna O.V., Nesterov S.V., Trakhtenberg L.I. The effect of structure of crown ether complexes with alkaline-earth metal chlorides on their radiation resistance (1997) *High Energy Chemistry*, 31 (1), pp. 16 - 19, Cited 4 times.
- Moskvitin L.V., Koshkina O.A., Slesarenko S.V., Arsenyev M.A., Trakhtenberg L.I., Ryndya S.M., Magomedbekov E.P., Smolyanskii A.S. Thermoradiationally Modified Polytetrafluoroethylene as a Basis for Membrane Fabrication: Resistance to Hydrogen Penetration, the Effect of Ion Treatment on the Chemical Structure and Surface Morphology, Evaluation of the Track Radius (2023) *Membranes*, 13 (1), art. no. 101, Cited 3 times. DOI: 10.3390/membranes13010101
- Trakhtenberg L.I., Fokeyev A.A., Dolin S.P. Reagent reorganization and promotive modes in barrier preparation for H-tunneling in fluorene-acridine system (2001) *Chemical Physics Letters*, 341 (5-6), pp. 551 - 556, Cited 3 times. DOI: 10.1016/S0009-2614(01)00540-1
- Grishin M.V., Gatin A.K., Dokhlikova N.V., Kirsankin A.A., Kharitonov V.A., Belysheva T.V., Trakhtenberg L.I., Shub B.R. Single electronic traps in tin and zinc oxides (2014) *Nanotechnologies in Russia*, 9 (3-4), pp. 151 - 156, Cited 1 times. DOI: 10.1134/S1995078014020086
- Potapov V.K., Matyuk V.M., Trakhtenberg L.I. Synthesis of aluminum oxide nanostructures on the silicon surface (2005) *High Energy Chemistry*, 39 (5), pp. 330 - 332, Cited 1 times. DOI: 10.1007/s10733-005-0065-7
- Gerasimov G.N., Shchukin E.R., Gromov V.F., Kozhushner M.A., Trakhtenberg L.I. Modeling of the diffusion-kinetics-controlled adsorption of cations on a sorbent surface (2006) *Russian Journal of Physical Chemistry A*, 80 (10), pp. 1617 - 1621, Cited 2 times. DOI: 10.1134/S0036024406100116
- Gerasimov G.N., Gromov V.F., Belysheva T.V., Trakhtenberg L.I. Mechanism of the conductivity and sensor response of nanostructured In₂O₃+ZnO films (2013) *Russian Journal of Physical Chemistry A*, 87 (10), pp. 1731 - 1738, Cited 5 times. DOI: 10.1134/S0036024413090082
- Trusevich N.G., Vishnev A.A., Pigalskiy K.S., Mamsurova L.G., Trakhtenberg L.I. Evolution of the Structure and Magnetic Properties of the High-T_c Superconductor YBa₂Cu₃O_{6.92} in the Sol-Gel Synthesis Process (2022) *Inorganic Materials*, 58 (9), pp. 956 - 963, Cited 1 times. DOI: 10.1134/S0020168522090138

- Gerasimov G.N., Gromov V.F., Ikim M.I., Spiridonova E.Y., Grekhov M.M., Trakhtenberg L.I. Structure and Sensing Properties of Nanostructured SnO₂–In₂O₃ Composites Synthesized by the Impregnation Method (2019) Russian Journal of Physical Chemistry B, 13 (5), pp. 763 - 768, Cited 5 times. DOI: 10.1134/S1990793119050154
- Pigalskiy K.S., Efimov N.N., Vasilyev P.N., Vishnev A.A., Trakhtenberg L.I. Equilibrium magnetic properties of the Fe-doped HTSC YBaCuO (2023) Physica C: Superconductivity and its Applications, 612, art. no. 1354318, Cited 1 times. DOI: 10.1016/j.physc.2023.1354318
- Rozenbaum V.M., Shapochkina I.V., Teranishi Y., Witek H.A., Trakhtenberg L.I. Force-dependent motion reversal in quantum rocking ratchets (2023) Journal of the Chinese Chemical Society, 70 (3), pp. 421 - 431, Cited 1 times. DOI: 10.1002/jccs.202200510
- Kozhushner M.A., Trakhtenberg L.I. Complex dielectric permittivity of metal-containing nanocomposites: Non-phenomenological description (2013) NATO Science for Peace and Security Series B: Physics and Biophysics, pp. 49 - 67, Cited 1 times. DOI: 10.1007/978-94-007-5012-8_4
- Kurmangaleev K.S., Mikhailova T.Y., Trakhtenberg L.I. A Nonempirical Study of Oxygen Adsorption on the (011) In₂O₃ Surface (2022) Inorganic Materials, 58 (3), pp. 278 - 283, Cited 3 times. DOI: 10.1134/S0020168522030086
- Gerasimov G.N., Stanislavskii Yu.S., Kir'yanova T.V., Eremicheva Yu.N., Teleshov E.N., Trakhtenberg L.I. Effect of Crystal Size on the Reaction Kinetics in the Solid-State Polymerization of 1,6-Di(N-carbazolyl)-2,4-hexadiyne (2001) Polymer Science - Series B, 43 (1-2), pp. 54 - 57, Cited 1 times.
- Mamsurova L.G., Trusevich N.G., Vishnev A.A., Pigalskiy K.S., Trakhtenberg L.I. Comparative Study of the Physical Properties of Fine-Crystalline Mechanoactivated and Sol–Gel Samples of YBa₂Cu₃O_{6.92} High-Temperature Superconductors (2020) Russian Journal of Physical Chemistry B, 14 (6), pp. 986 - 989, Cited 5 times. DOI: 10.1134/S199079312006024X
- Kozhushner M., Trakhtenberg L. Charge transfer in composites "dielectric + metal nanoparticles": Effect of electric and magnetic fields (2012) International Journal of Quantum Chemistry, 112 (17), pp. 2904 - 2914, Cited 2 times. DOI: 10.1002/qua.24073
- Kozhushner M.A., Trakhtenberg L.I. Conductivity in a system of ferromagnetic nanoclusters: The influence of a magnetic field (2010) Russian Journal of Physical Chemistry B, 4 (3), pp. 502 - 509, Cited 1 times. DOI: 10.1134/S1990793110030218
- Fokeyev A.A., Zyubin A.S., Trakhtenberg L.I. The role of intermolecular vibrations and reorganization of a reaction system in tunneling reactions with H atom transfer. A Debye model for the medium (2008) Russian Chemical Bulletin, 57 (6), pp. 1093 - 1105, Cited 1 times. DOI: 10.1007/s11172-008-0138-0
- Fleurov V.N., Trakhtenberg L.I. Effect of the fluctuations on the TLS parameters (1983) Solid State Communications, 46 (10), pp. 755 - 758, Cited 4 times. DOI: 10.1016/0038-1098(83)90220-X
- Trakhtenberg L.I., Fokeyev A.A., Dolin S.P. The effect of reorganization of reagents on H atom tunneling in the fluorine-acridine system (2003) Elektrokimiya, 39 (1), pp. 41 - 48, Cited 4 times.
- Trakhtenberg L.I., Rabinovich A.B., Kaminskij V.A., Gerasimov G.N. Kinetics of formation of metal-polymer nanocomposite films (2002) Khimicheskaya Fizika, 21 (2), pp. 69 - 77, Cited 5 times.
- Ikim M.I., Dekhtyar' M.L., Rozenbaum V.M., Bugaev A.S., Trakhtenberg L.I. Symmetry of Brownian Photomotors (2020) Russian Journal of Physical Chemistry B, 14 (2), pp. 332 - 335, Cited 4 times. DOI: 10.1134/S1990793120020074
- Kozhushner M.A., Bodneva V.L., Belysheva T.V., Gerasimov G.N., Gromov V.F., Ikim M.I., Paltiel Y., Spiridonova E.Y., Trakhtenberg L.I. Sensory properties of oxide films with high concentrations of conduction electrons (2017) Russian Journal of Physical Chemistry A, 91 (3), pp. 572 - 576, Cited 1 times. DOI: 10.1134/S0036024417030153

- Belysheva T.V., Gromov V.F., Gerasimov G.N., Spiridonova E.Y., Bondarenko S.A., Trakhtenberg L.I. Sensors based on SnO₂ + In₂O₃ composite films for detecting CO in air (2011) Russian Journal of Physical Chemistry A, 85 (6), pp. 1021 - 1025, Cited 3 times. DOI: 10.1134/S0036024411060100
- Klochikhin V.L., Trakhtenberg L.I. Tunneling splitting in vibrational spectra of molecules (1998) Chemical Physics Letters, 285 (1-2), pp. 34 - 40, Cited 4 times. DOI: 10.1016/S0009-2614(97)01469-3
- Kozhushner M.A., Trakhtenberg L.I. Remagnetization of a ferromagnetic nanoparticle induced by the current of polarized electrons (2014) JETP Letters, 99 (4), pp. 210 - 213, Cited 4 times. DOI: 10.1134/S0021364014040080
- Kozhushner M.A., Posvyanskii V.S., Lidskii B.V., Bodneva V.L., Trakhtenberg L.I. Superconductivity Initiated by Electric Field in High-Temperature Superconductor at $T > T_c$ (2020) Physics of the Solid State, 62 (8), pp. 1300 - 1304, Cited 1 times. DOI: 10.1134/S1063783420080211
- Shpeizman V.V., Yakushev P.N., Trakhtenberg L.I., Smolyanskii A.S. Influence of the load sign on characteristics of micro- and nanoscale steps in strain rate of γ -irradiated polytetrafluoroethylene (2014) Physics of the Solid State, 56 (12), pp. 2485 - 2492, Cited 1 times. DOI: 10.1134/S1063783414120312
- Shapochkina I.V., Rozenbaum V.M., Gromov V.F., Ikim M.I., Trusevich N.G., Trakhtenberg L.I. Modeling the Energy Characteristics of Ratchets by a Game-Theory Approach (2023) Nonlinear Phenomena in Complex Systems, 26 (2), pp. 106 - 115, Cited 1 times. DOI: 10.33581/1561-4085-2023-26-2-106-115
- Dekhtyar' M.L., Rozenbaum V.M., Trakhtenberg L.I. Near-surface transport of semiconductor nanoclusters upon cyclic photoexcitation (2016) Russian Journal of Physical Chemistry A, 90 (7), pp. 1484 - 1488, Cited 2 times. DOI: 10.1134/S0036024416070062
- Dekhtyar M.L., Rozenbaum V.M., Trakhtenberg L.I. Polarization Effects in Organic Dipole Photomotors (2001) Theoretical and Experimental Chemistry, 55 (4), pp. 232 - 239, Cited 4 times. DOI: 10.1007/s11237-019-09613-6
- Ivanov G.K., Kozhushner M.A., Trakhtenberg L.I. Temperature dependence of the rate constants of cryochemical reactions (1999) Russian Chemical Bulletin, 48 (10), pp. 1882 - 1890, Cited 1 times. DOI: 10.1007/BF02494741
- Shapochkina I.V., Rozenbaum V.M., Trusevich N.G., Trakhtenberg L.I. Force-Dependent Fluxes of Adiabatic Classical and Quantum Rocking Ratchets (2022) Nonlinear Phenomena in Complex Systems, 25 (4), pp. 349 - 358, Cited 1 times. DOI: 10.33581/1561-4085-2022-25-4-349-358
- Ikim M.I., Erofeeva A.R., Spiridonova E.Y., Gromov V.F., Gerasimov G.N., Trakhtenberg L.I. Structure and Morphology of Cobalt-Doped Cubic-Rhombohedral In₂O₃ (2024) Russian Journal of Physical Chemistry B, 18 (6), pp. 1641 - 1645, Cited 1 times. DOI: 10.1134/S1990793124701495
- Trakhtenberg L.I., Fokeev A.A., Klochikhin V.L., Dolin S.P., Plakhutin B.N. Influences of temperature and pressure on transfer of atom of hydrogen in tunnel solid-phase reactions (2004) Khimicheskaya Fizika, 23 (6), pp. 56 - 69, Cited 3 times.
- Gromov V.F., Ikim M.I., Gerasimov G.N., Spiridonova E.Y., Trakhtenberg L.I. Purification of Aqueous Solutions Containing Salts of Heavy Metals and Ballast Ions (2022) Russian Journal of Physical Chemistry B, 16 (1), pp. 138 - 140, Cited 3 times. DOI: 10.1134/S1990793122010055
- Kurmangaleev K.S., Mikhailova T.Y., Trakhtenberg L.I. Oxygen Chemisorption on the Surface of an In₂O₃ (011) Nanocrystal (2020) Inorganic Materials, 56 (11), pp. 1138 - 1146, Cited 3 times. DOI: 10.1134/S0020168520110060
- Kozhushner M.A., Gatin A.K., Grishin M.V., Shub B.R., Kim V.P., Khomutov G.B., Ilegbusi O.J., Trakhtenberg L.I. Magnetization reversal of ferromagnetic nanoparticles induced by a

stream of polarized electrons (2016) *Journal of Magnetism and Magnetic Materials*, 414, pp. 38 - 44, Cited 2 times. DOI: 10.1016/j.jmmm.2016.04.045

- Gerasimov G.N., Gromov V.F., Belysheva T.V., Ikim M.I., Spiridonova E.Y., Grekhov M.M., Shapochkina I.V., Brynzar' V.I., Trakhtenberg L.I. Investigating the sensor response of ceria-containing binary metal oxide nanocomposites (2017) *Russian Journal of Physical Chemistry A*, 91 (10), pp. 1976 - 1980, Cited 1 times. DOI: 10.1134/S0036024417100120

- Bodneva V.L., Kozhushner M.A., Lidskii B.V., Posvyanskii V.S., Trakhtenberg L.I. Creation of Two-Dimensional High Temperature Superconductivity Under the Influence of an Electric Field (2023) *Russian Journal of Physical Chemistry B*, 17 (4), pp. 783 - 789, Cited 3 times. DOI: 10.1134/S1990793123040048

- Trakhtenberg L.I., Nadtochenko V.A. Tunneling proton transfer in biological systems. Role of temperature and pressure (2012) *Russian Journal of Physical Chemistry A*, 86 (9), pp. 1399 - 1406, Cited 5 times. DOI: 10.1134/S0036024412090142

- Rozenbaum V.M., Shapochkina I.V., Trakhtenberg L.I. Tunneling Mechanism for Changing the Motion Direction of a Pulsating Ratchet. Temperature Effect (2023) *JETP Letters*, 118 (5), pp. 369 - 375, Cited 2 times. DOI: 10.1134/S002136402360235X

- Kozhushner M.A., Lidskii B.V., Posvyanskii V.S., Trakhtenberg L.I. Effect of electric field on the magnetic characteristics of a ferromagnetic nanosemiconductor (2016) *Journal of Experimental and Theoretical Physics*, 123 (6), pp. 1068 - 1072, Cited 5 times. DOI: 10.1134/S1063776116130069

- Sakhno S.V., Kozhushner M.A., Posvyanskii V.S., Trakhtenberg L.I. Photoabsorption by the electronic subsystem of semiconductor quantum dots (2016) *Journal of Nanophotonics*, 10 (2), art. no. 026018, Cited 1 times. DOI: 10.1117/1.JNP.10.026018

- Pigalskiy K.S., Vishnev A.A., Efimov N.N., Shabatin A.V., Trakhtenberg L.I. The phase composition and structural, magnetic and superconducting properties of high-temperature superconductors $Y_{1-x}Fe_xBa_2Cu_3O_y$ ($0 \leq x \leq 0.08$) (2025) *Ceramics International*, 51 (9), pp. 11037 - 11047, Cited 3 times. DOI: 10.1016/j.ceramint.2024.12.523

- Terets A.D., Korochkova T.Ye., Mashira V.A., Rozenbaum V.M., Shapochkina I.V., Trakhtenberg L.I. Modeling the Jump-like Diffusion Motion of a Brownian Motor by a Game-Theory Approach: Deterministic and Stochastic Models (2022) *Nonlinear Phenomena in Complex Systems*, 25 (1), pp. 41 - 50, Cited 1 times. DOI: 10.33581/1561-4085-2022-25-1-41-50

- Ikim M.I., Gerasimov G.N., Erofeeva A.R., Gromov V.F., Ilegbusi O.J., Trakhtenberg L.I. Cobalt doped cubic and rhombohedral In_2O_3 : The role of crystalline phase of indium oxide in sensor response to hydrogen (2024) *Chemical Physics Letters*, 845, art. no. 141321, Cited 4 times. DOI: 10.1016/j.cplett.2024.141321

- Zheltova A.V., Smolyansky A.S., Biryukov Y.G., Ikim M.I., Trakhtenberg L.I. Synthesis of Metallic Janus Nanoparticles by Aerosol Spraying (2018) *Russian Journal of Physical Chemistry B*, 12 (5), pp. 929 - 932, Cited 1 times. DOI: 10.1134/S1990793118050238

- Bondarenko V.E., Zhuravleva T.S., Misurkin I.A., Titov S.V., Trakhtenberg L.I. Kinetic model of delay photoconductivity in EB films (1999) *Synthetic Metals*, 101 (1), pp. 854 - 855, Cited 1 times. DOI: 10.1016/S0379-6779(98)01347-2

- Kozhushner M.A., Bodneva V.L., Trakhtenberg L.I. Simulation of the dielectric and conductive properties of metal-containing nanostructured composites (2015) *Russian Journal of Physical Chemistry B*, 9 (5), pp. 748 - 753, Cited 1 times. DOI: 10.1134/S1990793115050085

- Rozenbaum V.M., Dekhtyar' M.L., Trakhtenberg L.I. Effect of electron transition kinetics on the photomotor velocity (2017) *Russian Journal of Physical Chemistry A*, 91 (10), pp. 1951 - 1956, Cited 1 times. DOI: 10.1134/S0036024417100338

- Gerasimov G.N., Kir'yanova T.V., Bel'skij V.K., Stash A.I., Lebedev S.A., Kozlova N.V., Trakhtenberg L.I. Effect of the structure of dimethyl 1,4-naphthalenediacrylate on the mechanism of its

solid-phase photocyclopolymerization (2001) *Zhurnal Fizicheskoi Khimii*, 75 (3), pp. 538 - 545, Cited 1 times.

- Hopf Henning, Gerasimov Genrikh N., Chvalun Sergei N., Rozenberg Valeria I., Popova Elena L., Nikolaeva Elena V., Grigor'ev Evgenii I., Zavjalov Sergei A., Trakhtenberg Leonid I. Metal-containing poly(p-xylylene) films by CVD: Poly(p-xylylene) with germanium crystals (1997) *Advanced Materials*, 9 (10), pp. 197 - 200, Cited 2 times.
- Gerasimov G.N., Nikolaeva E.V., Smirnova E.I., Sochilin V.A., Trakhtenberg L.I. Effect of the metal content and matrix structure on the formation of silver nanocrystals during cryochemical synthesis of polymer composites (2001) *Doklady Akademii Nauk*, 380 (2), pp. 213 - 217, Cited 2 times.
- Astapenko V.A., Sakhno S.V., Ilegbusi O.J., Trakhtenberg L.I. Absorption of Ultrashort Electromagnetic Pulses by ITO Nanoparticles (2017) *Journal of Physical Chemistry C*, 121 (51), pp. 28581 - 28586, Cited 5 times. DOI: 10.1021/acs.jpcc.7b10890
- Kozhushner M.A., Gatin A.K., Grishin M.V., Shub B.R., Kim V.P., Khomutov G.B., Trakhtenberg L.I. Change in the magnetic moment of a ferromagnetic nanoparticle under polarized current (2016) *Physics of the Solid State*, 58 (2), pp. 266 - 272, Cited 4 times. DOI: 10.1134/S1063783416020177
- Trakhtenberg L.I., Gerasimov G.N., Grigor'ev E.I., Zav'yalov S.A., Zagorskaya O.V., Zufman V.Yu., Smirnov V.V. Effect of interaction between copper nanoclusters on the catalytic rupture of the C-Cl bond (2000) *Zhurnal Fizicheskoi Khimii*, 74 (5), pp. 952 - 953, Cited 1 times.
- Novozhilov V.B., Bodneva V.L., Kurmangaleev K.S., Lidskii B.V., Posvyanskii V.S., Trakhtenberg L.I. Modeling of the Electronic Structure of Semiconductor Nanoparticles (2023) *Mathematics*, 11 (9), art. no. 2214, Cited 4 times. DOI: 10.3390/math11092214
- Trakhtenberg L.I., Fokeev A.A., Dolin S.P. The role Played by promoting modes and reorganization of reagents in tunneling of H atoms in the fluorene-acridine system (2001) *Zhurnal Fizicheskoi Khimii*, 75 (6), pp. 978 - 985, Cited 2 times.
- Pigalskiy K.S., Vishnev A.A., Baldin E.D., Trakhtenberg L.I. Synthesis of a High-Temperature Superconductor $Y_{1-x}Fe_xBa_2Cu_3O_y$ by the Sol-Gel and Solid-State Methods (2024) *Russian Journal of Physical Chemistry B*, 18 (2), pp. 624 - 625, Cited 3 times. DOI: 10.1134/S1990793124020131
- Kozhushner M.A., Lidskii B.V., Posvyanskii V.S., Trakhtenberg L.I. Semiconductor Nanoparticle in an Electric Field (2018) *JETP Letters*, 108 (9), pp. 637 - 640, Cited 3 times. DOI: 10.1134/S0021364018210075
- Grigor'ev E.I., Trakhtenberg L.I., Chasov V.V. Kinetics of interaction of nitroxyl radicals with Fs centers on the La₂O₃ surface (1997) *Zhurnal Fizicheskoi Khimii*, 71 (6), pp. 1086 - 1089, Cited 1 times.
- Posvyanskii V.S., Bodneva V.L., Chertkov A.V., Kurmangaleev K.S., Ikim M.I., Novozhilov V.B., Oseledets I.V., Trakhtenberg L.I. Tensor Network Modeling of Electronic Structure of Semiconductor Nanoparticles and Sensory Effect of Layers Based on Them (2025) *Mathematics*, 13 (20), art. no. 3296, Cited 1 times. DOI: 10.3390/math13203296
- Zav'ialov S.A., Zav'ialova L.M., Trakhtenberg L.I., Grigor'ev E.I., Buianov V.M., Teleshov B.V., Kovalev A.I., Mil'chakov A.A., Lashmanov S.G. Determination of antioxidative potential of biological fluids by using semiconductor chemical sensors [Opredelenie antioksidatnogo potentsiala biologicheskikh zhidkostei s pomoshch'iu poluprovodnikovyykh khimicheskikh sensorov.] (1998) *Vestnik Rossiiskoi akademii meditsinskikh nauk / Rossiiskaia akademiia meditsinskikh nauk*, (7), pp. 55 - 57, Cited 1 times.
- Trakhtenberg L.I., Milikh G.M. COLLISIONLESS DISSOCIATION OF MOLECULES DUE TO THEIR INTERACTION WITH INFRARED RADIATION. (1982) *Soviet journal of quantum electronics*, 12 (12), pp. 1656 - 1659, Cited 1 times. DOI: 10.1070/QE1982v012n12ABEH006316

- Kurmangaleev K.S., Mikhailova T.Y., Polunin K.S., Ilegbusi O.J., Trakhtenberg L.I. DFT modeling of reaction of H₂ with O₂ pre-adsorbed on In₂O₃(011) surface(2024) *Chemical Physics Letters*, 856, art. no. 141649, Cited 5 times. DOI: 10.1016/j.cplett.2024.141649
- Mamsurova L.G., Trusevich N.G., Gavrilkin S.Y., Vishnev A.A., Trakhtenberg L.I. Suppression of the superconducting gap near d-wave nodes caused by the structural disorder in fine-crystalline YBa₂Cu₃O_y high-T_c superconductors(2017) *JETP Letters*, 106 (6), pp. 378 - 383, Cited 5 times. DOI: 10.1134/S0021364017180084
- Bodneva V.L., Kozhushner M.A., Posvyanskii V.S., Trakhtenberg L.I. Theory of Sensitivity of Nanoscale-Structured Layers of Metal Oxides to Reducing Gases(2019) *Russian Journal of Physical Chemistry B*, 13 (1), pp. 190 - 195, Cited 4 times. DOI: 10.1134/S1990793119010068
- Gromov V.F., Gerasimov G.N., Ikim M.I., Spiridonova E.Y., Trakhtenberg L.I. Sorbents Based on Crown Ethers for Purification of Aqueous Solutions from Metal Ions(2020) *Russian Journal of Physical Chemistry B*, 14 (6), pp. 1036 - 1041, Cited 2 times. DOI: 10.1134/S1990793120060056
- Zitserman V.Y., Makhnovskii Y.A., Trakhtenberg L.I., Yang D.-Y., Lin S.H. Drift of particles caused by fluctuations of their sizes(2017) *JETP Letters*, 105 (5), pp. 335 - 340, Cited 5 times. DOI: 10.1134/S0021364017050149
- Trakhtenberg L.I., Gerasimov G.N., Gromov V.F., Bune E.V., Spiridonova E.Yu., Shchukin E.P., Morovov A.P., Ignat'ev Yu.I. Kinetics of the sorption of metals from aqueous solutions by immobilized crown ethers(2004) *Zhurnal Fizicheskoi Khimii*, 78 (4), pp. 696 - 701, Cited 2 times.
- Ikim M.I., Spiridonova E.Y., Ilegbusi O.J., Trakhtenberg L.I. Effect of Cu Doping on Synthesis, Composition and Sensor Properties of In₂O₃ Nanostructures(2025) *Nanomaterials*, 15 (12), art. no. 925, Cited 2 times. DOI: 10.3390/nano15120925
- Kozhushner M.A., Posvyanskii V.S., Lidskii B.V., Bodneva V.L., Ilegbusi O.J., Trakhtenberg L.I. Electric field distribution and chemical reactions near nano-dimensional truncated cone under strong external field(2020) *Chemical Physics*, 537, art. no. 110855, Cited 3 times. DOI: 10.1016/j.chemphys.2020.110855
- Ikim M.I., Gerasimov G.N., Gromov V.F., Belysheva T.V., Spiridonova E.Y., Shapochkina I.V., Ali-zade R.A., Trakhtenberg L.I. Conductivity of nanostructured India oxide films containing Co₃O₄ or ZrO₂ (2017) *Russian Journal of Physical Chemistry B*, 11 (5), pp. 846 - 849, Cited 3 times. DOI: 10.1134/S1990793117050037
- Kurmangaleev K.S., Kozhushner M.A., Trakhtenberg L.I. Electric Resistance of Binary Oxides CeO₂-In₂O₃ Structured at the Nanolevel(2020) *Russian Journal of Physical Chemistry B*, 14 (6), pp. 1063 - 1066, Cited 3 times. DOI: 10.1134/S1990793120060093
- Rozenbaum V.M., Dekhtyar M.L., Shapochkina I.V., Trakhtenberg L.I. Light-Driven Reciprocating Host-Guest Molecular Machines(2021) *JETP Letters*, 113 (11), pp. 738 - 744, Cited 2 times. DOI: 10.1134/S002136402112002X
- Astapenko V.A., Ilegbusi O.J., Sakhno S.V., Trakhtenberg L.I. Peculiarities of molecule photodissociation under influence of ultrashort electromagnetic pulses: Nonlinear dependence of probability on pulse duration(2019) *Journal of Photochemistry and Photobiology A: Chemistry*, 371, pp. 76 - 80, Cited 3 times. DOI: 10.1016/j.jphotochem.2018.11.006
- Rozenbaum V.M., Shapochkina I.V., Trakhtenberg L.I. Inertial Reciprocating Photomotor(2022) *JETP Letters*, 116 (12), pp. 902 - 908, Cited 1 times. DOI: 10.1134/S0021364022602639
- Klochikhin V.L., Trakhtenberg L.I. Pressure and temperature effects on the kinetics of tunnel solid-state reactions(1998) *Zhurnal Fizicheskoi Khimii*, 72 (3), pp. 452 - 459, Cited 2 times.
- Gol'danskii V.I., Kozhushner M.A., Trakhtenberg L.I. Polychronous kinetics with nonstationary rate constants. Effect of a medium(1997) *Russian Chemical Bulletin*, 46 (3), pp. 448 - 455, Cited 3 times. DOI: 10.1007/BF02495393

- Gromov V.F., Gerasimov G.N., Belysheva T.V., Trakhtenberg L.I. Sensor effect mechanisms in tin dioxide-based conductometric sensors for detection of reducing gases (2009) *Russian Journal of General Chemistry*, 79 (9), pp. 2024 - 2032, Cited 2 times. DOI: 10.1134/S1070363209090345
- Trakhtenberg L.I., Gerasimov G.N., Matyuk V.M., Potapov V.K. Synthesis of alumina nanostructures on a silicon surface by vacuum chemical deposition from aluminum nitrate (2005) *Russian Journal of Physical Chemistry A*, 79 (9), pp. 1528 - 1530, Cited 1 times.
- Shapochkina I.V., Korochkova T.Ye., Rozenbaum V.M., Bugaev A.S., Trakhtenberg L.I. Temperature-frequency controlling the characteristics of a pulsating brownian ratchet with slightly fluctuating potential energy (2021) *Nonlinear Phenomena in Complex Systems*, 24 (1), pp. 71 - 83, Cited 1 times. DOI: 10.33581/1561-4085-2021-24-1-71-83
- Rozenbaum V.M., Shapochkina I.V., Teranishi Y., Witek H.A., Trakhtenberg L.I. Extremely asymmetric sawtooth potential in the ratchet theory (2023) *Journal of the Chinese Chemical Society*, 70 (3), pp. 209 - 218, Cited 1 times. DOI: 10.1002/jccs.202200400
- Trakhtenberg L.I., Ilegbusi O.J., Kozhushner M.A. Comments on the article "Calculation of the electric potential and surface oxygen ion density for planar and spherical metal oxide grains by numerical solution of the Poisson equation coupled with Boltzmann and Fermi-Dirac statistics" (*Sensors and Actuators B: Chemical*, 293 (2019) 31–40) (*Sensors and Actuators, B: Chemical*, 302, art. no. 126986, Cited 2 times. DOI: 10.1016/j.snb.2019.126986
- Gerasimov G.N., Grekhov M.M., Gromov V.F., Ikim M.I., Spiridonova E.Y., Trakhtenberg L.I. Influence of Matrix Nature on the Structural Characteristics of In₂O₃-CeO₂ and SnO₂-CeO₂ Composites Fabricated by the Impregnation Method (2018) *Russian Journal of Physical Chemistry B*, 12 (4), pp. 709 - 713, Cited 3 times. DOI: 10.1134/S1990793118040218
- Trakhtenberg L.I., Fokeyev A.A., Mebel A.M. H/D kinetic isotope effect in HCOOH cis-trans conversion of formic acid in noble gas matrices (2013) *Chemical Physics Letters*, 574, pp. 47 - 50, Cited 3 times. DOI: 10.1016/j.cplett.2013.04.052
- Kurmangaleev K.S., Bodneva V.L., Posvyanskii V.S., Trakhtenberg L.I. Sensory Effect toward Hydrogen in a Nanostructured CeO₂-In₂O₃ System (2022) *Russian Journal of Physical Chemistry A*, 96 (9), pp. 2056 - 2058, Cited 3 times. DOI: 10.1134/S0036024422090199
- Shapochkina I.V., Rozenbaum V.M., Sheu S.-Y., Yang D.-Y., Lin S.H., Trakhtenberg L.I. Relaxation high-temperature ratchets (2019) *Physica A: Statistical Mechanics and its Applications*, 514, pp. 71 - 78, Cited 3 times. DOI: 10.1016/j.physa.2018.09.039
- Trakhtenberg L.I., Gerasimov G.N., Gromov V.F., Buné E.V., Spiridonova E.Yu., Shchukin E.P., Morovov A.P., Ignat'ev Yu.I. Kinetics of the sorption of metals from aqueous solutions by immobilized crown ethers (2004) *Russian Journal of Physical Chemistry A*, 78 (4), pp. 592 - 596, Cited 3 times.
- Gerasimov G.N., Gromov V.F., Trakhtenberg L.I. Physicochemical and Electrophysical Properties of Metal/Semiconductor Containing Nanostructured Composites (2018) *Russian Journal of Physical Chemistry A*, 92 (6), pp. 1087 - 1098, Cited 1 times. DOI: 10.1134/S0036024418060055
- Trakhtenberg L.I., Slavinskaya N.A., Pshezhetskii S.Ya. The effect of dynamic properties of the medium on the kinetics of solid-state radical photodissociation processes (1989) *Chemical Physics*, 134 (1), pp. 127 - 135, Cited 6 times. DOI: 10.1016/0301-0104(89)80244-7
- Gerasimov G.N., Gromov V.F., Ikim M.I., Trakhtenberg L.I. Erratum to: Effect of Composition and Structure of Metal Oxide Composites Nanostructured on Their Conductive and Sensory Properties (*Russian Journal of Physical Chemistry B*, (2021), 15, 6, (1072-1083), 10.1134/S1990793121060038) (2021) *Russian Journal of Physical Chemistry B*, 15 (6), pp. 1102, Cited 1 times. DOI: 10.1134/S1990793121310018
- Mamsurova L.G., Trusevich N.G., Gavrilkin S.Y., Mamsurov I.V., Trakhtenberg L.I. Schottky Anomalies in the Low-Temperature Specific Heat of YBa₂Cu₃O_y HTSC (2019) *Journal of*

Experimental and Theoretical Physics, 128 (4), pp. 616 - 623, Cited 1 times.DOI: 10.1134/S1063776119030099

- Klochikhin V.L., Trakhtenberg L.I. Fluctuation effects in the solid-phase kinetics of diffusion-controlled radiation-chemical processes: A Monte Carlo simulation(2010) High Energy Chemistry, 44 (4), pp. 261 - 267, Cited 1 times.DOI: 10.1134/S0018143910040016

- Korotcenkov G., Brinzari V., Trakhtenberg L., Cho B.K. In₂O₃-based thin films deposited by spray pyrolysis as promising thermoelectric material(2014) Advanced Materials Research, 1043, pp. 40 - 44, Cited 2 times.DOI: 10.4028/www.scientific.net/AMR.1043.40

- Navid Khatami S.M., Ilegbusi O.J., Trakhtenberg L.I. Modelling evaporation and chemical reaction in a multi-component droplet from spray pyrolysis synthesis of mixed metal-oxide nanocomposite films(2015) International Journal of Mathematical Modelling and Numerical Optimisation, 6 (2), pp. 141- 158, Cited 1 times.DOI: 10.1504/IJMMNO.2015.069967

- Rozenbaum V.M., Shapochkina I.V., Trakhtenberg L.I. Adiabatic Ratchet Effect in Systems with Discrete Variables(2020) JETP Letters, 112 (5), pp. 316 - 322, Cited 4 times.DOI: 10.1134/S0021364020170075

- Gerasimov G.N., Stanislavskij Yu.S., Kir'yanova T.V., Eremicheva Yu.N., Teleshov E.N., Trakhtenberg L.I. Effect of crystal size on the monomer to polymer conversion and reaction kinetics in the solid-state polymerization of 1,6-di(N-carbazolyl)-2,4-hexadiyne(2001) Vysokomolekularnye Soedineniya. Ser.A Ser.B Ser.C - Kratkie Soobshcheniya, 43 (2), pp. 378 - 382, Cited 0 times.

- Shchanov M.F., Trakhtenberg L.I. Pressure effects on the vibronic luminescence spectra of high-symmetry molecules in solid solutions(1999) Zhurnal Fizicheskoi Khimii, 73 (3), pp. 513 - 518, Cited 0 times.

- Grigor'ev E.I., Trakhtenberg L.I., Chasov V.V. Kinetics of interaction of nitroxyl radicals with F_s-centers on the La₂O₃ surface(1997) Russian Journal of Physical Chemistry A, 71 (6), pp. 968 - 971, Cited 0 times.

- Kaplan I.G., Miranda U., Trakhtenberg L.I. Study of the In₂O₃ molecule in the free state and in the crystal(2018) Molecular Physics, 116 (5-6), pp. 678 - 685, Cited 0 times.DOI: 10.1080/00268976.2017.1414963

- Trakhtenberg L.I., Fokeev A.A., Dolin S.P. The role played by promoting modes and reorganization of reagents in tunneling of H atoms in the fluorene-acridine system(2001) Russian Journal of Physical Chemistry A, 75 (6), pp. 875 - 880, Cited 0 times.

- Bondarenko E.A., Bondarenko S.A., Kargin N.I., Gromov V.F., Belysheva T.V., Spiridonova E.Y., Mikhnev L.V., Trakhtenberg L.I. The optical and gas-sensitive properties of opal-like structures based on SnO₂

- (2012) Russian Journal of Physical Chemistry A, 86 (6), pp. 987 - 991, Cited 0 times.DOI: 10.1134/S0036024412060064

- Shchanov M.F., Trakhtenberg L.I. Pressure Effects on the Vibronic Luminescence Spectra of High-Symmetry Molecules in Solid Solutions(1999) Russian Journal of Physical Chemistry A, 73 (3), pp. 439 - 443, Cited 0 times.

- Kozhushner M.A., Posvyanskii V.S., Lidskii B.V., Bodneva V.L., Trakhtenberg L.I. Influence of an External Electric Field on the Charge and Field Distributions in a Metal Tip(2020) Journal of Experimental and Theoretical Physics, 130 (2), pp. 198 - 203, Cited 0 times.DOI: 10.1134/S1063776120010069

- Ilin A.S., Forsh P.A., Ikim M.I., Koroleva A.V., Martyshov M.N., Trakhtenberg L.I., Kashkarov P.K. Conductance and photoconductance of indium oxide-zinc oxide composites in the hydrogen-containing atmosphere(2020) IFMBE Proceedings, 77, pp. 405 - 408, Cited 0 times.DOI: 10.1007/978-3-030-31866-6_74

- Gromov V.F., Ikim M.I., Gerasimov G.N., Spiridonova E.Y., Trakhtenberg L.I. Metal-Oxide Nanocomposites for Highly Efficient and Selective Detection of Various Gases (2022) *Colloid Journal*, 84 (6), pp. 681 - 688, Cited 0 times. DOI: 10.1134/S1061933X22600269
- Klochikhin V.L., Trakhtenberg L.I. Tunneling splitting of vibration states of non-rigid molecules and its calculation based perturbation theory in double adiabatic approximation (1997) *Doklady Akademii Nauk*, 356 (1), pp. 61 - 65, Cited 0 times.
- Shchukin E.R., Shulimanova Z.L., Gerasimov G.N., Gromov V.F., Trakhtenberg L.I. Simulation of the sorption of cations on the surface of a selective sorbent with allowance for the possibility of their desorption (2009) *Russian Journal of Physical Chemistry A*, 83 (10), pp. 1807 - 1809, Cited 0 times. DOI: 10.1134/S003602440910032X
- Trakhtenberg L.I., Gerasimov G.N. Influence of temperature on photocyclopolymerization of crystalline diolefin compounds (2003) *Khimicheskaya Fizika*, 22 (2), pp. 102 - 111, Cited 0 times.
- Kuznetsov A.V., Zav'yalov S.A., Grigor'ev E.I., Trakhtenberg L.I. Interaction of ozone with surface electron-donor centers of magnesium and titanium oxides (1996) *Doklady Akademii Nauk*, 346 (3), pp. 346 - 349, Cited 0 times.
- Ikim M.I., Gromov V.F., Gerasimov G.N., Bekeshev V.G., Trakhtenberg L.I. Effect of synthesis method on the structural, conductive and sensor properties of NiO-In₂O₃ nanocomposites (2024) *Nanosystems: Physics, Chemistry, Mathematics*, 15 (6), pp. 867 - 878, Cited 0 times. DOI: 10.17586/2220-8054-2024-15-6-867-878
- Astapenko V.A., Sakhno S.V., Kozhushner M.A., Posvyanskii V.S., Trakhtenberg L.I. Photoabsorption by the electron subsystem of a semiconductor nanoparticle (2016) *Optics and Spectroscopy (English translation of Optika i Spektroskopiya)*, 121 (5), pp. 689 - 695, Cited 0 times. DOI: 10.1134/S0030400X16110059
- Kir'yanova T.V., Kozlova N.V., Lebedev S.A., Gerasimov G.N., Teleshov E.N., Trakhtenberg L.I. Mechanism of the photocyclopolymerization of crystalline dimethyl p-phenylenediacrylate (2005) *Russian Journal of Physical Chemistry A*, 79 (1), pp. 116 - 120, Cited 0 times.
- Trakhtenberg L.I. Solid-phase chemical reactions at high pressures (1997) *Chemical Physics Reports*, 16 (6), pp. 991 - 1000, Cited 0 times.
- Smolyanskii A.S., Ikim M.I., Ryndya S.M., Kiryukhin D.P., Trakhtenberg L.I. Corrigendum to "Effect of γ -irradiation on surface morphology, microstructure and diffuse reflectance of polytetrafluoroethylene" (*Radiation Physics and Chemistry*, (2025), 232, C, (112650), (S0969806X25001422), 10.1016/j.radphyschem.2025.112650) (2026) *Radiation Physics and Chemistry*, 242, art. no. 113556, Cited 0 times. DOI: 10.1016/j.radphyschem.2025.113556
- Trakhtenberg L.I., Milikh G.M., Pshezhetsky S.Ya. Relaxation of highly vibrationally excited molecules (1984) *Chemical Physics*, 89 (3), pp. 403 - 414, Cited 0 times. DOI: 10.1016/0301-0104(84)85067-3
- Klochikhin V.L., Trakhtenberg L.I. Tunnel splitting of vibrational levels in the spectra of nonrigid molecules and its treatment in terms of the perturbation theory in the double adiabatic approximation (1997) *Doklady Physical Chemistry*, 356 (1-3), pp. 290 - 293, Cited 0 times.
- Trakhtenberg L.I., Teleshov E.N., Gerasimov G.N. Effect of pressure and temperature on the rate of solid-phase polymerization (1999) *Russian Journal of Physical Chemistry A*, 73 (2), pp. 281 - 285, Cited 0 times.
- Klochikhin V.L., Trakhtenberg L.I. Pressure and temperature effects on the kinetics of tunnel solid-state reactions in the acridine-fluorene system (1998) *Russian Journal of Physical Chemistry A*, 72 (3), pp. 376 - 382, Cited 0 times.
- Klochikhin V.L., Trakhtenberg L.I. ROLE OF CRYSTAL-LATTICE DEFECTS IN LOW-TEMPERATURE CHARGE TRANSFER. (1986) *Soviet electrochemistry*, 22 (10), pp. 1335 - 1341, Cited 0 times.

- Trakhtenberg L.I., Fokeev A.A., Dolin S.P. Hydrogen Atom Tunneling in a Fluorene-Acridine System: Effect of the Reactant Reorganization(2003) Russian Journal of Electrochemistry, 39 (1), pp. 37 - 43, Cited 0 times. DOI: 10.1023/A:1021911528588
- Kurmangaleev K.S., Mikhailova T.Y., Trakhtenberg L.I. Mechanism of Reaction of H₂ on the (011) In₂O₃ Surface with a Preadsorbed Oxygen Molecule(2024) Inorganic Materials, 60 (7), pp. 867 - 870, Cited 0 times. DOI: 10.1134/S0020168524701048
- Trusevich N.G., Gavrilkin S.Y., Trakhtenberg L.I. Pinning of a Magnetic Flux in Polycrystalline YBa₂Cu₃O_{6.92} HTSC during Cooling in a Weak Magnetic Field(2023) Journal of Experimental and Theoretical Physics, 137 (3), pp. 356 - 361, Cited 0 times. DOI: 10.1134/S1063776123090157
- Dolin S.P., Solin M.V., Trakhtenberg L.I. Structure defects in silicate glasses. Quantum-chemical consideration(2001) Chemical Physics Reports, 19 (3), pp. 573 - 591, Cited 0 times.
- Rozenbaum V.M., Shapochkina I.V., Trakhtenberg L.I. Quantum particle in a V-shaped well of arbitrary asymmetry. Brownian motors(2024) Physics-USpekhi, 67 (10), pp. 1046 - 1055, Cited 0 times. DOI: 10.3367/UFNe.2024.06.039704
- Buimistrov V.M., Trakhtenberg L.I. POSSIBILITY OF OBSERVING COOPERATIVE EFFECTS IN RAMAN SCATTERING.(1977) Sov Phys Solid State, 19 (9), pp. 1574 - 1577, Cited 0 times.
- Gerasimov G.N., Shchanov M.F., Koneva V.A., Chasov V.A., Kir'yanova T.V., Popova E.L., Teleshov E.N., Trakhtenberg L.I. Effect of pressure on the cross-polymerization of polyamide containing diacetylene fragments in the backbone(1999) Vysokomolekularnye Soedineniya. Ser.A Ser.B Ser.C - Kratkie Soobshcheniya, 41 (3), pp. 541 - 542, Cited 0 times.
- Klochikhin V.L., Trakhtenberg L.I. EFFECT OF INTERMOLECULAR VIBRATIONS ON THE RATE OF CHARGE TRANSFER IN THE SOLID PHASE.(1983) Soviet electrochemistry, 19 (9), pp. 1092 - 1096, Cited 0 times.
- Shantarovich V.P., Bekeshev V.G., Kevdina I.B., Ikim M.I., Trakhtenberg L.I. Influence of Morphology of Impregnated Composites on Their Conducting Properties and Positron Annihilation(2024) Instruments and Experimental Techniques, 67 (6), pp. 1201 - 1208, Cited 0 times. DOI: 10.1134/S0020441224702129
- Ikim M.I., Demina V.A., Spiridonova E.Y., Ilegbusi O.J., Trakhtenberg L.I. Structural and Gas-Sensitive Characteristics of In₂O₃: Effect of Hydrothermal/Solvothermal Synthesis Conditions(2025) Micromachines, 16 (11), art. no. 1299, Cited 0 times. DOI: 10.3390/mi16111299
- Misurkin I.A., Titov S.V., Trakhtenberg L.I., Bondarenko V.E., Zhuravleva T.S., Ivanova O.P. Impulse photoconductivity in EB films of various morphology(2001) Synthetic Metals, 119 (1-3), pp. 449 - 450, Cited 0 times. DOI: 10.1016/S0379-6779(00)01460-0
- Kuznetsov A.V., Zav'yalov S.A., Grigor'ev E.I., Trakhtenberg L.I. Interaction of ozone with surface electron-donating sites of magnesia and titania(1996) Doklady Physical Chemistry, 346 (1-3), pp. 20 - 22, Cited 0 times.
- Gerasimov G.N., Popova E.L., Kozlova N.V., Teleshov E.N., Trakhtenberg L.I. Kinetics of the thermal cross-polymerization of diacetylene groups incorporated into chains of a polyamide matrix(2001) Zhurnal Fizicheskoy Khimii, 75 (2), pp. 366 - 369, Cited 0 times.
- Ivanov G.K., Kozhushner M.A., Trakhtenberg L.I. Theory of temperature dependence of hydrogen tunneling reactions(2000) Chemical Physics Letters, 322 (1-2), pp. 78 - 82, Cited 0 times. DOI: 10.1016/S0009-2614(00)00401-2

- Mamsurova L.G., Trusevich N.G., Trakhtenberg L.I. Formation of Fermi Arcs at $T \leq T_c$ in the Vicinity of d-Wave Nodes of Structurally Inhomogeneous $YBa_2Cu_3O_{6.92}$ HTSCs(2021) *Physics of the Solid State*, 63 (8), pp. 1244 - 1252, Cited 0 times. DOI: 10.1134/S1063783421080187
- Gerasimov G.N., Popova E.L., Kozlova N.V., Teleshov E.N., Trakhtenberg L.I. Kinetics of the thermal cross-polymerization of diacetylene groups incorporated into chains of a polyamide matrix(2001) *Russian Journal of Physical Chemistry A*, 75 (2), pp. 307 - 309, Cited 0 times.
- Trakhtenberg L.I., Nadtochenko V.A. H-atom tunneling in biological reactions(2012) *Doklady Biochemistry and Biophysics*, 442 (1), pp. 4 - 6, Cited 0 times. DOI: 10.1134/S1607672912010024
- Klochikhin V.L., Trakhtenberg L.I. Tunneling splitting of vibrational spectra of molecules(1998) *Chemical Physics Reports*, 17 (6), pp. 1043 - 1055, Cited 0 times.
- Klochikhin V.L., Pshezhetskii S.Ya., Trakhtenberg L.I. Tunnel mechanism of free valence mobility in polymers(1979) *Polymer Science U.S.S.R.*, 21 (12), pp. 3082 - 3086, Cited 1 times. DOI: 10.1016/0032-3950(79)90145-X
- Smolyanskii A.S., Ikim M.I., Ryndya S.M., Kiryukhin D.P., Trakhtenberg L.I. Effect of γ -irradiation on surface morphology, microstructure and diffuse reflectance of polytetrafluoroethylene(2025) *Radiation Physics and Chemistry*, 232, art. no. 112650, Cited 0 times. DOI: 10.1016/j.radphyschem.2025.112650
- Trakhtenberg L.I., Lin S.H., Ilegbusi O.J. Chapter 1 Introduction(2007) *Thin Films and Nanostructures*, 34, pp. 1 - 6, Cited 0 times. DOI: 10.1016/S1079-4050(06)34001-X
- Kozhushner M.A., Bodneva V.L., Trakhtenberg L.I., Gromov V.F., Rozenbaum V.M. Sensory properties of nanostructured wide-band-gap semiconductor oxides: Effect of temperature and size of nanoparticles(2014) *Nanotechnologies in Russia*, 9 (3-4), pp. 157 - 162, Cited 0 times. DOI: 10.1134/S1995078014020098
- Gerasimov G.N., Shchanov M.F., Koneva V.A., Chasov V.A., Kir'yanova T.V., Popova E.L., Teleshov E.N., Trakhtenberg L.I. Effect of Pressure on the Cross-Polymerization of Polyamide Containing Diacetylene Fragments in the Backbone(1999) *Polymer Science - Series B*, 41 (3-4), pp. 53 - 56, Cited 0 times.
- Gerasimov G.N., Kir'yanova T.V., Bel'skii V.K., Stash A.I., Lebedev S.A., Kozlova N.V., Trakhtenberg L.I. Effect of the structure of dimethyl 1,4-naphthalenediacrylate on the mechanism of its solid-phase photocyclopolymerization(2001) *Russian Journal of Physical Chemistry A*, 75 (3), pp. 467 - 472, Cited 0 times.
- Shchanov M.F., Popova S.A., Trakhtenberg L.I. Spectra of luminescence of non-uniform solid solutions. Influence of pressure and temperature(2002) *Khimicheskaya Fizika*, 21 (2), pp. 50 - 53, Cited 0 times.
- Trakhtenberg L.I. Tunneling transfer of atomic particles in chemical and biological reactions: The role of intermolecular vibrations and media reorganization(2014) *Russian Journal of Physical Chemistry A*, 88 (11), pp. 1837 - 1848, Cited 0 times. DOI: 10.1134/S003602441411020X
- Buimistrov V.M., Trakhtenberg L.I. About the disparity between differential cross sections of electron and positron bremsstrahlung(1978) *Physics Letters A*, 69 (4), pp. 261 - 262, Cited 1 times. DOI: 10.1016/0375-9601(78)90180-9
- Kozhushner M.A., Posvyanskii V.S., Trakhtenberg L.I. Electronic structure of semiconductor and metal nanoparticles(2014) *Nanotechnologies in Russia*, 9 (5), pp. 339 - 345, Cited 0 times. DOI: 10.1134/S1995078014030082

- Misurkin I.A., Titov S.V., Trakhtenberg L.I., Bondarenko V.E., Zhuravleva T.S., Ivanova O.P. Pulse photocurrent in polyaniline films with various morphologic properties (2001) *Chemical Physics Reports*, 19 (11), pp. 2019 - 2028, Cited 0 times.
- Buimistrov V.M., Trakhtenberg L.I. Atomic excitation by a simultaneous collision with another atom and with a photon (1972) *Soviet Physics Journal*, 15 (9), pp. 1293 - 1297, Cited 0 times. DOI: 10.1007/BF00901521