AHMED SHAHVELED ABDINOV

Doctor of Physical and Mathematical Sciences, Professor.
Member of the New York Academy of Sciences
Head of the Physical Electronics Department,
Phone (work): 99412-539-73-73
E-mail: Abdinov-axmed@yandex.ru.; Abdinov_axmed@yahoo.com.; Outlook.office.com.aabdinov@bsu.edu.az.; ahmed.abdinov45@gmail.com.

SHORT BIOGRAPHY

He was born on May 30, 1945 in the Behrud village of of the Ordubad district of the Nakhchivan Autonomous Republic. He has a higher education in physics, a teacher of physics. He is married. Has 3 children and 5 grandchildren. Azerbaijanian. He lives in Baku city.

EDUCATION AND SCIENTIFIC DEGREE AND TITLES

1968 - M.S. (with honor diploma), Faculty of Physics, Baku State University (Baku, Azerbaijan). On the results in education was awarded a "Lenin" scholarship.

1971 - Post graduate study in USSR (now Russian Federation), Physical-Technical Institute of the Academy of Sciences (St. Petersburg).

1972 - Candidate of Physical and Mathematical Sciences – Topic of the dissertation - «Nature of minority heated carriers in semiconductors of germanium»

1979 – Assistant professor,

1979 - Doctor of Physical and Mathematical Sciences. Topic of the dissertation – «Electronic processes in A^3B^6 type heterogeneous layered semiconductors»

1981 - Professor, Baku State University

LABOR ACTIVITY

1963 -1968 - Student of Physical Faculty of the Baku State University, (Baku, Azerbaijan).

1968 -1969 - Azerbaijan National Academy of Sciences, Institute of Physics, junior research assistant (Baku, Azerbaijan).

1969-1972 - Postgraduate student), Specialist in Physical Electronics, Ioffe Physical and Technical Institute, (Sankt-Petersburg, Russian Federation).

1972 -1975 - Assistant, Faculty of Physics, Baku State University (Baku, Azerbaijan).

1975 -1979 -Junior teacher, Faculty of Physics, Baku State University (Baku, Azerbaijan).

1979 -1981 - Assistant Professor, Faculty of Physics, Baku State University (Baku, Azerbaijan).

1981-1988 - Professor, Faculty of Physics, Baku State University (Baku, Azerbaijan).

1988-1989 - Dean of the Physics Faculty, Baku State University (Baku, Azerbaijan).

1989 -1992 - Professor of the Faculty of Physics, Junior Scientist and Advisor of scientific laboratory of “Solid State Electronics”, Baku State University (Baku, Azerbaijan).

1992 -1993 - Head of the Physical Electronics Department, Professor, Baku State University (Baku, Azerbaijan); Advisor of the scientific laboratory of “Solid State Electronics”.

1993-2000- Deputy Minister of the Ministry of Education (Baku, Azerbaijan); Head of the Physical Electronics Department.

From 2000 to present - Head of the Physical Electronics Department, Baku State University (Baku, Azerbaijan)

REAL SCIENCE TEACHING INTERESTS

Optoelectronics

Physics of electronic devices

Material Science

SCIENTIFIC WORK WITH YOUTHS

Master's degree - 21

Candidates of Physical and Mathematical Sciences (PhDs in Physics) **-** 30:

1975, Nizami Mikayil Mehtiyev – Investigation of electroluminescence and switching effects in InSe, GaSe, and GaS single crystals,

1975, Aydin Hasan Kyazimzadeh - Investigation of some non-equilibrium electron processes in n-InSe and p-GaSe single crystals,

1978, Abdullah Amrullah Ahmedov – Investigation of low-frequency current oscillations in InSe single crystals and some long-term relaxing conductivities in GaSe single crystals,

1980, Hamza Samad Seyidli - The study of some non-equilibrium electronic processes in single crystals $Cd_{02}Hg_{08}Te$.

1982, Valeh Gulu Mamedov – Electronic properties of single crystals $CuInSe_2$ and heterojunctions based on them.

1982, Elxan Yunis Salayev – Stimulated conduction and current instabilities in single crystals of gallium selenide,

1983, Yaqub Hasan Hasanov – Electronic phenomena caused by charge exchange of local levels in an inhomogeneous semiconductor of the type of indium selenide single crystals,

1984, Ramiz Ruslan Agayev - Influence of the magnetic field and composition inhomogeneity on generation-recombination processes in single crystals $Cd_xHg_{1-x}Te$ (0,18≤X≤0,20).

1984, Ismayil Kadir Ismayilov - Electric and photoelectric properties of single crystals $Cd_xHg_{1-x}Te$ (0,23≤X≤0,50) in weak electric fields.

1984, Abdujabbar Akhatovich Muminov - Electrical and photoelectric properties of boron single crystals.

1984, Fizza Mahmud Novruzova - Electrical and photoelectric properties of single crystals with $Cd_xHg_{1-x}Te$ (0,50X≤0,95) in weak and strong electric fields.

1985, Fizuli Israfil Mamedov - Influence of radiation defects on the photoelectric and electrical properties of $Cd_xHg_{1-x}Te$ (0,20≤X≤0,50) single crystals.

1985, Khuraman Damirgan Jalilova - Electronic properties of $Pb_{1-x}Sn_xTe$ (0,18≤x≤0,22) epitaxial layers and photodiodes based on them.

1986, Oktay Majid Sadykhov - Effect of doping on non-equilibrium electronic processes in indium selenide single crystals.

1987, Namig Hajikhalil Darvishov - Electronic and vibrational spectra of crystals with scheelite structure and solid solutions based on them.

1989, Nusrat Gudrat Sadygov - Influence of defects on electronic processes in cadmium-mercury-tellurium single crystals,

1989, Mirfatullah Mirismayl Seyidov - Effects due to charge exchange of impurity levels in spatially inhomogeneous semiconductors such as gallium selenide monocrystals.

1989, Lyudmila Nikolayevna Yegorova - Influence of radiation irradiation on electronic properties of $Cd_xHg_{1-x}Te$ (0,25≤X≤0,95) single crystals.

1990, Aydin Museiib Huseynov - The effect of doping with holmium and gadolinium on the electronic and physicochemical properties of indium selenide single crystals,1995, Rana Fikret k. Babayeva – Effect of doping on electronic processes in partially disordered semiconductors of the type of indium selenide single crystals.

1996, Nailya Ali Ragimova - Decay and annihilation of excitons in quasi-two-dimensional single crystals and activated by rare-earth ions,

1999, Rovnag Mirza Rzayev - Electronic properties of gallium selenide single crystals doped with dysprosium.

2001, Huseyn Mikail Mamedov - Photoelectric and photoluminescence properties of the $Cd_{1-x}Zn_xS$ and $CdS_{1-x}Se_x$ chalcogenide semiconductors and structures on their basis.

2001, Elshan Fayaz Nasirov - The electrical and photoelectrical properties of $Cd_{1-x}Zn_xSe_y$ films and structures on their basis, deposited from solution,

2005, Gultakin Hidayat Eyvazova - Electric and photoelectric properties of InSe single crystals doped by dysprosium atoms and heterojunctions manufactured on their basis

2007, Hasan Asker Gasanly - Electric and photoelectric properties of heterojunctions, produced by the method of electrochemical deposition on the basis of $Cd_{1-x}Zn_xS$ and $CdS_{1-y}Se_y$,thin films.

2008, Sabina Ikram Amirova - The electronic processes in thin films of $Cd_{1-x}Zn_xS_{1-y}Se_y$ solid solutions and structures on their basis,

2008, Ayten Tahir Bagirova - Injection and generation-recombination processes in gallium selenide layered crystala alloyed by rare-earth elements,

2009, Shamsaddin Allahverdi Allahverdiyev – Electronical phenomena related to recharge of local levels in crystals of gallium selenide doped by holmium.

2014, Vusal Usub Mamedov - Electronic properties of $Cd_{1-x}Zn_xS_{1-y}Te_y(Se_y)$ films and $p-GaAs/n-Cd_{1-x}Zn_xS_{1-y}Te_y(Se_y)$ structures, prepared by the method of electrochemical deposition.

Doctors of Physical and Mathematical Sciences **-** 7:

1989, Hamza Samad Seyidli – Electronic properties of single crystals of cadmium-mercury-tellurium solid solutions.

1991, Nizami Mikayil Mehtiyev - Generation-recombination processes in strongly anisotropic $A^{III}B^{VI}$ и $A^{II}B_2^{III}C_4^{VI}$ selenides.

2005, Yusif Gushu Nurullayev – The electron-defect interaction in partially disordered crystals.

2006, Maarif Ali Djafarov – Electronic processes in single crystals of some A^2B^6 type compounds and in films on their basis, chemically deposited from solution.

2009, Rana Fikret Babayeva – Features of the electronic phenomena in partially-disorder semiconductors of $A^{III}B^{VI}$ type of crystals with layered structure alloyed by rare-earth elements and heterostructures on their basis.

2014, Rovnaq Mirza Rzayev – Effect of drift barriers on the electron phenomenon in layered semiconductors of $A^{III}B^{VI}$ monoselenide type crystals.

2017, Huseyin Mikayil Mamedov – Features of electronic processes in films and structures on the basis of $A^{II}B^{II}C^{VI}$ semiconductors deposited by electrochemical method.

PRESENT RESEARCH INTERESTS

The study of the features of electronic processes in various partially disordered crystals and thin films, as well as structures on their basis, and elucidation of the mechanisms of the influence of the disorder of the material on these processes, the technology of functional elements for electronic systems. Firstly:

- Observed the "Benedics effect" with hot electrons
- In monocrystalline semiconductors detected anomalous photoconductivity, photoelectric and electric fatigue.
- Showed the possibility of controlling the degree of ordering of partially disordered semiconductor crystals by doping with rare-earth elements,

- In semiconductors with a small Hall mobility observed and explained the heating of free carriers by an electric field.

GOVERNMENT PRIZE AND HONORARY TITLES:

1976 - Komsomol laureate in the scientific and techniques fields.

1993 - International Soros Fund laureate in the scientific field.

2005 - "The Scientist of the Year", Baku State University.

2009 - "One of the 100 Scientists of the Year" International Biographical Center (Cambridge).

2009 - "Person of the Year" American International Biographical Institute.

2015 - Honorary Diploma of the Ministry of Education of the Republic of Azerbaijan.

2015 - Honorary Diploma of the Baku State University.

2017 - Teacher of the Year, Baku State University.

INTERNATIONAL SEMINARS, SCHOOLS, CONFERENCES

He has participated with more than 80 scientific papers at 70 different International Scientific Conferences and Symposiums. Including:

1971, 1974, 1977, 1980, 1989 - International Symposium on “unstableness and plasma in solid states” (Litva, Vilnius),

1973 - V International Scientific Symposium on “Electroluminescence and its application” (Russian Federation, Stavropoulos),

1973 - International Scientific Conference “Problems of dielectrically electronics” (Uzbekistan, Tashkent),

1977 – All-Union Conference on Microelectronics and Physics of Semiconductor Devices (Tbilisi, Georgia),

1980 - III All-Union Conference on Deep Levels in Semiconductors (Tashkent, Uzbekistan),

1982 - III All-Union Conference on Physical Processes in Semiconductors and Heterostructures (Odessa, Ukraine),

1982 - VIII All-Union Conference on Semiconductor Physics (Baku, Azerbaijan),

1983 - VI All-Union Symposium on Semiconductors with a Narrow-bandgap and Semimetal (Lviv),

1985 - All-Union Conference on the Physics of narrow-bandgap semiconductor (Moscow, Russian Federation),

1986 - III All-Union Conference "Physics and technology of large-bandgap semiconductors" (Makhachkala, Russian Federation),

1989 - V All-Union Symposium "Plasma and Instabilities in Semiconductors" (Palanga, Lithuania),

1989, 1991 - All-Union Scientific Conference "Photoelectric phenomena in semiconductors" (Tashkent, Uzbekistan, Ashgabat, Turkmenistan),

1991 - The 3 rd All-Union Scientific and Technical Conference "Materials of chalcogenide semiconductors" (Chernivtsi, Ukraina),

1991 – "Radiative Solid State Physics" I regional conference of the Republics of Central Asia and Kazakhstan (Samarkand, Uzbekistan),

1993 - I Russian Conference on Semiconductor Physics (Nizhny Novgorod, Russian Federation),

1997, 1999 – Physical problems in material science of semiconductors (Chernivtsi, Ukraine),

2000, 2002, 2004, 2006, 2008 - International Conference on actual problems of Solid State Electronics and Microelectronics (Russian Federation, Taganrog),

2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016 International Conference on Photoelectronics and Night Vision Devices. (Russian Federation, Moscow),

2002, 2004, 2006, 2010, 2016. - International conference on Technical and Physical Problems in Power Engineering (Azerbaijan-Baku, İran-Tabriz, Turkey-Ankara, Bilbao- Spain),

2004, 2006 - International Conference on Opto-, nanoelectronics,

nanotechnology and microsystems (Russian Federation, Ulyanovsk),

2004, 2006, 2016, 2018 - International Conference "Amorphous and Microcrystalline Semiconductors" (St. Petersburg, Russian Federation),

2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011 – European Materials Research Society, Spring Meeting (Strasbourg. France)

2004 - Fourth International Conference on Inorganic Materials (Antwerp, Belgium),

2004 - Euroconference Photovoltaic Devices: Manufacturing issues – from laboratory to mass production (Kranjska Gora, Slovenia),

2005 - International Conference “Physics-2005” (Azerbaijan-Baku),

2006 - International Scientific Conference and School-Seminar "Actual Problems of Solid State Electronics and Microelectronics" (Divnomorskoe, Russian Federation),

2007 - International Conference on Electronic and phonon processes in semiconductors (Azerbaijan-Baku

2008, 2013 – International Scientific Conference on "Actual Problems of Physics» (Azerbaijan, Baku),

2009 - International Scientific Conference dedicated to the 90-th anniversary of Baku State University (Baku, Azerbaijan),

2010 - European materials research society fall meeting (Warsaw, Poland),

2010 - Texnical and Physical problems of power engineering. (Tabriz, Iran)

2013, 2014, 2015 - International Scientific Conference "Fundamental and Applied Problems of Physics" (Tashkent, Uzbekistan)

2013 - International scientific and technical conference "Microelectronic converters and devices based on them" (Sumgait, Azerbaijan)

2015 - International Scientific Conference "Opto-, Nanoelectronics, Condensed Matter and High Energy Physics" (Baku, Azerbaijan),

2016 – 8-th Interntional conference on materials science and condensed matter physics (Chisinau. Moldova),

2016, 2018 - International Scientific Conference "Actual Problems of Solid State Physics" (Minsk, Belarus),

2017 – Modern Trends in Physics. International Conference (Baku, Azerbaijan),

2017 - International scientific conference "Actual problems of modern natural sciences" (Ganja, Azerbaijan),

2018 – International scientific conference "Actual problems of natural and economic sciences" (Ganja, Azerbaijan),

2018 - International Scientific Conference "Actual Problems of Applied Physics and Energy" (Sumgait, Azerbaijan).

PUBLICATION:

In the period of 1968-2018 he published more 400 scientific works in journals:

«Semiconductors» - 68 (Russian Federation), «Optics and Spectroscopy» – 1 (Russian Federation), «Microelectronics» – 1 (Russian Federation), «Applied Physics» – 18 (Russian Federation), «Inorganic Materials» - 21 (Russian Federation), «High-temperature compounds» - 1 (Russian Federation), «Journal of Physical Chemistry» - 1 (Russian Federation), «Surface Engineering and Applied Electrochemistry» - 1 (Russian Federation), «Russian Physics Journal» - 1 (Russian Federation), «Physica Status Solidi» - 6 (Germany), «Japan Journal of Applied Physics» - 3 (Japan), «Thin Solid films» - 3 (UK), «Journal of Optoelectronics And Advanced Materials» -3 (Rumın), Proc. SPİE - 9 (USA), International Journal of advanced research – 1 (Malaysia), International Journal of Engineering And Science – 1 (India), «Transactions of NAS of Azerbaijan» - 28 (Azerbaijan), «Proceedings of NAS of Azerbaijan» - 22 (Azerbaijan), «Journal of Physics» - 15 (Azerbaijan), «Bulletin of Baku State University» - 10 (Azerbaijan), « Problems of Energy» - 6 (Azerbaijan), Journal of Qafqaz

University – 5 (Azerbaijan), Journal of Baku Engineering University. Physics – 1 (Azerbaijan).

PUBLICATION IN "SI" JOURNALS

1. Electrical properties of liquid selenium (in Russian) // High-molecular connections.1966. V.9. No. 8, p.1831-1832
2. Interaction of tallium impurity with oxygen in selen. // Journal of Physical chemistry, 1968, Vol. XLII, Issue 7, p.1680-1683.
3. Peculiarity of change of mobility of the current carriers in Ge in high electrical field. // Physics and technics of semiconductors, 1971, Vol. 5, Issue 8, p.1563-1567.
4. Investigated carrier heating in Ge at high electron-hole interactions. // Physics and technics of semiconductors, 1971, Vol.5, Issue 10, p. 1969-1975.
5. Thermophotoelectrical phenomenon of carrier heating in germanium. // Physics and techniques of semiconductors, 1972, Vol. 6, Issue 2, p. 353-359,
6. Effect of basic carriers on the mobility of germanium in pulse electrical field. // Physics and technics of semiconductors, 1972, Vol. 6, Issue 3, p. 447-481.
7. Change of minority hole mobility in germanium at high frequency electrical field at high electron-hole interactions. // Physics and technics of semiconductors, 1972, Vol. 6, Issue 3, p.577-578.
8. Appearance of thermo-emf at homogeneous semiconductors (phenomenon of Benedix) at heating of carries by HF field in germanium. // Physics and technics of semiconductors, 1972, Vol. 6, Issue 5, p.915-920.
9. Benedix effect at annealing of carriers by HF field. // Physics and technics of semiconductors, 1972, Vol. 6, Issue 7, p.1354-1358.

10. S-elements based GaSe type laminar semiconductors. // Phys. Stat. Solidi (a), 1973, vol. 15, K.33-35.
11. Change of electroconductance of p-GaSe at high HF electrical field. // Physics and techniques of semiconductors, 1973, Vol.7, Issue9, p.1830-1833.
12. On the switching phenomenon in GaSe. // Physics and techniques of semiconductors, 1973, Vol.7, Issue 10, c.2030-2031.
13. Hot carriers appeared at HF electrical field in electronic gallium selenide. // Physics and techniques of semiconductors, 1974, Vol. 8, Issue 1, p.192-195.
14. Thermo-e.m.f. connected with heating of carriers by HF field in p-GaSe. // Physics and techniques of semiconductors, 1974, Vol.8, Issue 5, p.869-873.
15. The switching phenomenon in InSe. // Physics and technics of semiconductors, 1974, Vol. 8. Issue 11, p. 2283.
16. Thermo-e.m.f. associated with with heating of carriers by HF field in semiconductive compounds InSe. // Physics and techniques of semiconductors, 1974, Vol. 8, Issue 12, p. 2311-2315.
17. On the mechanism of switching phenomenon in layered semiconductors of A^3B^6. // Microelectronics, 1975, Vol. 4, Issue 5, p.465-467.
18. Electroluminescence of single crystals of indium selenide. // Optics and spectroscopy, 1975, Vol.38, Issue 5, c.952-955..
19. Electroluminescent switch made of GaS layered semiconductor. // Soviet Physics Semiconductors-USSR, 1975, vol. 9, Issue 5, p. 642-643.
20. Injection of electrons and electron levels of capture in high-ohmic single crystals of gallium sulphide. // Physics and technics of semiconductors, 1975, Vol. 9, Issue 7, p.1429-1431.

21. Investigated hot carriers appeared at HF electrical field in semiconductors n-InSe. // Physics and techniques of semiconductors, 1975, Vol. 9, Issue 8, p.1561-1564.
22. Photomemory and electromemory phenomena in high-resistivity n-type InSe single crystals // Soviet Physics-Semiconductors, 1975, vol. 9, Issue 9, p. 1113-1115.
23. Anomalous Photoconductivity in n-Type InSe Single Crystals. // Fizika i Tekhnika Poluprovodnikov, 1975, vol. 9, Issue 10, p. 1970-1975.
24. Photoelectric memory effect in p-type GaSe. // Soviet Physics-Semiconductors, 1975, Vol. 9, Issue 11, p. 1391-1393.
25. Negative Residual Photoconductivity in InSe Single Crystals. // Soviet Physics-Semiconductors, 1975, Vol. 9, Issue 12, p. 1537-1538.
26. Investigation of the current-voltage characteristics of the layered semiconductor n-type InSe. // Soviet Physics Semiconductors, 1976, Vol.10, Issue 1, p. 44-47.
27. Negative photoconductivity and quenching of the photocurrent in n-type InSe under impurity excitation conditions. // Soviet Physics Semiconductors, 1976, Vol. 10, Issue 1, p. 47-50.
28. Effect of electrical field on the anomaly photoconductivity in monocrystals n-InSe. // Physics and technics of semiconductors, 1976, Vol.10, Issue 5, p.980-981.
29. Thermoelectric power of hot current carriers in heat-treated single crystals of germanium-silicon alloys (in Russian). // FTP, 1976, T.10, №7, p.1369-1373.
30. Generation of Electrical Pulses in InSe Single Crystals. // Soviet Physics-Semiconductors, 1976, vol.10, Issue 10, p.1178-1179.
31. Conductance of high ohmic monocrystals p-GaSe, stimulated by electrical field. // Physics and technics of semiconductors, 1976, Vol.10, Issue 13, p.2299-2303.

32. Heating of curries at HF electrical field in heart treated monocrystals $Ge_{1-x}Si_x$. // Physics and technics of semiconductors, 1977, Vol.11, Issue 1, p.65-68.
33. Anomalous photoconductivity of InSe single crystals. // Soviet Physics-Semiconductors, 1977, vol. 11, Issue 2, p. 227-228.
34. Oscillation of current induced by impurity IR light in monocrystals indium selenide. // Physics and technics of semiconductors, 1977, Vol.11, Issue 5, p.899-903.
35. Hot electrons, produced by HF electrical field in n-$Ge_{1-x}Si_x$. // Physics and technics of semiconductors, 1977, Vol. 11, Issue 5, p.1005.
36. Thermophotoe.m.f. connected with carrier heating in monocrystals of $Ge_{1-x}Si_x$. // Physics and technics of semiconductors, 1977, Vol. 11, Issue 5, p.1006.
37. Heating of carriers by HF electrical field in monocrystals p-Ge-Si. // Physics and technics of semiconductors, 1977, Vol.11, Issue 5, p.1006.
38. Thermoelectric power due to the heating of current carriers by a microwave electric field in Ge1-xSix single crystals (in Russian). // FTP, 1977, Vol.11, No. 5, p. 1006.
39. On the low-frequency oscillation of current in monocrystals InSe. // Physics and technics of semiconductors, 1977, Vol.11, №10, p.2026-2029.
40. Negative photoconductivity induced by an electric-field in gallium selenide single-crystals. // Soviet Physics Semiconductors-USSR, 1978, Vol. 12, Issue 6, p. 638-641.
41. About the electroluminescence in monocrystals GaS. // Physics and technics of semiconductors, 1978, Vol.12, №6, p.1237.
42. IR quenching of residual photoconductivity in monocrystals InSe. // Physics and technics of semiconductors, 1978, Vol.12, №6, p.1237.
43. Negative residual photoconductivity in p-type GaSe single crystals. // Sov. Phys. Semicond.,, 1978, vol. 12, Issue 9, p. 1041-1043.

44. Impurity photoconductivity of GaSe induced illumination corresponding to the fundamental absorption region. // Soviet Physics Semiconductors-USSR, 1980, vol. 14, Issue 1, p. 95-98.
45. Phototrigger effect in indium and gallium selenide single crystals // Fizika i Tekhnika Poluprovodnikov, 1980, vol. 14, Issue 4, p.749-753.
46. Temperature--electrical instability and low-frequency current oscillations in gallium selenide single crystals // Sov. Phys. Semicond., 1980, Vol. 14, Issue 4, p.442-445.
47. Photoconductivity of n-type $CuInSe_2$ single crystals. // Sov. Phys. Semicond., 1980, vol. 14, Issue 5, p. 526-528.
48. Slowly relaxing conductivity excited by an electric-field in indium and gallium selenide single-crystals. // Soviet Physics Semiconductors-USSR, 1981, vol. 15, Issue 1, p. 66-70.
49. Heating of carries in monocrystals $CuInSe_2$ by HF electrical field. // Physics and technics of semiconductors, 1981, Vol.15, Issue 2, p.258-262.
50. Induced injective impurity switching in monocrystals GaSe and low-frequencies oscillations of current. // Physics and technics of semiconductors, 1981, Vol. 15, Issue 3, p. 453-458.
51. Electrical and photoelectric properties of p-GaSe-n-$CuInSe_2$ heterojunctions. // Soviet Physics Semiconductors-USSR, 1981, Vol. 15, Issue 3, p. 345-346.
52. Dependence of electrical conductance of monocrystals of solid solutions p-$Cd_xHg_{1-x}Te$ on the intensity of the HF electrical field. // Physics and technics of semiconductors, 1981, Vol. 15, Issue 5, p.897-901.
53. Impurity Photoconductivity of Induced Illumination in Indium Selenide Single Crystals with Residual Conductivity. // Fizika i Tekhnika Poluprovodnikov, 1981, vol. 15, Issue 7, p. 1255-1258.

54. Effect of electron irradiation on the heating of carries by electrical field in monocrystals $Ge_{1-x}Si_x$. // Physics and technics of semiconductors, 1981, Vol. 15, Issue 10, p.1989-1993.
55. Absorption-band edge of $CuInSe_2$ single-crystals // Soviet Physics Semiconductors - USSR, 1981, vol. 15, Issue 11, p. 1302-1303.
56. Electrical and photoelectric properties of isotypic n-InSe-n-$CuInSe_2$ heterojunctions. // Soviet Physics Semiconductors-USSR, 1982, Vol. 16, Issue 2, p. 222-223.
57. Electroinduced impurity photoconductivity in monocrystals InSe with stimulated by electrical field negative photoconductivity and residual conductivity. // Physics and technics of semiconductors, 1982, Vol. 16, Issue 5, p.769-772.
58. Effect of magnetic field on the photoconductivity of solid solutions p-$Cd_xHg_{1-x}Te$. // Physics and technics of semiconductors, 1982, Vol. 16, Issue 5, p.880-882.
59. Impurity photoconductivity in monocrystals gallium selenide induced by electrical field. // Physics and technics of semiconductors, 1982, Vol. 16, Issue 6, p.953-958.
60. Current-voltage characteristics of high-resistivity single-crystals of III-VI-layer compounds. // Soviet Physics Semiconductors-USSR, 1982, vol.16, Issue 6, p. 638-641.
61. Residual optical quenching of intrinsic photoconductivity in monocrystals of indium selenide. // Physics and technics of semiconductors, 1982, Vol. 16, Issue 8, p.1523.
62. Long-relaxation negative photoconductivity in monocrystals of indium selenide. // Physics and technics of semiconductors, 1982, Vol. 16, Issue 8, p.1525.
63. Thermoemf of hot carriers produced by HF electrical field in monocrystals $Ge_{1-x}Si_x$ irradiated by electrons. // Physics and technics of semiconductors, 1982, Vol. 16, Issue 10, p. 1828-1830.

64. Photoelectrical fatiguability in monocrystals of InSe. // Physics and technics of semiconductors, 1983, Vol. 17, Issue 4, p.761-766.
65. About the effect of fluctuation of composition on the photoelectrical properties of monocrystals of solid solutions $Cd_xHg_{1-x}Te$. // Physics and technics of semiconductors, 1984, Vol. 18, Issue 6, p.1085-1086.
66. Effect of gadolinium impurities on injection-induced impurity photoconductivity in InSe single crystals. // Phys. Stat. Sol. (a), 1985. vol. 92, p. k77-k80.
67. Electrophysical properties of irradiated single crystals of n-CdxHg1-xTe in strong electric fields (in Russian). // Inorganic materials. 1985, Vol. 21. No. 10, p.1677-1679.
68. Effect of doping on the optical quenching of injection current in monocrystals InSe. // Physics and technics of semiconductors, 1986, Vol. 20, Issue 7, p.1347.
69. Effect of in homogeneity of composition on the electrical and optical properties of monocrystals $Cd_xHg_{1-x}Te$ ($0.19<x<0.30$). // Inorganic materials, 1987, Vol. 23, Issue 11, p. 1835-1838.
70. The influence of gadolinium doping on the switching effect in indium selenide single crystals. // Phys. Stat. Sol. (a), 1989. vol. 116, p.k173-177.
71. Effect of doping on exciton states in InSe and GaSe lamellar semiconductors // Phys. Stat. Sol. (a), 1991, vol. 128, p.235-242.
72. Electrophysical characteristics of γ-radiated monocrystals $Cd_xHg_{1-x}Te$ in $0.24<x<0.40$. // Inorganic materials, 1991, Vol. 27, Issue.4, p.696-698.
73. Exitonic levels in doped monocrystals InSe and GaSe. // Physics and technics of semiconductors, 1991, Vol. 25, Issue 6, p.983-989.
74. Transition relaxation of dark current in pure and doped crystals of indium selenides // Neorganicheskie Materialy. 1994, Vol. 30, Issue 3, p. 339-341.

75. An impurity photoeffect in partially disordered InSe crystals doped with Dy. // Inorganic Materials. 1994, Vol. 30, Issue 7, p. 883-886.
76. Accumulation of weak optical signals and spectral memory in InSe<Dy> single crystals. // Neorganicheskie Materialy. 1995, Vol. 31, Issue 7, p.896-898.
77. Lasting isothermal relaxation of dark electric resistance in dysprosium-doped indium selenide single crystals. // Neorganicheskie Materialy, 1995, Vol. 31, Issue 8, p.1020-1022.
78. Resistivity oscillations in InSe<Dy> single crystals. // Neorganicheskie Materialy, 1996, vol. 32, Issue 12, p.1446-1448.
79. Effect of Dy doping on the photoelectric properties of GaSe single crystals. // Inorganic materials. 1998, Vol. 34, Issue 3, p. 205-206.
80. Photoelectric behavior of GaSe single crystals doped with Dy. // Inorganic materials. 1999, Vol. 35, Issue 4, p. 325-327.
81. Photoconductivity of films $Cd_{1-x}Zn_xSe$ in IR-region deposited from solution. // Russian journal of Apple Physics, 2000, Vol. 7, №6, p.56-61.
82. Photoreceivers of IR radiation on the basis of $CdS_{1-x}Se_x$ deposited from solution. // Russian journal of Apple Physics, 2000, Vol. 7, №6, p.63-68.
83. Sensitization of IR photosensitivity by electrical field in indium selenide layered crystals. // SPIE, 2003, v. 5126, p.381-385.
84. Negative infrared photoconductivity in $CdS_{1-x}Se_x$ films. // Russian J. of Applied Physics, 2004, № 3. p. 94-97.
85. Functional opportunities of films $Cd_{1-x}Zn_xSe$, deposited from aqueous solution in IR range of spectrum. // Russian J. of Applied Physics, 2004, № 4, p.84-89.
86. Photoluminescence of rare-earth-doped InSe and GaSe single crystals. // Inorganic materials. 2004, vol. 40, Issue 6, p. 567-569.
87. About the mechanism of doping by rare-earth elements on photoluminescence of single crystals of A_3B_6 with layered structure. // Russian J. of Applied Physics, 2004, № 5. p. 74-78

88. Sensitization of IR photoconductivity in layered crystals of InSe by electrical field. // Russian J. of Applied Physics, 2004, № 5, p.81-85
89. Photoelectric properties of films $A^2B^2C^6$, deposited from a solution // Proc. of SPIE. 2004. Vol. 5834. p.254-259.
90. Photoelectric properties of isotype heterocundoctions n-InSe<REE> in visible and near IR-region. // Proceedings of SPIE. 2004. V.5834. p. 260-263.
91. The effect of doping by rare earth elements on initial and sensibilized IR-photosensivity of layered Indium selenide crystals // Proceedings of SPIE. 2004. V.5834. p. 299-303.
92. Photosensitivity of p, n-Si/n-$Cd_{1-x}Zn_xS$ heterojunctions manufactured by a method of electrochemical deposition // Thin Solid Films, 2005, V.480-481, p.388-391.
93. The effect of doping by rare earth elements on initial and sensibilized IR-photosensitivity of layered indium selenide crystals. // Russian J. of Applied Physics, 2006, № 2, p. 62-66.
94. Investigation of electrodeposited p-Si/$Cd_{1-x}Zn_xS_{1-y}Se_y$ heterojunction solar cells. // Thin Solid Films. 2006, v. 511-512, p. 140-142.
95. Effect of doping by RE on the electrical properties of single crystals InSe. // Inorganic materials, 2006, Vol.4 2, № 9, p.1035-1039.
96. On the opportunity of increase of stability degree of parameters and characteristics of IR photoreceivers on the basis of Mo/$CdS_{1-x}Se_x$. // Russian J. of Applied Physics, 2006, № 5, p.82-86.
97. Electrical and photoelectric properties of electrochemically fabricated $Sn_{O.2}$/$Cd_{0.4}Zn_{0.6}$S/CdTe solar cells. // Semiconductors, 2006, vol. 40, Issue 12, p.1442-1444.
98. Photodetectors for visible and near infrared with controlled sensitivity on the basis of p-GaSe single crystals doped by rare-earth elements // Proc. Of SPIE. 2006, Vol. 6636. p-66360G-1-66360G-4
99. Preparation and investigation of electrodeposited p-Si/$Cd_{0.3}Zn_{0.7}S_{0.4}$

$Se_{0.4}$ heterojunctions // Pros. SPIE. 2006. v.6636. p.986-990

100. Photoelectrical properties of isotypic heterostructures n-InSe<Dy>/n-$CuInSe_2$ in visible and near IR regions of spectrum. // Russian J. of Apple Physics, 2007, № 1, p.107-110.

101. Recombination processes in solution-grown $CdSe_{1-x}Te_x$ films. // Inorganic Materials, 2007, Vol. 43, Issue 3, p. 233-235.

102. Heat treatment effects in $In_2O_3/Cd_{0.4}Zn_{0.6}S_{0.9}Se_{0.1}$/CdTe heterojunction solar cells. // Journal of Optoelectronics and Advanced Materials, 2007, v.1, № 9, p.480-483

103. Investigation of electrodeposited Glass/SnO_2/$CuInSe_2$/$Cd_{1-x}Zn_xS_{1-y}Se_y$ /ZnO thin solar cells. // Japanese journal of Applied Physics, 2007, v.46, № 11, p.7359-7361

104. Functional capabilities of $CdSe_{1-x}Te_x$ films in IR region of the spectrum, Russian Applied Physics, 2008, № 5, p103-106.

105. Electrical conductivity of undoped and rare-earth-doped high-resistivity GaSe crystals. // Inorganic Materials, 2009, Vol. 45, Issue 7, c.723-727.

106. Dielectric properties of nanocomposites on the basis of copper sulfide nanoparticles and a polymer matrix // Surface Engineering and Applied Electrochemistry, 2009, vol. 45. Issue 2, p.167-170.

107. Dependence of Carrier Mobility on an Electric Fieldin Gallium Selenide Crystals // Semiconductors, 2012, Vol. 46, Issue. 6, pp. 730–735.

108. Temperature dependence of carrier mobility in undoped and gadolinium p-GaSe crystals // Inorganic materials. 2012. vol. 48. no 6. pp. 559-562.

109. Electric Field Effect on Photoconductivity Decay in *n*-InSe Single Crystals // Inorganic Materials, 2012, Vol. 48, No. 8, pp. 781–785.

110. Effect of Temperature and Rare Earth Doping on Charge Carrier Mobility in Indium Monoselenide Crystals. // Semiconductors, 2013, Vol. 47, No. 8, pp. 1013–1017.

111. Electric Field Effect on the Electrical Conductivity of InSe and InSe<Dy>Crystals.// Inorganic Materials, 2013, Vol. 49, No. 12, pp. 1180–1186.
112. Effects of Temperature and Rare Earth Doping on the Transport Properties of GaSe Crystals. // Inorganic Materials, 2014, Vol. 50, No. 4, pp. 334–338.
113. Effect of Light on the Mobility of Free Carriers in Indium Monoselenide Crystals. // Semiconductors, 2014, Vol. 48, No. 8, pp. 981–985.
114. Multifunctional photodetectors based on the n-InSe crystals.// Russian J. of Applied Physics, 2014, № 6. p. 76-80.
115. The IR-radiation receivers on a basis of gallium monoselenide. // Russian J. of Applied Physics, 2015, № 5. p. 67-71
116. On the Specific Electrophysical Properties of n-InSe Single Crystals. // Semiconductors, 2016, Vol. 50, No. 1, pp. 34–37.
117. Photodetectors for UV and visible ranges based on the monogallium selenide crystals // Russian J. of Applied Physics, 2016, № 6, p.72-76

118. Features of the mobility of electrons in a layered semiconductor n-InSe (in Russian). // FTP, 2018, T.52, issue. 13. C. 1563-1569.

119. Peculiarities of the kinetic coefficients of single crystals of a layered p-GaSe semiconductor (in Russian). // News of higher educational institutions. Physics (in Russian).

1. OTHER PUBLISHED WORKS

1. Donor-acceptor interaction of mixtures in selenium (in Russian) // Scientific notes ASU. 1966. №6. p. 74-77
2. Heating of current carriers in Se under the effect of a microwave electric field (in Russian) // Izv. AN Azerb. SSR, ser. ФТ-МН, 1974, № 4, P.151-155
3. On spectral memory in p-GaSe single crystals (in Russian) / / Izv. AN Az.

SSR, ser. FT and MN, 1975, Vol. 4, p.91-94.
4. Thermo-photo-electric effect due to the heating of the current carriers. InSe n-type single crystals // Akademiya Nauk Azerbaidzhanskoy SSR Izvestiya Seriia Fiziko Tekhnicheskikh i Matematicheskikh Nauk, 1976, Issue 4, p. 50-53.
5. Residual photoconductivity in InSe and GaSe single crystals. // Akademiya Nauk Azerbaidjhanskoy SSR Izvestiya Seriya Fiziko-Tekhnicheskikh i Matematicheskikh Nauk, 1977, vol. 2, p.72-76.
6. On the problem of contact/metal-laminated semiconductor of InSe, GaSe, GaS (in Russian) // Scientific notes of the Ministry of Higher and vocational high education of the AzSSR, Ser.fiz.-Math. Sciences, 1977, №4, p.106-109
7. Field quenching of residual photoconductivity in InSe single crystals (in Russian) // DAN Az. SSR, 1977, T.33, N8, p.36-40
8. Photoconductivity of a glassy semiconductor AsSTe (in Russian) // Izv. AS of the Azerbaijan SSR, ser. FT and MN, 1978, No. 1, p.32-35
9. Conductivity of glassy semiconductor AsSTe in alternating current (in Russian) // DAN Az.SSR, 1978, T.34, №6, p.27-29
10. On the problem of anomalous photoconductivity in layered semiconductors of the A^3B^6 type (in Russian) // DAN Az. SSR, 1978, V.34, No. 8, p.22-26.
11. Thermoelectric effect of hot carriers in $Cd_xHg_{1-x}Te$ (in Russian) // DAN AzSSR, 1978, T.34, N12, p.19-21
12. Anomalous photoconductivity of single crystals of a layered semiconductor p-GaSe (in Russian) / / Izv. AS of the Azerbaijan SSR, ser. FT and MN, 1980, No. 1, p.85-92
13. On the energy band diagram of p-GaSe/n-InSe heterojunctions (in Russian) // Izv. AN Az. SSR, ser. FT and MN, 1980, No. 2, p.113-116.
14. On the mechanism of IR-quenching of residual photoconductivity in semiconductors (in Russian) // DAN Az. SSR, 1980. T.36, №3, p.14-18.

15. Thermoelectric power of hot electrons in CuInSe2 single crystals (in Russian) // DAN Az.SSR, 1980. T.36, No. 2, p.30-33.
16. Electrical properties of n-CuInSe2 single crystals (in Russian) // DAN Az.SSR, 1980. T.36, No. 10, p.17-20.
17. Electroflection and heterogeneity in composition in $Cd_xHg_{1-x}Te$ single crystals (in Russian) // DAN Az.SSR, 1981. Vol.37, No.3, p.15-18.
18. Thermoelectric power of hot current carriers produced by a strong microwave electric field in CdxHg1-xTe single crystals (in Russian) // DAN Az.SSR, 1981. Vol.37, No. 4, p.30-33.
19. On the IR quenching of the residual photoconductivity in indium and gallium selenide single crystals (in Russian) // Izv. AS of the Azerbaijan SSR, ser. FT and MN, 1981, №5, p.85-89
20. Thermoelectric power of hot electrons in $CuInSe_2$ single crystals (in Russian) // DAN Az.SSR, 1980. V.36, No. 2, p.30-33.
21. Electrical properties of n-CuInSe2 single crystals (in Russian) // DAN Az.SSR, 1980. T.36, №10, p.17-20.
22. Some electrical-properties of the glass semiconductor As-S-Te // Izvestiya Akademii Nauk Azerbaidzhanskoi SSR Seriya Fiziko-Tekhnicheskikh I Matematicheskikh Nauk, 1981, Issue 5, p.84-87/
23. Temperature dependence of the current-voltage characteristic of InSe, GaSe, and GaS single crystals (in Russian) // DAN Az.SSR, 1981. Vol.37, No. 11, p.22-26
24. On the problem of the residual negative photoconductivity in indium selenide single crystals (in Russian), Izv. AS of the Azerbaijan SSR, ser. PT and MS, 1982, No.19, p.80-83.
25. Kinetics of the photoconductivity of p-CdxHg1-xTe single crystals in crossed electric and magnetic fields (in Russian) // DAN Az.SSR, 1982. V.38, No. 7, p.18-20.
26. Features of IR-quenching of photoconductivity in a layered semiconductor of indium selenide (in Russian) // DAN Az.SSR, 1982. V.38,

No. 7, p.19-21

27. Electrophysical properties of n-CdxHg1-xTe single crystals (0.24 <x <0.40) (in Russian)// DAN Az.SSR, 1982. V.38, No. 9, p.26-29.
28. Impurity photoconductivity induced by injection in indium selenide single crystals (in Russian) // DAN Az.SSR, 1982. T.38, No. 12, p. 29-31
29. Negative photomemory in n-InSe single crystals (in Russian) // DAN Az.SSR, 1983. V.39, No. 2, p. 29-32.
30. Effect of γ-irradiation on the kinetic parameters of p-CdxHg1-xTe single crystals at 0.30≤x≤0.40 (in Russian) // Izv. Academy of Sciences of the Az.SSR, ser. PT and MS, 1984, No.3, p.63-66
31. Warming of carriers by a strong electric microwave field in single crystals of n-CdxHg1-xTe at 0.54≤x≤0.92 in Russian) // Izv. AN Az.SSR, ser. PT and MS, 1984, No. 4, p.76-79.
32. Nature of photoelectric fatigue in a layered semiconductor n-InSe (in Russian) / / Izv. AN Az. SSR, ser. FT and MN, 1984, №4, p.80-84.
33. Hot electrons produced by a strong microwave electric field in n-CdxHg1-xTe single crystals (in Russian) // Izv. AS of the Azerbaijan SSR, ser. FT and MN, 1983, No. 4, p.88-92
34. Thermophotoelectric effect of hot carriers created by a strong electric field in CdxHg1-xTe single crystals at x = 0.92 (in Russian) // Izv. AS of the Azerbaijan SSR, ser. PT and MS, 1984, No. 5, pp. 50-53.
35. Electrical properties of monocrystals n-CdxHg1-xTe irradiated with fast electrons (in Russian) // DAN Az. SSR, 1984. V.40, No. 6, p. 29-32.

36. Warming of carriers in epitaxial films of $Pb_{0.82}Sn_{0.18}Se$ by a strong electric microwave field (in Russian) // DAN Az. SSR, 1984. V.40, No. 7, p.28-31
37. Influence of gadolinium impurities on the intrinsic photoconductivity induced by intrinsic light in indium selenide single crystals (in Russian) // DAN Az.SSR, 1985. V.41, No. 8, p. 28-31.

38. Thermoelectric power of hot current carriers created by a strong microwave electric field in epitaxial layers (in Russian) // DAN Az.SSR, 1985. T.42, No. 9, p.23-24
39. Electrophysical properties of n-CuInSe2 single crystals irradiated with γ-quanta (in Russian) // DAN Az. SSR, 1986. T.42, №10, p.21-24
40. Influence of irradiation with fast electrons on the photoelectric properties of n-CdxHg1-xTe single crystals (0.23≤x≤0.50) (in Russian) // DAN Az. SSR, 1986. V.42, No. 12. p.19-22
41. Generation-recombination characteristics of n-CdxHg1-xTe single crystals with 0.23≤x≤0.50 (in Russian) // Izv. AS of the Azerbaijan SSR, ser. PT and MS, 1987, No. 5, p.73-74
42. Influence of irradiation with γ-quanta on the electrophysical properties of CdxHg1-xTe single crystals with 0.50 <x <0.95 (in Russian) // DAN Az.SSR, 1989. V.45, No. 2. p.17-20
43. Features of negative photoconductivity in single crystals of layered semiconductors of indium and gallium selenides (in Russian), DAN Az.SSR, 1989. V.45, No. 3. p.7-11
44. Influence of the surface recombination rate on the n-CdxHg1-x Te current-voltage characteristics under the conditions of the Pinch effect (in Russian), DAN Az.SSR, 1988. V.44, No. 3. p. 85-88
45. Residual IR quenching of intrinsic photoconductivity in single crystals of indium and gallium selenides (in Russian), DAN Az.SSR, 1989. V.45, No. 4. p.11-16
46. Photoconductivity of CdxHg1-xTe single crystals irradiated with γ-quanta at 0.20 <x <0.95 (in Russian) // DAN Az. SSR, 1988. V.44, No.4, p.29-33
47. Effect of high-temperature irradiation with fast electrons on the electrical characteristics of CdxHg1-xTe single crystals at 0.50 <x <0.95 (in Russian) // DAN Az. SSR, 1989. V.45, No.9. p.13-16
48. Effect of electron irradiation on the photoconductivity of CdxHg1-xTe

single crystals with x = 0.65-0.95 (in Russian), DAN Az.SSR, 1990. V.46, No. 9. p.27-31

49. Low-frequency current oscillations in CdxHg1-xTe single crystals with x>0.65 (in Russian) // Reports of the Azerbaijan Academy of Sciences. V.XLVIII-L. No.1-12. 1993/94, pp. 33-37.

50. Photoelectric properties of single crystals GaSe doped by dysprosium.// Fizika. 1997. C.3. №1. p.7-8Photoelectric properties of single crystals GaSe doped by dysprosium.// Fizika. 1997. C.3. №1. p.7-8

51. Photovoltaic properties of doped layered semiconductors (in Azerbaijani) // Izvestiya Baku University, Series of physics-mat.s. 1998. No. 1. p. 5-7

52. Photoluminescence of InSe: Dy single crystals (in Russian) // Reports of the Azerbaijan Academy of Sciences. 2003. T.LIV. No. 3-4. 1998. P.51-53.

53. On the problem of photoconductivity of InSe:Dy single crystals, promising for solar energetics in (in Russian) // Power Engineering. 2001. No. 1. p. 66-72.

54. Photochemical reaction in CdZnSe films precipitated from an aqueous solution (in Russian) // Bulletin of the Baku University. 2003. No. 4. P.117-124.

55. Photoluminescence of doped with dysprosium indium and gallium selenide (in Russian) // Reports of the Azerbaijan Academy of Sciences. 2003. V. XXIII. No. 5. P. 143-147.

56. On the question on the opportunity of an increase in the reproducibility of the parameters and characteristics of solar converters on the basis A3B6 layered crystals // Power Engineering. 2003. № 3. p.83-87.

57. Solar converters on the basis of isotypic $In2O_3$ / $Cd_{1-x}Zn_xSe$ / $CdSe_{1-y}S_y$ heterostructures prepared by the method of electrochemical deposition. // Power Engineering, 2004, No. 1, p.64-70

58. Electrical properties of isotype heterojunctions n-InSe <RE> / n-CuInSe2. // Power Engineering, 2004. № 2, p.37-44.

59. The peculiarities of volt-ampere characteristics in indium selenium monocrystals doped by rare elements. // Transactions of NASA, 2004, Vol. XXIV, No. 5. p.75-80

60. About the preparation of uniform films of $Cd_{1-x}Zn_xSe$ / $CdSe_{1-y}S_y$ by electrochemical deposition // Transactions of NASA, 2005, Vol. XXV, No. 2, p. 88-92.

61. Features of electrical instabilities in InSe single crystals, doped by rare elements. // Transactions of NASA, 2005, Vol. XXV, No. 5, p.73-77

62. Electrical and photoelectrical properties of In2O3 / Cd0.3Zn0.7S0.8Se0.2 / Cu2Se thin film heterojunctions prepared by the method of electrochemical deposition // Power Engineering. 2006. No.1-2, pp. 89-93.

63. Relaxation of photoconductivity in films CdSe1-xTex chemically deposited from solution. // Transactions of NASA, 2006, Vol. XXVI, No. 2, p.95-98

64. Electrical instabilities in rare-earth elements doped with rare-earth elements of gallium selenide monocrystals (in Russian) // Transactions of NASA. 2006. Vol. XXVI. No. 5. p. 70-74.

65. Electroluminescence of layered monocrystals of A3B6 <RE>. // Fizika, 2006, V.XII, No. 3, p. 8-10.

66. Peculiarity of static VAC of single crystals GaSe doped by rare-earth elements. // Transactions of NASA, 2006, Vol. LXII. № 5-6. p. 55-62

67. Sensitized impurity photoconductivity in monocrystals of p-GaSe, doped by rare-earth elements. // Bulletin of Baku State University, 2006, No.3, p.156-161

68. Photoconductivity of p-GaSe efficient materials for solar energetics and optoelectronics, doped by rare-earth elements.// Power Engineering, 2006, No.3-4, p.39-44.

69. Electric and capacitance characteristics of solar photoconverters on the basis of anysotypic heterostructures p-GaSe / n-InSe. // Power Engineering, 2007, No. 1, p. 59-63.
70. The role of G. Akhundov in the development of physics in Azerbaijan. Akhundova at the Baku State University (in Azerbaijani) // Fizika, 2007, V. XIII, No. 4, p. 5-7.
71. Electrical and luminescent instabilities in crystals of A3B6 monoselenides doped with rare-earth elements with a layered structure (in Russian) // Fizika, 2007, V. XIII, No. 2 4, p. 136-138.
71. On the effect of optical fatigue in p-GaSe-doped p-GaSe crystals (in Russian), Fizika, 2008, T.XIV, No. 3, p. 68-69
72. Switching phenomenon in n-$Cd_{1-x}Zn_xSe/CdSe_{1-y}S_y$ thin films. // Azerbaijan Journal of Physics, 2008, Vol. XIV, No. 3, p. 107 - 108
73. Influence of doping of rare-earth elements on the effects of dark current formation and electric fatigue in p-GaSe crystals (in Russian) // Izv. NAS of Azerbaijan, series of physical and mathematical sciences. Elm, 2008, V. XXVIII, No. 5, p. 125-129.
74. Switching phenomenon in AIIIBVI layered monoselenides and heterostructures on the basis, Bulletin of Baku State University, 2009, No. 3. p.139-147
75. Features of electroluminescence in partially-disordered crystals of $A^{III}B^{VI}$ type alloyed by lanthanides // Bulletin of Baku State University, 2010, No. 1, p.121-130
76. Long-term relaxation effects in gallium monoselenide doped by holmium and gadolinium // Azerbaijan Journal of Physics. Volume XVI, Number 2, Series: En, June, 2010, p. 289-291
77. Preparation and mexanism of the current passage in p-GaSe/n-$Cd_{1-x}ZnxS_{1-y}$ Se_y heterojunction // Azerbaijan Journal of Physics. Baku, 2010, Vol. XVI, No. 2, p.51-54
78. Effect of the light on charge carriers in gallium monoselenide crystals //

Azerbaijan Journal of Physics, 2011, XVII, №2, p.51-56.
79. About the photoconductivity of indium selenide single crystals // Bulletin of Baku State University, 2011, No. 2, p. 89-98.
80. On the mechanism of induced impurity photoconductivity in crystals of AIIIBVI monoselenide with layered structure. // Bulletin of Baku State University, 2011. No. 3. p. 122-132
81. Features of induced impurity photoconductivity in crystals of indium monoselenides // Transactions NASA, series of physical-mathematical and technical sciences, physics and astronomy. 2011. Vol. XXXI. No. 5. p. 59-66
82. Electrical and photoelectric properties of films Cd1-xZnxS1-yTey prepared by the method of electrochemical deposition // Azerbaijan Journal of Physics, 2012, Vol. XVIII, Sec. Az, No. 3, p.23-29
83. Anomalies of the induced impurity photoconductivity in gallium monoselenide crystals // Azerbaijan Journal of Physics, 2012, v. XVIII, No. 1, p. 25-30.
84. Diagnostics of the junction region of p-GaAs / n-Cd1-xZnxS1-ySey thin film heterojunctions. // Bulletin of Baku State University, 2013, No. 1, p.111-119
85. Influence of temperature and doping with rare-earth elements on the electrophysical parameters of AIIIBVI crystals with layered structure // Azerbaijan Journal of Physics, Baku, v. XIX, No. 1, 2013, p.17-22
86. On the issue of intrinsic photoconductivity properties of gallium monoselenide crystals. // Journal of Qafqaz University, Physics. Baku, v.1, 2013, p.16-27.
87. The IR-quenching of negative and intrinsic photoconductivity in p-GaSe crystals. // Journal of Qafqaz University. Physics. Bakı. 2014. Vol. 2. number 2. p.130-135.
88. On the specific effect of temperature and doping on the electrophysical parameters of indium selenide single crystals (in Russian) // Journal of Qafqaz University. Physics. 2015. Bakı. Vol. 3. number 1. p.41-48.
89. Specific features of intrinsic photoconductivity in crystals of indium

monoselenides // Bulletin of Baku State University. 2015, Baku, No. 1, p. 129-136

90. On the effect of an electric field on photoconductivity in InSe single crystals. International Journal of Advanced Research. 2015. Vol. 3. ISSUE 10. P. 593-598. ISSN No. 2320-5407

91. Properties of the relaxation processes in photoresistors based on $ZnIn_2Se_4$ type anisotropic crystals. // Journal of Qafqaz University - Physics. 2016. Vol. 4, N. 1. P. 3-8

92. Heterostructures with controlled characteristics based on layered monoselenides of AIIIBVI compounds. // Journal of Qafqaz University - Physics. 2016. Vol. 4, N. 1. P. 27-33

93. On some anomalies in the electronic properties of n-InSe single crystals (in Russian) // Bulletin of the Baku University.

94. On the charge transfer in layered semiconductor indium selenide // Azerbaijan Journal of Physics. Vol. XXII, No. 3. 2016. P. 16-19

95. Effect of Various External and Internal Factors on the Carrier Mobility in n-InSe // International Journal of Engineering And Science. 2016. Vol. 6, Issue 11, PP-01-04

96. Light switches with controlled parameters based on n-InSe single crystals (in Russian) // Bulletin of the Baku University, Series of Physics and Mathematics. 1, p. 147-154.

97. About the peculiarities of spectrum of the intrinsic photoconductivity in monocrystals of indium selenide // Transactions of Azerbaijan National Academy of Sciences. Physics and astronomy. 2017. Vol. XXXVII. No. 2. p. 43-48

98. Photoconductivity of indium monoselenide crystals ion strong electric fields // AJP Fizika (En). 2017. vol. XXIII. No. 3. P.27-30

99. Basic parameters and characteristics of anisotype p-GaSe <Ho> / n-InSe <Ho> heterostructures // Journal of Baku Engineering University. Physics. 2017. Vol.1. number 2. P-134-140.

100. Heterostructures of p-GaSe / n-InSe perspective for opto- and photoelectronics // Transactions of NASA, series of physical-mathematical and technical sciences, physics and astronomy. 2018. T. XXXVIII. №2. from. 23-29

101. On the anomalies of the electrophysical parameters in layered monoselenides of AIIIBVI semiconductor compounds (in Russian) // Azerbaijan Journal of Physics (Az.). 2018. vol. XXIV. No. 3. p.3-4.

CITED BY

Citations – 374;

h-index – 8

i10-index - 3

PATENTS

1. Author's certificate "Photovoltaic receiver of light" No. 455679 (1974) with priority from 03/01/1972

2. Author's certificate for invention - Luminescent material based on indium selenide. AU № 4715036 № 1687592, 1989. Moscow

BOOKS

2004 - «Solid State Electronics» (in Azerbaijan) school-book for institutes of higher education, Baku, «Tahsil» - 136 pp.

2005 - «Optoelectronics» (in Azerbaijan) textbook for institutes of higher education, Baku, «Maarif» - 410 pp.

2008 - «Story and methodology of physical electronics» (in Azerbaijan) textbook for institutes of higher education, Baku, «Tahsil» - 164 pp.

2009 - «Materials of electronic technique and basis nanotechnology» (in Azeri) textbook for institutes of higher education, Baku, «Tahsil» - 184 pp.

2011 – «Electronic devises and basis of electronic emission» (in Azeri) textbook for institutes of higher education, Baku, «Tahsil» - 358 pp.

2018 – «Materials Science» (in Azerbaijan) textbook for institutes of higher education, Baku, «Tahsil -134 pp.

EDUCATIONAL-METHODICAL WORKS

2007 - Bachelor program booklet on the specialty of “Physical electronics”, Baku, Tahsil, 34 programs – 62 p.

2007 - Master program booklet on the specialty of “Physical electronics”, Baku, Tahsil, 25 programs – 45 p.

2015 - "Rules of laboratory work on Practical Physics", Baku, "Printing House of the Baku University" - 15 p.

2018 - Collection of programs on basic subjects on the specialty "050104 - Teacher of Physics", Baku, "Printing House of the Baku University" -196 p.

2018 - Collection of basic subjects on the specialty "050503 - Physics", Baku, "Printing house of the Baku University" -156 p.

2018 - Collection of Selected Subject Programs on the specialty "050104 - Teacher of Physics", Baku, "Printing House of the Baku University" -145 p.

2018 - Collection of programs of selected subjects on the specialty "050503 - Physics", Baku, "Printing house of the Baku University" -125 p.