



ФИЗИКО – МАТЕМАТИЧЕСКИЙ ФАКУЛЬТЕТ



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ОБРАЗОВАНИЕ, СТЕПЕНЬ	<p>1977- 1983: Московский государственный университет, физический факультет, диплом физика.</p> <p>1987-1990 : Аспирант в Ташкентском государственном университете</p> <p>1993- Диплом кандидата физико-математических наук. (01.04.10- физика подупроводников)</p> <p>2019- Диплом Доктора наук по специальности физика подупроводников (01.04.10)</p>
ТРУДОВАЯ ДЕЯТЕЛЬНОСТЬ:	<p>1983 – 1985: служба в армии</p> <p>1985 – 1986: Младший научный сотрудник в лаборатории гамма-активационного анализа, Институт прикладной физики Ташкентского государственного университета.</p> <p>1990 - 1992: инженер кафедры физики полупроводников и диэлектриков Ташкентского государственного университета</p> <p>1992 - 1996: Ассистент кафедры физики Ургенческого государственного университета.</p> <p>1997- 2010: Заведующий кафедрой физики, Ургенческий государственный университет .</p> <p>2010- 2013: Заместитель директора Ургенческого филиала Ташкентского университета информационных технологий.</p> <p>2013- 2016: Доцент кафедры естественных наук Ургенческого филиала Ташкентского университета информационных технологий.</p> <p>2016- present: доцент кафедры физики, Ургенческий государственный университет</p>
СПЕЦИАЛЬНОСТЬ	<ul style="list-style-type: none">Физика.
ПРЕПОДАВАЕМЫЕ ПРЕДМЕТЫ	<ul style="list-style-type: none">Квантовая механика, Моделирование полупроводниковых приборов, физические основы фотовольтаики
ОБЛАСТЬ НАУЧНЫХ ИНТЕРЕСОВ:	Моделирование полупроводниковых приборов, полупроводниковые многослойные структуры, МОП структуры, МОП транзисторы, FinFET транзисторы, беспереходные

	МОП транзисторы, короткоканальные эффекты в наноразмерных МОП транзисторах, случайные телеграфные шумы, радиационная физика полупроводниковых приборов.
ПРОЕКТЫ:	<p>2016-2019. RENES – “ Development of the Master program in renewable energy and sustainable environment” (Erasmus+ program).</p> <p>2017-2020. “ New approach to investigation of the nature and lateral distribution of the defects at Si-SiO₂ interface and in the oxide layer”. Ministry of innovative development of Uzbekistan.</p> <p>2021-2023. Совместный Индийско-Узбекский проект “Self Heating Effect on stacked Nanosheet Field Effect Transistor”</p>
ПУБЛИКАЦИИ	<p>1. Atamuratov A.E., Babadjanov R.D., Gromov Y.A., Zaynabidinov S. Influence of bremsstrahlung with Emax = 25 MeV on MOSFET characteristics. Doklady Physics 1989, No. 3, p. 31</p> <p>2. Zaynabidinov S., Daliev H., Atamuratov A.E. Low temperature annealing influence to the Si-SiO₂ interface states densities of MOSFETs. Doklady Physics. 1992, No.1, p.24.</p> <p>3. Atamuratov A.E., Zainabidinov S., Yusupov A., Daliev H.S., Adinaev K. Influence of surface states generated at the Si--SiO₂ interface to the MOSFET leakage current. Tech. Phys. Lett. Vol. 21, No.21, 79 (1995)</p> <p>4. Atamuratov A.E., Zainabidinov S., Daliev H.S., Yusupov A., Adinaev K. Effect of thermal-field treatment and ionizing radiation on the energy spectrum of Si-SiO₂ interface states of a MOSFET. Tech. Phys. Vol. 42, No.9, pp. 1106-1107 (1997)</p> <p>5. Zainabidinov S., Atamuratov A.E., Yusupov A., Adinaev K. Ionizing Radiations and annealing influence on MOSFET charge states. Tr. J. of Physics, V.23, No. 3, 1999, p.485.</p> <p>6. Atamuratov A.E., Yusupov A., Adinaev K. Experimental Assesment of the Nonuniform Radiation – Induced Space – Charge Distribution in the Surface Region of Silicon. Inorganic Materials, 2001, Vol. 37, No. 8, p.767.</p> <p>7. Atamuratov A.E., Yusupov A., Aminov U.A. Influence of a high energy Bremsstrahlung and heat treatment on parameters of the MOSFET. Informations of Higher Educational establishments. An electron technology materials, 2003, No.4, p. 54-56 (in Russian).</p> <p>15. A.E. Atamuratov. Influence of the high-energy bremsstrahlung on field transistor threshold voltage. Uzbek Journal of Physics, 2003, V.5(№5-6), pp.356-358.</p> <p>8. A.E. Atamuratov, H.-H. Wehmann. Determination of the longitudinal charge distribution at the Si-SiO₂ interface of MOSFET by C-V measurements; Materials of Second International Conference “ Fundamental and Applied Problems of Physics”, Tashkent (2004), p.222-224 .</p> <p>9. A. E. Atamuratov, A. Yusupov, K. Babajanov . Distribution of surface carrier concentration in the cylindrical MOSFET with the built-in charge in oxide layer. Materials of Republican conference on Physical Electronics, Tashkent, November 2-4 (2005), p. 48 (in Russian).</p>

- 10.** A. E. Atamuratov, Charulata Barge, H.-H Wehmann. Features of the charged area image on a SiO₂ surface. Materials of Conference “Fundamental and Applied Problems of Physics”, Tashkent (2006), p. 146-148.
- 11.** A. E. Atamuratov, D. U. Matrasulov, and P. K. Khabibullaev. Detection of a Charge Built in Oxide Layer of a Metal–Oxide–Semiconductor Field-Effect Transistor by Lateral C- V Measurement. *Doklady Physics*, 2007, Vol. 52, No. 6, pp. 322–325.
- 12.** A.E. Atamuratov. Modeling of quantum wires in the interface layer of the semiconductor-oxide structures with charge built in oxide. Complex Phenomena in Nanoscale Systems.NATO Science for Peace and Security Series-B:Physics and Biophysics. Proceedings of the NATO Advanced Research Workshop on Recent Advances in Nonlinear Dynamics and Complex System Physics; From natural to Social Sciences and Security. Tashkent, Uzbekistan, 12-17 October 2008, p.229-237.
- 13.** A. N. Georgobiani , A. E. Atamuratov , U. A. Aminov , and T. A. Atamuratov. Tunable SiO₂/Si-Based Nanostructures. *Inorganic Materials*, 2009, Vol. 45, No. 8, pp. 900–904.
- 14.** A. E. Atamuratov, D. Yu. Matrasulov, and P. K. Khabibullaev. Influence of the Field of the Built_in Oxide Charge on the Lateral C–V Dependence of the MOSFET. *Doklady Physics*, 2010, Vol. 55, No. 2, pp. 52–54.
- 15.** J. D. Wei, S. F. Li, A. Atamuratov, H.-H. Wehmann, and A. Waag . Photoassisted Kelvin probe force microscopy at GaN surfaces: The role of polarity. *Appl. Phys. Lett.* **97**, 172111 (2010).
- 16.** A.E. Atamuratov, R. Granzner , M. Kittler, Z. Atamuratova, M. Halillaev, F. Schwierz . Simulation of Random Telegraph Noise in nanometer nMOSFET induced by interface and oxide trapped charge. NATO Advanced Research Workshop on Low Dimensional Functional Materials, October 15-19, 2012, Tashkent
- 17.** A.E. Atamuratov , Z. Atamuratova, M. Halillaev, G. Ghione. Simulation of carrier distribution in nanometer MNOSFET with single charge trapped in oxide and at SiO₂ – Si₃N₄ interface. Materials of International conference Low dimensional nanoscale systems: quantum effects, particle transport and advanced materials. November 6-7,2012, Tashkent.
- 18.** Matyakubov H., Atamuratova Z. A., Abdikarimov A., Halillaev M., Atamuratov A.E. The method of estimation of single trapped charge position in nanometer MNOSFET oxide layer and Si-SiO₂ interface. Materials of International conference Fundamental and Applied Problems of Physics November 14-16,2013, Tashkent.
- 19.** A. Abdikarimov, G.Indalecio, E. Comesana, N. Seoane, K. Kalna, A.J. Garcia-Louredo, A. E. Atamuratov. Influence of device geometry on electrical characteristics of a 10.7 nm SOI-FINFET.in 17th International Workshop on Computational Electronics. IWCE 2014. pp.1-4. [Online]. Available:
<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?reload=true&arnumber=6865877>
- 20.** A.E.Atamuratov, U.A.Aminov, Z.A. Atamuratova, M. Halillaev, A. Abdikarimov , H. Matyakubov. The lateral capacitance of nanometer MNOSFET with a single charge

- trapped in oxide layer or at SiO₂ - Si₃N₄ interface. Nanosystems: physics, chemistry, mathematics, 2015, 6 (6), p. 837–842
- 21.**A.E. Atamuratov, A. Abdikarimov, M. Khalilloev, Z. A. Atamuratova , R. Rahmanov, A. Garcia-Loureiro, A. Yusupov, Simulation study of ddbl effect in 25 nm soi-finfet with the different body shape, Nanosystems: Physics, Chemistry, Mathematics, 2017. 8 (1), p. 71–74
- 22.**A.Abdikarimov , A.E. Atamuratov, A. Yusupov , Simulation study of subthreshold slope in 25 nm SOI-FinFET with the different body shape. Simulation of DIBL effect in junctionless SOI MOSFETs with extended gate. Doclady Uzb Academy N 3, p.20-22, 2017.
- 23.**A. E. Atamuratov, , M. Khalilloev, , A. Abdikarimov, , Z.A. Atamuratova, M. Kittler, R. Granzner, F. Schwierz, Influence of non-uniform lateral interface defects distribution to the current-voltage characteristic of MOSFET .Nanosystems: physics, chemistry, mathematics, 2017, 8 (1), p. 75–78.
- 24.** Atamuratov A.E.,Abdikarimov A., Atamuratova Z.A., Xolillaev M., Yusupov A. Collection of papers (Urgench state university). Actual problems of modern science, education and training in the region 8-12 page, N1, 2017
- 25.** A.E. Atamuratov, Z.A. Atamuratova, A. Yusupov, A. Ghani,. Characterising lateral capacitance of MNOSFET with localised trapped charge in nitride layer. Results in Physics, V.11, 2018, pp. 656–658..
- 26.** Abdikarimov A.E., Yusupov A., Atamuratov A.E. Influence of the body shape and thickness of buried oxide to DIBL effect of SOI FinFET. “Technical Physics letters”, 2018, v44, N21, pp.22-28
- 27.**Z. A. Atamuratova, A. Yusupov, B. O. Khalikberdiev, and A. E. Atamuratov Anomalous Behavior of Lateral C–V Characteristic of an MNOS Transistor with an Embedded Local Charge in the Nitride Layer. Technical Physics, 2019, Vol. 64, No. 7, pp. 1006–1009.
28. Atabek E. Atamuratov 1, Mahkam M. Khalilloev, Ahmed Yusupov, A. J. García-Loureiro, Jean Chamberlain Chedjou and Kyamakya Kyandoghere. Contribution to the Physical Modelling of Single Charged Defects Causing the Random Telegraph Noise in Junctionless FinFET. Appl. Sci. 2020, 10(15), 5327; doi:10.3390/app10155327
29. Ahmed Yusupov, Atabek E. Atamuratov, Azamat E. Abdikarimov,Jean Chamberlain Chedjou and Kyandoghere Kyamakya. The amplitude of RTN in nanometer SOI FinFET with different channel shape. World Scientific Proceedings Series on Computer Engineering and Information ScienceDevelopments of Artificial Intelligence Technologies in Computation and Robotics, pp. 1541-1548 (2020).
30. Atabek E. Atamuratov, Ahmed Yusupov, Zukhra A. Atamuratova, Jean Chamberlain Chedjou and Kyamakya Kyandoghere. Lateral Capacitance–VoltageMethod of NanoMOSFET for Detecting the Hot Carrier Injection. Appl. Sci. 2020, 10(21), 7935; doi:10.3390/app10217935