

Ministry of Education of the Republic of Azerbaijan,
Head of the Department of Physics, Azerbaijan
University of Architecture and Construction, Doctor
of Physics, Professor **Abdullayev Adil Polad**



INFORMATION

Abdullayev Adil Polad was born on 30.03.1969 in Poylu village of Aghstafa district. He graduated from the Physics Faculty of Baku State University. He is a doctor of physical and mathematical sciences and associate professor. Thesis topic: "The main features of Dielectric Properties of Polymorphic Modifications of "TlS and TlIn_{1-x}R_xS₂ (R_x=Fe, Ge, Au, Si) Solid Solution and cage dynamics"

Doctoral Dissertation: "Features of Dielectric Relation and Conductivity in Grouped Crystals of A³B⁶ and A³B³C₂⁶ Influenced by Radiation"

Main scientific achievements: he has defined the mechanisms of electrical conductivity and superior conductivity in crystals of A³B⁶ and A³B³C₂⁶, influenced by the electric field and γ -radiation of S-shaped transformation and memory event.

In 2014-2016, he was a member of the Dissertation Council №. 01.221 of the Institute of Radiation Problems of ANAS on the specialty of Semiconductor Physics and Radiation Materials Physics.

Since 2017, he has been a member (deputy chairman) of the Expert Council on Physical and Astronomical Sciences of the Supreme Attestation Committee under the President of the Republic of Azerbaijan.

His research projects won first place in the nominations of physical and astronomical sciences in the fourth and fifth republican competitions "Scientists of tomorrow" in 2015 and second place in 2016; and by the joint opinion of the jury, Azerbaijan was among more than 70 countries in the USA represented at the traditional Intel ISEF –Intel International Science and Engineering Exhibition.

He is the author of 167 scientific works and 6 books published in prestigious and impact foreign journals, as well as a participant and co-leader of 3 local and 2 foreign grant competitions.

He began his higher pedagogical activity in 2000, taught "General Physics " at universities.

In 2013-2019, he worked as a professor at the Department of Fundamental and Natural Sciences (Mathematics and Physics) of the Azerbaijan Higher Military School named after Heydar Aliyev.

Since 2019, he has been working as the head of the Department of Physics of the Azerbaijan University of Architecture and Civil Engineering.

He is the author of 6 books on physics.

1. **ОПТИКА**. ААНМ mətbəəsi. Bakı 2015. **230 s.**
2. **Fizika fənni üzrə laboratoriya işləri**. ААНМ mətbəəsi. Bakı 2015. **36 s.**
3. **МЕХАΝІКА**. Hərbi Akademiya mətbəəsi. Bakı 2016. **253 s.**
4. **МОЛЕКУЛЯР ФІЗИКА ВƏ ТЕРМОДИНАМІКА**. Hərbi Akademiya mətbəəsi. Bakı 2017. **244 s.**
5. **Elektromaqnitizm**. ААНМ mətbəəsi. Bakı 2019. **447 s.**
6. **Fizika məsələləri (Mexanika bölməsi, qısa nəzəri məlumat və məsələ həlli ilə birlikdə)**. EDU Company Təhsil Mərkəzi. Bakı 2019. 324 s.

Main scientific works (including recent years)

1. Полиморфизм и фазовые переходы в TlS. Кристаллография. М. 2000, том.45, №4, с.606-610.
2. Полиморфное превращение в TlSe и электрофизические свойства фаз. Кристаллография. М. 2008, том. 53, № 5, с. 864-868.
3. Особенности проводимости γ -облученных кристаллов TlGaTe₂ с нанопочечной структурой. Физика и техника полупроводников, 2010, том 44, в. 5. с. 610-614.
4. Гигантская диэлектрическая релаксация в кристаллах TlGaTe₂. Физика твердого тела. 2011. том. 53. в. 8. с. 1488-1492
5. Суперионная проводимость в кристаллах TlGaTe₂. Физика и техника полупроводников, 2011, том 45, в. 8. с. 1009-1013.
6. Суперионная проводимость, эффекты переключения и памяти в кристаллах TlInSe₂ и TlInTe₂. Физика и техника полупроводников, 2011, том 45, в. 11, с. 1441-1445.
6. Superionic Conductivity in One-Dimensional Nanofibrous TlGaTe₂ Crystals. Japanese Journal of Applied Physics 50 (2011) 05FC09-1 – 2

7. Получение и свойства твердого раствора $(\text{TlInSe}_2)_{0,96}\text{Se}_{0,04}$. Неорганические материалы. 2012, т. 48, № 12, с. 1309-1313
8. Ионная проводимость и диэлектрическая релаксация в кристаллах TlGaTe_2 облученных γ – квантами. Физика и техника полупроводников, 2013, т. 47, в. 5. с. 696-701.
9. Поляризация, вызванная объемными зарядами, и ионная проводимость в кристаллах TlInSe_2 . Физика и техника полупроводников, 2014, т. 48, в. 5, с. 442-447.
10. Проводимость по локализованным состояниям системы твердых растворов $(\text{TlInSe}_2)_{1-x}(\text{TlGaTe}_2)_x$ Физика и техника полупроводников, 2015, том 49, в. 12, с. 1704-1709.
11. Особенности терагерцовых спектров слоистых кристаллов TlInS_2 . Физика твердого тела, 2016, том 58, в. 1, с. 27-31
12. Суперионная проводимость твердых растворов $(\text{TlGaSe}_2)_{1-x}(\text{TlInS}_2)_x$ Физика и техника полупроводников, 2018, том 52, в. 10, с.1111-1114
13. The study of heat transfer coefficient while flow unsaturated liquid through the tube at pressure below criti. Modern Physics Letters B. Vol. 34, №27, 2020 2050299 (11 pages)

Main scientific achievements:

He has defined the mechanisms of electrical conductivity and superion conductivity in crystals of A^3B^6 and $\text{A}^3\text{B}^3\text{C}_2^6$, influenced by the electric field and g-radiation of S-shaped transformation and memory event.

In addition to discussions at national and international conferences (Baku, Ulyanovsk, Almaty, Makhachkala, Moscow, Hong Kong, Ankara, Spain, Minsk, Florida, USA, Voronezh, Chisinau, Cyprus, Norway, Tashkent, etc.), he is the author of 167 scientific works and 6 books published in journals belonging to the “Science index” (Russia, the United States, France, Turkey, Japan, Kazakhstan, Ukraine, etc.).

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