#### **Curriculum Vitae**

# Professor DSc PhD Arif Nesrullajev (Nesrullazade)



**Degrees** 

1992	<b>Doctor of Sciences (Physics</b>	Institute of Physics, Academy of Sciences of
	and Mathematics)	Azerbaijan, Baku, Azerbaijan
	(DSc)	High Attestation Commission of Ministry Council of
		the USSR, Moscow, USSR
1980	Philosophy Doctor	Scientific-Research Institute of Optical Physical
	(Physics and Mathematics)	Investigations, Moscow, Russia, USSR
	(PhD)	High Attestation Commission of Ministry Council of
		the USSR, Moscow, USSR
1973	Master of Sciences	Azerbaijan State University, Faculty of Physics, Baku,
	(Physics) (MSc)	Azerbaijan
1972	Bachelor (Physics)	Azerbaijan State University, Faculty of Physics, Baku,
	(BSc)	Azerbaijan

- Bachelor Thesis: "Study of optical properties of semiconductors, where the rule by Urbach is performed."
- Master of Sciences Thesis: "Investigations of optical properties of thin films of the rare earth elements."
- Philosophy Doctor Thesis: "Investigations of thermo-optical properties of smectic liquid crystals."
- Doctor of Sciences Thesis: "Electro-physical properties of lyotropic liquid crystalline systems."

# Languages

- Azerbaijanian
  - Turkish
  - Russian
  - English
  - •Italian

# **Scientific Interests**

Area of Expertise	Keywords	
Liquid Crystal Physics and Application	Mesogenes, Thermotropic, Lyotropic, Phase Transitions, Liquid Crystal – Surface Interactions, Displays, Indicators, Multimatrix Systems, Recording Systems, Thermographs	
Condensed Matter Physics, Soft Matter Physics, Material Sciences	Solid State, Soft Matter, Phase Transitions, Crystallo-Physics, Crystallo-Optics, Optics	
Optics	Geometric Optics, Wave and Polarization Optics, Quantum Optics, Photometry, Optical Materials, Thermo-Optics, Electro-Optics, Magneto-Optics, Acoustical Optics, Optical Devices	
Physical Chemistry, Chemical Physics	Surface Effects, Colloid and Dispersion Systems, Micelles, Phase States, Double Electrical Layer	

# **PUBLICATIONS:**

More than 300 scientific publications (papers, books, invention patents, papers in books, abstracts, other publications)

# Awards

Awards Type	Organization	Years
First Reward for Young Scientist of Azerbaijan	Young Confederation of Azerbaijan	1982
Medal "Inventor of the USSR"	State Committee of Science and Technique of the USSR	1983
Diploma and Honorary Sign	State Committee of Science and Technique of the USSR Central Committee of Inventors Association of the USSR	1984
Diploma	Scientific and Technical Association of the USSR Inventors Association of the USSR, Azerbaijan	1985
Laureate	International Scientific "Soros" Award	1993
Honor Platelet	EBILTEM, Ege University	1999
Awards "Publication	Turkish Scientific and Technical Research Council	1999-2020
Encouragement"	(TÜBİTAK)	
Research Awards	Sitki Kocman Foundation, Mugla University	2006-2016
Certificate of Appreciation	American Chemical Society Publications	2014-2017

# **Administration Experience**

<b>Position Periods</b>	Administration Positions	Organizations
September 1985-	Scientific Secretary of	Faculty of Physics, Baku State University,
May 1988	Scientific Seminars	Baku, Azerbaijan
September 1999-	Member of Publication	Faculty of Natural Sciences,
December 2001	Commission	Ege University, Izmir, Turkey
December 2010-	Head of Department	Department of Physics, Faculty of Natural
March 2017		Sciences, Mugla Sitki Kocman University,
		Mugla, Turkey
February 2011-	Member of Board	Faculty of Natural Sciences, Mugla Sitki
March 2917		Kocman University, Mugla, Turkey
March 2011-	Member of the	Faculty of Natural Sciences, Mugla Sitki
March 2917	Administration Board	Kocman University, Mugla, Turkey
December 2010-	Member of Board	Institute of Natural Sciences, Mugla Sitki
Mart 2017		Kocman University, Mugla, Turkey
June 2012-	Member of Senate	Mugla Sitki Kocman University,
June 2015		Mugla, Turkey
June 2012-	Member of the	Faculty of Natural Sciences, Mugla Sitki
March 2017	Administration Board	Kocman University, Mugla, Turkey
December 2014-		Ethics Commission for Natural Sciences and
December 2016	Member of Board	Engineering Sciences, Mugla Sitki Kocman
		University, Mugla, Turkey
March 2015-		<b>Enhance Commission for Docents and</b>
March 2017	Member of Board	Professors in Fields of Natural Sciences and
		Engineering Sciences, Mugla Sitki Kocman
		University, Mugla, Turkey
March 2015-		Enhance Commission for Docents and
March 2017	Member of Board	Professors in Fields of Natural Sciences and
		Engineering Sciences, Mugla Sitki Kocman
		University, Mugla, Turkey

### **Education Activity**

# **LESSONS**

- Waves and Optics;
- Waves and Optics Laboratory;
- General Physics I;
- General Physics Laboratory I;
- General Physics II;
- General Physics Laboratory II;
- General Physics III;
- Atomic and Molecular Physics;
- Special Problems in Physics I;
- Special Problems in Physics II;
- Mechanics of Fluids;
- Optics;
- Phase Transitions:
- Quantum Optics;
- Optics Laboratory;
- Vibration and Waves:
- Thermodynamics;
- Fundamentals of Infrared Technique and Technology;
- Geometrical Optics, Photometry, Optical Systems;
- Physics of Liquid Crystals I;
- Physics of Liquid Crystals II;
- Physics of Solid State;
- Colloid Chemistry;
- Surface Phenomenon and Disperse Systems;
- Biological Structures and Biological Membranes;
- Graduation Study I;
- Graduation Study II;
- Lesson in Special Scientific Fields.

#### **Scientific Activity**

#### 1. Grants

- High Education Ministry of Azerbaijan SSR 1976;
- Ministry of High Education of the USSR and Ministry of Foreign Affairs, Italy 1986;
- Deutscher Akademischer Austausch Dienst (DAAD), Germany 1989;
- The Italian Society of Liquid Crystals, Italy 1991;
- BAYG Program of TÜBİTAK, Turkey 1992;
- Deutscher Akademischer Austausch Dienst, Germany (DAAD) 1993;
- BAYG Program of TÜBİTAK, Turkey 2002;
- Erasmus Teaching Mobility Program, Hungary 2011;
- International Research Program of High Education Committee of Turkey, Lithuania 2014.

#### 2. Scientific Centers and Scientific – Research Visiting and Invited Professorships

- Microelectronic Institute of Ministry Electronic Industry of the USSR, Baku, Azerbaijan;
- Azerbaijan State University, Baku, Azerbaijan;
- All-Union Scientific-Research Institute of Optical-Physical Investigations (VNIIOFI), Moscow, Russia;
- Universitá per Stranieri, Perugia, Italy;
- Istituto Superiore di Sanitá, Roma, Italy;
- Universitá di Roma "La Sapienza", Roma, Italy;
- Vilnius State University, Vilnius, Lithuania;
- The Italian Society of Liquid Crystals, ECLC99, Courmayeur, Italy;
- Eötvos Lorand Szeged University, Szeged, Hungary;
- Bayureuth Universität, Bayureuth, Germany;
- State Optical Institute (GOI), St.-Petersburg, Russia;
- Vytautas Magnus University, Kaunas, Lithuania;
- Istanbul Technical University, Istanbul, Turkey;
- Ege University, Izmir, Turkey;
- Mugla Sitki Kocman University, Mugla, Turkey.

### 3. Membership in Conferences and Symposiums Committees

- Azerbaijan National Conference on Liquid Crystals and Their Application, Baku, Azerbaijan, May, 1982 Member of Scientific Committee;
- Azerbaijan National Conference on Liquid Crystals and Their Application, Baku, Azerbaijan, May, 1982 Member of Organizing Committee;
- Scientific Seminars, Baku State University, Faculty of Physics, Baku, Azerbaijan, 1985-1988 Scientific Secretary;
- 1<sup>st</sup> All-Union Conference on Lyotropic Liquid Crystals, Ivanovo, Russia, USSR, December, 1990 Member of Scientific Committee;
- 23st International Physics Congress of Turkish Physical Society, Muğla, Turkey, September, 2005 Member of Organizing Committee;
- School on Physics and Physical Education, Mugla, Turkey, May, 2005 Member of Organizing Committee;
- 21<sup>st</sup> Annual Conference on Liquid Atomization and Spray Systems, Muğla, Turkey, September, 2007 Member of Local Organizing Committee;
- Condensed Matter Physics Conference of Balkan Countries, Muğla, Turkey, May, 2008 Conference Director;
- Condensed Matter Physics Conference of Balkan Countries, Muğla, Turkey, May, 2008
   Member of International Scientific Committee:
- Condensed Matter Physics Conference of Balkan Countries, Muğla, Turkey, May, 2008 Member of International Advisory Committee;
- School on Physics and Physical Education, Mugla, Turkey, May, 2008 Member of Organizing Committee;
- 26<sup>st</sup> International Physics Congress of Turkish Physical Society, Bodrum, Turkey, September, 2009 Member of Scientific Committee;
- ADIM Physics Days-I, Afyonkarahisar, Turkey, May, 2010 Member of Advisory Board:
- ADIM Physics Days-1I, Denizli, Turkey, April, 2012 Member of Advisory Board;
- 17th International School on Condensed Matter Physics, Varna, Bulgaria, September 2012 Member of International Programme Committee;
- Şükran Rauf Nasuhoğlu Investigation, Education and Cultural Center Member of Coordination Center;
- ADIM Physics Days-III, Isparta, Turkey, April, 2014 Member of Advisory Board;
- ADIM Physics Days-III, Isparta, Turkey, April, 2014 Member of Scientific Committee:
- 18th International School on Condensed Matter Physics, Varna, Bulgaria, September 2014 Member of International Program Committee;
- ADIM Physics Days-IV, Kütahya, Türkiye, May, 2015 Member of Scientific Committee;
- Symposiun on Investigations in Natural Sciences of Mugla Sitki Kocman University, Mayıs 2015 Member of Organization Committee;
- ADIM Physics Days-V, Eskişehir, Turkey, April, 2016 Member of Scientific Committee;
- 19th International School on Condensed Matter Physics, Varna, Bulgaria, September 2016 Member of International Program Committee.
- 33th International Congress of the Turkish Physical Society, Bodrum, Turkey, September 2017 Member of International Scientific Committee.

#### 4. Editor of Scientific Journal

- "Journal of Optoelectronics and Advanced Materials" Guest Editor (2008);
- "Journal of Optoelectronics and Advanced Materials Symposia" Guest Editor (2008).

#### 5. Refereeing in Scientific Journals

- "Crystallography";
- "Kolloid Journal";
- "Physics of Status Solidi";
- "Materials Chemistry and Physics";
- "Journal of Physical Chemistry Chemical Physics";
- "Molecular Physics";
- "International Journal of Modern Physics B";
- "Modern Physics Letters B";
- "Journal of Materials Science";
- "Canadian Journal of Physics";
- "Crystal Research and Technology";
- "International Journal of Thermophysics";
- "Journal of Optoelectronics and Advanced Materials"
- "Journal of Optoelectronics and Advanced Materials Symposia";
- "Balkan Physics Letters";
- "Journal of Physical Chemistry";
- "Tenside, Surfactants, Detergents";
- "Journal of Physics: Conference Series":
- "Journal of Modern Physics";
- "Journal of Molecular Liquids";
- "Journal of Molecular Structure";
- "Materials Science and Engineering B";
- "Langmuir";
- "Physics of Fluids";
- "Journal of Physics: Condensed Matter";
- "Journal of Applied Physics: Condensed Matter";
- "Liquid Crystals";
- "Solid State Communications":
- "Il Nuovo Cimento";
- "Optoelectronics and Advanced Materials Rapid Communications";
- "Physical Review E";
- "Industrial & Engineering Chemistry Research";
- "CrystEngCom";
- "Materials Research Bulletin";
- "Chemical Communications";
- "Molecular Crystals and Liquid Crystals";
- "Phase Transitions".

#### 6. Referee in Scientific Projects

- TÜBİTAK TBAG Projects Coordination (2009, 2010);
- Istanbul Technical University, Coordination Center of Scientific Research Projects (2008, 2009, 2010, 2011);
- Yıldız Technical University, Coordination Center of Scientific Research Projects (2009, 2010, 2011, 2012, 2013, 2015, 2016, 2017);
- Balıkesir University, Coordination Center of Scientific Research Projects (2012);
- Abant İzzet Baysal University, Coordination Center of Scientific Research Projects (2012, 2013, 2014, 2015);
- National Scientific Projects 2011-2014 in Republic of Serbia;
- TÜBİTAK TBAG Projects (2016, 2017, 2019);
- Mugla Sitki Kocman University, Coordination Center of Scientific Research Projects (2017, 2018).

# 7. Participation in Scientific Projects

- 1. Azerbaijan State University, Baku, Azerbaijan, the USSR, Scientific and Technical Project, Project No.21/74 **Researcher**;
- 2. All Union Scientific Research Institute of Optical-Physical Measurements (VNIIOFI), Moscow, Russia, the USSR, "Light Liquid Crystals" Scientific and Technical Project **Researcher**:
- 3. Universitá di Roma I, Dipartimento di Energetica, Roma, Italy, Ministry of Public Education of Italy under a Ministerio Publica Istruzione Grant **Researcher**;
- 4. TÜBİTAK, Turkey, "Study of thermo-, electro and magneto-optical properties of lyotropic liquid crystals" entitled Project No. TBAG-214 **Advisor**;
- 5. Istanbul Technical University, Istanbul, Turkey, Project supported by Scientific Research Foundation and entitled "Investigation of Physical Properties of Liquid Crystalline Materials, which are Perspective for Application and Elaboration of Electro-Optical Devices" **Researcher**;
- Optical Devices" **Researcher**;

  6. Ege University, Izmir, Turkey, Project No.Bil/1997/003 supported by Aegean Scientific-Technical Center EBILTEM and entitled "Mesomorphic, Morphologic and Orientational Properties of Polymorphic and Monomorphic Liquid Crystals **Advisor**;
- 7. Ege University, İzmir, Turkey, Project No.97/FEN/010 supported by Scientific Research Foundation and entitled "Lyotropic Micellar Systems: Thermo-Optical, Magneto-Optical and Orientational Properties" **Advisor**;
- 8. Ege University, İzmir, Turkey, Project No.98/002 supported by Scientific Research Foundation and entitled "Lyotropic Liquid Crystals: Thermo-Optical, Magneto-Optical and Orientational Properties"— **Advisor**;
- 9. Ege University, İzmir, Turkey, Project No.99/002 supported by Scientific Research Foundation and entitled "Studies of Properties and Mechanisms of Electrical Conductivity in Lyotropic Liquid Crystals" **Advisor**;
- 10. Ege University, İzmir, Turkey, Project No.2000/020 supported by Scientific Research Foundation and entitled "Studies of Microscopic and Macroscopic Properties of Thermotropic Liquid Crystals"—Advisor;
- 11. Ege University, İzmir, Turkey, Project No.2000/045 supported by Scientific Research Foundation "Studies of Phase States and Optical Refracting Properties in Binary and Ternary Lyotropic Systens Based on N-Cetyl-N,N,N-trimethyl ammonium bromide" Advisor:
- 12. Ege University, İzmir, Turkey, Project No.2000/046 supported by Scientific Research Foundation and entitled "Studies of Microscopic and Macroscopic Properties in Liquid Crystals" **Researcher**;
- 13. Muğla University, Muğla, Turkey, Project No.2003/02 supported by Scientific Research Foundation and entitled "Investigations of Thermotropic Phase Transitions in Liquid Crystalline Systems"— Yürütücü;
- 14. Muğla University, Muğla, Turkey, Project No.2003/04 supported by Scientific Research Foundation and entitled "Investigations of Optical Properties in Anorganic and Organic Materials"— **Researcher**;
- 15. Muğla University, Muğla, Turkey, Project No.2007/011 supported by Scientific Research Foundation and entitles "Studies of Optical, Thermo-Optical and Magneto-Optical Properties of Liquid Crystals"—Advisor;
- 16. Muğla University, Muğla, Turkey, Project No.2008/04 supported by Scientific Research Foundation and entitled "Studies of Optical, Thermo-Morphologic and Thermo-Optical Properties of Lyotropic Nematic and Cholesteric Mesophases"— **Advisor**;
- 17. Muğla University, Muğla, Turkey, Project No.2009/17 supported by Scientific Research Foundation and entitled "Investigations of Thermo-Morphologic, Thermo-Optical and Thermodynamic Properties of Liquid Crystals with Multiple Phase Transitions"—

  Advisor:
- 18. Muğla University, Muğla, Turkey, Project No.12/40 supported by Scientific Research Foundation and entitled "Synthesis, Characterization and Investigation of Thermo-Morphologic Properties of New Thermotropic Calamitic Liquid Crystalline Materials" Advisor;

- 19. National Institute of Boron Investigations BOREN, Turkey, Scientific-Research Project No. 2012.Ç0345 and entitled "Synthesis and Investigations of Liquid Crystalline Properties in New Organo-Boron Combinations" **Researcher**;
- 20. Muğla Sıtkı Koçman University, Muğla, Turkey, Project No.15/139 supported by Scientific Research Foundation and entitled "Study of Thermotropic, Thermo-Morphologic and Magneto-Morphologic Properties of Nematic Mesophases in Tetradecyldimethyl Ammonium Bromide + Water + Decanol" **Advisor**;
- 21. Muğla Sıtkı Koçman University, Muğla, Turkey, Project No.15/019 supported by Scientific Research Foundation and entitled "Thermo-Morphologic, Thermotropic, Thermo-Optical and Dielectrical Properties of Lyotropic Liquid Crystals with Micelles of Indefinite Sizes"— Advisor;
- 22. Muğla Sıtkı Koçman University, Muğla, Turkey, Project No.15/124 supported by Scientific Research Foundation and entitled "Study of the Morphologic, Structural, Thermotropic and Optical Properties of Defective Textures in Liquid Crystals", Advisor;
- 23. Muğla Sıtkı Koçman University, Muğla, Turkey, Project No.15/239 supported by Scientific Research Foundation and entitled "Phase States, Mesomorphic, Thermo-Morphologic and Optical Refracting Properties: Dodecyl Trimethyl Ammonium Bromide + Water Lyotropic Systems" **Advisor.**
- 24. Mugla Sitki Kocman University, Mugla, Turkey, Project No.16/056 supported by Scientific Research Foundation and entitled "Investigation of Optical and thermopotical properties of smectogen and nematogen thermotropic liquid crystals"— Advisor;
- 25. Muğla Sıtkı Koçman University, Muğla, Turkey, Project No.17/132 supported by Scientific Research Foundation and entitled "Liquid crystalline mesophases of complex mixtures of ionic amphiphiles and their thermo-optical and dielectrical properties" **Advisor.**