

# Valeri Beybudovich Arakelyan

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**Institute of Physics**  
Chair of Molecular Physics  
Professor

## Language skills

Русский Հայերեն English

## Publications

*Article*

### **STABILITY AND CONDUCTIVITY OF BILAYER LIPID MEMBRANE IN PRESENCE NANOPARTICLES**

Jomardyan, T. M., Ananyan, G. V., Arakelyan, V.

Proceedings of the YSU. Physical and Mathematical Sciences 2023 23-30

*Article*

### **Influence of Cation Porphyrins on DNA Damage during Irradiation by X-rays**

L Aloyan, A Avetisyan, V Arakelyan, H Margaryan

Journal of Physics: Conference Series 2023 012009

*Article*

### **A study of the subdiffusion of small molecules in charged polyelectrolyte multilayers**

I. Vardanyan, V. Arakelyan, Z. Navoyan, E. Diamanti, S. E. Moya, E. Donath

Scientific Reports 2021 22585

*Article*

### **ИЗМЕНЕНИЕ ВЫХОДНОГО СИГНАЛА ДНК-БИОСЕНСОРА, ИНДУЦИРОВАННОГО АДСОРБЦИЕЙ ЛИГАНДОВ НА ДУПЛЕКСЫ ДНК В ФЛУКТУИРУЮЩЕЙ СРЕДЕ**

В.Б. Аракелян, А.П. Антонян, М.А. Парсаданян, М.А. Шагинян, П.О. Вардеванян

Биофизика (Biophysics) 2020 670-675

*Article*

### **Hybridization kinetics of DNA fragments in the presence of ligands intercalating into DNA-duplexes**

Valeri B. Arakelyan, Aleksandr Y. Mamasakhlisov, Eduard M. Kazaryan, Marine A. Parsadanyan,

Poghos O. Vardevanyan

Journal of Biomolecular Structure and Dynamics 2020 1-6

*Article*

### **Влияние адсорбции лигандов на выходной сигнал ДНК-биосенсора**

В.Б. Аракелян, А.Т. Карапетян, П.О. Вардеванян

Биофизический Вестник 2019 61-67

*Article*

### **Памяти профессора Юрия Павловича Благого - воспоминания коллег из Ереванского**

**университета**

Аракелян В.Б., Карапетян А.Т., Вардеванян П.О.

Биофизический Вестник 2019 78-79

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**A Flow Cytometry Study of the Non-Fickian Diffusion of Small-Charged Molecules in Poly(diallyl dimethyl ammonium chloride)/Poly(styrene sodium sulfonate) Multilayers: Impact of the Layer Number, Top Layer, and Concentration of Diffusing Molecules**

Ishkhan Vardanyan, Zaven Navoyan, Sergio Enrique Moya, Valeri Arakelyan, Edwin Donath

Journal of Physical Chemistry B 2019 2182-2189

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*Article*

**INFLUENCE OF ZINC OXIDE NANOPARTICLES ON BILAYER LIPID MEMBRANE PROPERTIES**

A. L. TOROSYAN, G. V. ANANYAN, V. B. ARAKELYAN

Proceedings of the YSU. Physical and Mathematical Sciences 2019 208-213

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*Article*

**A typical diffusion monitored by flow cytometry: slow diffusion of small molecules in polyelectrolyte multilayers**

E. Donath, I. Vardanyan, S. Meyer, R. A. Murray, S. E. Moya, Z. Navoyan, V. Arakelyan

Nanoscale 2018 765-772

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*Article*

**INFLUENCE OF NANOPARTICLES OF CuO ON THE STABILITY AND CONDUCTIVITY OF BLM**

A. L. TOROSYAN, G. V. ANANYAN, V. B. ARAKELYAN

Proceedings of the YSU. Physical and Mathematical Sciences 2018 p. 41-46

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*Article*

**Влияние интенсивности внешнего шума на кинетику связывания лигандов с рецепторами**  
Аракелян В.Б., Данько В.П., Григорян Р.П.

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2017 94-101

<http://www.flib.sci.am/eng/Fizika/Frame.html>

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**INFLUENCE OF SODIUM DODECYL SULFATE ON STABILITY OF BILAYER LIPID MEMBRANES**  
L. A. TONAYAN, A. L. TOROSYAN, V. B. ARAKELYAN

Proceedings of the YSU. Physical and Mathematical Sciences 2016 58-63

<http://www.ysu.am/science/en/journals>

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*Article*

**THE MODELING OF CERTAIN PROBLEMS OF SPACE BIOLOGY IN EARTH CONDITIONS**

G.E. Khachatryan, N.V. Simonyan, N.I. Mkrtychyan, V.B. Arakelyan, S.Sh. Tatikyan, V.M. Tsakanov, P.M. Antonyan, S.K. Karamyan, V.V. Harutyunyan

Biological Journal of Armenia 2016 21-29

<http://www.flib.sci.am/eng/Biology/>

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*Article*

**Some Aspects of Radioecology in the Areas Adjacent to Armenian NPP**

Khachartyan G.E., Arakelyan V.B., Simonyan N.V., Mkrtychyan N.I., Avakyan T.M., Pyuskyulyan K.I.

Genetics, Evolution and Radiation 2016 315-328  
<http://www.springer.com/gb/book/9783319488370>

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*Article*

**Influence of H<sub>2</sub>TOEtPyP<sub>4</sub> porphyrin on the stability and conductivity of bilayer lipid membranes**

Anahit Torosyan, Valeri Arakelyan

European Biophysics Journal with Biophysics Letters 2015 745-750

<https://link.springer.com/journal/249>

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**АДСОРБЦИЯ КАТИОННЫХ Со-ПОРФИРИНОВ НА ЛИПОСОМЫ**

В.Б. АРАКЕЛЯН, А.Л. ТОРОСЯН, Р.К. КАЗАРЯН

Հայաստանի կենսաբանական հանդես 2014 63-67

<http://www.flib.sci.am/eng/Biology/>

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*Article*

**Stability of Bilayer Lipid Membrane in the Presence of Co-Containing Metalloporphyrins**

V. B. Arakelyan, A. L. Torosyan, R. K. Ghazaryan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2014 297-300

<http://www.springer.com/physics/particle+and+nuclear+physics/journal/11958>

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*Article*

**CYCLIC CURRENT-VOLTAGE CHARACTERISTICS OF A BILAYER LIPID MEMBRANE IN THE PRESENCE OF PORPHYRIN**

V. B. ARAKELYAN, A. L. TOROSYAN, R.K.Ghazaryan

Proceedings of the YSU. Physical and Mathematical Sciences 2014 60-63

<http://www.ysu.am/science/en/journals>

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*Article*

**Влияние малых концентраций cis-DDP на адсорбцию лигандов на ДНК**

В. Б. Аракелян, С. Г. Арутюнян, Г. С. Саркисян, П. О. Вардеванян

Հայաստանի կենսաբանական հանդես 2008 175-182

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*Conference*

**The consistent description of diffusion and kinetic states of the adsorption of ligands on DNA immobilized molecules**

Valeri B.Arakelyan, Zaven E. Navoyan, Gohar G. Hovhannisyan, Poghos O. Vardevanyan

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*Conference*

**Effect of concentration of ligands on DNA-biosensor average output signal and dispersion.**

Valeri B. Arakelyan, Marine A. Parsadanyan, Poghos O. Vardevanyan

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*Conference*

**Changes in the stability and conductivity of BLM in the presence of zinc oxide nanoparticles**

Anahit L. Torosyan, Gayane V. Ananyan, Valeri B. Arakelyan

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*Conference*

**ВЛИЯНИЕ АДСОРБЦИИ ЛИГАНДОВ НА СТАТИСТИЧЕСКИЕ ХАРАКТЕРИСТИКИ ВЫХОДНОГО СИГНАЛА ДНК-БИОСЕНСОРА**

Аракелян В.Б., Антонян А.П., Парсаданян М.А., Шагинян М.А., Вардеванян П.О.

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*Conference*

**Influence of Metal Oxide Nanoparticles in the Stability and Conductivity of BLM**

G.V. Ananyan, Ts.M. Jomardyan, V.B. Arakelyan

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*Conference*

**Influence of ZnO nanoparticles in the stability and conductivity of BLM depending on its composition**

Gayane V. Ananyan, Syuzi M. Grigoryan, Tsovinar Jomardyan, Ishkhan V. Vardanyan,

Valery. B. Arakelyan

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*Conference*

**Влияние мультипликативного шума на выходной сигнал ДНК-биосенсора**

Алоян Л., Аракелян В.Б., Парсаданян М.А., Вардеванян П.О.

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*Conference*

**Influence of Cation Porphyrins on DNA Damage during Irradiation by X-rays**

L.R. Aloyan, A.A. Avetisyan, V.B. Arakelyan, H.G. Margaryan

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*Conference*

**The Influence of Porphyrins on DNA Damage Induced by Electron Beam**

L. Aloyan, V. Arakelyan, A. Avetisyan, H. Margaryan

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