

# Вадим Робертович Оганян

## Научно-исследовательский институт физики

Տեսական ֆիզիկայի լաբորատորիա

Старший научный сотрудник

23-88  
(060) 71-03-88

vadim.ohanyan@ysu.am



## Образование

Учреждение	Ереванский государственный университет
Факультет	Факультет физики, кафедра теоретической физики
Дата	1998 - 2001
Степень / Звание	Аспирант

Учреждение	Ереванский государственный университет
Факультет	Факультет физики, кафедра теоретической физики
Дата	1993 - 1998
Степень / Звание	Квалифицированный специалист

## Ученое звание/Ученая степень

Учреждение	Ереванский физический институт
Дата	2003
Степень / Звание	Кандидат наук
Специальность	Физико-математические науки
Научный руководитель	Нерсес Ананикян
Научная тема	Фазовые переходы и плато намагниченности в некоторых спиновых системах, рекурсивные решетки, одномерные цепочки и нелинейная сигма-модель

## Знание языков

Русский English Deutsch Українська

## Публикации

Статья

### Quantum entanglement in a mixed-spin trimer: Effects of a magnetic field and heterogeneous $g$ factors

Vadim Ohanyan, Zhirayr Adamyan

Physical Review E 2024 034131

Статья

### Magnetization plateaus and enhanced magnetocaloric effect of a spin-1/2 Ising-Heisenberg and Heisenberg double sawtooth ladder with four-spin interaction

Hamid Arian Zad, Vadim Ohanyan, Azam Zoshki, Jozef Strecka  
Physical Review E 2023 044132 (1-12)

---

*Статья*

**Electric field driven flat bands: Enhanced magnetoelectric and electrocaloric effects in frustrated quantum magnets**

Vadim Ohanyan, Johannes Richter, Joerg Schuleburg, Juergen Schanck  
Physical Review B 2022 054420

---

*Статья*

**Magnetic and magnetoelectric properties of  $AFeF_5$  ( $A = Ca, Sr$ ) spin-chain compounds**

N. V. Ter-Oganessian, S. A. Guda, V. P. Sakhnenko, V. Ohanyan  
Journal of Magnetism and Magnetic Materials 2020 165720(1-6)

---

*Статья*

**Spin-1/2 XX chain in a transverse field with regularly alternating g factors: Static and dynamic properties**

Taras Krokhmal'skii, Taras Verkholyak, Ostap Baran, Vadim Ohanyan, Oleg Derzhko  
Physical Review B 2020 144403

---

*Статья*

**Influence of XY anisotropy on a magnetoelectric effect in spin-1/2 XY chain in a transverse magnetic field**

V. Ohanyan  
Condensed Matter Physics 2020 43704

---

*Статья*

**Quantum Entanglement in Spin Dimers: Effects of a Magnetic Field and Heterogeneous g-Factors**

Z. A. Adamyan, S. A. Muradyan, V. R. Ohanyan  
Journal of Contemporary Physics (Armenian Academy of Sciences) 2020 292–298

---

*Статья*

**Non-conserved magnetization operator and 'fire-and-ice' ground states in the Ising-Heisenberg diamond chain**

Vadim Ohanyan, Jordana Torrico, Onofre Rojas  
Journal of Magnetism and Magnetic Materials 2018 85-96

---

*Статья*

**Spin-1/2 XY -chain magnetoelectric: Effect of zigzag geometry**

Vadim Ohanyan, Ostap Baran, Taras Verkholyak  
Physical Review B 2018 064415(1-13)

---

*Статья*

**Absence of actual plateaus in zero-temperature magnetization curves of quantum spin clusters and chains**

Vadim Ohanyan, Onofre Rojas, Jozef Strecka, Stefano Bellucci  
Physical Review B 2015 214423-12  
<http://journals.aps.org/prb/>

---

Статья

**Magnetism-driven ferroelectricity in spin-1/2 XY chains**

Vadim Ohanyan, Oleg Menchyshyn, Taras Verkholyak, Taras Krokhmalskii, Oleg Derzhko

Physical Review B 2015 184427 - 7

<http://journals.aps.org/prb/>

---

Статья

**Magnetization non-rational quasi-plateau and spatially modulated spin order in the model of the single-chain magnet,**

$[\{\text{CuL}\}_2\text{Dy}\}\{\text{Mo}\{\text{CN}\}_8\}]\cdot\{\text{2CH}\}_3\{\text{CN}\}\cdot\text{mbo}$

Vadim Ohanyan, Stefano Bellucci, Onofre Rojas

EPL (Europhysics Letters) 2014 47012

<http://www.epleters.net/>

---

Статья

**Landau problem on the ellipsoid, hyperboloid and paraboloid of revolution**

Vadim Ohanyan, Armen Nersessian, Eva Gevorgyan, Evgeniy Tolkachev

Modern Physics Letters A 2014 1450148(1-15)

<http://www.worldscientific.com/worldscinet/mpla>

---

Статья

**Correlation functions in one-dimensional spin lattices with Ising and Heisenberg bonds**

Vadim Ohanyan, Stefano Bellucci

EUROPEAN PHYSICAL JOURNAL B 2013 446

<http://epjb.epj.org/>

---

Статья

**Exact description of the magnetoelectric effect in the spin-1/2 XXZ-chain with Dzyaloshinskii-Moriya interaction**

Michael Brockmann, Andreas Klumper, Vadim Ohanyan

Physical Review B 2013 054407

<http://journals.aps.org/prb/>

---

Статья

**Magnetocaloric effect in spin-1/2 XX chains with three-spin interactions**

M. Topilko, T. Krokhmalskii, O. Derzhko, V. Ohanyan

EUROPEAN PHYSICAL JOURNAL B 2012 278

<http://epjb.epj.org/>

---

Статья

**Magneto-thermal properties of the Heisenberg-Ising orthogonal-dimer chain with triangular XXZ-clusters**

Vadim Ohanyan, Andreas Honecker

Physical Review B 2012 054412(1-17)

<http://journals.aps.org/prb/>

---

Статья

**Exactly solvable mixed-spin Ising-Heisenberg diamond chain with biquadratic interactions and single-ion anisotropy**

Onofre Rojas, S. M. de Souza, Vadim Ohanyan, Martiros Khurshudyan

Physical Review B 2011 094430

<http://journals.aps.org/prb/>

---

*Статья*

**Lattice distortions in sawtooth chain with Heisenberg and Ising bonds**

S. Bellucci, V. Ohanyan

EUROPEAN PHYSICAL JOURNAL B 2010 531-541

<http://epjb.epj.org/>

---

*Статья*

**Phase diagrams of the Ising-Heisenberg chain with  $S=1/2$  triangular XXZ clusters**

Vadim Ohanyan

Physics of Atomic Nuclei 2010 494-498

<http://link.springer.com/journal/11450>

---

*Статья*

**Exact calculation of the magnetocaloric effect in the spin-1/2 XXZ chain**

Christian Trippe, Andreas Honekcer, Andreas Klumper, Vadim Ohanyan

Physical Review B 2010 054402

<http://journals.aps.org/prb/>

---

*Статья*

**Antiferromagnetic sawtooth chain with Heisenberg and Ising bonds**

Vadim Ohanyan

Condensed Matter Physics 2009 343-351

<http://www.icmp.lviv.ua/journal/>

---

*Статья*

**Exactly solvable Ising-Heisenberg chain with triangular  $XXZ$ -Heisenberg plaquettes**

Diana Antonosyan, Stefano Bellucci, Vadim Ohanyan

Physical Review B 2009 014432

<http://journals.aps.org/prb/>

---

*Статья*

**Two-center quantum MICZ-Kepler system and Zeeman effect in the charge-dyon system**

Stefano Bellucci, Vadim Ohanyan

Physics Letters A 2008 5765-5772

<http://www.journals.elsevier.com/physics-letters-a>

---

*Статья*

**Multi-center MICZ-Kepler systems**

Armen Nersessian, Vadim Ohanyan

Theoretical and Mathematical Physics 2008 618

<http://link.springer.com/journal/11232>

---

*Статья*

**$N=4$  Supersymmetric MICZ-Kepler systems on  $S^3$**

Stefano Bellucci, Sergey Krivonos, Vadim Ohanyan

Physical Review D 2007 105023

<http://journals.aps.org/prd/>

---

Статья

**Multi-center MICZ-Kepler system, supersymmetry and integrability,**

Sergey Krivonos, Armen Nersessian, Vadim Ohanyan

Physical Review D 2007 085002

<http://journals.aps.org/prd/>

---

Статья

**An exact solution on the ferromagnetic Face-Cubic spin model on a Bethe lattice**

Vadim Ohanyan, Nerses Ananikian, L.N. Ananikian

Physica A: Statistical Mechanics and its Applications 2007 501-513

<https://www.journals.elsevier.com/physica-a-statistical-mechanics-and-its-appli...>

---

Статья

**Magnetization plateaus in the ferromagnetic--ferromagnetic--antiferromagnetic Ising chain,**

Vadim Ohanyan, Nerses Ananikian

Physics Letters A 2003 76-84

<http://www.journals.elsevier.com/physics-letters-a>

---

Статья

**The multisite interaction Ising model approach to Solid  $^3\text{He}$  system on the triangular lattice,**

Tigran Arakelyan, Vadim Ohanyan, Lev Ananikyan, Nerses Ananikian, Michael roger

Physical Review B 2003 024424

<http://journals.aps.org/prb/>

---

Статья

**Local WZW-theory on a Manifold with Boundary**

Samvel Apikyan, Vadim Ohanyan

Modern Physics Letters A 1998 3009-3015

<http://www.worldscientific.com/worldscinet/mpla>

---

Конференция

**Interplay of Katsura-Nagaosa-Balatsky mechanism and zigzag geometry of lattice bonds: exactly solvable model of the  $S = 1/2$  XY magnetoelectric**

OHANYAN Vadim, BARAN Ostep, VERKHOLYAK Taras

---

Конференция

**Spin-1/2 XY Model of a Magnetoelectric on Zigzag Ladder: Exact Results**

V. Ohanyan, O. Baran, T. Verkholyak

---

Конференция

**Non-conserved magnetization, negative g-factors and 'fire-and-ice' spin configurations**

V. Ohanyan, J. Strečka, O. Rojas, J. Torrico, S. Bellucci

---

Конференция

**Electric field driven flat bands: Enhanced magnetoelectric and electrocaloric effects in frustrated quantum magnets**

Johannes Richter, Vadim Ohanyan, Joerg Schulenburg, Juergen Schnack

---