

## Prof. RIZA ERDEM

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### Education Information

Doctorate, Erciyes University, Fen Bilimleri Enstitüsü, Fizik Anabilim Dalı, Turkey 1997 - 2001

Postgraduate, Tokat Gaziosmanpaşa University, Graduate School Of Natural And Applied Sciences, Fizik Anabilim Dalı, Turkey 1993 - 1995

Undergraduate, Middle East Technical University, Fen- Edebiyat Fakültesi, Fizik Bölümü, Turkey 1987 - 1992

### Dissertations

Doctorate, Spin-1 Ising Sisteminin Kritik Sıcaklık Yakınlarındaki Durulma Teorisi, Erciyes University, Fen Bilimleri Enstitüsü, Fizik Anabilim Dalı, 2001

Postgraduate, Bilineer ve Bikuadratik Etkileşmeli Spin-1 Ising Modelinin Dinamiği, Tokat Gaziosmanpaşa University, Fen Bilimleri Enstitüsü, Fizik Anabilim Dalı, 1995

### Research Areas

Physics, General Physics, Statistical physics, thermodynamic and nonlinear dynamic systems, Natural Sciences

### Academic Titles / Tasks

Professor, Akdeniz University, Faculty of Science, Department of Physics, 2012 - Continues

Associate Professor, Akdeniz University, Faculty of Science, Department of Physics, 2010 - 2012

Associate Professor, Tokat Gaziosmanpaşa University, Faculty Of Arts And Sciences, 2008 - 2010

Research Assistant PhD, Tokat Gaziosmanpaşa University, Faculty Of Arts And Sciences, 2001 - 2008

Research Assistant, Tokat Gaziosmanpaşa University, Faculty Of Arts And Sciences, 1993 - 2001

### Advising Theses

Erdem R., Bazı tek tip ve karma- spin Ising zincirleri için Riemann skaler eğrilik diyagramlarının elde edilmesi, Postgraduate, F.HÜLYA(Student), 2019

ERDEM R., Kristal Alan Varlığında Nanoparçacığın Manyetik Özelliklerinin Büyüklüğe Bağlı Olarak İncelenmesi, Postgraduate, Z.Demir(Student), 2013

Erdem R., Tek Domenli Bir Nanoparçacığın Dipol-Kuadrupol Etkileşmesi Altında Manyetik Özelliklerinin İncelenmesi,

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Nonequivalent Antiferromagnetically Coupled Sublattices Induce Two-Step Spin-Crossover Transitions: Equilibrium and Nonequilibrium Aspects**  
Veliu V., Yalçın O., Özüm S., ERDEM R.  
Magnetochemistry, vol.10, no.6, 2024 (SCI-Expanded)
- II. **Geometrical aspects of the multicritical phase diagrams for the Blume–Emery–Griffiths model**  
ALATA N., ERDEM R., GÜLPINAR G.  
European Physical Journal Plus, vol.138, no.5, 2023 (SCI-Expanded)
- III. **Mean and Gaussian curvatures of equilibrium states for a spin-1 Ising system: existence of minimal surface in the paramagnetic solutions**  
ERDEM R.  
European Physical Journal Plus, vol.138, no.4, 2023 (SCI-Expanded)
- IV. **Static and dynamic properties of two-sublattice spin-crossover systems**  
Yalçın O., Veliu V., Özüm S., ERDEM R.  
Physica B: Condensed Matter, vol.645, 2022 (SCI-Expanded)
- V. **Geometrical description of the state space in spin crossover solids with high-spin low-spin degree of freedom**  
ERDEM R.  
Physica A: Statistical Mechanics and its Applications, vol.598, 2022 (SCI-Expanded)
- VI. **Hysteretic dipolar and quadrupolar properties of the spin-1 Blume-Emery-Griffiths model under pair approximation**  
ÖZÜM S., ERDEM R., Yalçin O., Gorguluer O.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.35, no.28, 2021 (SCI-Expanded)
- VII. **Nanosized Monolayer on Square Lattice within Spin-1 Ising Model: Hysteretic Properties with Odd Interactions**  
Ozum S., Kavlak R., Erdem R., Yalçin O.  
ACTA PHYSICA POLONICA A, vol.140, no.1, pp.84-90, 2021 (SCI-Expanded)
- VIII. **Hysteretic behavior of quadrupolar ordering in a 2D magnetic spin-1 Ising nanoparticle**  
ERDEM R., Yalçin O., ÖZÜM S., Sahin A., Demirer N.  
CHINESE JOURNAL OF PHYSICS, vol.69, pp.38-49, 2021 (SCI-Expanded)
- IX. **Ferromagnetism of Nanosized Bilayer on Square Lattice Within Ising Model: Static and Dynamic Aspects with Size Effects Using Pair Approximation**  
Gorguluer O., Yalçin O., Erdem R.  
ACTA PHYSICA POLONICA A, vol.139, no.2, pp.109-117, 2021 (SCI-Expanded)
- X. **Ruppeiner geometry of isotropic Blume-Emery-Griffiths model**  
Erdem R., Alata N.  
EUROPEAN PHYSICAL JOURNAL PLUS, vol.135, no.11, 2020 (SCI-Expanded)
- XI. **Determination of the steady-state kinetics in a spin-1 Ising model using path probability method**  
ÖZÜM S., ERDEM R.  
MODERN PHYSICS LETTERS B, vol.34, no.30, 2020 (SCI-Expanded)
- XII. **Quantum lattice model with local multi-well potentials: Riemannian geometric interpretation for the phase transitions in ferroelectric crystals**  
ERDEM R.  
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.556, 2020 (SCI-Expanded)
- XIII. **Relaxation times obtained from the rate equations using path probability method for the spin-1 Ising model**  
ERDEM R., ÖZÜM S.

- MODERN PHYSICS LETTERS B, vol.33, no.22, 2019 (SCI-Expanded)
- XIV. **Thermodynamic geometry of Ising ferromagnet in an external magnetic field: A self-consistent field theory calculation**  
ERDEM R.  
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.526, 2019 (SCI-Expanded)
- XV. **Dynamic dipolar and quadrupolar susceptibilities for the spin-1 Blume-Emery-Griffiths model based on Onsager theory of irreversible thermodynamics**  
Pawlak A., ERDEM R., GÜLPINAR G.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.472, pp.86-95, 2019 (SCI-Expanded)
- XVI. **High-frequency magnetic field on crystal field diluted S=1 Ising system: magnetic relaxation near continuous phase transition points**  
GÜLPINAR G., ERDEM R.  
CANADIAN JOURNAL OF PHYSICS, vol.96, no.12, pp.1321-1332, 2018 (SCI-Expanded)
- XVII. **ANTIFERROMAGNETIC ISING MODEL IN THE FRAMEWORK OF RIEMANNIAN GEOMETRY**  
ERDEM R.  
ACTA PHYSICA POLONICA B, vol.49, no.10, pp.1823-1834, 2018 (SCI-Expanded)
- XVIII. **Critical and multicritical behaviors of static and complex magnetic susceptibilities for the mean-field Blume-Capel model with a random crystal field**  
GÜLPINAR G., ERDEM R., Agartioğlu M.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.439, pp.44-52, 2017 (SCI-Expanded)
- XIX. **Origins of the Exchange-Bias Phenomenology, Coercivity Enhancement, and Asymmetric Hysteretic Shearing in Core-Surface Smart Nanoparticles**  
ERDEM R., Yalçın O., Ozum S., Ciftci N.  
ADVANCES IN CONDENSED MATTER PHYSICS, vol.2016, 2016 (SCI-Expanded)
- XX. **Static quadrupolar susceptibility for a Blume-Emery-Griffiths model based on the mean-field approximation**  
PAWLAK A., GÜLPINAR G., ERDEM R., Agartioğlu M.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.395, pp.1-6, 2015 (SCI-Expanded)
- XXI. **The phase diagrams with influence of biquadratic exchange coupling on martensitic-austenitic transformations for core-surface nanoparticles**  
YALCIN O., ERDEM R., Özüm S., Demir Z.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.389, pp.120-123, 2015 (SCI-Expanded)
- XXII. **Martensitic and austenitic transformations in core-surface cubic nanoparticles**  
Ozum S., Yalçın O., ERDEM R., Bayrakdar H., Eker H. N.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.373, pp.217-221, 2015 (SCI-Expanded)
- XXIII. **Spin-lattice relaxation within a dimerized Ising chain in a magnetic field**  
ERDEM R., GÜLPINAR G., Yalçın O., Pawlak A.  
JOURNAL OF APPLIED PHYSICS, vol.116, no.3, 2014 (SCI-Expanded)
- XXIV. **Origin of the martensitic and austenitic phase transition in core-surface smart nanoparticles with size effects and hysteretic splitting**  
Yalçın O., ERDEM R., Özüm S.  
JOURNAL OF APPLIED PHYSICS, vol.115, no.5, 2014 (SCI-Expanded)
- XXV. **Effect of magnetic field on dynamic response function in Ising systems**  
Pawlak A., ERDEM R.  
PHYSICS LETTERS A, vol.377, no.38, pp.2487-2493, 2013 (SCI-Expanded)
- XXVI. **Dynamic response function in Ising systems below T-c**  
Pawlak A., ERDEM R.  
PHYSICAL REVIEW B, vol.83, no.9, 2011 (SCI-Expanded)
- XXVII. **Frequency dependence of the complex susceptibility for a spin-1 Ising model**  
Erdem R.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.321, no.17, pp.2592-2595, 2009 (SCI-Expanded)

- XXVIII. **Monte Carlo simulation for statistical mechanics model of ion-channel cooperativity in cell membranes**  
Erdem R., AYDINER E.  
PHYSICAL REVIEW E, vol.79, no.3, 2009 (SCI-Expanded)
- XXIX. **Spin-1 model of noninteracting nanoparticles**  
Yalcin O., Erdem R., Oevuenc S.  
ACTA PHYSICA POLONICA A, vol.114, no.4, pp.835-844, 2008 (SCI-Expanded)
- XXX. **Magnetic relaxation in a spin-1 Ising model near the second-order phase transition point**  
Erdem R.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.320, no.18, pp.2273-2278, 2008 (SCI-Expanded)
- XXXI. **The transport properties of the cell membrane ion channels in electric fields: Bethe lattice treatment**  
Erdem R., Ekiz C.  
JOURNAL OF STATISTICAL PHYSICS, vol.129, no.3, pp.469-481, 2007 (SCI-Expanded)
- XXXII. **A non-extensive statistical mechanical approach to define the equilibrium value function in the kinetics of voltage-gated ion channels**  
Erdem R.  
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.373, pp.417-424, 2007 (SCI-Expanded)
- XXXIII. **Effect of crystal-field potential on compensation temperature of a mixed spin-1/2 and spin-1 Ising ferrimagnetic system**  
Ekiz C., Erdem R.  
PHYSICS LETTERS A, vol.352, no.4-5, pp.291-295, 2006 (SCI-Expanded)
- XXXIV. **Collective equilibrium behaviour of ion channel gating in cell membranes: An Ising model formulation**  
Erdem R.  
JOURNAL OF BIOLOGICAL PHYSICS, vol.32, no.6, pp.523-529, 2006 (SCI-Expanded)
- XXXV. **An interactive two-state model for cell membrane potassium and sodium ion channels in electric fields using the pair approximation**  
Erdem R., Ekiz C.  
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.351, no.2-4, pp.417-426, 2005 (SCI-Expanded)
- XXXVI. **A kinetic model for voltage-gated ion channels in cell membranes based on the path integral method**  
Erdem R., Ekiz C.  
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.349, no.1-2, pp.283-290, 2005 (SCI-Expanded)
- XXXVII. **The finite-size scaling study of the specific heat and the Binder parameter for the six-dimensional Ising model**  
Merdan Z., Erdem R.  
PHYSICS LETTERS A, vol.330, no.6, pp.403-407, 2004 (SCI-Expanded)
- XXXVIII. **A noninteracting two-state model of cell membrane ion channels using the pair approximation**  
Erdem R., Ekiz C.  
PHYSICS LETTERS A, vol.331, no.1-2, pp.28-33, 2004 (SCI-Expanded)
- XXXIX. **On the temperature dependence of the sound attenuation maximum as a function of frequency and magnetic field in a spin-1 Ising model near the critical region**  
Erdem R., Keskin M.  
PHYSICS LETTERS A, vol.326, no.1-2, pp.27-31, 2004 (SCI-Expanded)
- XL. **A new approach to define dynamics of the ion channel gates**  
Özer M., Erdem R., Provaznik I.  
NEUROREPORT, vol.15, no.2, pp.335-338, 2004 (SCI-Expanded)
- XLI. **Dynamics of voltage-gated ion channels in cell membranes by the path probability method**  
Özer M., Erdem R.  
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.331, no.1-2, pp.51-60, 2004 (SCI-Expanded)
- XLII. **Relaxation phenomena in the Blume-Emery-Griffiths model near the critical and multicritical points**  
Erdem R., Ekiz C., Keskin M.

- PHYSICA STATUS SOLIDI B-BASIC RESEARCH, vol.240, no.1, pp.220-229, 2003 (SCI-Expanded)
- XLIII. **Field-dependent behavior of the sound attenuation in a spin-1 Ising model**  
Erdem R.  
PHYSICS LETTERS A, vol.312, no.3-4, pp.238-243, 2003 (SCI-Expanded)
- XLIV. **A new methodology to define the equilibrium value function in the kinetics of (in)activation gates**  
Özer M., Erdem R.  
NEUROREPORT, vol.14, no.7, pp.1071-1073, 2003 (SCI-Expanded)
- XLV. **Critical behaviors of the sound attenuation in a spin-1 Ising model**  
Keskin M., Erdem R.  
JOURNAL OF CHEMICAL PHYSICS, vol.118, no.13, pp.5947-5954, 2003 (SCI-Expanded)
- XLVI. **Sound dispersion in a spin-1 Ising system near the second-order phase transition point**  
Erdem R., Keskin M.  
PHYSICS LETTERS A, vol.310, no.1, pp.74-79, 2003 (SCI-Expanded)
- XLVII. **Effect of the off-diagonal Onsager rate coefficient on the relaxation times in a spin-1 Ising system**  
Keskin M., Erdem R.  
PHYSICS LETTERS A, vol.297, no.5-6, pp.427-431, 2002 (SCI-Expanded)
- XLVIII. **Sound attenuation in a spin-1 Ising system near the critical temperature**  
Erdem R., Keskin M.  
PHYSICS LETTERS A, vol.291, no.2-3, pp.159-164, 2001 (SCI-Expanded)
- XLIX. **Dynamics of a spin-1 Ising system in the neighborhood of equilibrium states**  
Erdem R., Keskin M.  
PHYSICAL REVIEW E, vol.64, no.2, 2001 (SCI-Expanded)
- L. **Theory of relaxation phenomena in a spin-1 Ising system near the second-order phase transition point**  
Erdem R., Keskin M.  
PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS, vol.225, no.1, pp.145-155, 2001 (SCI-Expanded)
- LI. **Dynamic behavior of a spin-1 Ising model. I. Relaxation of order parameters and the "flatness" property of metastable states**  
Keskin M., Erdem R.  
JOURNAL OF STATISTICAL PHYSICS, vol.89, no.5-6, pp.1035-1046, 1997 (SCI-Expanded)

## Books & Book Chapters

- I. **Thermal Hysteresis Due to the Structural Phase Transitions in Magnetization for Core-Surface Nanoparticles**  
ERDEM R., Özüml S., Yalçın O.  
in: Recent Advances in Thermo and Fluid Dynamics, Gorji-Bandpy M, Editor, Intech, Rijeka, pp.109-125, 2015
- II. **Magnetic Properties and Size Effects of Spin-1/2 and Spin-1 Models of Core-Surface Nanoparticles in Different Type Lattices**  
Yalçın O., ERDEM R., Demir Z.  
in: Nanotechnology and Nanomaterials "Smart Nanoparticles Technology", Abbass Hashim, Editor, Intech, Rijeka, pp.541-560, 2012
- III. **Nonequilibrium Thermodynamics of Ising Magnets**  
ERDEM R., Gülpınar G.  
in: Thermodynamics - Systems in Equilibrium and Non-Equilibrium, Carlos Moreno Piraján J., Editor, Intech, Rijeka, pp.255-278, 2011

## Refereed Congress / Symposium Publications in Proceedings

- I. **Blume-Capel modelinin termodinamik geometri çerçevesinde incelenmesi**  
Akkurt T., Erdem R., Ekiz C.  
27. Yoğun Madde Fiziği- Ankara Toplantısı , Ankara, Turkey, 16 December 2022, pp.3-4
- II. **Slow and fast relaxation times of quantum lattice model with local multi-well potentials: phenomenological dynamics for Sn2P2S6 ferroelectric crystals**  
Erdem R., Özüm S., Güçlü N.  
Turkish Physical Society 38th International Physics Congress, Muğla, Turkey, 31 August - 04 September 2022, pp.322
- III. **Thermodynamic metric geometry of 3D order parameter state space in a mixed spin-1/2 and spin-1 Ising ferromagnetic system**  
Akkurt T., Erdem R., Ekiz C.  
Turkish Physical Society 38th International Physics Congress, Muğla, Turkey, 31 August - 04 September 2022, pp.323
- IV. **Dejenere düşük-spin yüksek-spin geçişlerinin termodinamik geometri kullanılarak incelenmesi**  
Erdem R.  
26. Yoğun Madde Fiziği – Ankara Toplantısı , Ankara, Turkey, 24 December 2021, pp.25
- V. **Geometrical Aspects of the Multicritical Phase Diagrams for the Blume-Emery-Griffiths Model**  
ALATA N., ERDEM R.  
The 46th Conference of the Middle European Cooperation in Statical Physics, Riga, Latvia, 11 - 13 May 2021, pp.79
- VI. **Nanosized Monolayer on the Square Lattice within Spin-1 Ising Model: Magnetic Properties with odd Interactions**  
Kavlak R., Özüm S., ERDEM R., Yalçın O.  
Turkish Physical Society 36th International Physics Congress, İstanbul, Turkey, 1 - 05 September 2020, pp.91
- VII. **Kuantum Örgü Modeli İçin Geometrik Faz Diyagramları**  
ERDEM R.  
25. Yoğun Madde Fiziği – Ankara Toplantısı, Ankara, Turkey, 20 December 2019, pp.33
- VIII. **Spin-1 Ising Modelinde Manyetik Dağılganlık Bağıntısı ve Manyetik Sönüm Faktörünün Yol Olasılık Metodu ile Hesaplanması**  
Özüm S., ERDEM R.  
25. Yoğun Madde Fiziği – Ankara Toplantısı, Ankara, Turkey, 20 December 2019, pp.37
- IX. **Dypolar and Quadrupolar Hysteresis in Core-Surface Magnetic Nanoparticles**  
Özüm S., Yalçın O., ERDEM R.  
6th International Conference on Materials Science and Nanotechnology for Next Generation, Niğde, Turkey, 16 - 18 October 2019, pp.43
- X. **Thermodynamic curvature for the Ising model in the pair approximation**  
ERDEM R.  
26. İstatistiksel Fizik Günleri (İFG 26), İzmir, Turkey, 27 - 29 June 2019, pp.10
- XI. **A geometrical perspective on the phase and phase transitions in a spin-1 Ising system**  
ERDEM R., ALATA N.  
44th Conference of the Middle Eeuropean Cooperation in Statistical Physics, Münih, Germany, 1 - 03 May 2019, pp.1
- XII. **"A geometrical perspective on the phase and phase transitions in a spin-1 Ising system"**  
ERDEM R., ALATA N.  
44th Conference of the Middle Eeuropean Cooperation in Statistical Physics, Münih, ALMANYA, 1-3 Mayıs 2019, pp.1-1, Münih, Germany, 1 - 03 May 2019, pp.1
- XIII. **Thermodynamic Geometry of Ising Ferromagnets in an External Magnetic Field**  
ERDEM R.  
6th Italian Conference on Magnetism, Messina, Italy, 30 January - 01 February 2019, pp.92
- XIV. **Spin-1 Ising Sisteminde Manyetizasyon ve Kuadrupol Moment Durulma Sürelerinin Yol Olasılık Metodu ile Hesaplanması**  
Özüm S., ERDEM R.

24. Yoğun Madde Fiziği Ankara Toplantısı, Ankara, Turkey, 21 December 2018, pp.48
- XV. **Riemannian Geometry of Ising Model in the Bethe Approximation**  
Erdem R.  
3rd International Conference on Mathematical Sciences and Statistics (ICMSS), Putrajaya, Malaysia, 6 - 08 February 2018, vol.1132
- XVI. **Short-range magnetic ordering in core-surface smart nanoparticles**  
ERDEM R., YALÇIN O.  
International conference on Nanomagnetism and Spintronics, San Sebastian, Spain, 19 - 23 June 2017, pp.10
- XVII. **Dynamic quadrupolar susceptibility for the spin-1 Blume-Emery-Griffiths model**  
ERDEM R., Gülpınar G., Pawlak A.  
The Conferences of the Middle European Cooperation in Statistical Physics, Lyon, France, 8 - 10 February 2017, pp.87
- XVIII. **Investigation of finite-size effects in the free energy surfaces of a mean field spin-1 Ising system: A microcanonical formulation using gamma function**  
ERDEM R., Yalçın O.  
IUPAP International Conference on Statistical Physics, Lyon, France, 18 - 22 July 2016, pp.53
- XIX. **Size effects on the open probability of two-state ion channel system in cell membranes using microcanonical formalism based on gamma function**  
ERDEM R., Aydiner E.  
5th International Conference on Mathematical Modeling in Physical Sciences (IC-MSquare), Atina, Greece, 23 - 26 May 2016, vol.738, no.12110, pp.1-5
- XX. **Hysteretic Behaviour of Quadrupolar Ordering in the Magnetic Nanoparticles**  
ERDEM R., Yalçın O., Şahin A., Demirer N.  
4th International Congress on Nanoscience and Nanotechnology, Kuala Lumpur, Malaysia, 28 - 29 January 2016, pp.47
- XXI. **Size effects on the open probability of two-state ion channel system in cell membranes using microcanonical formalism based on gamma function**  
ERDEM R., AYDINER E.  
5th International Conference on Mathematical Modeling in Physical Sciences (IC-MSquare), Athens, Greece, 23 - 26 May 2016, vol.738
- XXII. **Exact Analysis of Free Energy Surfaces for the Spin-1 Mean-Field Ising Model in the Microcanonical Formalism using Gamma Function**  
ERDEM R., Yalçın O.  
14th Regional Conference on Mathematical Physics, Islamabad, Pakistan, 9 - 14 November 2015, pp.311-319
- XXIII. **Temperature and size effects of exchange bias in composite nanoparticles**  
ERDEM R., Yalçın O., Özüm S., Çiftçi N.  
40th Conference of the Middle European Cooperation in Statistical Physics, Estergon, Hungary, 23 - 25 March 2015, pp.44
- XXIV. **Martensitic and austenitic transformations in smart nanoparticles with size effects and hysteresis splitting**  
ERDEM R., Yalçın O., Özüm S.  
The European Conference Physics of Magnetism 2014 (PM'14), Poznan, Poland, 23 - 27 June 2014, pp.174
- XXV. **Çekirdek-Yüzey Tipi Nanoparçacıklarda Değiş-tokuş Anizotropi etkisinin Kaynağı**  
ERDEM R., Yalçın O., Özüm S., Çiftçi N.  
19. Yoğun Madde Fiziği- Ankara Toplantısı, Ankara, Turkey, 20 December 2013, pp.1
- XXVI. **Magnetic properties of a monodomain nanoparticle with dipole-quadrupole interactions**  
ERDEM R., Yalçın O., Çiftçi N.  
3rd Nanotoday Conference, Biopolis, Singapore, 8 - 11 December 2013, pp.76
- XXVII. **Spin-lattice relaxation within a dimerized Ising chain undergoing spin-Peierls transition in a magnetic field**  
ERDEM R., Gülpınar G., Yalçın O., Pawlak A.

25. IUPAP International Conference on Statistical Physics, Seoul, South Korea, 21 - 26 July 2013, pp.424
- XXVIII. **Işık saçılımı metodları ile polielektrolit-tuz çözeltilerinde faz geçiş dinamiğinin incelenmesi**  
KAYA D., ERDEM R., YALTKAYA Ş.  
İstatistik Fizik Günleri 21, Kayseri, Turkey, 27 June 2013 - 29 June 2013, pp.5
- XXIX. **Işık saçılımı metodları ile polielektrolit-tuz çözeltilerinde faz geçiş dinamiğinin incelenmesi**  
KAYA D., ERDEM R., YALTKAYA Ş.  
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- XXX. **İŞIK SAÇILIMI METODLARI İLE POLİELEKTROLİT-TUZ ÇÖZELTİLERİNDE FAZ GEÇİŞ DİNAMİĞİNİN İNCELENMESİ**  
KAYA D., YALTKAYA Ş., ERDEM R.  
20. İSTATİKSEL FİZİK GÜNLERİ,, Kayseri, Turkey, 27 - 29 June 2013, pp.1
- XXXI. **Critical and multicritical behaviors of dynamic susceptibility for a spin-1 Ising model with a random crystal field**  
ERDEM R., Ağartıoğlu M., Gülpınar G.  
XXIII. Sitges Conference on Statistical Mechanics: Understanding and Managing Randomness in Physics, Chemistry and Biology, Barselona, Spain, 4 - 08 June 2012, pp.71
- XXXII. **Farklı Örgü ve Spin Değerlerine Sahip Çekirdek-Kabuk Nanoparçacığın Büyüklüğe Bağlı İncelenmesi**  
ERDEM R., Demir Z., Yalçın O.  
18. Yoğun Madde Fiziği- Ankara Toplantısı, Ankara, Turkey, 25 November 2011, pp.23
- XXXIII. **Static quadrupolar susceptibility for the Blume-Emery-Griffiths Model**  
ERDEM R., Gülpınar G., Pawlak A.  
36th Conference of the Middle European Cooperation in Statistical Physics, Lviv, Ukraine, 5 - 07 April 2011, pp.83
- XXXIV. **Blume-Emery-Griffiths Modeli için Dinamik Kuadrupol Alınganlık**  
ERDEM R., Gülpınar G.  
17. Yoğun Madde Fiziği- Ankara Toplantısı, Ankara, Turkey, 05 November 2010, pp.56
- XXXV. **Static and dynamic quadrupolar susceptibility for a spin-1 Ising model**  
ERDEM R., Pawlak A.  
International Conference on Superconductivity and Magnetism, Antalya, Turkey, 25 - 30 April 2010, pp.1
- XXXVI. **Spin-1 Blume-Emery-Griffiths modelinde dinamik Alınganlığın üçlü nokta ve kritik son nokta davranışları**  
ERDEM R.  
16. Yoğun Madde Fiziği- Ankara Toplantısı, Ankara, Turkey, 06 November 2009, pp.51
- XXXVII. **Relaxational model for spin-1 Ising system based on the Van Hove approximation**  
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## Supported Projects

ERDEM R., TÜBİTAK Project, Spin-1 Ising Sistemlerinde Manyetik Durulma ve Dinamik Alınganlık, 2007 - 2009

## Metrics

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## Congress and Symposium Activities

- 14th Regional Conference on Mathematical Physics, Attendee, Islâmâbâd, Pakistan, 2015
- 40th Conference of the Middle European Cooperation in Statistical Physics, Attendee, Esztergom, Hungary, 2015
- The European Conference Physics of Magnetism, Attendee, Poznan, Poland, 2014
19. Yoğun Madde Fiziği- Ankara Toplantısı, Attendee, Ankara, Turkey, 2013
- 3rd Nanotoday Conference, Attendee, Biopolis, Singapore, 2013
- IUPAP International Conference on Statistical Physics, Attendee, Seoul, South Korea, 2013
- XXIII. Sitges Conference on Statistical Mechanics: Understanding and Managing Randomness in Physics, Chemistry and Biology, Attendee, Sitges/Barcelona, Spain, 2012
18. Yoğun Madde Fiziği- Ankara Toplantısı, Attendee, Ankara, Turkey, 2011
- 36th Conference of the Middle European Cooperation in Statistical Physics, Attendee, Lviv, Ukraine, 2011
17. Yoğun Madde Fiziği- Ankara Toplantısı, Attendee, Ankara, Turkey, 2010
- International Conference on Superconductivity and Magnetism, Attendee, Antalya, Turkey, 2010
16. Yoğun Madde Fiziği- Ankara Toplantısı, Attendee, Ankara, Turkey, 2009
- Turkish Physical Society 26th International Physics Congress, Attendee, Bodrum/Muğla, Turkey, 2009
15. Yoğun Madde Fiziği- Ankara Toplantısı, Attendee, Ankara, Turkey, 2008
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15. İstanbul İstatistiksel Fizik Günleri, Attendee, İstanbul, Turkey, 2008
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