

Assoc. Prof. ZEYNEP DEMİR VATANSEVER

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: P-3863-2019

ScopusID: 56964092600

Yoksis Researcher ID: 113221

Education

Doctorate, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Fizik (Dr), Turkey 2010 - 2016

Postgraduate, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Turkey 2008 - 2010

Undergraduate, Dokuz Eylul University, Buca Eğitim Fakültesi, Matematik ve Fen Bilimleri Eğitimi Bölümü, Turkey 2003 - 2008

Foreign Languages

English, C1 Advanced

Certificates, Courses and Trainings

Vocational Training, Advanced Workshop on Landau-Zener Interferometry and Quantum Control In Condensed Matter, İzmir Yüksek Teknoloji Enstitüsü, 2014

Vocational Training, International Summer School on HPC challenges in Computational Sciences, New York University, 2013

Vocational Training, 2012 Cambridge ITAP School and Workshop on Coherence and Condensation in Low Dimensional Systems, ITAP, 2012

Vocational Training, Eurasia-Pacific Summer School on and Conference on Strongly Correlated Electrons, ITAP, 2012

Vocational Training, Novel Gain Materials and Devices Based on II-V-N Compounds, Dokuz Eylül Üniversitesi, 2011

Dissertations

Doctorate, Electronic states in few-electron quantum dots: Configuration interaction method, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Fizik (Dr), 2016

Postgraduate, Electronic structure of many electron quantum dots, Dokuz Eylul University, Fen Bilimleri Enstitüsü, 2010

Research Areas

General Physics, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties

Academic Positions

Associate Professor, Dokuz Eylul University, Fen Fakültesi, Fizik Bölümü, 2019 - Continues

Research Assistant, Dokuz Eylul University, Fen Fakültesi, Fizik Bölümü, 2009 - Continues

Academic and Administrative Experience

Deputy Head of Department, Dokuz Eylul University, Fen Fakültesi, Fizik Bölümü, 2022 - 2023

Deputy Head of Department, Dokuz Eylul University, Fen Fakültesi, Fizik Bölümü, 2021 - 2022

Courses

Undergraduate

Physics Laboratory, Undergraduate, 2022 - 2023

Physics I, Undergraduate, 2022 - 2023

PHYSICS I, Undergraduate, 2022 - 2023, 2021 - 2022

Technical English-II, Undergraduate, 2020 - 2021, 2019 - 2020

Physics I, Undergraduate, 2021 - 2022

Physics Laboratory, Undergraduate, 2020 - 2021, 2019 - 2020

Physics II, Undergraduate, 2020 - 2021

Technical English I, Undergraduate, 2021 - 2022

Physics I, Undergraduate, 2020 - 2021

Technical English I, Undergraduate, 2020 - 2021, 2019 - 2020

Physics I, Undergraduate, 2019 - 2020

Journal articles indexed in SCI, SSCI, and AHCI

- I. **Investigation of the electronic and magnetic properties of bare and oxygen-terminated ordered double transition-metal MXenes for spintronic applications**
Akyildiz A., Ilgaz Aysan I., Abdullahi Y. Z., Akgenc Hanedar B., Demir Vatansever Z., Ersan F.
Physical Chemistry Chemical Physics, vol.26, no.41, pp.26566-26575, 2024 (SCI-Expanded)
- II. **Electronic, magnetic and universality properties of room-temperature antiferromagnet Fe₂O₃ monolayer**
DEMİR VATANSEVER Z., Abdullahi Y. Z., Ersan F., VATANSEVER E.
Journal of Physics and Chemistry of Solids, vol.192, 2024 (SCI-Expanded)
- III. **Strain effects on the electronic and magnetic properties of Cr₂TaC₂ and Cr₂TaC₂O₂ monolayers**
Bilican F., Ozdemir Kart S., VATANSEVER E., Ersan F., DEMİR VATANSEVER Z.
Applied Physics Letters, vol.122, no.15, 2023 (SCI-Expanded)
- IV. **Magnetic properties of two dimensional V₂O₃ monolayer**
DEMİR VATANSEVER Z.
Physica Scripta, vol.98, no.2, 2023 (SCI-Expanded)
- V. **Dynamic phase transitions on the kagome Ising ferromagnet**
Vatansever Z. D.
PHYSICAL REVIEW E, vol.106, no.5, 2022 (SCI-Expanded)
- VI. **First-principles and Monte Carlo investigation of magnetic properties of two-dimensional transition metal alloyed boron-carbide CrFeBC sheet**
Abdullahi Y. Z., DEMİR VATANSEVER Z., AKTÜRK E., AKINCI Ü., AKTÜRK O. Ü.
COMPUTATIONAL MATERIALS SCIENCE, vol.202, 2022 (SCI-Expanded)

- VII. **Novel two-dimensional CrXB₂ (X=Cr, Ru) metal for high Neel temperature antiferromagnetic spintronics**
Abdullahi Y. Z., DEMİR VATANSEVER Z., AKTÜRK E., AKINCI Ü., AKTÜRK O. Ü.
JOURNAL OF SOLID STATE CHEMISTRY, vol.302, 2021 (SCI-Expanded)
- VIII. **Monte Carlo study of the two-dimensional kinetic Blume-Capel model in a quenched random crystal field**
Vasilopoulos A., DEMİR VATANSEVER Z., Vatansever E., Fytas N. G.
PHYSICAL REVIEW E, vol.104, no.2, 2021 (SCI-Expanded)
- IX. **Doping-Driven Antiferromagnetic to Ferromagnetic Phase Transition in Tetragonal Cr₂B₂ Monolayer**
Abdullahi Y. Z., DEMİR VATANSEVER Z., AKTÜRK E., AKINCI Ü., AKTÜRK O. Ü.
PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS, vol.258, no.4, 2021 (SCI-Expanded)
- X. **Ferromagnetic TM₂BC (TM = Cr, Mn) monolayers for spintronic devices with high Curie temperature**
Abdullahi Y. Z., DEMİR VATANSEVER Z., ERSAN F., AKINCI Ü., AKTÜRK O. Ü., AKTÜRK E.
PHYSICAL CHEMISTRY CHEMICAL PHYSICS, vol.23, no.10, pp.6107-6115, 2021 (SCI-Expanded)
- XI. **Magnetocaloric properties of FM/AFM core/shell nanoparticles: a Monte Carlo simulation study**
VATANSEVER E., YÜKSEL Y., DEMİR VATANSEVER Z.
EUROPEAN PHYSICAL JOURNAL B, vol.94, no.1, 2021 (SCI-Expanded)
- XII. **Ising universality in the two-dimensional Blume-Capel model with quenched random crystal field**
VATANSEVER E., DEMİR VATANSEVER Z., Theodorakis P. E., Fytas N. G.
PHYSICAL REVIEW E, vol.102, no.6, 2020 (SCI-Expanded)
- XIII. **Exploring the potential of MnX (S, Sb) monolayers for antiferromagnetic spintronics: A theoretical investigation**
Abdullahi Y. Z., ERSAN F., DEMİR VATANSEVER Z., AKTÜRK E., AKTÜRK O. Ü.
JOURNAL OF APPLIED PHYSICS, vol.128, no.11, 2020 (SCI-Expanded)
- XIV. **A tetragonal phase Mn₂B₂ sheet: a stable room temperature ferromagnet with sizable magnetic anisotropy**
Abdullahi Y. Z., DEMİR VATANSEVER Z., AKTÜRK E., AKINCI Ü., AKTÜRK O. Ü.
PHYSICAL CHEMISTRY CHEMICAL PHYSICS, vol.22, no.19, pp.10893-10899, 2020 (SCI-Expanded)
- XV. **Tuning exchange bias in inverted antiferromagnetic/ferromagnetic core/shell nanoparticles by binary alloy shells**
Vatansever Z., Vatansever E.
PHYSICS LETTERS A, vol.382, no.40, pp.2901-2907, 2018 (SCI-Expanded)
- XVI. **Magnetic anisotropy and interface exchange coupling dependence of exchange bias in core/shell doubly inverted magnetic nanoparticles**
Vatansever Z., YÜKSEL Y., Vatansever E.
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.51, no.36, 2018 (SCI-Expanded)
- XVII. **Monte Carlo simulation study for hysteresis properties of a Prussian blue analog nanowire**
Vatansever Z.
PHYSICA B-CONDENSED MATTER, vol.545, pp.397-401, 2018 (SCI-Expanded)
- XVIII. **Numerical study of exchange bias in antiferromagnetic/ferromagnetic core/shell nanoparticles with non-magnetic defects**
Vatansever Z.
PHYSICS LETTERS A, vol.382, no.36, pp.2539-2543, 2018 (SCI-Expanded)
- XIX. **Magnetic features of a mixed ferro-ferrimagnetic ternary alloy cylindrical nanowire**
Vatansever Z.
PHYSICS LETTERS A, vol.381, no.40, pp.3450-3455, 2017 (SCI-Expanded)
- XX. **Hysteresis properties of a quenched disordered binary alloy cylindrical nanowire: A Monte Carlo simulation study**
Vatansever Z.

- JOURNAL OF ALLOYS AND COMPOUNDS, vol.720, pp.388-394, 2017 (SCI-Expanded)
- XXI. **Thermal and magnetic phase transition properties of a binary alloy spherical nanoparticle: A Monte Carlo simulation study**
Vatansever Z., Vatansever E.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.432, pp.239-244, 2017 (SCI-Expanded)
- XXII. **Finite temperature magnetic phase transition features of the quenched disordered binary alloy cylindrical nanowire**
Vatansever Z., Vatansever E.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.701, pp.288-294, 2017 (SCI-Expanded)
- XXIII. **Effects of a scattering center on the ground-state energy of quantum-dot lithium**
Vatansever Z., Sakiroglu S., Sokmen I.
MODERN PHYSICS LETTERS B, vol.31, no.7, 2017 (SCI-Expanded)
- XXIV. **Effects of impurity on the energy spectra of quantum-dot lithium**
Vatansever Z., Sakiroglu S., AKGÜNGÖR K., Sokmen I.
PHYSICA B-CONDENSED MATTER, vol.481, pp.179-184, 2016 (SCI-Expanded)
- XXV. **Shape effects on the ground-state energy of a three-electron quantum dot**
Vatansever Z., Sakiroglu S., Sokmen I.
CHINESE PHYSICS B, vol.24, no.12, 2015 (SCI-Expanded)

Articles Published in Other Journals

- I. **Critical dynamics of cluster algorithms in the random-bond Ising model**
Kanbur U., Vatansever Z. D.
PHYSICAL REVIEW E - STATISTICAL, NONLINEAR, AND SOFT MATTER PHYSICS, vol.109, pp.241401-241408, 2024 (Scopus)
- II. **Hysteresis properties of a mixed ferromagnetic-ferrimagnetic ternary alloy**
DEMİR VATANSEVER Z.
Academic Platform Journal of Engineering and Science, vol.6, no.2, pp.94-102, 2018 (Peer-Reviewed Journal)

Papers Presented at Peer-Reviewed Scientific Conferences

- I. **Universality properties of two-dimensional kinetic Blume-Capel model in a quenched random crystal field**
Demir Vatansever Z.
SECOND INTERNATIONAL BILATERAL WORKSHOP ON SCIENCE BETWEEN DOKUZ EYLÜL UNIVERSITY AND AZERBAIJAN NATIONAL ACADEMY OF SCIENCES, 18 November 2022, (Unpublished)
- II. **POSSIBILITIES OF ENHANCING MAGNETOCALORIC EFFECT IN LOW DIMENSIONAL SYSTEMS**
AKINCI Ü., YÜKSEL Y., VATANSEVER E., DEMİR VATANSEVER Z.
FIRST INTERNATIONAL BILATERAL WORKSHOP ON SCIENCE BETWEEN DOKUZ EYLÜL UNIVERSITY AND AZERBAIJAN NATIONAL ACADEMY OF SCIENCES, Turkey, 19 November 2021, (Summary Text)
- III. **Effects of the particle size and shape of the magnetic nanoparticles on the magnetic hyperthermia and exchange bias properties**
YÜKSEL Y., VATANSEVER E., DEMİR VATANSEVER Z.
12th International Symposium on Hysteresis Modeling and Micromagnetics, 19 - 22 May 2019, (Summary Text)
- IV. **Üçlü Alaşım Nanotelin Manyetik Özellikleri: Monte Carlo Simülasyonu**
DEMİR VATANSEVER Z.
Adım Fizik Günleri VII, Aydın, Turkey, 23 - 25 May 2018, (Summary Text)
- V. **Monte Carlo study of hysteresis features of a cylindrical nanowire under quenched disorder**
Demir Vatansever Z.

NTZ-Workshop "CompPhys17": New Developments in Computational Physics, Leipzig, Germany, 30 November - 02 December 2017, (Unpublished)

- VI. **Phase transition properties of a binary alloy cylindrical nanowire: A Monte Carlo simulation study**
DEMİR VATANSEVER Z.
Turkish Physical Society 33rd International Physics Congress, Muğla, Turkey, 6 - 10 September 2017, (Summary Text)
- VII. **KARIŞIK FERRO-FERRİMANYETİK ÜÇLÜ ALAŞIM SİSTEMİNİN MANYETİK ÖZELLİKLERİ**
DEMİR VATANSEVER Z.
ADIM FİZİK GÜNLERİ VI, Balıkesir, Turkey, 19 - 21 July 2017, (Summary Text)
- VIII. **Hysteresis features of a quenched disordered binary alloy cylindrical nanowire**
DEMİR VATANSEVER Z.
24. İstatistiksel Fizik Günleri (İFG 24), İzmir, Turkey, 29 June - 01 July 2017, (Summary Text)
- IX. **Finite Temperature Magnetic Properties of the Quenched Disordered Binary Alloy Nanowire: A Monte-Carlo Simulation Study**
DEMİR VATANSEVER Z.
42nd Conference of the Middle-European Cooperation in Statistical Physics (MECO), Lyon, France, 8 - 10 February 2017, (Summary Text)
- X. **İkili alaşım küresel nanoparçacık sisteminin sonlu sıcaklık faz geçişi özellikleri: Monte Carlo Simülasyonu**
DEMİR VATANSEVER Z., VATANSEVER E.
22. Yoğun Madde Fiziği Ankara Toplantısı (YMF-22), Ankara, Turkey, 16 December 2016, (Summary Text)
- XI. **Üç Elektronlu Polygonal Kuantum Noktalar**
Demir Z., Şakiroğlu S., Akgüngör K., Sökmen İ.
Yoğun Madde Fiziği İzmir Toplantısı, İzmir, Turkey, 17 April 2015, pp.37, (Summary Text)
- XII. **Safsızlık Etkisi Altındaki Kuantum Nokta Sistemi Şekillenim Etkileşim Yöntemi**
DEMİR Z., AKGÜNGÖR K., ŞAKİROĞLU S., SÖKMEN İ.
Yoğun Madde Fiziği İzmir Toplantısı 2014, Turkey, 11 April 2014
- XIII. **KUANTUM NOKTALARIN ŞEKİLLENİM ETKİLEŞİM YÖNTEMİ İLEİNCELENMESİ**
DEMİR VATANSEVER Z., AKGÜNGÖR K., SÖKMEN İ.
Yoğun Madde Fiziği-İzmir Toplantısı, İzmir, Turkey, 06 April 2012, (Summary Text)

Funded Projects

Demir Vatansever Z., Ersan F., TUBITAK Project, Lateral-Hetero Mxenele ile Elektronik ve Manyetik Özelliklerin Ayarlanması, 2021 - 2024

Yüksel Y., Vatansever E., Demir Vatansever Z., TUBITAK Project, Manyetik Nanoparçacıklarda Parçacık Büyüklüğü Ve Geometrisinin Manyetokalorik Ve Manyetik Hipertermi Özellikleri Üzerindeki Etkisi, 2019 - 2020

Metrics

Publication: 41

Citation (WoS): 142

Citation (Scopus): 132

H-Index (WoS): 7

H-Index (Scopus): 6

Invited Talks

SECOND INTERNATIONAL BILATERAL WORKSHOP ON SCIENCE BETWEEN DOKUZ EYLÜL UNIVERSITY AND
AZERBAIJAN NATIONAL ACADEMY OF SCIENCES, Workshop, Dokuz Eylül Üniversitesi, Turkey, November 2022

Scholarships

2219 - Yurt Dışı Doktora Sonrası Araştırma Burs Programı, TÜBİTAK, 2022 - 2022