

Prof. MURAT DURANDURDU

Personal Information

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International Researcher IDs

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Education Information

Doctorate, Ohio University, College Of Science, United States Of America 1999 - 2002

Postgraduate, Virginia Polytechnic Institute and State University, College Of Engineering, Materials Science And Engineering, United States Of America 1997 - 1999

Masters (Non-Thesis), Rutgers, The State University of New Jersey, College Of Science, Physics, United States Of America 1995 - 1997

Undergraduate, Karadeniz Technical University, Fen Edebiyat Fakultesi, Fizik, Turkey 1988 - 1992

Dissertations

Doctorate, Polyamorphism in Semiconductors, Ohio University, College Of Science, Physics, 2002

Postgraduate, Molecular Statics Simulation in Aluminum ?, Virginia Polytechnic Institute And State University, College Of Engineering , Materials Science And Engineering , 1999

Research Areas

Physics, Condensed Matter 1: Structural, Mechanical and Thermal Properties, Equations of State, Phase Equilibria, and Phase Transitions, Natural Sciences

Academic Titles / Tasks

Professor, Abdullah Gul University, Mühendislik Fakültesi, Nanoteknoloji Mühendisliği, 2017 - Continues

Professor, Charles University, Faculty of Science , Department of Physical and Macromolecular Chemistry, 2020 - 2021

Associate Professor, Abdullah Gul University, Mühendislik Fakültesi, Nanoteknoloji Mühendisliği, 2014 - 2017

Associate Professor, Texas Tech University, College Of Science, Physics, 2011 - 2014

Assistant Professor, University of Texas at El Paso, College Of Science, Physics, 2004 - 2011

Research Assistant PhD, The University of Michigan, College Of Engineering, Materials Science And Engineering, 2002 - 2004

Research Assistant, Ohio University, College Of Science, Physics, 1999 - 2002

Research Assistant, Virginia Polytechnic Institute and State University, College Of Engineering, Materials Science And Engineering, 1997 - 1999

Research Assistant, Karadeniz Technical University, Fen Edebiyat Fakultesi, Fizik, 1993 - 1994

Academic and Administrative Experience

Head of Department, Abdullah Gul University, 2015 - 2022

Head of Department, Abdullah Gul University, İleri Malzemeler Ve Nanoteknoloji, 2015 - 2022

Head of Department, Abdullah Gul University, 2015 - 2022

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Amorphous boron carbonitride (BC₄N) from ab initio simulations**
Durandurdu M.
Journal of Non-Crystalline Solids, vol.639, 2024 (SCI-Expanded)
- II. **Amorphous Silicon Nanoparticles and Silicon Nanoglasses from Ab Initio Simulations**
BOLAT S., Durandurdu M.
Silicon, vol.16, no.10, pp.4263-4271, 2024 (SCI-Expanded)
- III. **Amorphous GaN: Polyamorphism and crystallization at high pressure**
Durandurdu M.
Computational Materials Science, vol.241, 2024 (SCI-Expanded)
- IV. **Amorphous carbon nitride (C₃N₄)**
Durandurdu M.
Journal of Non-Crystalline Solids, vol.631, 2024 (SCI-Expanded)
- V. **Structural and electronic transformations of GeSe₂ glass under high pressures studied by X-ray absorption spectroscopy**
Mijit E., Durandurdu M., Rodrigues J. E. F., Trapananti A., Javad Rezvani S., Rosa A. D., Mathon O., Irfune T., Di Cicco A.
Proceedings of the National Academy of Sciences of the United States of America, vol.121, no.14, 2024 (SCI-Expanded)
- VI. **Amorphous to amorphous phase transformation in boron-rich amorphous silicon borides: an ab initio study**
Karacaoğlan A. Ö. Ç., Durandurdu M.
High Pressure Research, vol.44, no.4, pp.443-456, 2024 (SCI-Expanded)
- VII. **Ab initio study of boron-rich amorphous boron carbides**
Yıldız T. A., DURANDURDU M.
Journal of the American Ceramic Society, vol.106, no.5, pp.2862-2874, 2023 (SCI-Expanded)
- VIII. **Possible boron-rich amorphous silicon borides from ab initio simulations**
Karacaoğlan A. Ö. Ç., DURANDURDU M.
Journal of Molecular Modeling, vol.29, no.4, 2023 (SCI-Expanded)
- IX. **Boron-rich amorphous boron oxides from ab initio simulations**
Karacaoğlan A. Ö. Ç., DURANDURDU M.
Journal of Non-Crystalline Solids, vol.604, 2023 (SCI-Expanded)
- X. **Amorphous BC₅ from first principles calculations**
DURANDURDU M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.592, 2022 (SCI-Expanded)
- XI. **Theoretical investigation of substituent effects on the relative stabilities and electronic structure of [BnXn](2-) clusters**
TAHAOĞLU D., ALKAN F., DURANDURDU M.
JOURNAL OF MOLECULAR MODELING, vol.27, no.12, 2021 (SCI-Expanded)
- XII. **Formation of a very high-density amorphous phase of carbon and its crystallization into a simple cubic structure at high pressure**
DURANDURDU M.
COMPUTATIONAL MATERIALS SCIENCE, vol.200, 2021 (SCI-Expanded)

- XIII. **Amorphous boron phosphide: An ab initio investigation**
BOLAT S., Durandurdu M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.570, 2021 (SCI-Expanded)
- XIV. **Amorphous zircon at high pressure**
BOLAT S., DURANDURDU M.
JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS, vol.153, 2021 (SCI-Expanded)
- XV. **A first principles study of amorphous and crystalline silicon tetraboride**
Karacaoglu A. O., DURANDURDU M.
MATERIALS CHEMISTRY AND PHYSICS, vol.258, 2021 (SCI-Expanded)
- XVI. **Stoichiometric amorphous boron carbide (BC)**
Yildiz T. A., DURANDURDU M.
JOURNAL OF MATERIALS SCIENCE, vol.55, no.30, pp.14709-14716, 2020 (SCI-Expanded)
- XVII. **Amorphous silicon hexaboride at high pressure**
DURANDURDU M.
PHILOSOPHICAL MAGAZINE, vol.100, no.14, pp.1818-1833, 2020 (SCI-Expanded)
- XVIII. **Ab initio simulation of amorphous BC₃**
DURANDURDU M.
COMPUTATIONAL MATERIALS SCIENCE, vol.178, 2020 (SCI-Expanded)
- XIX. **Amorphous silicon triboride: A first principles study**
Ozlem A., Karacaoglan C., DURANDURDU M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.536, 2020 (SCI-Expanded)
- XX. **High pressure modifications in amorphous boron suboxide: An ab initio study**
DURANDURDU M.
CERAMICS INTERNATIONAL, vol.46, no.5, pp.5968-5975, 2020 (SCI-Expanded)
- XXI. **Amorphous boron carbide from ab initio simulations**
Yildiz T. A., DURANDURDU M.
COMPUTATIONAL MATERIALS SCIENCE, vol.173, 2020 (SCI-Expanded)
- XXII. **Tetrahedral amorphous boron nitride: A hard material**
DURANDURDU M.
JOURNAL OF THE AMERICAN CERAMIC SOCIETY, vol.103, no.2, pp.973-978, 2020 (SCI-Expanded)
- XXIII. **Pressure-induced amorphization, mechanical and electronic properties of zeolitic imidazolate framework (ZIF-8)**
ERKARTAL M., DURANDURDU M.
MATERIALS CHEMISTRY AND PHYSICS, vol.240, 2020 (SCI-Expanded)
- XXIV. **Phase transition of ZrN under pressure**
DURANDURDU M.
PHILOSOPHICAL MAGAZINE, vol.99, no.8, pp.942-955, 2019 (SCI-Expanded)
- XXV. **Hydrogenated amorphous boron nitride: A first principles study**
Uchoyuk T. A., DURANDURDU M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.502, pp.159-163, 2018 (SCI-Expanded)
- XXVI. **Amorphous zirconia at high pressure**
DURANDURDU M.
JOURNAL OF THE AMERICAN CERAMIC SOCIETY, vol.101, no.12, pp.5411-5418, 2018 (SCI-Expanded)
- XXVII. **Solute aggregation in Ca₇₂Zn₂₈ metallic glass**
TAHAOĞLU D., DURANDURDU M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.500, pp.410-416, 2018 (SCI-Expanded)
- XXVIII. **Amorphous magnesium silicide**
DURANDURDU M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.498, pp.118-124, 2018 (SCI-Expanded)
- XXIX. **An in-depth investigation of Mg-Zn-Ca metallic glasses: A first principles study**
ERKARTAL M., DURANDURDU M.

- COMPUTATIONAL MATERIALS SCIENCE, vol.153, pp.326-337, 2018 (SCI-Expanded)
- XXX. **Pressure-Induced Amorphization of MOF-5: A First Principles Study**
ERKARTAL M., DURANDURDU M.
CHEMISTRYSELECT, vol.3, no.28, pp.8056-8063, 2018 (SCI-Expanded)
- XXXI. **Hard boron rich boron nitride nanoglasses**
Cetin A. O., DURANDURDU M.
JOURNAL OF THE AMERICAN CERAMIC SOCIETY, vol.101, no.5, pp.1929-1939, 2018 (SCI-Expanded)
- XXXII. **Permanent densification of amorphous zinc oxide under pressure: A first principles study**
TAHAOĞLU D., DURANDURDU M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.481, pp.27-32, 2018 (SCI-Expanded)
- XXXIII. **MgCu metallic glass**
DURANDURDU M.
PHILOSOPHICAL MAGAZINE, vol.98, no.8, pp.633-645, 2018 (SCI-Expanded)
- XXXIV. **Amorphous silicon hexaboride: a first-principles study**
DURANDURDU M.
PHILOSOPHICAL MAGAZINE, vol.98, no.30, pp.2723-2733, 2018 (SCI-Expanded)
- XXXV. **Two successive amorphous-to-amorphous phase transformations in TiO₂**
DURANDURDU M.
JOURNAL OF THE AMERICAN CERAMIC SOCIETY, vol.100, no.9, pp.3903-3911, 2017 (SCI-Expanded)
- XXXVI. **Densification of amorphous boron under pressure**
DURANDURDU M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.471, pp.274-279, 2017 (SCI-Expanded)
- XXXVII. **Amorphous zirconia: ab initio molecular dynamics simulations**
DURANDURDU M.
Philosophical Magazine, vol.97, no.16, pp.1334-1345, 2017 (SCI-Expanded)
- XXXVIII. **High-density amorphous phase of CdO**
DURANDURDU M.
Journal of Non-Crystalline Solids, vol.463, pp.64-67, 2017 (SCI-Expanded)
- XXXIX. **Ferromagnetism in amorphous MgO**
DURANDURDU M.
PHILOSOPHICAL MAGAZINE, vol.97, no.24, pp.2129-2141, 2017 (SCI-Expanded)
- XL. **Nanosegregated amorphous AlBN₂ alloy**
DURANDURDU M.
Philosophical Magazine, vol.96, no.30, pp.3200-3210, 2016 (SCI-Expanded)
- XLI. **Polyamorphism in Aluminum Nitride: A First Principles Molecular Dynamics Study**
DURANDURDU M.
JOURNAL OF THE AMERICAN CERAMIC SOCIETY, vol.99, no.5, pp.1594-1600, 2016 (SCI-Expanded)
- XLII. **n-type conductivity in Si-doped amorphous AlN: an ab initio investigation**
DURANDURDU M.
PHILOSOPHICAL MAGAZINE, vol.96, no.11, pp.1110-1121, 2016 (SCI-Expanded)
- XLIII. **Pressure-induced phase transformations in amorphous arsenic**
DURANDURDU M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.437, pp.6-9, 2016 (SCI-Expanded)
- XLIV. **Local structure of As₂O₃ glass from first principles simulations**
DURANDURDU M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.436, pp.18-21, 2016 (SCI-Expanded)
- XLV. **Amorphous boron nitride at high pressure**
DURANDURDU M.
PHILOSOPHICAL MAGAZINE, vol.96, no.18, pp.1950-1964, 2016 (SCI-Expanded)
- XLVI. **Hexagonal nanosheets in amorphous BN: A first principles study**
Durandurdu M.

- JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.427, pp.41-45, 2015 (SCI-Expanded)
- XLVII. **Novel high-pressure phase of ZrO₂: An ab initio prediction**
Durandurdu M.
JOURNAL OF SOLID STATE CHEMISTRY, vol.230, pp.233-236, 2015 (SCI-Expanded)
- XLVIII. **High-pressure phase transitions of TiN: an ab initio constant pressure study**
Durandurdu M.
PHILOSOPHICAL MAGAZINE, vol.95, no.22, pp.2376-2384, 2015 (SCI-Expanded)
- XLIX. **Liquid boron and amorphous boron: An ab initio molecular dynamics study**
Durandurdu M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.417, pp.10-14, 2015 (SCI-Expanded)
- L. **Uncovering Nanoclusters in Amorphous AlN: An Ab Initio Study**
Durandurdu M.
JOURNAL OF THE AMERICAN CERAMIC SOCIETY, vol.98, no.4, pp.1095-1098, 2015 (SCI-Expanded)
- LI. **Atomic structure of amorphous CdO from first principles simulations**
Durandurdu M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.412, pp.11-15, 2015 (SCI-Expanded)
- LII. **New high-pressure phase of MgH₂: An ab initio constant-pressure study**
Durandurdu M.
EPL, vol.105, no.4, 2014 (SCI-Expanded)
- LIII. **Atomic structure of amorphous Mg₄₀Cu₃₅Ti₂₅ alloy: An ab initio molecular dynamics study**
Durandurdu M.
SOLID STATE COMMUNICATIONS, vol.154, pp.30-33, 2013 (SCI-Expanded)
- LIV. **Ab initio modeling of metallic Pd₈₀Si₂₀ glass**
Durandurdu M.
COMPUTATIONAL MATERIALS SCIENCE, vol.65, pp.44-47, 2012 (SCI-Expanded)
- LV. **Nanoscale icosahedral packing in amorphous Mg₅₀Ni₅₀: An ab initio study**
Tetik E., Durandurdu M., KARADAĞ F.
EPL, vol.100, no.2, 2012 (SCI-Expanded)
- LVI. **Nanosize icosahedral quasicrystal in Mg₉₀Ca₁₀ glass: An ab initio molecular dynamics study**
Durandurdu M.
JOURNAL OF CHEMICAL PHYSICS, vol.137, no.3, 2012 (SCI-Expanded)
- LVII. **Formation of Cotunnite Phase in ZrO₂ under Uniaxial Stress: A First Principles Study**
Ozturkz H., Durandurdu M.
JOURNAL OF THE AMERICAN CERAMIC SOCIETY, vol.94, no.3, pp.932-937, 2011 (SCI-Expanded)
- LVIII. **Vibrational properties of amorphous germanium under pressure and its thermal expansion and Gruneisen parameters**
Durandurdu M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.356, pp.977-981, 2010 (SCI-Expanded)
- LIX. **Formation of a Cmc₂m phase in SnS at high pressure; an ab initio constant pressure study**
Alptekin S., Durandurdu M.
SOLID STATE COMMUNICATIONS, vol.150, pp.870-874, 2010 (SCI-Expanded)
- LX. **Formation of Anatase Phase in HfO₂ in Tensile Stress: An Ab Initio Study**
Durandurdu M.
JOURNAL OF THE AMERICAN CERAMIC SOCIETY, vol.93, no.5, pp.1467-1469, 2010 (SCI-Expanded)
- LXI. **Ab initio molecular dynamics study of pressure-induced phase transformation in KCl**
Durandurdu M.
COMPUTATIONAL MATERIALS SCIENCE, vol.48, no.3, pp.672-676, 2010 (SCI-Expanded)
- LXII. **Formation of a two-dimensional layered structure in silica under shear stresses: An ab initio study**
Durandurdu M.
PHYSICAL REVIEW B, vol.81, no.17, 2010 (SCI-Expanded)
- LXIII. **Orthorhombic intermediate phases for the wurtzite-to-rocksalt phase transformation of CdSe: An ab**

initio constant pressure study

Durandurdu M.

CHEMICAL PHYSICS, vol.369, pp.55-58, 2010 (SCI-Expanded)

- LXIV. **Pressure-induced phase transformation of BaS: An ab initio constant pressure study**
Durandurdu M.
CHEMICAL PHYSICS, vol.367, pp.80-82, 2010 (SCI-Expanded)
- LXV. **First principles study of structural phase stability of wide-gap semiconductors MgTe, MgS and MgSe**
Gokoglu G., Durandurdu M., Gulseren O.
COMPUTATIONAL MATERIALS SCIENCE, vol.47, no.2, pp.593-598, 2009 (SCI-Expanded)
- LXVI. **Expanded phase of ZrO₂: An ab initio constant-pressure study**
Durandurdu M.
EPL, vol.88, no.6, 2009 (SCI-Expanded)
- LXVII. **New transformation mechanism for a zinc-blende to rocksalt phase transformation in MgS**
Durandurdu M.
JOURNAL OF PHYSICS-CONDENSED MATTER, vol.21, no.45, 2009 (SCI-Expanded)
- LXVIII. **Fcc-to-bct phase transformation of aluminum under triaxial stresses: an ab initio constant pressure study**
Durandurdu M.
EUROPEAN PHYSICAL JOURNAL B, vol.72, no.2, pp.241-245, 2009 (SCI-Expanded)
- LXIX. **Pressure-induced phase transition in AlN: An ab initio molecular dynamics study**
Durandurdu M.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.480, no.2, pp.917-921, 2009 (SCI-Expanded)
- LXX. **Formation of an anataselike phase in silica under anisotropic stress: An ab initio constant-pressure study**
Durandurdu M.
PHYSICAL REVIEW B, vol.80, no.2, 2009 (SCI-Expanded)
- LXXI. **High-density amorphous phase of GeS₂ glass under pressure**
Durandurdu M.
PHYSICAL REVIEW B, vol.79, no.20, 2009 (SCI-Expanded)
- LXXII. **High-pressure phases of ZrO₂: An ab initio constant-pressure study**
Oezturk H., Durandurdu M.
PHYSICAL REVIEW B, vol.79, no.13, 2009 (SCI-Expanded)
- LXXIII. **The structural phase transition of ZnSe under hydrostatic and nonhydrostatic compressions: an ab initio molecular dynamics study**
Durandurdu M.
JOURNAL OF PHYSICS-CONDENSED MATTER, vol.21, no.12, 2009 (SCI-Expanded)
- LXXIV. **Pressure-induced phase transition in wurtzite ZnS: An ab initio constant pressure study**
Durandurdu M.
JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS, vol.70, pp.645-649, 2009 (SCI-Expanded)
- LXXV. **Pressure-induced phase transition of BeO**
ALPTEKIN S., Durandurdu M.
SOLID STATE COMMUNICATIONS, vol.149, pp.345-348, 2009 (SCI-Expanded)
- LXXVI. **An ab initio constant-pressure study of pressure-induced phase transition of MgSe**
Oezduran M., Durandurdu M.
EPL, vol.84, no.5, 2008 (SCI-Expanded)
- LXXVII. **Pressure-induced phase transition of zinc-blende AlN: An ab initio molecular dynamics study**
Durandurdu M.
JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS, vol.69, no.11, pp.2894-2897, 2008 (SCI-Expanded)
- LXXVIII. **Phase transformation of 6H-SiC at high pressure: An ab initio constant-pressure study**
Eker S., Durandurdu M.
EPL, vol.84, no.2, 2008 (SCI-Expanded)

- LXXXIX. **Diamond to beta-Sn phase transition of silicon under hydrostatic and nonhydrostatic compressions**
Durandurdu M.
JOURNAL OF PHYSICS-CONDENSED MATTER, vol.20, no.32, 2008 (SCI-Expanded)
- LXXX. **New B2O3 crystals predicted from concurrent molecular dynamics simulations and first-principles calculations**
HUANG L., Durandurdu M., KIEFFER J.
JOURNAL OF PHYSICAL CHEMISTRY C, vol.111, no.37, pp.13712-13720, 2007 (SCI-Expanded)
- LXXXI. **Structural phase transition of gold under uniaxial, tensile, and triaxial stresses: An ab initio study**
Durandurdu M.
PHYSICAL REVIEW B, vol.76, no.2, 2007 (SCI-Expanded)
- LXXXII. **Ab initio simulations of the structural phase transformation of 2H-SiC at high pressure**
Durandurdu M.
PHYSICAL REVIEW B, vol.75, no.23, 2007 (SCI-Expanded)
- LXXXIII. **Transformation pathways of silica under high pressure**
HUANG L., Durandurdu M., KIEFFER J.
NATURE MATERIALS, vol.5, no.12, pp.977-981, 2006 (SCI-Expanded)
- LXXXIV. **Ab initio molecular dynamics study of pressure-induced phase transition in ZnS**
MARTINEZ I., Durandurdu M.
JOURNAL OF PHYSICS-CONDENSED MATTER, vol.18, no.41, pp.9483-9491, 2006 (SCI-Expanded)
- LXXXV. **Transition pathway in GaAs under uniaxial stress: an ab initio study**
Durandurdu M.
JOURNAL OF PHYSICS-CONDENSED MATTER, vol.18, no.20, pp.4887-4894, 2006 (SCI-Expanded)
- LXXXVI. **Electronic and mechanical properties of wurtzite type SiC nanowires**
Durandurdu M.
PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS, vol.243, no.5, 2006 (SCI-Expanded)
- LXXXVII. **Ab initio modeling of small diameter silicon nanowires**
Durandurdu M.
PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS, vol.243, no.2, 2006 (SCI-Expanded)
- LXXXVIII. **Ab initio simulation of polyamorphic phase transition in hydrogenated silicon**
Durandurdu M.
PHYSICAL REVIEW B, vol.73, no.3, 2006 (SCI-Expanded)
- LXXXIX. **Phase transition of GeSe2 at high pressure**
Durandurdu M.
PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS, vol.242, no.15, pp.3085-3090, 2005 (SCI-Expanded)
- XC. **Cmcm phase of GeS at high pressure**
Durandurdu M.
PHYSICAL REVIEW B, vol.72, no.14, 2005 (SCI-Expanded)
- XCI. **Ab initio simulation of the rhombohedral-to-simple-cubic transition in arsenic**
Durandurdu M.
PHYSICAL REVIEW B, vol.72, no.7, 2005 (SCI-Expanded)
- XCII. **Structural phase transition of germanium under uniaxial stress: An ab initio study**
Durandurdu M.
PHYSICAL REVIEW B, vol.71, no.5, 2005 (SCI-Expanded)
- XCIII. **Mechanically controlled, seeded formation of a nanoscale metastable phase in ionic compounds**
Palko J., Durandurdu M., Kieffer J.
NANO LETTERS, vol.4, no.9, pp.1769-1773, 2004 (SCI-Expanded)
- XCIV. **Pressure-induced amorphous-to-amorphous phase transition in GaAs**
Durandurdu M.
PHYSICAL REVIEW B, vol.70, no.8, 2004 (SCI-Expanded)
- XCV. **High-pressure phases of amorphous and crystalline silicon**
Durandurdu M., DRABOLD D.

- PHYSICAL REVIEW B, vol.67, no.21, 2003 (SCI-Expanded)
- XCVI. **Pressure-induced structural phase transition of paracrystalline silicon**
Durandurdu M., DRABOLD D.
PHYSICAL REVIEW B, vol.66, no.20, 2002 (SCI-Expanded)
- XCVII. **Ab initio simulation of pressure-induced low-energy excitations in amorphous silicon**
Durandurdu M., DRABOLD D.
PHYSICAL REVIEW B, vol.66, no.15, 2002 (SCI-Expanded)
- XCVIII. **Ab initio simulation of high-pressure phases of GaAs**
Durandurdu M., DRABOLD D.
PHYSICAL REVIEW B, vol.66, no.4, 2002 (SCI-Expanded)
- XCIX. **First-order pressure-induced polyamorphism in germanium**
Durandurdu M., DRABOLD D.
Physical Review B - Condensed Matter and Materials Physics, vol.66, no.4, pp.412011-412014, 2002 (SCI-Expanded)
- C. **Simulation of pressure-induced polyamorphism in a chalcogenide glass GeSe₂**
Durandurdu M., DRABOLD D.
PHYSICAL REVIEW B, vol.65, no.10, 2002 (SCI-Expanded)
- CI. **Ab initio simulation of first-order amorphous-to-amorphous phase transition of silicon**
Durandurdu M., DRABOLD D.
PHYSICAL REVIEW B, vol.64, no.1, 2001 (SCI-Expanded)
- CII. **Approximate ab initio calculations of electronic structure of amorphous silicon**
Durandurdu M., DRABOLD D., MOUSSEAU N.
PHYSICAL REVIEW B, vol.62, no.23, pp.15307-15310, 2000 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

- I. **Derivative Structures of Closo Boron Hydride Cluster, B₁₆X₁₆:A DFT Study**
TAHAOĞLU D., DURANDURDU M.
CSC2018: International Computational Science Congress, 26 - 28 October 2018
- II. **CMCM INTERMEDIATE PHASE FOR THE HCP-TO-BCC PHASE TRANSITION IN MAGNESIUM**
DURANDURDU M., Çetin A. Ö., Üçhöyük T. A.
3.ULUSLARARASI MALZEME BİLİMİ VE TEKNOLOJİSİ KONFERANSI (KAPADOKYA), 17 - 19 September 2018
- III. **Stability Investigation of B₁₆H₁₆- Derivatives by DFT Calculations**
TAHAOĞLU D., DURANDURDU M.
International Conference on Materials Science and Technology in Cappadocia, 17 - 19 September 2018
- IV. **Effects of Production Methods on Structural and Mechanical Properties for Metallic Ca₇₂Zn₂₈ Glass- A DFT Study**
TAHAOĞLU D., DURANDURDU M.
The International Conference On Materials Science Mechanical And Automation Engineerings And Technology (IMSMATEC'18), 10 - 12 April 2018
- V. **Polyamorphism in TiO₂**
DURANDURDU M.
ncon-International Congress on Chemistry and Materials Science, 5 - 07 October 2017
- VI. **Metallic Ca₇₂Zn₂₈ Glass from First Principle Molecular Dynamics Simulations**
TAHAOĞLU D., DURANDURDU M.
International Congress on Chemistry and Materials Science, Ankara, Turkey, 5 - 07 October 2017
- VII. **Investigation of Phase Transformation of Amorphous Zinc Oxide under Pressure: a DFT Study**
TAHAOĞLU D., DURANDURDU M.
Türk Fizik Derneği 33. Uluslararası Fizik Kongresi, Bodrum, Turkey, 6 - 10 September 2017
- VIII. **POLYAMORPHIC PHASE TRANSITION IN ALUMINUM NITRIDE**

DURANDURDU M.

Uluslararası Malzeme Bilimi ve Teknolojisi Konferansı Kapadokya (IMSTEC'16), 6 - 08 April 2016

IX. Hidden Nanoclusters in Amorphous AlN A First Principles Study

DURANDURDU M.

International Semiconductor Science and Technology Conference 2015 (ISSTC2015), 11 - 13 May 2015

Supported Projects

Durandurdu M., TUBITAK Project, Bor zengini amorf malzemeler, 2017 - 2020

DURANDURDU M., ERKARTAL M., Project Supported by Higher Education Institutions, Kristal Kusur Mühendisliği ile Metal-Organik Kafes Yapıların (MOF) Karbondioksit (CO₂) Yakalama ve Depolama Özelliklerinin İyileştirilmesi, 2017 - 2019

DURANDURDU M., TUBITAK Project, Yeni Bor ve Nitrojen Esaslı Amorf Malzemenin Tahmini, 2014 - 2016

DURANDURDU M., Project Supported by Other Official Institutions, Pressure-induced phase transformation of metallic glasses, 2010 - 2011

DURANDURDU M., Project Supported by Other Official Institutions, Materials World Modules, 2004 - 2007

Activities in Scientific Journals

Conference Papers in Physics , Committee Member, 2010 - 2015

Scientific Refereeing

Phys. Rev. Letters, National Scientific Refreed Journal, January 2002

Metrics

Publication: 111

Citation (WoS): 875

Citation (Scopus): 1087

H-Index (WoS): 15

H-Index (Scopus): 18

Congress and Symposium Activities

APS March Meeting, Attendee, Indiana, United States Of America, 2002

Invited Talks

First Principles Study of Amorphous Boron Suboxide and its High- Pressure Behavior , Conference, MSRC-2022 Kyiv, Ukraine, Ukraine, May 2022

Scholarships

BİDEP 2232, TUBITAK, 2014 - 2016

BİDEP 2221, TUBITAK, 2009 - 2009

BİDEP 2221, TÜBİTAK, 2008 - 2008
1416, Ministry of Education, 1994 - 2000
Eğitim Bursu, University, 1989 - 1993