

## Assoc. Prof. Hüseyin Birtan KAVANOZ

### Personal Information

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**Address:** Yıldız Teknik Üniversitesi Davutpaşa Kampusu Fen Edebiyat Fakültesi Fizik Bölümü

### International Researcher IDs

ORCID: 0000-0002-2400-5637

Publons / Web Of Science ResearcherID: ABF-5933-2021

Yoksis Researcher ID: 124308

### Education Information

Doctorate, Yıldız Technical University, Faculty Of Arts & Science, Department Of Physics, Turkey 1990 - 1995

### Dissertations

Doctorate, Termodinamik pertürbasyon kuramına dayalı yaklaşımla sıvı alkali metallerin yapısının tayini, Yıldız Technical University, Graduate School of Natural and Applied Sciences, 1995

Postgraduate, Percus-yevick katı küre modeli ile ikili sıvı karışımların yapı faktörlerinin hesaplanması, Yıldız Technical University, Graduate School of Natural and Applied Sciences, 1989

### Research Areas

Atomic Spectra and Photon Interactions, Radioactive decay and in-beam spectroscopy, Structure of Liquids and Solids; Crystallography, Thermal Properties of Condensed Matter

### Academic Titles / Tasks

Associate Professor, Yıldız Technical University, Faculty Of Arts & Science, Department Of Physics, 2017 - Continues

Assistant Professor, Yıldız Technical University, Faculty Of Arts & Science, Department Of Physics, 1998 - 2017

### Advising Theses

Kavanoz H. B., Süperiyonik sistemlerin moleküler dinamik yöntemi ile transport ve termodinamik özelliklerinin incelenmesi, Doctorate, H.ÖMER(Student), 2016

Kavanoz H. B., Sıvı alkali metallerin tek parçacık dinamiği, Postgraduate, H.ÖMER(Student), 2005

### Jury Memberships

Post Graduate, Post Graduate, Trakya Üniversitesi, July, 2019

Post Graduate, Post Graduate, Trakya Üniversitesi, July, 2019

Post Graduate, Post Graduate, Trakya Üniversitesi, July, 2019

Doctoral Examination, Doktora Yeterlik Sınavı Jürisi, İstanbul Üniversitesi, December, 2017

Doctorate, Doktora sınav jürisi, Yıldız Teknik Üniversitesi Fen Bilimleri Enst., July, 2016

Post Graduate, Tez Savunma Jürisi, İstanbul Üniversitesi, December, 2014

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

- I. **Evaluation of three different glassy composites (quinary matrix designed using Cr<sub>2</sub>O<sub>3</sub>/Na<sub>2</sub>O/MnO<sub>2</sub>) in respect of radiation shielding behaviors**  
TOKER O., Bilmez B., Toker M. O., KAVANOZ H. B., AKÇALI Ö., YILMAZ M., İÇELLİ O.  
RADIATION EFFECTS AND DEFECTS IN SOLIDS, vol.176, no.9-10, pp.967-981, 2021 (SCI-Expanded)
- II. **An investigation on gamma-ray shielding properties of quaternary glassy composite (Na<sub>2</sub>Si<sub>3</sub>O<sub>7</sub>/Bi<sub>2</sub>O<sub>3</sub>/ B<sub>2</sub>O<sub>3</sub>/Sb<sub>2</sub>O<sub>3</sub>) by BXCOM and MCNP 6.2 code**  
AKÇALI Ö., Çağlar M., TOKER O., Bilmez B., KAVANOZ H. B., İÇELLİ O.  
Progress in Nuclear Energy, vol.125, 2020 (SCI-Expanded)
- III. **Comparison of ITO and ZnO ternary glassy composites in terms of radiation shielding properties by Monte Carlo N-particle transport code and BXCOM**  
TOKER O., Bilmez B., KAVANOZ H. B., AKÇALI Ö., İÇELLİ O.  
RADIATION AND ENVIRONMENTAL BIOPHYSICS, vol.59, no.2, pp.283-293, 2020 (SCI-Expanded)
- IV. **A novel comprehensive utilization of vanadium slag/epoxy resin/antimony trioxide ternary composite as gamma ray shielding material by MCNP 6.2 and BXCOM**  
Kavanoz H. B., Akçalı Ö., Toker O., Bilmez B., Çağlar M., İçelli O.  
Radiation Physics and Chemistry, vol.165, 2019 (SCI-Expanded)
- V. **Evaluation of magnetic field assisted sun drying of food samples on drying time and mycotoxin production**  
Nuroglu E., Öz E., Bakırdere S., Bursalioglu E. O., Kavanoz H. B., İçelli O.  
INNOVATIVE FOOD SCIENCE & EMERGING TECHNOLOGIES, vol.52, pp.237-243, 2019 (SCI-Expanded)
- VI. **Temperature Dependence of Thermodynamic Properties of Thallium Chloride and Thallium Bromide**  
Kavanoz H. B.  
HIGH TEMPERATURE MATERIALS AND PROCESSES, vol.34, no.1, pp.81-86, 2015 (SCI-Expanded)
- VII. **Dielectric characterization of electro-coagulated boron waste**  
Okutan M., Kavanoz H. B., İçelli O., Yalçın Z., Ay F., Delipinar D., Yakuphanoglu F.  
VACUUM, vol.101, pp.298-300, 2014 (SCI-Expanded)
- VIII. **Photon parameters for gamma-rays sensing properties of some thick oxide films**  
Kavanoz H. B., Yağcı Ö., Yalçın Z., İçelli O., Altındal A., Okutan M., Mann K. S.  
VACUUM, vol.101, pp.238-245, 2014 (SCI-Expanded)
- IX. **Resistivity, ESR, and Radiation Shielding Properties of the Volcanic Rock Materials**  
Nuhoglu Ç., Tapan M., Okutan M., Aydın S., Yalçın Z., İçelli O., Kavanoz H. B., Orak S.  
ADVANCES IN CONDENSED MATTER PHYSICS, 2014 (SCI-Expanded)
- X. **Energy Absorption and Exposure Buildup Factors of Essential Amino Acids**  
Bursalioglu E., Balkan B., Kavanoz H. B., Okutan M., İçelli O., Yalçın Z.  
BIOMED RESEARCH INTERNATIONAL, 2014 (SCI-Expanded)
- XI. **THERMOPHYSICAL PROPERTIES OF URANIUM DIOXIDE: A MOLECULAR DYNAMICS STUDY OF SOLID AND LIQUID PHASES OF STOICHIOMETRIC UO<sub>2</sub>**  
GÜNAY S. D., KAVANOZ H. B., AKDERE Ü., TAŞSEVEN Ç.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.25, pp.3211-3223, 2011 (SCI-Expanded)
- XII. **MOLECULAR DYNAMICS SIMULATION OF UO<sub>2</sub>: AN ALTERNATIVE RIGID ION MODEL POTENTIAL**  
GÜNAY S. D., AKDERE Ü., KAVANOZ H. B., TAŞSEVEN Ç.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.25, no.9, pp.1201-1210, 2011 (SCI-Expanded)

- XIII. **Effective charges and ionicity in molten salts**  
Kavanoz H., Yilmaz M., Gurbuz H., Silbert M.  
PHYSICS AND CHEMISTRY OF LIQUIDS, vol.40, no.1, pp.115-121, 2002 (SCI-Expanded)
- XIV. **Static structure of a group of trivalent molten salts: An alternative rigid ion model potential**  
Yilmaz M., Gurbuz H., Kavanoz H., Tasseven C., Silbert M.  
HIGH TEMPERATURE MATERIALS AND PROCESSES, vol.20, pp.421-428, 2001 (SCI-Expanded)

### Articles Published in Other Journals

- I. **Photon atomic parameters of nonessential amino acids for radiotherapy and diagnostics.**  
Bursalıoğlu E., İçelli O., Balkan B., Kavanoz H. B., Okutan M.  
Journal of amino acids, vol.2014, pp.434519, 2014 (Peer-Reviewed Journal)
- II. **THE STRUCTURE and IONIC TRANSPORT of LIQUID SEMICONDUCTOR NiTe**  
Akdere Ü., KAVANOZ H. B., Taşseven Ç.  
BALKAN PHYSICS LETTERS, vol.15, no.1, 2009 (Non Peer-Reviewed Journal)
- III. **The Structure and Ionic Transport of Liquid Semiconductor NiTe**  
Akdere Ü., Günay S. D., Kavanoz H. B., Taşseven Ç.  
Balkan Physics Letters, vol.15, pp.1-7, 2009 (Peer-Reviewed Journal)
- IV. **İkili Sıvı Metal Alaşımlarda Basınç Hesaplanması**  
KAVANOZ H. B., Karagözlü S.  
Yıldız Teknik Üniversitesi Dergisi, vol.4, pp.43-50, 1995 (Non Peer-Reviewed Journal)
- V. **Yukowa Etkileşmeli Yüklü Katı Küre Potansiyeli ile 3d Geçiş Metallerinin Sıvı Yapısı**  
KAVANOZ H. B., Yılmaz M., Karagözlü S., Gümüş İ.  
Yıldız Teknik Üniversitesi Dergisi, vol.4, pp.27-32, 1995 (Non Peer-Reviewed Journal)
- VI. **The Investigation of the Structural Properties and Freezing Criteria of Molten Metal Fluoride Salts**  
Karagözlü S., KAVANOZ H. B.  
İstanbul Üniversitesi Fen Fakültesi Astronomi-Fizik Dergisi, vol.54, 1989 (Non Peer-Reviewed Journal)

### Books & Book Chapters

- I. **Temel Fizik Deneyleri 1 Mekanik-Isı**  
Ören D., Çingı E., Karabay I., Taşseven Ç., KAVANOZ H. B., Cantürk M.  
Yıldız Teknik Üniversitesi, 1998
- II. **Temel Fizik Deneyleri (Mühendislik Bölümleri için)**  
Ören D., Çingı E., Karabay I., KAVANOZ H. B., Cantürk M.  
Yıldız Teknik Üniversitesi, 1998
- III. **Temel Fizik Deneyleri 2 Elektrik-Magnetizma**  
Ören D., Çingı E., Karabay I., KAVANOZ H. B., Cantürk M.  
Yıldız Teknik Üniversitesi, 1998

### Refereed Congress / Symposium Publications in Proceedings

- I. **A Monte Carlo Simulation Study of Na<sub>2</sub>Si<sub>3</sub>O<sub>7</sub> / Bi<sub>2</sub>O<sub>3</sub> / B<sub>2</sub>O<sub>3</sub> / Sb<sub>2</sub>O<sub>3</sub> quaternary glassy composites for radiation shielding**  
Akçalı Ö., Kavanoz H. B., Toker O., Bilmez B., Çağlar M., Yılmaz M., İçelli O.  
Eighth Bozok Workshop, Yozgat, Turkey, 25 - 27 July 2019, pp.1
- II. **An investigation of ternary composites as gamma ray shielding material by Monte Carlo simulation and BXCOM**

Kavanoz H. B., Akçalı Ö., Toker O., Bilmez B., Yılmaz M., Çağlar M., İçelli O.

Eighth Bozok Science Workshop, Yozgat, Turkey, 25 - 27 July 2019

- III. **Study on Ag<sub>3</sub>Si Lattice Parameter Evolution with Temperature**  
Öztek H. Ö., Yılmaz M., Kavanoz H. B.  
Turkish Physical Society 34th International Physics Congress, Muğla, Turkey, 5 - 09 September 2018, pp.493-0
- IV. **Preliminary Results of Calculation of Ionic Conductivity of Molten Ag-Based Superionics**  
Yılmaz M., Öztek H. Ö., Kavanoz H. B.  
Turkish Physical Society 32nd International Physics Congress, Muğla, Turkey, 6 - 09 September 2016, pp.381-0
- V. **Preliminary results of structural and transport properties of AgI Ag<sub>2</sub>S and Ag<sub>3</sub>SI in molten phase by molecular dynamics simulation**  
Öztek H. Ö., Yılmaz M., Kavanoz H. B.  
9th International Physics Conference of the Balkan Physical Union, İstanbul, Turkey, 24 - 27 August 2015, pp.447
- VI. **Preliminary results of Lindemann Criteria Calculation Ag Based Superionics**  
Yılmaz M., Öztek H. Ö., Kavanoz H. B.  
Turkish Physical Society 31 Th International Physics Congress, Muğla, Turkey, 21 - 24 July 2014, pp.424-0
- VII. **A MOLECULAR DYNAMICS STUDY ON STRUCTURAL AND DYNAMICAL PROPERTIES OF ?-Ag<sub>2</sub>Te SYSTEM**  
Kavanoz H. B., Öztek H. Ö.  
INTELLECTBASE ACADEMIC CONFERENCE, Texas, United States Of America, 17 - 19 April 2014
- VIII. **FIRST PRINCIPLES CALCULATIONS ON AgCuS STROMEYERITE MINERAL**  
Öztek H. Ö., Ilgaz I. P., Yılmaz M., Kavanoz H. B., İçelli O., Yalçın Z.  
Türk Fizik Derneği 30.Uluslararası Fizik Kongresi, İstanbul, Turkey, 2 - 05 September 2013, pp.543
- IX. **Photon parameters for gamma-rays and gas sensing properties of some thick oxide films**  
YAĞCI Ö., KAVANOZ H. B., YALÇIN Z., ALTINDAL A., İÇELLİ O., OKUTAN M.  
TFD 30 - Türk Fizik Derneği 30. Uluslararası Fizik Kongresi, 2 - 05 September 2013
- X. **First Principles Calculation of Stromeayerite, AgCuS**  
Öztek H. Ö., Yılmaz M., Kavanoz H. B., İçelli O., Yalçın Z.  
Turkish Physical Society 30 Th International Physics Congress, Muğla, Turkey, 2 - 05 September 2013, pp.542
- XI. **A Study of Low Temperature Thermal Expansion and Structural Behaviour of Stromeayerite AgCuS**  
Akdere Ü., Öztek H. Ö., Yılmaz M., Kavanoz H. B.  
Turkish Physical Society 29 International Physics Congress, Muğla, Turkey, 5 - 08 September 2012, pp.655
- XII. **Thermophysical Properties of Liquid Thallium Halides (TlBr, TlCl, TlI) from Hypernetted Chain Theory**  
Akdere Ü., Yılmaz M., Kavanoz H. B., Öztek H. Ö.  
Turkish Physical Society 28 International Physics Congress, Muğla, Turkey, 6 - 09 September 2011, pp.825
- XIII. **Thermophysical Properties of Liquid Thallium Halides(TlBr,TlCl,TlI) from Hypernetted Chain Theory**  
Yılmaz M., KAVANOZ H. B.  
28th International Physics Congress, 01 September 2011, vol.1, pp.825
- XIV. **Molecular dynamics simulation of thermal properties of Ag<sub>3</sub>SI**  
Öztek H., KAVANOZ H. B., AKDERE Ü., YILMAZ M., Taşseven Ç.  
7th International Conference of the Balkan Physical Union, Alexandroupoli, Greece, 9 - 13 September 2009, vol.1203, pp.252-254
- XV. **Molecular Dynamics Simulation of Thermal Properties of Ag<sub>3</sub>SI**  
KAVANOZ H. B., Akdere Ü., Yılmaz M., Taşseven Ç.  
7TH INTERNATIONAL CONFERENCE OF THE BALKAN PHYSICAL UNION, 01 January 2009, vol.1203, pp.252-254
- XVI. **Transport Properties of Uranium Dioxide by Molecular Dynamics Simulation**  
Akdere Ü., Kavanoz H. B., Taşseven Ç., Gunay S. D.  
International Conference on Computational Methods in Science and Engineering, Corfu, Glifada, Greece, 25 - 30 September 2007, vol.2, pp.1212-1215
- XVII. **Hypernetted Chain Theory and Molecular Dynamic Simulation of Static Structure and Ionic Transport in Molten UO<sub>2</sub> and UCl<sub>3</sub>**

- Günay S. D., Akdere Ü., Kavanoz H. B., Yılmaz M., Taşseven Ç.  
Turkish Physical Society 23th Conference, Muğla, Turkey, 13 - 16 September 2005
- XVIII. Static Criteria for Freezing of Liquid Halide Salts**  
Akdere Ü., Yılmaz M., Kavanoz H. B., Taşseven Ç.  
Turkish Physical Society 23 International Physics Congress, Muğla, Turkey, 13 - 16 September 2005, pp.641
- XIX. Static Criteria for Freezing of Liquid Halide Salts**  
Yılmaz M., Akdere Ü., Kavanoz H. B., Taşseven Ç.  
Turkish Physical Society 23th International Physics Congress , Muğla, Turkey, 13 - 16 September 2005, pp.641-0
- XX. Erimiş UCl<sub>3</sub> ün Yapısal Özelliklerinin Kurumsal Tayini**  
Akdere Ü., Kavanoz H. B., Yılmaz M., Taşseven Ç.  
Türk Fizik Derneği 22. Fizik Kongresi, Muğla, Turkey, 14 - 17 September 2004, pp.387-0
- XXI. İyonik Sıvıların Statik Dielektrik Fonksiyonu**  
KAVANOZ H. B., Akdere Ü., Taşseven Ç.  
Türk Fizik Derneği 22. Fizik Kongresi, 01 September 2004
- XXII. The Static and Thermodynamic Properties of Molten UO<sub>2</sub> and UCl<sub>3</sub> (Preliminary Results)**  
Akdere Ü., Taşseven Ç., Kavanoz H. B.  
The Fifth International Conference on Chemical Physics, İstanbul, Turkey, 31 October - 01 November 2002, pp.1-2
- XXIII. Effective Charges and Ionicity in Molten Salts**  
Kavanoz H. B., Yılmaz M., Gürbüz H. H.  
Fourth General Conference of the Balkan Physical Union, Veliko-Tarnovo, Bulgaria, 22 - 27 August 2000, pp.111-0
- XXIV. Bridge Functions of Molten Salts from Molecular Dynamic Simulations**  
Taşseven Ç., Kavanoz H. B., Yılmaz M.  
Second International Kaş-School on Liquid State Physics, Antalya, Turkey, 15 - 25 September 1998, pp.20-24
- XXV. Integral Equations Calculations of the Static Structure of Molten MX<sub>3</sub> Systems**  
Yılmaz M., Kavanoz H. B., Taşseven Ç.  
Second International Kaş-School on Liquid State Physics, Antalya, Turkey, 15 - 25 September 1998, pp.10-15
- XXVI. Structure of Liquid Alkali Metals Calculated by the Integral Equation Approach**  
Kavanoz H. B., Gümüş İ.  
İ.T.Ü. 4. İstatistik Fizik Günleri, İstanbul, Turkey, 7 - 11 July 1997
- XXVII. Percus Yevick Katı Küre Modeli ile İkili Sıvı Karışımların Yapı Faktörünün Hesaplanması**  
Kavanoz H. B.  
II. Trakya Teorik Fizik Seminerleri, Edirne, Turkey, 4 - 05 August 1988
- XXVIII. Erimiş Metal-Florür Tuzlarının Yapısal Özelliklerinin ve Donma Kriterinin İncelenmesi**  
Karagözlü S., KAVANOZ H. B.  
Türk Fizik Derneği I. Ulusal Yoğun Madde Fiziği Kongresi
- XXIX. The Static and Thermodynamic properties of UO<sub>2</sub> and UCl<sub>3</sub>: preliminary results**  
Taşseven Ç., KAVANOZ H. B.  
V. International Conference on Chemical Physics
- XXX. Static Criteria for Freezing of Liquid Halide Salts**  
Yılmaz M., KAVANOZ H. B., Taşseven Ç.  
Turk Physical Society 23rd International Physics Congress
- XXXI. Preliminary Results of Lindemann Criteria Calculation Ag Based Superionics**  
Öztek H. Ö., KAVANOZ H. B.  
Turkish Physical Society 31th International Physics Congress
- XXXII. Metal Tuzlarının Kristalleşmesinde Süper İyonik İletkenlik Davranışları**  
Dalgıç S., Gümüş İ., Karagözü S., KAVANOZ H. B., Yılmaz M.  
Türk Fizik Derneği I. Ulusal Yoğun Madde Fiziği Kongresi
- XXXIII. Equilibrium Molecular Dynamic of the Transport properties of Molten Thallium Halides.**  
KAVANOZ H. B., Yılmaz M., Taşseven Ç.  
6th International Conference of the Balkan Physical Union
- XXXIV. Sıvı 3d Geçiş Metallerinin Yapısı için Varyasyonel Termodinamik Hesaplamalar**

KAVANOZ H. B., Gümüş İ.

Türk Fizik Derneği 14.Ulusal Fizik Kongresi

XXXV. **Dynamic Criteria for Freezing of Liquid Alkali Metals**

KAVANOZ H. B., Yılmaz M.

6th International Conference of the Balkan Physical Union

## Supported Projects

Bölükbaş U., Çelebi U. B., Kavanoz H. B., Altok N., Ekerim A., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Girişimcilik Ekosistemindeki Aktörlerin Yaratıcı İşbirliğinin Geliştirilmesi ve Atölye Alt Yapısıyla Güçlendirilmesi, 2017 - 2018

KAVANOZ H. B., GÜNAY S. D., Other International Funding Programs, Süperiyonik İletkenlerin Yüksek Sıcaklık Davranışları, 2003 - 2007

KAVANOZ H. B., Other International Funding Programs, İyonik Sıvıların Yapı ve Dinamiğine Polarizasyon Etkisi, 1997 - 1999

## Memberships / Tasks in Scientific Organizations

Türk Fizik Derneği, Board Member, 1987 - 1990

## Scientific Refereeing

The American Institute of Physics (AIP) Conference Proceedings, Conference Paper (Full Text), December 2016

The American Institute of Physics (AIP) Conference Proceedings, Conference Paper (Full Text), December 2016

Indian Journal of Pure & Applied Physics (IJPAP), Conference Paper (Full Text), May 2016

## Scientific Research / Working Group Memberships

Hesaplamalı Fiziksel Bilimler Laboratuvarı, Yıldız Technical University, Türkiye,

<https://labsis.yildiz.edu.tr/Root/LabDetails/9e4e2227-f4ac-4557-b46e-93d76757e380>, 2002 - 2010

## Mobility Activity

Faculty Training Programme, Guest Researcher, University of Louisville, United States Of America, 2011 - 2011

Other, Guest Researcher, Universidad de Valladolid, Spain, 1998 - 1998

Other, Guest Researcher, Università Degli Studi di Trieste, Italy, 1989 - 1989

## Metrics

Publication: 62

Citation (WoS): 78

Citation (Scopus): 102

H-Index (WoS): 6

H-Index (Scopus): 6

## **Invited Talks**

Teknoparklar İşbirliđi ve İstiřare Toplantısı, Workshop, Trakya Üniversitesi, Turkey, April 2017

## **Awards**

Kavanoz H. B., Yayın Teřvik Ödülü, YILDIZ TEKNİK ÜNİVERSİTESİ, 2012, Yıldız Teknik Üniversitesi, September 2012

Kavanoz H. B., YTÜ Bilim Teřvik Ödülü, YILDIZ TEKNİK ÜNİVERSİTESİ, 1998, Yıldız Teknik Üniversitesi, September 1998

## **Non Academic Experience**

University of Louisville Kentucky-ABD

University of Valladolid İSPANYA

İnternational Center of Theoretical Physics Trieste-İTALYA