

## Assoc. Prof. MUSTAFA HİCABİ BÖLÜKDEMİR

### Personal Information

Office Phone: [+90 312 202 1236](tel:+903122021236)

Email: [hicabi@gazi.edu.tr](mailto:hicabi@gazi.edu.tr)

Other Email: [mustafahicabi@gmail.com](mailto:mustafahicabi@gmail.com)

Web: <https://avesis.gazi.edu.tr/hicabi>



### Education Information

Doctorate, Gazi University, Fen Bilimleri Enstitüsü, Fizik (Dr), Turkey 2004 - 2007

Postgraduate, Tokat Gaziosmanpaşa University, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), Turkey 2001 - 2004

Undergraduate, Tokat Gaziosmanpaşa University, Fen-Edebiyat Fakültesi, Fizik Bölümü, Turkey 1997 - 2001

### Certificates, Courses and Trainings

Education Management and Planning, 2237-A LİSANSÜSTÜ AKADEMİK DANIŞMANLIK EĞİTİMİ (TÜBİTAK DESTEKLİ), 2021

### Research Areas

Nuclear physics

### Academic Titles / Tasks

Research Assistant, Gazi University, Fen Fakültesi, Fizik, 2008 - 2011

Assistant Professor, Gazi University, Fen Fakültesi, Fizik, 2008 - 2008

Research Assistant, Gazi University, Fen Fakültesi, Fizik, 2005 - 2008

Research Assistant, Tokat Gaziosmanpaşa University, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), 2002 - 2004

### Academic and Administrative Experience

Gazi University, Polatlı Fen-Edebiyat Fakültesi, Fizik Bölümü, 2012 - 2013

### Courses

İleri Nükleer Fizik 1, Doctorate, 2017 - 2018

### Advising Theses

BÖLÜKDEMİR M. H. , Radyo frekans parçacık hızlandırıcı için bağdaştırıcı tasarımı, üretimi ve deneyleri, Doctorate, E.ÇİÇEK(Student), 2020  
BÖLÜKDEMİR M. H. , Investigation Of Interactions Of Proton And Carbon Beams With Tissue Equivalent Targets, Doctorate, F.EKİNCİ(Student), 2019  
BÖLÜKDEMİR M. H. , Investigation Of Scattering Doses Using Error Calculations In Radiotherapy For Patients With Implants, Postgraduate, S.AYAN(Student), 2016

## Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Investigation of shape effects and dead layer thicknesses of a coaxial HPGe crystal on detector efficiency by using PHITS Monte Carlo simulation**  
BÖLÜKDEMİR M. H. , UYAR E., Aksoy G., Ünlü H., Dikmen H., Özgür M.  
Radiation Physics and Chemistry, vol.189, 2021 (Journal Indexed in SCI)
- II. **A study on heat capacity of oxide and nitride nuclear fuels by using Einstein-Debye approximation**  
Eser E., Duyuran B., Bolukdemir M. H. , Koc H.  
Nuclear Engineering and Technology, vol.52, no.6, pp.1208-1212, 2020 (Journal Indexed in SCI Expanded)
- III. **Electromagnetic simulations, manufacturing and low power measurements of a 352.21 MHz RF power coupler for the SANAEM RFQ project**  
Cicek E., BÖLÜKDEMİR M. H. , Kilic I., Yasatekin B., Alacakir A.  
JOURNAL OF INSTRUMENTATION, vol.13, 2018 (Journal Indexed in SCI)
- IV. **Kinetic Study on the OSL Technique Using Human Blood Sample**  
KOÇ K., Tanir G., Aksoy G., BÖLÜKDEMİR M. H.  
NEUROQUANTOLOGY, vol.16, no.4, pp.41-46, 2018 (Journal Indexed in SCI)
- V. **Calculation of thermophysical properties of copper compounds in CuCl production cycle**  
BÖLÜKDEMİR M. H. , Koc H., Eser E.  
JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS, vol.112, pp.258-261, 2018 (Journal Indexed in SCI)
- VI. **Measurement of the distribution of radiation in the area surrounding the target mass using optically stimulated luminescence technique**  
Tanir A. G. , Yedek H., KOÇ K., BÖLÜKDEMİR M. H.  
APPLIED RADIATION AND ISOTOPES, vol.119, pp.23-27, 2017 (Journal Indexed in SCI)
- VII. **Direct Determination of Radiation Dose in Human Blood**  
Tanir A. G. , Gulec O., ŞAHİNER E., BÖLÜKDEMİR M. H. , KOÇ K., MERİÇ N., Keles S. K.  
NEUROQUANTOLOGY, vol.14, no.1, pp.28-35, 2016 (Journal Indexed in SCI)
- VIII. **On the stopping power for low energy positrons**  
Tanir G., Bolukdemir M. H. , Keles S., Goker I.  
Chinese Journal of Physics, vol.50, no.3, pp.425-433, 2012 (Journal Indexed in SCI Expanded)
- IX. **Measurement of dose given by Co-60 in radiotherapy with TLD-500**  
Tanir G., Cengiz F., BÖLÜKDEMİR M. H.  
RADIATION PHYSICS AND CHEMISTRY, vol.81, no.4, pp.355-357, 2012 (Journal Indexed in SCI)
- X. **The effect of the initial exciton numbers on  $^{54,56}\text{Fe}(p, xp)$  Pre-Equilibrium Reactions**  
Bolukdemir M. H. , Tel E., Aydin A., Okuducu S., Kaplan A.  
Physics of Atomic Nuclei, vol.74, no.2, pp.209-215, 2011 (Journal Indexed in SCI Expanded)
- XI. **Investigation of some structural fusion materials for  $(n, \alpha)$  reactions at the 14-15 MeV energy region**  
Tel E., Sahan M., Aydin A., Bolukdemir M. H. , Sahan H., Ugur F. A.  
Journal of Fusion Energy, vol.30, no.1, pp.26-33, 2011 (Journal Indexed in SCI Expanded)
- XII. **Neutron skin effect of some Mo isotopes in pre-equilibrium reactions**  
Bolukdemir M. H. , Tel E., Okuducu S., Akti N. N.  
Pramana - Journal of Physics, vol.76, no.3, pp.457-469, 2011 (Journal Indexed in SCI Expanded)
- XIII. **Investigation of the neutron emission spectra of some deformed nuclei for  $(n, xn)$  reactions up to 26**

## **MeV energy**

Kaplan A., Buyukuslu H., Tel E., Aydin A., Bolukdemir M. H.

Indian Journal of Physics, vol.85, no.11, pp.1615-1629, 2011 (Journal Indexed in SCI Expanded)

- XIV. **An alternative view on the kinetics of optical stimulated luminescence decay**  
Tanir G., BÖLÜKDEMİR M. H.  
JOURNAL OF RADIOANALYTICAL AND NUCLEAR CHEMISTRY, vol.285, no.3, pp.563-568, 2010 (Journal Indexed in SCI)
- XV. **Investigation of coulomb and pairing effects using new developed empirical formulas for proton-induced reaction cross sections**  
Tel E., Aydin E. G., Aydin A., Kaplan A., Bolukdemir M. H., Okuducu S.  
Physics of Atomic Nuclei, vol.73, no.3, pp.412-419, 2010 (Journal Indexed in SCI Expanded)
- XVI. **Theoretical cross sections of  $^{209}\text{Bi}$ ,  $^{232}\text{Th}$ ,  $^{235}\text{U}$  and  $^{238}\text{U}$  on deuteron-induced reactions**  
Buyukuslu H., Kaplan A., Tel E., Aydin A., Yildirim G., Bolukdemir M. H.  
Annals of Nuclear Energy, vol.37, no.4, pp.534-539, 2010 (Journal Indexed in SCI Expanded)
- XVII. **Improved Formula for  $(n, ^3\text{He})$  Fusion Reactions Cross Sections Using Optical Model**  
Bolukdemir M. H., Tel E., Akti N. N., Aydin A., Okuducu S.  
Journal of Fusion Energy, vol.29, no.1, pp.13-18, 2010 (Journal Indexed in SCI Expanded)
- XVIII. **Excitation functions of some neutron production targets on  $(d, 2n)$  reactions**  
Kaplan A., Buyukuslu H., Aydin A., Tel E., Yildirim G., Bolukdemir M. H.  
Journal of Fusion Energy, vol.29, no.2, pp.181-187, 2010 (Journal Indexed in SCI Expanded)
- XIX. **Production cross sections of medical  $\gamma$  in radionuclides**  
Buyukuslu H., KAPLAN A., Yildirim G., Aydin A., Tel E., BÖLÜKDEMİR M. H.  
Kerntechnik, vol.75, no.3, pp.103-108, 2010 (Journal Indexed in SCI Expanded)
- XX. **Investigation of neutron skin effect with density dependence by using a new calculation method for initial exciton numbers on pre-equilibrium reactions**  
Tel E., Bolukdemir M. H., Okuducu S., Aydin A., Kaplan A.  
Physica Scripta, vol.80, no.6, 2009 (Journal Indexed in SCI Expanded)
- XXI. **Calculation of nuclear level density parameters of some light deformed medical radionuclides using collective excitation modes of observed nuclear spectra**  
Okuducu S., Akti N. N., Sarac H., Bolukdemir M. H., Tel E.  
Modern Physics Letters A, vol.24, no.33, pp.2681-2691, 2009 (Journal Indexed in SCI Expanded)
- XXII. **The study of  $(n, d)$  reaction cross sections for new evaluated semi-empirical formula using optical model**  
Boeluekdemir M. H., Tel E., Okuducu S., Aydin A.  
Journal of Fusion Energy, vol.28, no.4, pp.398-403, 2009 (Journal Indexed in SCI Expanded)
- XXIII. **New evaluated semi-empirical formula using optical model for 14-15 MeV  $(n, t)$  reaction cross sections**  
Tel E., Durgu C., Aydin A., Boeluekdemir M. H., Kaplan A., Okuducu S.  
Journal of Fusion Energy, vol.28, no.4, pp.377-384, 2009 (Journal Indexed in SCI Expanded)
- XXIV. **Calculation of radii and density of 7-19B isotopes using effective skyrme force**  
Tel E., Okuducu S., Tanir G., Akti N. N., Bolukdemir M. H.  
Communications in Theoretical Physics, vol.49, no.3, pp.696-702, 2008 (Journal Indexed in SCI Expanded)
- XXV. **Semi-empirical systematics of  $(n, 2n)$ ,  $(n, \alpha)$  reactions cross sections at 1415 MeV neutron energy**  
Tel E., Okuducu S., Boeluekdemir M. H., Tanir G.  
International Journal of Modern Physics E, vol.17, no.3, pp.567-583, 2008 (Journal Indexed in SCI Expanded)
- XXVI. **Irradiation effect on dielectric properties and electrical conductivity of Au/SiO<sub>2</sub>/n-Si (MOS) structures**  
TATAROĞLU A., Altindal S., Boeluekdemir M. H., Tanir G.  
Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms, vol.264, no.1, pp.73-78, 2007 (Journal Indexed in SCI Expanded)
- XXVII. **Infrared stimulated luminescence-decay shape from NaCl as a function of radiation doses**

- Tanir G., BÖLÜKDEMİR M. H.  
RADIATION MEASUREMENTS, vol.42, no.10, pp.1723-1726, 2007 (Journal Indexed in SCI)
- XXVIII. **IRSL characteristics of NaCl and KCl relative to dosimeter**  
Tanir G., Bolukdemir M. H. , Catli S., Tel E.  
RADIATION MEASUREMENTS, vol.42, no.1, pp.29-34, 2007 (Journal Indexed in SCI)
- XXIX. **Effects of beta-ray irradiation on the C-V and G/ω-V characteristics of Au/SiO<sub>2</sub>/n-Si (MOS) structures**  
TATAROĞLU A., Bolukdemir M. H. , Tanir G., Altindal Ş., Bulbul M. M.  
Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms, vol.254, no.2, pp.273-277, 2007 (Journal Indexed in SCI Expanded)
- XXX. **Activation energy of NaCl as a function of radiation dose**  
Tanir G., Bolukdemir M. H.  
Journal of Radioanalytical and Nuclear Chemistry, vol.270, no.2, pp.413-416, 2006 (Journal Indexed in SCI Expanded)
- XXXI. **Application of the luminescence single-aliquot technique for dose estimation in the Marmara Sea**  
Tanir G., Sencan E., Bolukdemir M. H. , TÜRKÖZ M. B. , Tel E.  
Journal of Environmental Radioactivity, vol.84, no.3, pp.409-416, 2005 (Journal Indexed in SCI Expanded)
- XXXII. **Comparison of the decay-rate parameter of the luminescence signal generated by various laboratory radiation doses**  
Tanir G., TÜRKÖZ M. B. , Sencan E., Bolukdemir M. H. , Tel E., Okuducu S.  
Journal of Radioanalytical and Nuclear Chemistry, vol.265, no.3, pp.399-403, 2005 (Journal Indexed in SCI Expanded)

## Articles Published in Other Journals

- I. **The Effect of the Second Peak formed in Biomaterials used in a Slab Head Phantom on the Proton Bragg Peak**  
Ekinci F., BÖLÜKDEMİR M. H.  
JOURNAL OF POLYTECHNIC-POLİTEKNİK DERGISI, vol.23, no.1, pp.129-136, 2020 (Journal Indexed in ESCI)
- II. **Calculation of Neutron Density Distributions of Tin Isotopes Using the Thomas Fermi Approximation**  
ESER E., yalçın a., BÖLÜKDEMİR M. H. , gökbulut m., KOÇ H.  
International journal of modern engineering research, vol.6, no.12, pp.59-65, 2016 (Refereed Journals of Other Institutions)
- III. **Usage of attenuation coefficients of some tissue-equivalent materials**  
Tanir A. G. , Ketenci F. S. , BÖLÜKDEMİR M. H.  
TURKISH JOURNAL OF PHYSICS, vol.39, no.1, pp.69-74, 2015 (Journal Indexed in ESCI)
- IV. **The effects of plaster on radiation doses given to patients**  
Karaman O., Tanir A. G. , BÖLÜKDEMİR M. H.  
TURKISH JOURNAL OF PHYSICS, vol.39, no.1, pp.31-36, 2015 (Journal Indexed in ESCI)
- V. **Effects of different types of nuclear radiations on optically stimulated luminescence**  
TANIR A. G. , BÖLÜKDEMİR M. H. , KIZILIRMAK T. N.  
TURKISH JOURNAL OF PHYSICS, vol.37, pp.363-367, 2013 (Refereed Journals of Other Institutions)
- VI. **Application of active OSL Approximation to some experimental optical stimulated luminescence decay**  
TANIR A. G. , BÖLÜKDEMİR M. H.  
Turkish Journal of Physics, vol.35, no.3, pp.265-272, 2011 (Refereed Journals of Other Institutions)

## Books & Book Chapters

- I. **Bölüm 20 Elektrik Alanlar; Bölüm 21 Gauss Yasası; Bölüm 22 Elektriksel Potansiyel**  
YILDIZ D. E. , Aydođru S. y. , KURT H. H. , ŞAFAK ASAR Y., Hacısmailođlu M. C. , KURT E., AKIN B., BÖLÜKDEMİR M. H. , KARADAĞ F., EKİCİBİL A., et al.  
in: Fen ve mühendislik için fizik, Esra Yıldız, Erol Kurt, H.Hilal Kurt, Editor, Nobel Yayınevi, Ankara, pp.223-252, 2015
- II. **Radyasyon ve Radyasyondan Korunma Fiziđi**  
Arasođlu A., Aslan N., Aydın A., Babacan T., Boztosun İ., Bulur E., Engin B., Gümüş H., Kaplan A., Karadađ M., et al.  
Palme Yayın Dađıtım, Ankara, 2013
- III. **RADYASYON FİZİĐİNDE İSTATİSTİK**  
Uđur G., Uđur Ş., Tanır A. G. , Koç K., Bölükdemir M. H. , Arasođlu A., Aslan N., Aydın A., Babacan T., Boztosun İ., et al.  
in: PHYSICS FOR RADIATION PROTECTION, Prof.Dr. A.Güneş TANIR,Doç.Dr. M. Hicabi BÖLÜKDEMİR,Yrd.Doç. Dr.Kemal KOÇ, Editor, Palme Yayın Dađıtım, Ankara, pp.79-146, 2013

## Refereed Congress / Symposium Publications in Proceedings

- I. **Evaluating the Performance of n-type HPGe Detector Modeled as Sharp and Rounded Edge Using PHITS MC**  
UYAR E., BÖLÜKDEMİR M. H.  
TURKISH PHYSICAL SOCIETY 37TH INTERNATIONAL PHYSICS CONGRESS, Bodrum, Turkey, 01 September 2021
- II. **INVESTIGATION OF SECONDARY NEUTRONS PRODUCED BY PROTON AND HELIUM ION BEAMS IN WATER**  
PEHLİVANLI A., BÖLÜKDEMİR M. H.  
XIV. International Conference on Nuclear Structure Properties, NSP2021, Konya, Turkey, 02 June 2021
- III. **INVESTIGATION OF THE EFFECT OF COPPER COOLING ROD ON DETECTOR EFFICIENCY WITH MONTE CARLO METHOD IN HPGe DETECTORS**  
UYAR E., BÖLÜKDEMİR M. H.  
XIV. International Conference on Nuclear Structure Properties, NSP2021, Konya, Turkey, 02 June 2021
- IV. **MODELLING OF MARINELLI BEAKER SOURCE IN HPGe DETECTORS BY MONTE CARLO SIMULATION**  
Aksoy G., BÖLÜKDEMİR M. H.  
TURKISH PHYSICAL SOCIETY 37TH INTERNATIONAL PHYSICS CONGRESS, Bodrum, Turkey, 01 September 2021
- V. **MODELING OF A HPGe DETECTOR USING PHITS FOR THE CALCULATION OF FULL ENERGY PEAK EFFICIENCIES**  
UYAR E., BÖLÜKDEMİR M. H.  
5th International Conference on Theoretical and Experimental Studies in Nuclear Applications and Technology (TESNAT2019), Amasya, Turkey, 02 May 2019
- VI. **Determination of the full energy peak efficiency of HPGe detector using Monte Carlo simulation**  
UYAR E., BÖLÜKDEMİR M. H. , ESER E.  
TESNAT-2018, 20 - 22 April 2018
- VII. **Calculation specific heat capacity of Uranium Nitride nuclear fuel**  
ESER E., Duyuran B., KOÇ H., BÖLÜKDEMİR M. H.  
TESNAT-2018, 20 - 22 April 2018
- VIII. **Determination of secondary neutrons produced by 100 MeV energy protons in water.**  
PEHLİVANLI A., BÖLÜKDEMİR M. H.  
TESNAT 2018, Antalya, Turkey, 20 April 2018
- IX. **A Compact RF Power Coupler Design for the SANAEM RFQ Accelerator**  
Cicek E., BÖLÜKDEMİR M. H. , Kilic I., Yasatekin B., Alacakir A.  
34th International Physics Congress (IPS) of the Turkish-Physical-Society (TPS), Konacik, Turkey, 5 - 09 September 2018, vol.2042
- X. **Physics of plasma focus device for nuclear fusion studies**  
BÖLÜKDEMİR M. H. , ESER E.

NSP2017-10. International workshop on nuclear structure properties, Karabük, Turkey, 20 - 22 September 2017

- XI. **Investigations of thermophysical properties of nuclear fuels (Oxide and Nitride) using Einstein-Debye approximation.**  
ESER E., KOÇ H., BÖLÜKDEMİR M. H.  
X. International Workshop on Nuclear Structure Properties (NSP2017), 20 - 22 September 2017
- XII. **Küçük ölçekli nükleer füzyon reaktörleri: IEC**  
BÖLÜKDEMİR M. H.  
Adım Fizik Günleri VI, Balıkesir, Turkey, 19 - 21 June 2017
- XIII. **Calculation of Neutron Cross Section for DD Reaction in IEC Fusion Reactor**  
Bölükdemir A. S. , BÖLÜKDEMİR M. H. , TANIR A. G.  
TESNAT 2017: 3rd International Conference on Theoretical and Experimental Studies in Nuclear Applications and Technology, Adana, Turkey, 10 - 12 May 2017
- XIV. **OSL kinetic using AOSL approximation**  
TANIR A. G. , Aksoy G., KOÇ K., BÖLÜKDEMİR M. H.  
TESNAT 2017: 3rd International Conference on Theoretical and Experimental Studies in Nuclear Applications and Technology, 10 - 12 May 2017
- XV. **The distribution of ionizing radiation in the area surrounding the target mass using OSL**  
TANIR A. G. , Yedek H., BÖLÜKDEMİR M. H. , KOÇ K.  
TESNAT 2017: 3rd International Conference on Theoretical and Experimental Studies in Nuclear Applications and Technology, Adana, Turkey, 10 - 12 May 2017
- XVI. **An Analysis of Dose Distributions for Some Biomaterials and Solid Water Phantom**  
BÖLÜKDEMİR M. H. , ayan s., ESER E.  
IX. INTERNATIONAL WORKSHOP ON NUCLEAR STRUCTURE PROPERTIES, 1 - 03 September 2016, pp.77
- XVII. **Comparison of the Bragg Curves from Liquid Water for Protons**  
TANIR A. G. , küşneci e. n. , KOÇ K., BÖLÜKDEMİR M. H.  
IX. INTERNATIONAL WORKSHOP ON NUCLEAR STRUCTURE PROPERTIES, 1 - 03 September 2016
- XVIII. **The Study on the Osl Kinetics from Human Blood Sample**  
TANIR A. G. , aksoy g., KOÇ K., BÖLÜKDEMİR M. H.  
IX. INTERNATIONAL WORKSHOP ON NUCLEAR STRUCTURE PROPERTIES, 1 - 03 September 2016, pp.32
- XIX. **Analytical Evaluation of the Coulomb Potential for Spherical Nuclei**  
ESER E., KOÇ H., BÖLÜKDEMİR M. H.  
IX. INTERNATIONAL WORKSHOP ON NUCLEAR STRUCTURE PROPERTIES, 1 - 03 September 2016
- XX. **The Situation of Inertial Electrostatic Confinement Fusion Reactor in Fusion Studies**  
BÖLÜKDEMİR M. H.  
IX. INTERNATIONAL WORKSHOP ON NUCLEAR STRUCTURE PROPERTIES, 1 - 03 September 2016, pp.38
- XXI. **THE EFFECTS OF TITANIUM ALLOY AND STAINLESS STEEL BIOMATERIALS ON DOSE DISTRIBUTION IN RADIOTHERAPY**  
Ayan S., BÖLÜKDEMİR M. H. , Fatih Çağlar K.  
9th International Physics Conference of the Balkan Physical Union, 24 - 27 August 2015
- XXII. **Equivalent dose determination using components of IRSL decay curves**  
Tanir G., Boeluekdemir M. H.  
6TH International Conference of the Balkan Physical Union, İstanbul, Turkey, 22 August 2006 - 26 August 2007, vol.899, pp.528
- XXIII. **NaCl ve KCl'ün IRSL bozunma eğrilerinin sıcaklık bağımlılığına göre kıyaslanması**  
TANIR A. G. , BÖLÜKDEMİR M. H. , ÇATLI DİNÇ S., TEL E.  
9. Ulusal Nükleer Bilimler ve Teknolojileri Kongresi, Turkey, 14 - 16 September 2005
- XXIV. **NaCl Samples for Optical Luminescence Dosimetry**  
BÖLÜKDEMİR M. H. , ÇATLI DİNÇ S., TANIR A. G. , TEL E.  
Tfd-23 Fizik Kongresi, 13 - 16 September 2005

## Supported Projects

BÖLÜKDEMİR M. H. , Project Supported by Higher Education Institutions, Nükleer Füzyon Yapı Materyali Olarak Kullanılan Bazı Çekirdeklerin Nükleer Reaksiyonlarının Bozunmuş Born Dalga Yaklaşımı ile İncelenmesi, 2010 - 2013

## Citations

Total Citations (WOS):188

h-index (WOS):7