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Ögrenim Bilgisi

Doktora 2010 - 2014	Erciyes Üniversitesi, Fen Bilimleri Enstitüsü, Türkiye
Yüksek Lisans 2004 - 2007	Sivas Cumhuriyet Üniversitesi, Fen Bilimleri Enstitüsü, Fen Bilimleri Enstitüsü, Türkiye
Lisans 1999 - 2004	Ege Üniversitesi, Fen Fakültesi, Fizik Bölümü, Türkiye

Yaptığı Tezler

Doktora, Etkin kütleli ve relativistik spin 1/2-1-0 parçacıklarının farklı potansiyel etkileşimleri, Erciyes Üniversitesi, Fen Bilimleri Enstitüsü, 2014
Yüksek Lisans, P-tipi delta katkılı GaAs yapıların elektronik özellikleri, Sivas Cumhuriyet Üniversitesi, Fen Bilimleri Enstitüsü, Fen Bilimleri Enstitüsü, 2007

Akademik Unvanlar / Görevler

Prof. Dr. 2024 - Devam Ediyor	Sivas Cumhuriyet Üniversitesi, Fen Fakültesi, Fizik Bölümü
Doç. Dr. 2019 - 2024	Sivas Cumhuriyet Üniversitesi, Fen Fakültesi, Fizik Bölümü
Doç. Dr. 2019 - 2019	Karamanoğlu Mehmetbey Üniversitesi, Mühendislik Fakültesi, Enerji Sistemleri Mühendisliği Bölümü

Yrd. Doç. Dr. 2015 - 2019	Karamanoğlu Mehmetbey Üniversitesi, Mühendislik Fakültesi, Enerji Sistemleri Mühendisliği Bölümü
Araştırma Görevlisi 2010 - 2014	Erciyes Üniversitesi, Fen Fakültesi, Fizik
Araştırma Görevlisi 2009 - 2010	Karamanoğlu Mehmetbey Üniversitesi, Kamil Özdağ Fen Fakültesi, Fizik Bölümü

Desteklenen Projeler

1. Bahar M. K., TÜBİTAK Projesi, İki elektronlu kuantum noktalarının enerjilerine plazma ortamının, elektrik, manyetik, lazer alanlarının ve hız-bağımlı potansiyelin etkilerinin incelenmesi, 2017 - 2018

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

1. **Short laser pulse effects on spectral dynamics of encapsulated He, Ne, Ar atoms in fullerenes**
   BAHAR M. K.
   European Physical Journal D, cilt.78, sa.11, 2024 (SCI-Expanded)
2. **Persistent currents of ultrarelativistic plasma-encased endofullerene molecules entrapping a H atom**
   BAHAR M. K.
   Communications in Theoretical Physics, cilt.76, sa.6, 2024 (SCI-Expanded)
3. **Photoionization treatment of encompassed plasma-implanted exotic atoms**
   BAHAR M. K.
   European Physical Journal Plus, cilt.139, sa.5, 2024 (SCI-Expanded)
4. **Radiative dynamics of laser-driven Li@Cn embedded in quantum plasma**
   BAHAR M. K.
   Physica Scripta, cilt.99, sa.3, 2024 (SCI-Expanded)
5. **Photoionization process of energy-dependent excited He atom trapped inside endofullerene molecules encased in a quantum plasma**
   BAHAR M. K.
   European Physical Journal D, cilt.78, sa.2, 2024 (SCI-Expanded)
6. **Combined effects of thermodynamic factors and external fields for nonlinear optical processes of deformed Mathieu quantum dot containing central impurity**
   BAHAR M. K., BAŞER P.
   Physics Letters, Section A: General, Atomic and Solid State Physics, cilt.483, 2023 (SCI-Expanded)
7. **The second, third harmonic generations and nonlinear optical rectification of the Mathieu quantum dot with the external electric, magnetic and laser field**
   BAHAR M. K., BAŞER P.
   Physica B: Condensed Matter, cilt.665, 2023 (SCI-Expanded)
8. **Photoionization Cross Section for H@Cn${\text{H@C}}_{n}$ Implanted in Nonideal Classical Plasmas**
   BAHAR M. K., Martínez-Flores C.
   Annalen der Physik, cilt.535, sa.9, 2023 (SCI-Expanded)
9. **Nonlinear optical specifications of the Mathieu quantum dot with screw dislocation**
   BAHAR M. K., BAŞER P.
   European Physical Journal Plus, cilt.138, sa.8, 2023 (SCI-Expanded)

10. **Generation of adiabatic pulses**
Lumb S., Talwar S. L., BAHAR M. K., Prasad V.
Physica E: Low-Dimensional Systems and Nanostructures, cilt.144, 2022 (SCI-Expanded)
11. **Tuning of nonlinear optical characteristics of Mathieu quantum dot by laser and electric field**
BAHAR M. K., Baser P.
EUROPEAN PHYSICAL JOURNAL PLUS, cilt.137, sa.10, 2022 (SCI-Expanded)
12. **Nonlinear optical characteristics of thermodynamic effects- and electric field-triggered Mathieu quantum dot**
BAHAR M. K., BAŞER P.
MICRO AND NANOSTRUCTURES, cilt.170, 2022 (SCI-Expanded)
13. **Charge-current generations and optical specifications of Gaussian quantum dot with energy-dependent potential**
BAHAR M. K.
CHEMICAL PHYSICS LETTERS, cilt.802, 2022 (SCI-Expanded)
14. **Li@C-n immersed in nonideal classical plasmas**
BAHAR M. K.
EUROPEAN PHYSICAL JOURNAL PLUS, cilt.137, sa.9, 2022 (SCI-Expanded)
15. **Evaluation of the external electric- and magnetic field-driven Mathieu quantum dot's optical observables**
BAŞER P., BAHAR M. K.
PHYSICA B-CONDENSED MATTER, cilt.639, 2022 (SCI-Expanded)
16. **Manipulating the orbital charge-currents of compressed Li and Na atom embedded in quantum plasma**
BAHAR M. K.
CHEMICAL PHYSICS, cilt.557, 2022 (SCI-Expanded)
17. **Relativistic treatments of quantum plasma-immersed Li, Na, K atoms**
BAHAR M. K.
EUROPEAN PHYSICAL JOURNAL PLUS, cilt.137, sa.4, 2022 (SCI-Expanded)
18. **Plasma-embedded positronium atom with energy-dependent potential**
BAHAR M. K.
EUROPEAN PHYSICAL JOURNAL PLUS, cilt.136, sa.11, 2021 (SCI-Expanded)
19. **Charge-Current Output in Plasma-Immersed Hydrogen Atom with Noncentral Interaction**
BAHAR M. K.
ANNALEN DER PHYSIK, cilt.533, sa.11, 2021 (SCI-Expanded)
20. **Effect of intense laser and electric fields on nonlinear optical properties of cylindrical quantum dot with Morse potential**
UNGAN F., BAHAR M. K., Barseghyan M. G., Perez L. M., Laroze D.
OPTIK, cilt.236, 2021 (SCI-Expanded)
21. **Optical response of plasma processed quantum dot under the external fields**
Kilic K., BAHAR M. K.
INTERNATIONAL JOURNAL OF QUANTUM CHEMISTRY, cilt.121, sa.7, 2021 (SCI-Expanded)
22. **Influence of applied external fields on the nonlinear optical properties of a semi-infinite asymmetric AlxGa1-xAs/GaAs quantum well**
Ungan F., BAHAR M. K., Rodriguez-Magdaleno A., Mora-Ramos M. E., Martinez-Orozco J. C.
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, cilt.123, 2021 (SCI-Expanded)
23. **Optical analysis of quantum dot with velocity-dependent potential**
BAHAR M. K., Ungan F., Kaya H., AKKOYUN S.
INTERNATIONAL JOURNAL OF QUANTUM CHEMISTRY, cilt.121, sa.5, 2021 (SCI-Expanded)
24. **Optical properties of a triple AlGaAs/GaAs quantum well purported for quantum cascade laser active region**
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25. **Optical responses in asymmetric hyperbolic-type quantum wells under the effect of external electromagnetic fields**
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Photonics and Nanostructures - Fundamentals and Applications, cilt.41, 2020 (SCI-Expanded)
26. **Electron-related nonlinear optical properties of cylindrical quantum dot with the Rosen-Morse axial potential**
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COMMUNICATIONS IN THEORETICAL PHYSICS, cilt.72, sa.7, 2020 (SCI-Expanded)
27. **The laser field controlling on the nonlinear optical specifications of the electric field-triggered Rosen-Morse quantum well**
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PHYSICS LETTERS A, cilt.384, sa.19, 2020 (SCI-Expanded)
28. **Optical properties of n-type asymmetric triple delta-doped quantum well under external fields**
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PHYSICA SCRIPTA, cilt.95, sa.5, 2020 (SCI-Expanded)
29. **Magneto-optical specifications of Rosen-Morse quantum dot with screw dislocation**
Bahar M. K., Ungan F.
INTERNATIONAL JOURNAL OF QUANTUM CHEMISTRY, cilt.120, sa.11, 2020 (SCI-Expanded)
30. **Generalized potential for confined positronium atom immersed in plasmas**
Bahar M. K., Soylu A.
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31. **The optimal ranges for the optical properties of two-electron quantum dot immersed in plasmas**
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PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES, cilt.114, 2019 (SCI-Expanded)
32. **Nonlinear optical properties of morse quantum well modulated by THz laser fields**
UNGAN F., Pal S., Bahar M. K., Mora-Ramos M. E.
PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES, cilt.113, ss.86-91, 2019 (SCI-Expanded)
33. **The functionality of the external electric and magnetic field on optical specifications of Rosen-Morse quantum well**
Ungan F., Bahar M. K.
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34. **Velocity dependent potential effects on two-electron quantum dot in plasmas**
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PHYSICS OF PLASMAS, cilt.26, sa.6, 2019 (SCI-Expanded)
35. **Computation of the nonlinear optical properties of n-type asymmetric triple delta-doped GaAs quantum well**
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SUPERLATTICES AND MICROSTRUCTURES, cilt.130, ss.76-86, 2019 (SCI-Expanded)
36. **Two-Electron Pseudodot System With Laser Effect in Plasmas**
Bahar M. K., Soylu A.
IEEE TRANSACTIONS ON PLASMA SCIENCE, cilt.47, sa.4, ss.1713-1725, 2019 (SCI-Expanded)
37. **Optical specifications of laser-induced Rosen-Morse quantum well**
UNGAN F., Bahar M. K.
OPTICAL MATERIALS, cilt.90, ss.231-237, 2019 (SCI-Expanded)
38. **Analysis of the anomalous electromagnetic moments of the tau lepton in gamma p collisions at the LHC**
Koksal M., Inan S. C., Billur A. A., Ozguven Y., Bahar M. K.
PHYSICS LETTERS B, cilt.783, ss.375-380, 2018 (SCI-Expanded)
39. **Laser-driven two-electron quantum dot in plasmas**
Bahar M. K., Soylu A.

PHYSICS OF PLASMAS, cilt.25, sa.6, 2018 (SCI-Expanded)

40. **Confinement control mechanism for two-electron Hulthen quantum dots in plasmas**
Bahar M. K., Soylu A.
JOURNAL OF PHYSICS B-ATOMIC MOLECULAR AND OPTICAL PHYSICS, cilt.51, sa.10, 2018 (SCI-Expanded)

41. **Two-electrons quantum dot in plasmas under the external fields**
Bahar M. K., Soylu A.
PHYSICS OF PLASMAS, cilt.25, sa.2, 2018 (SCI-Expanded)

42. **Search for the anomalous electromagnetic moments of tau lepton through electron-photon scattering at CLIC**
Ozguven Y., Billur A. A., Inan S. C., Bahar M. K., Koksal M.
NUCLEAR PHYSICS B, cilt.923, ss.475-490, 2017 (SCI-Expanded)

43. **The Hulthen Potential Model for Hydrogen Atoms in Debye Plasma**
Bahar M. K., Soylu A., Poszwa A.
IEEE TRANSACTIONS ON PLASMA SCIENCE, cilt.44, sa.10, ss.2297-2306, 2016 (SCI-Expanded)

44. **The nuclear size and mass effects on muonic hydrogen-like atoms embedded in Debye plasma**
Poszwa A., Bahar M. K., Soylu A.
PHYSICS OF PLASMAS, cilt.23, sa.10, 2016 (SCI-Expanded)

45. **Probe of hydrogen atom in plasmas with magnetic, electric, and Aharonov-Bohm flux fields**
Bahar M. K., Soylu A.
PHYSICS OF PLASMAS, cilt.23, sa.9, 2016 (SCI-Expanded)

46. **Effects of laser radiation field on energies of hydrogen atom in plasmas**
Bahar M. K.
PHYSICS OF PLASMAS, cilt.22, sa.9, 2015 (SCI-Expanded)

47. **Confinement effects of magnetic field on two-dimensional hydrogen atom in plasmas**
Bahar M. K., Soylu A.
PHYSICS OF PLASMAS, cilt.22, sa.5, 2015 (SCI-Expanded)

48. **An Alternative Approach to Solutions of the MGECSC Potential in Presence of External Electric Field**
Bahar M. K.
ADVANCES IN HIGH ENERGY PHYSICS, cilt.2015, 2015 (SCI-Expanded)

49. **Relativistic corrections for screening effects on the energies of hydrogen-like atoms embedded in plasmas**
Poszwa A., Bahar M. K.
PHYSICS OF PLASMAS, cilt.22, sa.1, 2015 (SCI-Expanded)

50. **Ansatz approach solution of the Duffin-Kemmer-Petiau equation for spin-1 particles with position-dependent mass in the presence of Kratzer-type potential**
BAHAR M. K., YAŞUK F.
CANADIAN JOURNAL OF PHYSICS, cilt.92, sa.12, ss.1565-1569, 2014 (SCI-Expanded)

51. **The hydrogen atom in plasmas with an external electric field**
Bahar M. K., Soylu A.
PHYSICS OF PLASMAS, cilt.21, sa.9, 2014 (SCI-Expanded)

52. **Plasma screening effects on the energies of hydrogen atom under the influence of velocity-dependent potential**
Bahar M. K.
PHYSICS OF PLASMAS, cilt.21, sa.7, 2014 (SCI-Expanded)

53. **Relativistic solutions for the spin-1 particles in the two-dimensional Smorodinsky-Winternitz potential**
BAHAR M. K., YAŞUK F.
ANNALS OF PHYSICS, cilt.344, ss.105-117, 2014 (SCI-Expanded)

54. **AIM Solutions to the DKP Equation for Spin-1 Particles in the Presence of Kratzer Potential in (2+1) Dimensions**
BAHAR M. K.

FEW-BODY SYSTEMS, cilt.54, sa.11, ss.2133-2142, 2013 (SCI-Expanded)

55. **Solutions of the Duffin-Kemmer-Petiau equation in the presence of Hulthen potential in (1+2) dimensions for unity spin particles using the asymptotic iteration method**
Molaee Z., BAHAR M. K., YAŞUK F., Hassanabadi H.
CHINESE PHYSICS B, cilt.22, sa.6, 2013 (SCI-Expanded)
56. **Relativistic spin-1 particles with position-dependent mass under the Coulomb interaction: Exact analytical solutions of the DKP equation**
BAHAR M. K., YAŞUK F.
CANADIAN JOURNAL OF PHYSICS, cilt.91, sa.3, ss.191-197, 2013 (SCI-Expanded)
57. **Fermionic particles with position-dependent mass in the presence of inversely quadratic Yukawa potential and tensor interaction**
BAHAR M. K., YAŞUK F.
PRAMANA-JOURNAL OF PHYSICS, cilt.80, sa.2, ss.187-197, 2013 (SCI-Expanded)
58. **Bound states of the Dirac equation with position-dependent mass for the Eckart potential**
BAHAR M. K., YAŞUK F.
CHINESE PHYSICS B, cilt.22, sa.1, 2013 (SCI-Expanded)
59. **Exact Solutions of the Mass-Dependent Klein-Gordon Equation with the Vector Quark-Antiquark Interaction and Harmonic Oscillator Potential**
BAHAR M. K., YAŞUK F.
ADVANCES IN HIGH ENERGY PHYSICS, cilt.2013, 2013 (SCI-Expanded)
60. **Approximate Solutions to the Dirac Equation with Effective Mass for the Manning-Rosen Potential in N Dimensions**
BAHAR M. A., YAŞUK F.
FEW-BODY SYSTEMS, cilt.53, ss.515-524, 2012 (SCI-Expanded)
61. **Approximate solutions of the Dirac equation with position-dependent mass for the Hulthen potential by the asymptotic iteration method**
YAŞUK F., BAHAR M. K.
PHYSICA SCRIPTA, cilt.85, sa.4, 2012 (SCI-Expanded)
62. **Subband structure of p-type delta-doped GaAs as dependent on the acceptor concentration and the layer thickness**
Ozturk E., Bahar M. K., Sokmen I.
EUROPEAN PHYSICAL JOURNAL-APPLIED PHYSICS, cilt.41, sa.3, ss.195-200, 2008 (SCI-Expanded)

Diğer Dergilerde Yayınlanan Makaleler

1. **Plasma Shielding Effects on Nuclear Spectra: 18Ne Application**
AKKOYUN S., BAHAR M. K.
Bulletin of the Russian Academy of Sciences: Physics, cilt.86, sa.11, ss.1387-1390, 2022 (Scopus)
2. **Search for the anomalous electromagnetic moments of the tau lepton through electron photon scattering at the CLIC**
ÖZGÜVEN Y., İNAN S. C., BİLLUR A. A., KÖKSAL M., BAHAR M. K.
arxİv, 2016 (Hakemsiz Dergi)
3. **Ladder Operators and Coherent States for Electrons Under Double Parabolic Confinement in a Quantum Wire**
Bahar M. K.
Celal Bayar Journal of Science, cilt.12, ss.427-435, 2016 (Hakemli Dergi)
4. **The Dirac equation with position-dependent mass for the modified Pöschl-Teller potential and its solution**
YAŞUK F., BAHAR M. K.
Internatiomal Journal of Physical Sciences, 2012 (Hakemli Dergi)

5. **Elektrik alan altındaki kare kuantum kuyusunun elektronik özelliklerinin pertürbatif ve analitik yöntem ile incelenmesi**
   Bahar M. K., Ersoy A.
   Sakarya Üniversitesi Fen Bilimleri Enstitüsü Dergisi, cilt.14, ss.55-61, 2010 (Hakemli Dergi)

Akademik İdari Deneyim

2017 - 2019	**Anabilim/Bilim Dalı Başkanı**	Karamanoğlu Mehmetbey Üniversitesi, Mühendislik Fakültesi, Enerji Sistemleri Mühendisliği Bölümü
2015 - 2019	**Bölüm Başkan Yardımcısı**	Karamanoğlu Mehmetbey Üniversitesi, Mühendislik Fakültesi, Enerji Sistemleri Mühendisliği Bölümü
2015 - 2017	**Anabilim/Bilim Dalı Başkanı**	Karamanoğlu Mehmetbey Üniversitesi, Mühendislik Fakültesi, Enerji Sistemleri Mühendisliği Bölümü

Verdiği Dersler

Fizikte Sayısal Yöntemler, Yüksek Lisans, 2019 - 2020
Genel Fizik 2, Lisans, 2019 - 2020
Genel Fizik I, Lisans, 2019 - 2020

Yönetilen Tezler

Bahar M. K., Elektrik ve manyetik alan etkisinde plazma ortamında iki elektronlu Gaussian kuantum noktasının optiksel özellikleri, Yüksek Lisans, K.KILIÇ(Öğrenci), 2020

Metrikler

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Atıf (WoS): 228
Atıf (Scopus): 533
H-İndeks (WoS): 9
H-İndeks (Scopus): 13

Araştırma Alanları

Atomik ve moleküler etkileşimler, Plazma fiziği