

Prof. BAYRAM ÜNAL

Personal Information

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Biography

Bayram Ünal began his academic career in 1987, graduating with honors from the Department of Physics Engineering at the Faculty of Engineering, Ankara University. After successfully completing the English preparatory class, he completed his master's degree in semiconductor electronics in 1990. In the same year, he started a doctoral program at Ankara University and was awarded an overseas postgraduate scholarship by the Council of Higher Education (YÖK).

In 1993, Ünal went to the United Kingdom for a postgraduate program on behalf of Mersin University and began his doctoral studies in the Department of Physics at Leicester University. Later, he completed his Ph.D. at DeMontfort University in the same city, graduating successfully in 1999. Due to his outstanding performance during his doctoral studies, he was awarded the LAXTON BEQUEST award by the university administration.

Ünal continued his postdoctoral research at DeMontfort University for one year, and in 2000, he joined the Waveguide Laser project at the Faculty of Electronics and Computer Sciences at the University of Southampton. In these studies, which lasted for three years, he pioneered the production of the Nd waveguide laser, a world first.

From 2003, he worked for three years on the EPSRC-supported "Bi-directional interfacing of electronics and cultured neurons" project at DeMontfort University and Queen Mary, University of London. After the project was completed, he returned to Turkey in 2007 to carry out similar projects.

In 2007, the "BioNanoTechnology Infrastructure" project, which he prepared and presented within Fatih University, was approved by TÜBİTAK and supported in 2008 with a budget of 6,900,000 TL (approximately \$6 million) by the State Planning Organization (DPT). The high-tech R&D laboratories established were transformed into an R&D Center in 2010 and additionally became operational as an Institute in 2012. Ünal served as the Founding Director of both the R&D Center and the R&D Institute.

In 2014, Ünal resigned from his position at Fatih University and continued his academic career at Istanbul Sabahattin Zaim University with the title of Associate Professor. In 2015, he was appointed as a Professor at the Faculty of Engineering and Natural Sciences at Istanbul Sabahattin Zaim University. In the same year, he was appointed as the Head of the Department of Software Engineering and Director of the Institute of Natural Sciences.

In August 2019, Ünal was appointed as a Professor at Istanbul University - Cerrahpaşa, Institute of Forensic Sciences and Forensic Medicine. He was also appointed as the Director of the Institute of Nanotechnology and Biotechnology, which he had previously designed and founded, and he still serves as a Professor at the Institute of Forensic Sciences and Forensic Medicine.

Throughout his career, Prof. Dr. Bayram Ünal has led many significant projects and is recognized as a respected academician both nationally and internationally.

Education Information

Doctorate, De Montfort University, England 1995 - 1999

Postgraduate, Ankara University, Fen Bilimleri Enstitüsü, Turkey 1988 - 1990

Undergraduate, Ankara University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, Turkey 1983 - 1987

Dissertations

Doctorate, Electrical, optical and structural properties of Group IV nanostructures, De Montfort University, School of Applied Sciences, 1999

Postgraduate, Metal/yalıtkan/yarıiletken/metal yapılarında yüzey durumlarının tayini, Ankara University, Fen Bilimleri Enstitüsü, 1990

Research Areas

Printed Circuits, Thin Film, Thick Film and Hybrid ICs, Circuit Theory, Electronic Circuits, Microwave Circuits, Nanotechnology, Optics and Photonics, Renewable energy, Electrical Machine Theory and Design, Dielectric Materials and Devices, Optical Materials and Devices, Optoelectronic Materials and Devices, Semiconducting Materials and Devices, Condensed Matter 1: Structural, Mechanical and Thermal Properties

Academic Titles / Tasks

Professor, Istanbul Gelisim University, FACULTY OF ENGINEERING AND ARCHITECTURE, ELECTRICAL AND ELECTRONICS ENGINEERING, 2024 - Continues

Professor, İstanbul University-Cerrahpaşa, Institute Of Forensic Sciences, Department Of Natural And Applied Sciences, 2019 - 2024

Professor, Istanbul Sabahattin Zaim University, Mühendislik ve Doğa Bilimleri, Yazılım Mühendisliği, 2015 - 2019

Associate Professor, Istanbul Sabahattin Zaim University, Mühendislik ve Doğa Bilimleri, Bilgisayar Mühendisliği, 2014 - 2015

Associate Professor, Fatih University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, 2010 - 2014

Assistant Professor, Fatih University, Fen-Edebiyat, Fizik, 2007 - 2010

Lecturer PhD, University of London-Queen Mary and Westfield College, School of Physical and Chemical Sciences, Physics, 2003 - 2007

Lecturer PhD, University of Southampton, School of Electronics and Computing Sciences, Optoelectronic Research Center, 2001 - 2003

Lecturer PhD, De Montfort University, School of Applied Sciences, 1999 - 2000

Research Assistant, Mersin University, Fen, Fizik, 1993 - 1999

Research Assistant, Ankara University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 1988 - 1993

Academic and Administrative Experience

Institute Board Member, İstanbul University-Cerrahpaşa, Institute Of Forensic Sciences, Department Of Natural And Applied Sciences, 2020 - 2024

Director of The Institution, İstanbul University-Cerrahpaşa, Nanoteknoloji Ve Biyoteknoloji Enstitüsü, Nanoteknoloji

Anabilim Dalı, 2019 - 2020

Teknopark Koordinatörlüğü, İstanbul Sabahattin Zaim University, Teknopark Koordinatörlüğü, 2018 - 2019

Head of Department, İstanbul Sabahattin Zaim University, Mühendislik ve Doğa Bilimleri, Yazılım Mühendisliği, 2015 - 2019

Faculty Management Board Member, İstanbul Sabahattin Zaim University, Mühendislik Ve Doğa Bilimleri Fakültesi,, Bilgisayar Mühendisliği Bölümü, 2015 - 2019

Director of The Institution, İstanbul Sabahattin Zaim University, Fen Bilimleri, Bilgisayar, 2015 - 2018

Director of The Institution, Fatih University, Biyonanoteknoloji Enstitüsü,, Nanoteknoloji Mühendisliği, 2012 - 2014

Manager of Research and Application Center, Fatih University, Biyonanoteknoloji Enstitüsü, , Nanoteknoloji Mühendisliği, 2010 - 2013

Courses

Adli Mikroskopi Teknikleri, Doctorate, 2023 - 2024

Adli Fizik ve Mühendislik, Postgraduate, 2023 - 2024

Electronics II, Undergraduate, 2023 - 2024

Probability and Stochastic Processes, Postgraduate, 2023 - 2024

Electronics I, Undergraduate, 2023 - 2024

Digital Logic Design, Undergraduate, 2023 - 2024

Sayısal Mantık Tasarımı, Undergraduate, 2023 - 2024

Adli Bilimlerde ve Adli Mühendislikte Nanoteknoloji, Doctorate, 2023 - 2024

Adli İstatistik, Postgraduate, 2022 - 2023

Advising Theses

Ünal B., İstanbul Sözleşmesi tartışmaları etrafında kadın cinayeti haberlerinin adli bilimler açısından incelenmesi, Postgraduate, İ.ÜLAŞ(Student), 2023

Ünal B., ARDIŞIK OLARAK YİV-SET ÇEKİLEN NAMLULARDAN ELDE EDİLEN MERMİ ÇEKİRDEKLERİNİN İNCELENMESİ, Postgraduate, A.ÇETİN(Student), 2023

Ünal B., 11-hidroksi THC'nin analizine yönelik moleküler damgalı polimerin sentezlenmesi ve karakterizasyonu, Postgraduate, Ö.DAYANIR(Student), 2022

Ünal B., Türkiye'de yaşayan boşnaklarda 24 STR DNA profilinin belirlenmesi, Postgraduate, E.ÖZ(Student), 2021

Ünal B., Investigation of structural, optical and electrical properties of MBE grown Si-Ge thin films, Doctorate, İ.ŞEKER(Student), 2015

Ünal B., Enhanced quantum efficiency of photovoltaic solar cell based on nanoporous silicon, Postgraduate, B.HAMZA(Student), 2014

Ünal B., Design and analysis of nanoscale antennas at optical frequencies, Postgraduate, S.KOKİÇİ(Student), 2012

Ünal B., Optical and morphological investigation of chemical etched silicon for uniform photoluminescence, Postgraduate, A.KARATUTLU(Student), 2010

Ünal B., Investigation of structural and luminescent characterization of wet-etched silicon, Postgraduate, S.İSTENGİR(Student), 2010

Research Infrastructure Information

Ünal B., Nanotechnology and Biotechnology Institute, September 2010

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Comprehensive analysis of Ni_{0.4}Cu_{0.2}Zn_{0.4}Fe_{2-4x}Sn_{3x}O₄ nanospinel ferrites: Structural, electrical, and dielectric characterization through advanced techniques**
ÜNAL B., Almessiere M., Baykal A., Slimani Y., Gondal M., Kian-Pour N., Shirsath S. E., Manikandan A., Baig U.
Ceramics International, vol.50, no.17, pp.30670-30682, 2024 (SCI-Expanded)
- II. **Unraveling the dielectric and electrical properties of binary BaTiO₃/Ba_{0.98}Ca_{0.01}Mg_{0.01}Fe₁₂O₁₉ composites**
Slimani Y., ÜNAL B., Baykal A., Almessiere M., Thakur A., Batoor K.
Journal of Physics and Chemistry of Solids, vol.191, 2024 (SCI-Expanded)
- III. **Investigation of electrical and dielectric properties of BaTiO₃-based composite systems incorporated with various amounts of Co_{0.8}Mn_{0.1}Ni_{0.1}Fe_{1.9}Ce_{0.1}O₄**
Slimani Y., Ünal B., Baykal A., Almessiere M. A., Thakur A., Shariq M.
Journal of Materials Science: Materials in Electronics, vol.35, no.13, 2024 (SCI-Expanded)
- IV. **Exploring dielectric and electrical characteristics in Sr_{0.5}Ba_{0.5}Sn_xFe_{12-x}O₁₉/CoFe₂O₄ nanocomposites**
Almessiere M., ÜNAL B., Baykal A., Korkmaz A. D., Gondal M., Slimani Y., Kahraman S., Güngüneş H.
Ceramics International, 2024 (SCI-Expanded)
- V. **Investigation of substitutional impact of vanadium ion (V³⁺) over conductivity and dielectric features of SrCo hexaferrites**
ÜNAL B., Almessiere M., Baykal A., Korkmaz A. D., Gondal M., Slimani Y.
Applied Physics A: Materials Science and Processing, vol.129, no.12, 2023 (SCI-Expanded)
- VI. **The role of Mo⁶⁺ ion substitution on the electrical and dielectric features of SrNi-hexaferrites**
ÜNAL B., Almessiere M., Slimani Y., Jermy R., Baykal A.
Journal of Materials Science: Materials in Electronics, vol.34, no.17, 2023 (SCI-Expanded)
- VII. **The role of Pr³⁺, Pr³⁺-Y³⁺ and Pr³⁺-Y³⁺-Dy³⁺ ions substitutions on the electrical and dielectric properties of NiCo nanospinel ferrites**
ÜNAL B., Almessiere M., Auwal I., Slimani Y., Baykal A.
Journal of Alloys and Compounds, vol.944, 2023 (SCI-Expanded)
- VIII. **A study on the electrical and dielectric traits of ternary NiCuZn-spinel ferrites co-substituted with Ga³⁺-Gd³⁺ ions**
ÜNAL B., Almessiere M., Baykal A., Slimani Y., Sadaqat A., Ul-Hamid A.
Materials Science and Engineering: B, vol.289, 2023 (SCI-Expanded)
- IX. **Electrical and dielectric properties of Ni_{0.5}Co_{0.5}Ga_xFe_{1.8-x}O₄ (x ≤ 1.0) spinel ferrite microspheres**
Akhtar S., Almessiere M., ÜNAL B., Korkmaz A. D., Slimani Y., Tashkandi N., Baykal A., Ul-Hamid A., Manikandan A.
Journal of Rare Earths, vol.41, no.2, pp.259-267, 2023 (SCI-Expanded)
- X. **One-pot synthesis of hard/soft SrFe₁₀O₁₉/x(Ni_{0.8}Zn_{0.2}Fe_{1.8}Cr_{0.2}O₄) nanocomposites: Electrical features and reflection losses**
Almessiere M., ÜNAL B., Ali S., Baykal A., Slimani Y., Trukhanov A.
Ceramics International, vol.48, no.17, pp.25390-25401, 2022 (SCI-Expanded)
- XI. **A study on the conductivity, dielectric, and microwave properties of SrNb_xY_xFe_{12-2x}O₁₉ (0.00 ≤ x ≤ 0.05) nano-hexaferrites**
Ünal B.
JOURNAL OF MATERIALS RESEARCH AND TECHNOLOGY, vol.17, pp.2975-2986, 2022 (SCI-Expanded)
- XII. **Investigation on electrical and dielectric properties of hard/soft spinel ferrite nanocomposites of CoFe₂O₄/(NiSc_{0.03}Fe_{1.97}O₄)_x**
Almessiere M., ÜNAL B., Baykal A., Auwal I., Slimani Y., Manikandan A., Trukhanov A.
Vacuum, vol.194, 2021 (SCI-Expanded)
- XIII. **Electrical and dielectric properties of rare earth substituted hard-soft ferrite (Co_{0.5}Ni_{0.5}Ga_{0.01}Gd_{0.01}Fe_{1.98}O₄)_x/(ZnFe₂O₄)_y nanocomposites**
Almessiere M., ÜNAL B., Demir Korkmaz A., Shirsath S. E., Baykal A., Slimani Y., Gondal M., Baig U., Trukhanov A.
Journal of Materials Research and Technology, vol.15, pp.969-983, 2021 (SCI-Expanded)
- XIV. **Effects of Ce-Dy rare earths co-doping on various features of Ni-Co spinel ferrite microspheres**

prepared via hydrothermal approach

Almessiere M., ÜNAL B., Slimani Y., Gungunes H., Toprak M., Tashkandi N., Baykal A., Sertkol M., Trukhanov A., Yildiz A., et al.

Journal of Materials Research and Technology, vol.14, pp.2534-2553, 2021 (SCI-Expanded)

- XV. **A study on the electrical and dielectric properties of SrGd_xFe_{12-x}O₁₉ (x = 0.00–0.05) nanosized M-type hexagonal ferrites**
ÜNAL B., Almessiere M., Slimani Y., Demir Korkmaz A., Baykal A.
Journal of Materials Science: Materials in Electronics, vol.32, no.13, pp.18317-18329, 2021 (SCI-Expanded)
- XVI. **Impact of calcination temperature on electrical and dielectric properties of SrGa_{0.02}Fe_{11.98}O₁₉-Zn_{0.5}Ni_{0.5}Fe₂O₄ hard/soft nanocomposites**
Almessiere M., ÜNAL B., Auwal I., Slimani Y., AYDIN H., Manikandan A., Baykal A.
Journal of Materials Science: Materials in Electronics, vol.32, no.12, pp.16589-16600, 2021 (SCI-Expanded)
- XVII. **Investigation of AC susceptibility, dielectric and electrical properties of Tb–Tm co-substituted M-type Sr hexaferrites**
Slimani Y., ÜNAL B., Almessiere M., Demir Korkmaz A., Baykal A.
Materials Chemistry and Physics, vol.260, 2021 (SCI-Expanded)
- XVIII. **Electrical and optical properties of Ni_{0.5}Co_{0.5-x}Cd_xNd_{0.02}Fe_{1.78}O₄ (x ≤ 0.25) spinel ferrite nanofibers**
Alahmari F., Almessiere M., ÜNAL B., Slimani Y., Baykal A.
Ceramics International, vol.46, no.15, pp.24605-24614, 2020 (SCI-Expanded)
- XIX. **Effect of thulium substitution on conductivity and dielectric belongings of nanospinel cobalt ferrite**
ÜNAL B., Almessiere M., Korkmaz A. D., Slimani Y., Baykal A.
Journal of Rare Earths, vol.38, no.10, pp.1103-1113, 2020 (SCI-Expanded)
- XX. **Developing the magnetic, dielectric and anticandidal characteristics of SrFe₁₂O₁₉/(Mg_{0.5}Cd_{0.5}Dy_{0.03}Fe_{1.97}O₄)_x hard/soft ferrite nanocomposites**
Algarou N., Slimani Y., Almessiere M., Rehman S., Younas M., Unal B., Korkmaz A. D., Gondal M., Trukhanov A., Baykal A., et al.
Journal of the Taiwan Institute of Chemical Engineers, vol.113, pp.344-362, 2020 (SCI-Expanded)
- XXI. **Investigation of structural and physical properties of Eu³⁺ ions substituted Ni_{0.4}Cu_{0.2}Zn_{0.4}Fe₂O₄ spinel ferrite nanoparticles prepared via sonochemical approach**
Slimani Y., ÜNAL B., Almessiere M., Korkmaz A. D., Shirsath S. E., Yasin G., Trukhanov A., Baykal A.
Results in Physics, vol.17, 2020 (SCI-Expanded)
- XXII. **Role of WO₃ nanoparticles in electrical and dielectric properties of BaTiO₃–SrTiO₃ ceramics**
Slimani Y., ÜNAL B., Almessiere M., Hannachi E., Yasin G., Baykal A., Ercan I.
Journal of Materials Science: Materials in Electronics, vol.31, no.10, pp.7786-7797, 2020 (SCI-Expanded)
- XXIII. **Microstructure, dielectric and microwave features of [Ni_{0.4}Cu_{0.2}Zn_{0.4}](Fe_{2-x}Tb_x)O₄ (x ≤ 0.1) nanospinel ferrites**
Almessiere M., Slimani Y., ÜNAL B., Zubar T., Sadaqat A., Trukhanov A., Baykal A.
Journal of Materials Research and Technology, vol.9, no.5, pp.10608-10623, 2020 (SCI-Expanded)
- XXIV. **Electrical properties of La³⁺ and Y³⁺ ions substituted Ni_{0.3}Cu_{0.3}Zn_{0.4}Fe₂O₄ nanospinel ferrites**
Almessiere M., ÜNAL B., Slimani Y., Korkmaz A., Baykal A., Ercan I.
Results in Physics, vol.15, 2019 (SCI-Expanded)
- XXV. **Electrical and dielectric properties of Nb³⁺ ions substituted Ba-hexaferrites**
Almessiere M., Unal B., Slimani Y., Demir Korkmaz A., Algarou N., Baykal A.
Results in Physics, vol.14, 2019 (SCI-Expanded)
- XXVI. **The conductivity and dielectric properties of neobium substituted Sr-hexaferrites**
ÜNAL B., Almessiere M., Slimani Y., Baykal A., Trukhanov A., Ercan I.
Nanomaterials, vol.9, no.8, 2019 (SCI-Expanded)
- XXVII. **Frequency and dc bias voltage dependent dielectric properties and electrical conductivity of BaTiO₃ [sbn]SrTiO₃/(SiO₂)_x nanocomposites**
Slimani Y., Unal B., Hannachi E., Selmi A., Almessiere M., Nawaz M., Baykal A., Ercan I., Yildiz M.

- Ceramics International, vol.45, no.9, pp.11989-12000, 2019 (SCI-Expanded)
- XXVIII. **Electrical Properties of Cerium and Yttrium Co-substituted Strontium Nano-hexaferrites**
Almessiere M., Unal B., Baykal A., Ercan I.
Journal of Inorganic and Organometallic Polymers and Materials, vol.29, no.2, pp.402-415, 2019 (SCI-Expanded)
- XXIX. **The impact of Eu³⁺ ion substitution on dielectric properties of Y_{3-x}Eu_xAl₅O₁₂ (0.00 ≤ x ≤ 0.10) ceramics**
Almessiere M., Unal B., Baykal A., Ercan I., Yildiz M.
Journal of Materials Science: Materials in Electronics, vol.30, no.3, pp.2489-2500, 2019 (SCI-Expanded)
- XXX. **The effect of Yb³⁺ ion substitution on dielectric and microstructural properties of Y₃Al₅O₁₂ ceramics**
Almessiere M., Unal B., Baykal A., Ercan I.
Journal of Materials Science: Materials in Electronics, vol.30, no.1, pp.609-623, 2019 (SCI-Expanded)
- XXXI. **Dielectric and microstructural properties of YAG:Dy³⁺ ceramics**
Almessiere M. A., Unal B., Baykal A.
Journal of Rare Earths, vol.36, no.12, pp.1310-1318, 2018 (SCI-Expanded)
- XXXII. **Decalin-assisted light emitting porous Si formation and its optical, surface and morphological properties**
Karatutlu A., Istengir S., Cosgun S., Seker I., Unal B.
Applied Surface Science, vol.422, pp.498-503, 2017 (SCI-Expanded)
- XXXIII. **Electrical and Dielectric Properties of Y³⁺-Substituted Barium Hexaferrites**
Auwal I., Ünal B., Baykal A., KURTAN Ü., Amir M., Yıldız A., Sertkol M.
Journal of Superconductivity and Novel Magnetism, vol.30, no.7, pp.1813-1826, 2017 (SCI-Expanded)
- XXXIV. **Electrical and Dielectric Characterization of Bi-La Ion-Substituted Barium Hexaferrites**
Auwal I., Ünal B., Baykal A., KURTAN Ü., Yıldız A.
Journal of Superconductivity and Novel Magnetism, vol.30, no.6, pp.1499-1514, 2017 (SCI-Expanded)
- XXXV. **Microwave, dielectric and magnetic properties of Mg-Ti substituted Ni-Zn ferrite nanoparticles**
Ünal B., Ünver İ., Güngüneş H., Topal U., Baykal A., Sözeri H.
Ceramics International, vol.42, no.15, pp.17317-17331, 2016 (SCI-Expanded)
- XXXVI. **Maxwell-Wagner relaxation in grain boundary of BaBixLaxYxFe_{12-3x}O₁₉ (0.0 ≤ x ≤ 0.33) hexaferrites**
Bakış Y., Auwal I., Ünal B., Baykal A.
Composites Part B: Engineering, vol.99, pp.248-256, 2016 (SCI-Expanded)
- XXXVII. **Conductivity and dielectric properties of SrLaxBixYxFe_{12-3x}O₁₉ (0.0 ≤ x ≤ 0.33) hexaferrites**
Bakış Y., Auwal I., Ünal B., Baykal A.
Ceramics International, vol.42, no.10, pp.11780-11795, 2016 (SCI-Expanded)
- XXXVIII. **Dielectric properties, cationic distribution calculation and hyperfine interactions of La³⁺ and Bi³⁺ doped strontium hexaferrites**
Auwal I., Ünal B., Güngüneş H., Shirsath S. E., Baykal A.
Ceramics International, vol.42, no.7, pp.9100-9115, 2016 (SCI-Expanded)
- XXXIX. **Magnetic, electrical and microwave properties of Mn-Co substituted Ni_xZn_{0,8-x}Fe₂₀₄ nanoparticles**
Sözeri H., Genç F., Ünal B., Baykal A., Aktaş B.
Journal of Alloys and Compounds, vol.660, pp.324-335, 2016 (SCI-Expanded)
- XL. **Synthesis, Characterization, and Dielectric Properties of BaFe₁₀(Mn₂+Zn₂+Zn₂)₀₁₉ Hexaferrite**
Baykal A., Demir M., Ünal B., Sözeri H., Toprak M.
Journal of Superconductivity and Novel Magnetism, vol.29, no.1, pp.199-205, 2016 (SCI-Expanded)
- XLI. **Electrical properties and hyperfine interactions of boron doped Fe₃₀₄ nanoparticles**
Amir M., Ünal B., Geleri M., Güngüneş H., Shirsath S. E., Baykal A.
Superlattices and Microstructures, vol.88, pp.450-466, 2015 (SCI-Expanded)
- XLII. **Polyol synthesis of Mn³⁺ substituted Fe₃₀₄ nanoparticles: Cation distribution, structural and electrical properties**
Amir M., Ünal B., Shirsath S. E., Geleri M., Sertkol M., Baykal A.

- Superlattices and Microstructures, vol.85, pp.747-760, 2015 (SCI-Expanded)
- XLIII. **Electrical Properties of Mn-Doped NixZn0.9-xFe2O4 Particles**
Genc F., Ünal B., Baykal A., Sözeri H.
Journal of Superconductivity and Novel Magnetism, vol.28, no.3, pp.1055-1064, 2015 (SCI-Expanded)
- XLIV. **Effect of Zn substitution on electrical properties of nanocrystalline cobalt ferrite**
Ünal B., Baykal A.
Journal of Superconductivity and Novel Magnetism, vol.27, no.2, pp.469-479, 2014 (SCI-Expanded)
- XLV. **Comparison of sealer penetration using the endovac irrigation system and conventional needle root canal irrigation**
Kara Tuncer A., Ünal B.
Journal of Endodontics, vol.40, no.5, pp.613-617, 2014 (SCI-Expanded)
- XLVI. **Polyaniline-MnFe2O4-CTAB nanocomposite in ionic liquid: Electrical properties**
Shafiu S., Ünal B., Baykal A.
Journal of Superconductivity and Novel Magnetism, vol.27, no.4, pp.1073-1078, 2014 (SCI-Expanded)
- XLVII. **Growth of shape controlled silicon nanowhiskers by electron beam evaporation**
Karakiz M., Toydemir B., Unal B., Arslan L. C.
EPJ Applied Physics, vol.65, no.2, 2014 (SCI-Expanded)
- XLVIII. **The Ionic Liquid Based Synthesis of Polyaniline-MnFe2O4-CTAB Nanocomposite: Electrical Properties**
Shafiu S., Ünal B., Baykal A.
Journal of Inorganic and Organometallic Polymers and Materials, vol.23, no.6, pp.1335-1340, 2013 (SCI-Expanded)
- XLIX. **The Electrical Properties of Polyaniline (PANI)-Co0.5Mn0.5Fe2O4 Nanocomposite**
KURTAN Ü., Junejo Y., Ünal B., Baykal A.
Journal of Inorganic and Organometallic Polymers and Materials, vol.23, no.5, pp.1089-1096, 2013 (SCI-Expanded)
- L. **Synthesis and Characterization of Multiwall-Carbon Nanotubes Decorated with Nickel Ferrite Hybrid**
Unal B., Baykal A., Senel M., Sözeri H.
Journal of Inorganic and Organometallic Polymers and Materials, vol.23, no.3, pp.489-498, 2013 (SCI-Expanded)
- LI. **Acid Functionalized Multiwall Carbon Nanotube/Magnetite (MWCNT)-COOH/Fe3O4 Hybrid: Synthesis, Characterization and Conductivity Evaluation**
Baykal A., Senel M., Unal B., Karaoğlu E., Sözeri H., Toprak M.
Journal of Inorganic and Organometallic Polymers and Materials, vol.23, no.3, pp.726-735, 2013 (SCI-Expanded)
- LII. **Multiwall-carbon nanotube/cobalt ferrite hybrid: Synthesis, magnetic and conductivity characterization**
Unal B., Senel M., Baykal A., Sözeri H.
Current Applied Physics, vol.13, no.7, pp.1404-1412, 2013 (SCI-Expanded)
- LIII. **Low-temperature synthesis of single-domain Sr-hexaferrite particles by solid-state reaction route**
Sözeri H., Baykal A., Ünal B.
Physica Status Solidi (A) Applications and Materials Science, vol.209, no.10, pp.2002-2013, 2012 (SCI-Expanded)
- LIV. **Synthesis, magnetic and electrical characteristics of poly(2-thiophen-3-yl- malonic acid)/Fe 3O 4 nanocomposite**
Aydin M., Ünal B., Esat B., Baykal A., Karaoğlu E., Toprak M., Sözeri H.
Journal of Alloys and Compounds, vol.514, pp.45-53, 2012 (SCI-Expanded)
- LV. **Optical energy transfer mechanisms: From naphthalene to biacetyl in liquids and from pyrazine to biacetyl**
Bayrakceken F., YEĞİN K., Korkmaz E., Bakis Y., Unal B.
International Journal of Photoenergy, vol.2012, 2012 (SCI-Expanded)
- LVI. **Absorption and fluorescence spectroscopy of 1,2: 3,4-dibenzanthracene**
Bayrakceken F., YEĞİN K., Korkmaz E., Bakis Y., Unal B.
International Journal of Photoenergy, vol.2012, 2012 (SCI-Expanded)
- LVII. **Quenching influence of cell culture medium on photoluminescence and morphological structure of porous silicon**

- Unal B.
Applied Surface Science, vol.258, no.1, pp.207-211, 2011 (SCI-Expanded)
- LVIII. **Synthesis and characterization of polypropiolate sodium (PPNa)-Fe 304 nanocomposite**
Baheci S., Unal B., Baykal A., Sözeri H., Karaoglu E., Esat B.
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