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Profesör

Mühendislik Fakültesi › Elektrik-Elektronik Mühendisliği Bölümü

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Araştırma alanları: Fen Bilimleri ve Matematik Temel Alanı › Fizik

Anahtar kelimeler: Yarı İletkenler, Yoğun Madde Fiziği, Nanoteknoloji

ÖZET GÖSTERGELER

MAKALE 54 WoS 48 · Scopus 0 · TR Dizin 0	BİLDİRİ 34	KİTAP · KİTAPTA BÖLÜM 10 · 4	PROJE 0 yürütücü 0	TEZ DANIŞMANLIĞI 10 doktora 5	ATIF (KAYNAK MAKS.) 775 h-index Scopus 12 · WoS - · GS -
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EĞİTİM

1982 – 1986	Doktora University Of Minnesota-Twin Cities · Elektrik Mühendisliği Tez: <i>Theory of Heterojunctions</i>
1982 – 1984	Yüksek Lisans University Of Minnesota-Twin Cities · Elektrik Mühendisliği Tez: <i>PN Junction Modelling</i>
1975 – 1978	Lisans · Fizik Bölümü İstanbul Üniversitesi · Fen Fakültesi

AKADEMİK GÖREVLER

2023 – devam ediyor	Profesör Fatih Sultan Mehmet Vakıf Üniversitesi · Mühendislik Fakültesi · Elektrik-Elektronik Mühendisliği Bölümü
2005 – 2022	Profesör İstanbul Teknik Üniversitesi · Fen-Edebiyat Fakültesi · Fizik Mühendisliği Bölümü
1997 – 2005	Doçent İstanbul Teknik Üniversitesi · Fen-Edebiyat Fakültesi · Fizik Mühendisliği Bölümü
1995 – 1997	Yardımcı Doçent İstanbul Teknik Üniversitesi · Fen-Edebiyat Fakültesi · Fizik Mühendisliği Bölümü
1990 – 1992	Yardımcı Doçent University Of Miami · College Of Engineering · Electrical And Computer Engineering

İDARİ GÖREVLER

2010 – 2012	Rektör Uluslararası Saraybosna Üniversitesi
2008 – 2009	Bölüm Başkanı İstanbul Teknik Üniversitesi
2005 – 2008	Dekan Yardımcısı İstanbul Teknik Üniversitesi

MAKALELER (55)

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6. TURFANDA AYKUT,ÜNLÜ HİLMİ (2024). Cycle-to-cycle switching endurance variability in vertically aligned nanocrystalline molybdenum disulfide: computational insights. *Journal of Physics D: Applied Physics*, 57(32), 5305.
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7. TURFANDA AYKUT, ÜNLÜ HİLMİ (2023). Mimicking bacterial learning and memory in tungsten based two-sided single layers of WSeO, WSeS, WSeSe, and WSeTe. *Journal of Applied Physics*, 133(17), 174301-174326.
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9. TURFANDA AYKUT, ÜNLÜ HİLMİ (2023). Single-Electron-Precise Tailoring of a Resistive-Switching Device by Tuning Transfer Printing Parameters: A Computational Study. *IEEE Transactions on Electron Devices*, 70(10), 5489-5496.
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10. TURFANDA AYKUT, ÜNLÜ HİLMİ (2022). Single atom precise, ultrafast, and universal emulation of biological synapses using atomically thin vertical heterostructures. *Journal of Applied Physics*, 132.
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12. ÜNLÜ HİLMİ (2019). A thermoelastic model for strain effects on bandgaps and band offsets in heterostructure core/shell quantum dots. *EUROPEAN PHYSICAL JOURNAL-APPLIED PHYSICS*, 86(3), 30401-30417.
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13. Karim M Rezaul,Balaban Mesut,ÜNLÜ HİLMİ (2019). Strain Effects on the Band Gap and Diameter of CdSe Core and CdSe/ZnS Core/Shell Quantum Dots at Any Temperature. *Advances in Materials Science and Engineering*, 2019, 1-10.
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18. Sedaghat Pisheh Hadi, Gheshlaghi Negar, ÜNLÜ HİLMİ (2017). Composition Tuning of Bandgap and Diameter of CdSe/Cd_{1-x}Zn_xS Core/Shell Quantum Dots. Materials Science in Semiconductor Processing, 68, 295-301.
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19. ÜNLÜ HİLMİ (2017). Impact of Gate Impedance on Dielectric Breakdown Evaluation for 28nm FDSOI Transistors. Microelectronics Engineering.
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21. Aydın Hakan, Karim M Rezaul, Balaban Mesut, ÜNLÜ HİLMİ (2016). Colloidal Synthesis and Characterization of CdSe Quantum Dots Role of Cd Se Molar Ratio and Temperature. International Journal of Scientific & Technology Research, 6(1), 66-70.
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22. Gheshlaghi Negar, Pisheh Hadi Sedaghat, ÜNLÜ HİLMİ (2016). Interface Strain Effects on ZnSe CdSe based Type I and ZnSe CdS Type II Core Shell Quantum Dots. Energy Procedia, 102, 152-163.
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26. ÜNLÜ HİLMİ (2015). Electronic structure and Absolute Band Edge Position of Tetragonal AgInS₂ Photocatalyst A Hybrid Density Functional Study. materials science in semiconductor processing.
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27. ÜNLÜ HİLMİ (2015). Theoretical study of the influence of electron beam parameters on the cathodoluminescence of p type CdTe. materials science in semiconductor processing.
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BİLDİRİLER (34)

1. ÜNLÜ HİLMİ (2024). Magnetic charge and Faraday tensor for transformation of electromagnetic fields and symmetric Maxwell's equations in theory of relativistic invariant electrodynamics. 13th International Conference on Mathematical Modelling in Physical Sciences. Uluslararası · Tam metin bildirir · Sözlü Sunum · 30.09.2024
2. MALKOÇ DERYA, DANACI BURÇİN, ÜNLÜ HİLMİ (2024). Modelling of strain effects in core/shell quantum dots with tight binding theory and k.p effective mass approximation. 13th International Conference on Mathematical Modeling in Physical Sciences. Uluslararası · Tam metin bildirir · Sözlü Sunum · 30.09.2024
3. MALKOÇ DERYA, DANACI BURÇİN, ÜNLÜ HİLMİ (2024). Strain Effects in Type I and Type II Core/Shell Quantum Dots for Energy Storage. THE 4th INTERNATIONAL CONFERENCE ON ENERGY ENVIRONMENT AND STORAGE OF ENERGY. Uluslararası · Tam metin bildirir · Sözlü Sunum · 05.09.2024
4. ÜNLÜ HİLMİ (2023). Strain effects in core/shell nanowires and quantum dots. ICFAS2023 - 10th International Congress on Fundamental and Applied Sciences. Uluslararası · Özet bildirir · Sözlü Sunum · 06.06.2023
5. ÜNLÜ HİLMİ (2021). Special relativity in six dimensions. Turkish Society 37th International Physics Conference, Bodrum * Turkey. Uluslararası · Tam metin bildirir · Sözlü Sunum · 01.09.2021
6. ÜNLÜ HİLMİ (2018). A Thermoelastic Model for Interface Strain Effects in Microscale and Nanoscale Heterostructures. 5th International Materials Science and Technology for Next Generation Conference. Uluslararası · Özet bildirir · Sözlü Sunum · 04.10.2018
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10. Karim M Rezaul, ÜNLÜ HİLMİ (2017). Thermal Expansion and Lattice Mismatch Strain Effects on Core Bandgap and Diameter of CdSe/ZnS Heterostructure Core/Shell Quantum Dots. Turkish Physical Society 33rd International Physics Congress (TPS33). Uluslararası · Tam metin bildirir · Sözlü Sunum · 06.09.2017
11. ÜNLÜ HİLMİ (2017). Tight Binding Modeling of AlGaIn/GaN and InGaIn/GaN Spherical Core/Shell Quantum Dots. E-MRS ICNS 12 Meeting. Uluslararası · Tam metin bildirir · Poster · 24.07.2017
12. ÜNLÜ HİLMİ (2017). Tight Binding Modelling of Binary/Ternary and Ternary/Binary Heterostructure Core/Shell Quantum Dots. Turkish Physical Society 33rd International Physics Congress (TPS33). Uluslararası · Tam metin bildirir · Sözlü Sunum · 06.09.2017
13. ÜNLÜ HİLMİ, Meziani Abdelhakim, Semra Lemia, Quahrani Tarik, Gürel H Hakan, Telia Azzedine (2016). A comparative Tight Binding and DFT Study of Structural and Electronic Properties of Wurtzite and Zincblende AlIn

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15. Gürel Hakan, Akıncı Özden, ÜNLÜ HİLMİ (2016). Density functional theory calculations of III-N based semiconductors with mBJLDA. Turkish Physical Society 32nd International Physics Congress (TPS32).
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16. Karim Rezaul M, Pisheh Hadi Sedaghat, Gheshlaghi Negar, ÜNLÜ HİLMİ (2016). Effects of Interface Strain and Growth Temperature on Optical and Dielectric Properties of CdSe and CdSe ZnS Nanocrystals. Science & Applications of Thin Films, Conference & Exhibition (SATF 2016).
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