

Assoc. Prof. AHMET KARATAY

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: C-9985-2018

ScopusID: 57215491663

Yoksis Researcher ID: 104525

Education Information

Doctorate, Ankara University, Fen Bilimleri Enstitüsü, Fizik Mühendisliği (Dr), Turkey 2011 - 2015

Postgraduate, Ankara University, Fen Bilimleri Enstitüsü, Fizik Mühendisliği (YI) (Tezli), Turkey 2009 - 2011

Undergraduate, Ankara University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, Turkey 2004 - 2009

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Aza-bodipy bileşiklerine ağır atom bağlanmasının doğrusal olmayan soğurma, floresans ve ultra hızlı spektroskopik özelliklerine etkisi, Ankara University, Fen Bilimleri Enstitüsü, Fizik Mühendisliği (Dr), 2015

Postgraduate, In0.15Ga0.85Se tek kristalinin ve amorf yapıdaki ince filmlerinin doğrusal olmayan optik özellikleri, Ankara University, Fen Bilimleri Enstitüsü, Fizik Mühendisliği (YI) (Tezli), 2011

Research Areas

Natural Sciences, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Ankara University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 2020 - Continues

Assistant Professor, Ankara University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 2019 - 2020

Research Assistant, Ankara University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 2010 - 2019

Courses

Fizikte Güncel Konular, Undergraduate, 2022 - 2023

Modern Fizik, Undergraduate, 2021 - 2022
Fizik III, Undergraduate, 2022 - 2023
Fizik Mühendisliğinde Araştırma Teknikleri I, Undergraduate, 2022 - 2023
Uzmanlık Alan Dersi, Postgraduate, 2021 - 2022
Advanced Optics, Undergraduate, 2021 - 2022
OCCUPATIONAL HEALTH AND SAFETY II, Undergraduate, 2021 - 2022
Physics II, Undergraduate, 2021 - 2022
OCCUPATIONAL HEALTH AND SAFETY I, Undergraduate, 2022 - 2023
Physics Laboratory, Undergraduate, 2021 - 2022
PHYSICS I, Undergraduate, 2022 - 2023
Fizik mühendisliğinde araştırma teknikleri, Undergraduate, 2021 - 2022
Research Project, Undergraduate, 2022 - 2023
İş Sağlığı Ve Güvenliği I, Undergraduate, 2022 - 2023
İş Sağlığı Ve Güvenliği II, Undergraduate, 2021 - 2022
PHYSICS I, Undergraduate, 2022 - 2023
Physics II, Undergraduate, 2021 - 2022
Uzmanlık alan Dersi, Doctorate, 2022 - 2023
PHYSICS LABORATORY I, Undergraduate, 2022 - 2023

Advising Theses

Karatay A., Grafen Kuantum Noktaları ile Katkılanmış Elektrosin Nanoliflerin Doğrusal Olmayan Optik ve Optik Sınırlama Özelliklerinin İncelenmesi, Doctorate, A.DOĞAN(Student), Continues
Karatay A., Plazmonik Metallerle Güçlendirilmiş Grafen Kuantum Nokta Nanoyapıların Doğrusal Olmayan Optik Özellikleri, Doctorate, S.HANÇE(Student), Continues
Karatay A., Bor Katkılandırılmış InSe Yarıiletken Kristallerinin Doğrusal ve Doğrusal Olmayan Optik Özelliklerinin Araştırılması, Postgraduate, M.Yağmur(Student), 2024
Karatay A., InSe, InTe ve InTe: Er yarıiletken ince filmlerin doğrusal olmayan optik özelliklerinin incelenmesi, Postgraduate, E.AVCI(Student), 2022
Karatay A., TlGa(SxSe1-x)2 ($0 \leq x \leq 1$) amorf yarıiletken ince filmlerinin doğrusal olmayan optik özelliklerinin incelenmesi, Postgraduate, T.DİNÇBAY(Student), 2022

Jury Memberships

Doctorate, Doctorate, Orta Doğu Teknik Üniversitesi, August, 2023
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Ankara Üniversitesi, July, 2023
Post Graduate, Post Graduate, Ankara Üniversitesi, May, 2022
Post Graduate, Post Graduate, Ankara Üniversitesi, May, 2022
Doctorate, Doctorate, Gazi Üniversitesi, March, 2022
Doctorate, Doctorate, Gazi Üniversitesi, March, 2022
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Ankara Üniversitesi, June, 2021

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Tungsten oxide filled nanofibers for optical limiting in near infrared region**
PEPE Y., AKKOYUN Ş., Asci N., Cakır O., Tutel Y., Emrah Unalan H., KARATAY A., ELMALI A.
Optics and Laser Technology, vol.176, 2024 (SCI-Expanded)
- II. **Revealing the Effects of Defect States on the Nonlinear Absorption Properties of the TlInse and**

Tl₂In₂S₃Se Crystals in Near-Infrared Optical Limiting Applications

Dogan A., KARATAY A., IŞIK M., YILDIZ E., Gasanly N. M., ELMALI A.

CRYSTAL GROWTH & DESIGN, no.17, pp.6981-6990, 2024 (SCI-Expanded)

- III. **Enhanced Nonlinear Optical Limiter in the Visible Spectral Region Based on Fe- and Co-Doped NiO Nanoparticles within PVP Nanofibers**
PEPE Y., TUTEL Y., AKKOYUN Ş., Asci N., Cevik E., KARATAY A., ÜNALAN H. E., ELMALI A.
ACS APPLIED NANO MATERIALS, vol.7, no.14, pp.16007-16017, 2024 (SCI-Expanded)
- IV. **Revealing photoluminescence and nonlinear optical absorption characteristics of PbMo_{0.75}W_{0.25}O₄ single crystal for optical limiting applications**
Doğan A., Karatay A., Işık M., Yıldız E., Gasanly N.
PHYSICA SCRIPTA, vol.99, no.5, pp.55546, 2024 (SCI-Expanded)
- V. **Effects of boron doping in InSe single crystals on optical limiting performance in the near-infrared region**
Dogan A., PEPE Y., Bilgili M. Y., KARATAY A., Ertap H., Karabulut M., ELMALI A.
PHYSICA SCRIPTA, no.4, 2024 (SCI-Expanded)
- VI. **Visible-light optical limiting of vanadia–polyvinylpyrrolidone nanofibers**
PEPE Y., Tutel Y., AKKOYUN Ş., Asci N., Cevik E., KARATAY A., ÜNALAN H. E., ELMALI A.
Journal of Materials Science, vol.59, no.10, pp.4102-4117, 2024 (SCI-Expanded)
- VII. **Enhanced nonlinear absorption and photoluminescence properties of Zn, Fe, Cu, V and Ni doped MoO₃ transition metal oxide thin films**
PEPE Y., TUTEL Y., Ucar A. D., Cevik E., KARATAY A., ÜNALAN H. E., ELMALI A.
PHYSICA SCRIPTA, vol.99, no.2, 2024 (SCI-Expanded)
- VIII. **Chromogenic sensing, biological, and optical properties of Schiff bases of 2-amino-6-methoxybenzothiazole**
YILDIZ E., PEPE Y., Erdener D., KARATAY A., BOYACIOĞLU B., ÜNVER H., Yapar G., DEMİR N., YILDIZ M., ELMALI A.
JOURNAL OF MOLECULAR STRUCTURE, vol.1295, 2024 (SCI-Expanded)
- IX. **Investigation of the Defect and Intensity-Dependent Optical Limiting Performance of MnO₂ Nanoparticle-Filled Polyvinylpyrrolidone Composite Nanofibers**
PEPE Y., AKKOYUN Ş., Asci N., Cevik E., Tutel Y., KARATAY A., ÜNALAN H. E., ELMALI A.
ACS OMEGA, vol.8, no.50, pp.47954-47963, 2023 (SCI-Expanded)
- X. **Controlled plasmon-induced nonlinear absorption and optical limiting in Al/PVP composite nanofibers**
ÜNLÜ B. A., AKKOYUN Ş., KARATAY A., ATEŞ A., ELMALI A.
NANOSCALE, vol.15, no.47, pp.19229-19237, 2023 (SCI-Expanded)
- XI. **The effect of thionation of the carbonyl group on the photophysics of compact spiro rhodamine-naphthalimide electron donor-acceptor dyads: intersystem crossing, charge separation, and electron spin dynamics**
Xiao X., Mu T., Sukhanov A. A., Zhou Y., Yu P., Yu F., ELMALI A., Zhao J., KARATAY A., Voronkova V. K.
PHYSICAL CHEMISTRY CHEMICAL PHYSICS, vol.25, no.46, pp.31667-31682, 2023 (SCI-Expanded)
- XII. **Efficient Spin-Orbit Charge-Transfer Intersystem Crossing and Slow Intramolecular Triplet-Triplet Energy Transfer in Bodipy-Perylenebisimide Compact Dyads and Triads**
Chen X., Rehmat N., Kurganskii I. V., Maity P., ELMALI A., Zhao J., KARATAY A., Mohammed O. F., Fedin M. V.
CHEMISTRY-A EUROPEAN JOURNAL, vol.29, 2023 (SCI-Expanded)
- XIII. **Promoting the optical limiting behavior in poly(methyl methacrylate)/ α-MnO₂ nanocomposite films through modulation of in-gap states by metal doping**
PEPE Y., Cevik E., TUTEL Y., KARATAY A., ÜNALAN H. E., ELMALI A.
MATERIALS CHEMISTRY AND PHYSICS, vol.309, 2023 (SCI-Expanded)
- XIV. **Electron transfer and intersystem crossing in the coumarin-anthracene electron donor-acceptor dyads**
Zhao X., Kurganskii I., ELMALI A., Zhao J., KARATAY A., Mazzone G., Fedin M.

DYES AND PIGMENTS, vol.218, 2023 (SCI-Expanded)

- XV. **Colorimetric chemical sensing properties of 3-amino-4-hydroxybenzene- sulfonic acid-based Schiff bases containing electron donor-acceptor groups**
Yıldız E., Pepe Y., Erdener D., Karatay A., Boyacıoğlu B., Ünver H., Yapar G., Demir N., Yıldız M., Elmalı A.
CHEMICAL PHYSICS, vol.574, 2023 (SCI-Expanded)
- XVI. **Investigation of the wavelength dependent nonlinear absorption mechanisms of polyvinylpyrrolidone and cadmium selenide hybrid nanofibers**
PEPE Y., AKKOYUN Ş., Bozkurt B., KARATAY A., ATEŞ A., ELMALI A.
OPTICS AND LASER TECHNOLOGY, vol.164, 2023 (SCI-Expanded)
- XVII. **Two-Photon Absorption Response of Functionalized BODIPY Dyes in Near-IR Region by Tuning Conjugation Length and Meso-Substituents**
YILDIZ E., ÜNLÜ B. A., KARATAY A., Bozkurt Y., Ozler M. E., SÖZMEN F., YABAŞ E., BOYACIOĞLU B., ÜNVER H., ELMALI A.
ACS OMEGA, vol.8, no.34, pp.30939-30948, 2023 (SCI-Expanded)
- XVIII. **Effect of group electronegativity on spectroscopic, biological, chromogenic sensing and optical properties of 2-formyl-benzene sulfonic acid sodium salt-based Schiff bases**
Yıldız E., Pepe Y., Erdener D., Karatay A., Boyacıoğlu B., Ünver H., Yapar G., Demir N., Yıldız M., Elmalı A.
JOURNAL OF MOLECULAR STRUCTURE, vol.1286, 2023 (SCI-Expanded)
- XIX. **UV-Vis spectroscopic and colorimetric anion detection and fluorescence properties of new 3-amino-4-hydroxybenzenesulfonic acid-based Schiff bases depending on the strength and position of the electron donor substitution**
Yıldız E., Pepe Y., Erdener D., Karatay A., Boyacıoğlu B., Ünver H., Yapar G., Demir N., Yıldız M., Elmalı A.
PHYSICA SCRIPTA, vol.98, no.8, 2023 (SCI-Expanded)
- XX. **Tunable nonlinear absorption and optical limiting behavior of $\text{NaBi}(\text{Mo}_x\text{W}_{1-x})_2$ single crystals with ratio of Molybdenum/Tungsten**
PEPE Y., YILDIZ E., IŞIK M., KARATAY A., HASANLI N., ELMALI A.
PHYSICA SCRIPTA, vol.98, no.7, 2023 (SCI-Expanded)
- XXI. **Excitation wavelength dependent nonlinear absorption mechanisms and optical limiting properties of $\text{Bi}_{12}\text{SiO}_{20}$ single crystal**
Doğan A., KARATAY A., Isik M., PEPE Y., HASANLI N., ELMALI A.
OPTICAL MATERIALS, vol.140, 2023 (SCI-Expanded)
- XXII. **Effects of Heavy Iodine Atoms and π -Expanded Conjugation on Charge Transfer Dynamics in Carboxylic Acid BODIPY Derivatives as Triplet Photosensitizers**
Akhuseyin Yildiz E., Yabaş E., Sözmen F., Bozkurt Y., Karatay A., Boyacıoğlu B., Ünver H., Elmalı A.
CHEMPHYSICHEM, vol.24, no.5, 2023 (SCI-Expanded)
- XXIII. **Defect-assisted wavelength dependence of one photon and multiphoton absorptions in a composite nanofiber of polyvinylpyrrolidone and hexagonal boron nitride**
PEPE Y., Akkoyun S., Bozkurt B., KARATAY A., ATEŞ A., ELMALI A.
JOURNAL OF MATERIALS CHEMISTRY C, vol.11, no.7, pp.2756-2763, 2023 (SCI-Expanded)
- XXIV. **Tetrahydroxyphthalocyanine as a potential nonlinear optical material**
Buyukeksi S. I., ORMAN E. B., KARATAY A., Selcuki N. A., ÖZKAYA A. R., ELMALI A., SALİH B., Sengul A.
JOURNAL OF MOLECULAR STRUCTURE, vol.1271, 2023 (SCI-Expanded)
- XXV. **Wavelength dependence of the nonlinear absorption performance and optical limiting in $\text{Bi}_{12}\text{TiO}_{20}$ single crystal**
PEPE Y., IŞIK M., KARATAY A., Gasanly N., ELMALI A.
JOURNAL OF LUMINESCENCE, vol.253, 2023 (SCI-Expanded)
- XXVI. **Defect assisted enhanced nonlinear optical performance and optical limiting of pure and doped BiVO_4 powders and nanocomposite films**
Tekin S., TUTEL Y., KARATAY A., ÜNALAN H. E., ELMALI A.
Journal of Luminescence, vol.252, 2022 (SCI-Expanded)
- XXVII. **One-photon absorption enhanced nonlinear absorption and optical limiting of the electrospun**

- polyvinylpyrrolidone via excitation energy and incorporation of polypyrrole particles**
PEPE Y., AKKOYUN Ş., Bozkurt B., KARATAY A., ATEŞ A., ELMALI A.
JOURNAL OF MATERIALS SCIENCE, vol.57, pp.21265-21275, 2022 (SCI-Expanded)
- XXVIII. **Colorimetric probing and fluorescent chemosensor features of functionalized sulphonamide-azomethine derivatives**
YILDIZ E., Erdener D., Tekin S., KARATAY A., BOYACIOĞLU B., ÜNVER H., YILDIZ M., ELMALI A.
Journal of Photochemistry and Photobiology A: Chemistry, vol.433, 2022 (SCI-Expanded)
- XXIX. **The role of defects on the transition from saturable absorption to nonlinear absorption of Bi₂GeO₂₀ single crystal under increasing laser excitation**
PEPE Y., IŞIK M., KARATAY A., Yildiz E., HASANLI N., ELMALI A.
JOURNAL OF LUMINESCENCE, vol.251, 2022 (SCI-Expanded)
- XXX. **Nonlinear optical absorption characteristics of PbMoO₄ single crystal for optical limiter applications**
PEPE Y., Isik M., KARATAY A., HASANLI N., ELMALI A.
Optical Materials, vol.133, 2022 (SCI-Expanded)
- XXXI. **Two-photon absorption and triplet excited state quenching of near-IR region aza-BODIPY photosensitizers via a triphenylamine moiety despite heavy bromine atoms**
Karatay A., Yilmaz H., Yildiz E., Sevinc G., Hayvalı M., Boyacıoğlu B., Ünver H., Elmalı A.
PHYSICAL CHEMISTRY CHEMICAL PHYSICS, vol.24, no.41, pp.25495-25505, 2022 (SCI-Expanded)
- XXXII. **Mechanisms of nonlinear optical absorption in (GeO₂)_{1-x}-(PbF₂)_x (0.1 ≤ x ≤ 0.3) modified germanate glasses**
ÜNLÜ B. A., Bilir G., Yuksek M., KARATAY A., YILDIZ E., ELMALI A.
Optical Materials, vol.131, 2022 (SCI-Expanded)
- XXXIII. **Understanding electrooxidation mechanism of anticancer drugs utilizing ultrafast pump probe spectroscopy**
KARATAY A., KURBANOĞLU S., Sevinc G., YILDIZ E., HAYVALI M., ÖZKAN S. A., ELMALI A.
Journal of Molecular Structure, vol.1262, 2022 (SCI-Expanded)
- XXXIV. **Above bandgap one-photon excitation induced nonlinear absorption behavior of InTe**
ÜNLÜ B. A., KARATAY A., Avci E., Yildiz E., ATEŞ A., ELMALI A.
JOURNAL OF LUMINESCENCE, vol.248, 2022 (SCI-Expanded)
- XXXV. **Nonlinear optical performance and optical limiting of germanate glasses modified with PbF₂ and B₂O₃ induced by nanosecond pulsed laser**
PEPE Y., Bilir G., Yuksek M., KARATAY A., Yildiz E., ELMALI A.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.590, 2022 (SCI-Expanded)
- XXXVI. **Tuning the energy bandgap and nonlinear absorption coefficients of WO_x/ZrO₂ nanocomposite thin films with the role of weight and doping concentration**
Tekin S., KARATAY A., Yildiz E., DONAR Y. O., SINAĞ A., DULKADİR H., ELMALI A.
JOURNAL OF LUMINESCENCE, vol.247, 2022 (SCI-Expanded)
- XXXVII. **Naked-eye colorimetric anion probing and fluorescent switching features of conjugated Schiff Bases derived from 4-(Trifluoromethyl) benzenesulfonamide**
Yıldız E., Tekin S., Erdener D., Karatay A., Boyacıoğlu B., Ünver H., Yıldız M., Elmalı A.
Journal of Luminescence, vol.247, 2022 (SCI-Expanded)
- XXXVIII. **Study of the structural and optical properties of thallium gallium disulfide (TlGaS₂) thin films grown via thermal evaporation**
Isik M., KARATAY A., Ech-Chergui A. N., HASANLI N.
PHYSICA SCRIPTA, vol.97, no.7, 2022 (SCI-Expanded)
- XXXIX. **Morphology, defects and polymer concentration related nonlinear absorption and optical limiting properties of electrospun polyamide 6 nanofibers**
PEPE Y., AKKOYUN Ş., KARATAY A., Yildiz E., ÜNVER H., ATEŞ A., ELMALI A.
JOURNAL OF APPLIED POLYMER SCIENCE, vol.139, no.23, 2022 (SCI-Expanded)
- XL. **Colorimetric probe and optical behaviours of new azomethine derivatives of sulfonamide**
Tekin S., KARATAY A., Erdener D., YILDIZ E., BOYACIOĞLU B., ÜNVER H., YILDIZ M., ELMALI A.

Journal of Molecular Structure, vol.1253, 2022 (SCI-Expanded)

- XL1. **Amino-functionalized nitrogen-doped graphene quantum dots and silver-graphene based nanocomposites: Ultrafast charge transfer and a proof-of-concept study for bioimaging applications**
KARATAY A., ERDENER ÇIRALI D., Gurcan C., Yildiz E., YILMAZER AKTUNA A., BOYACIOĞLU B., ÜNVER H., YILDIZ M., ELMALI A.
JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY A-CHEMISTRY, vol.426, 2022 (SCI-Expanded)
- XLII. **Structural and optical characteristics of thermally evaporated TlGaSe₂ thin films**
Isik M., KARATAY A., HASANLI N.
OPTICAL MATERIALS, vol.124, 2022 (SCI-Expanded)
- XLIII. **Defect assisted nonlinear absorption and optical limiting in amorphous TlGaS₂(1-x)Se₂(x) (0 ≤ x ≤ 1) thin films**
ÜNLÜ B. A., KARATAY A., Yildiz E., Dincbay T., ÜNVER H., HASANLI N., ELMALI A.
JOURNAL OF LUMINESCENCE, vol.241, 2022 (SCI-Expanded)
- XLIV. **Enhanced nonlinear absorption and optical limiting of transparent, electrospun graphite filled polymer composite nanofibers in near IR region**
PEPE Y., AKKOYUN Ş., KARATAY A., Yildiz E., ATEŞ A., ÜNVER H., ELMALI A.
JOURNAL OF MATERIALS SCIENCE, vol.57, no.2, pp.1058-1068, 2022 (SCI-Expanded)
- XLV. **Defect assisted optical limiting performance of hexagonal boron nitride nanosheets in aqueous suspension and PMMA nanocomposite films**
ÜNLÜ B. A., KARATAY A., Yildiz E., Yola M. L., YÜKSEK M., ATAR N., ELMALI A.
OPTICAL MATERIALS, vol.121, 2021 (SCI-Expanded)
- XLVI. **Thermally Induced Phase Transition and Defect-Assisted Nonlinear Absorption and Optical Limiting in Nanorod Morphology V2O₅ Thin Films**
PEPE Y., TUTEL Y., Yildiz E., KARATAY A., ÜNALAN H. E., ELMALI A.
ADVANCED ENGINEERING MATERIALS, vol.23, no.10, 2021 (SCI-Expanded)
- XLVII. **Great enhancement of two photon absorption cross section value by intramolecular charge transfer in newly synthesized triphenylamine-BODIPY derivative**
Yildiz E., SEVİNÇ G., Tekin S., KARATAY A., HAYVALI M., ELMALI A.
DYES AND PIGMENTS, vol.193, 2021 (SCI-Expanded)
- XLVIII. **Intersystem Crossing and Triplet-State Property of Anthryl- and Carbazole-[1,12]fused Perylenebisimide Derivatives with a Twisted pi-Conjugation Framework**
Mahmood Z., Sukhanov A. A., Rehmat N., Hu M., ELMALI A., Xiao Y., Zhao J., KARATAY A., Dick B., Voronkova V. K.
JOURNAL OF PHYSICAL CHEMISTRY B, vol.125, no.32, pp.9317-9332, 2021 (SCI-Expanded)
- XLIX. **Chromophore Orientation-Dependent Photophysical Properties of Pyrene-Naphthalimide Compact Electron Donor-Acceptor Dyads: Electron Transfer and Intersystem Crossing**
Imran M., Sukhanov A. A., Maity P., ELMALI A., Zhao J., KARATAY A., Mohammed O. F., Voronkova V. K.
JOURNAL OF PHYSICAL CHEMISTRY B, vol.125, no.32, pp.9244-9259, 2021 (SCI-Expanded)
- L. **Enhancement of Nonlinear Absorption in Defect Controlled ZnO Polycrystalline Thin Films by Means of Co-Doping**
Unlu B. A., Sener D., Tekin S., Yildiz E., KARATAY A., Serin T., Elmali A.
PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS, vol.258, no.6, 2021 (SCI-Expanded)
- LI. **Intersystem Crossing and Electron Spin Selectivity in Anthracene-Naphthalimide Compact Electron Donor-Acceptor Dyads Showing Different Geometry and Electronic Coupling Magnitudes**
Chen K., Kurganskii I. V., Zhang X., ELMALI A., Zhao J., KARATAY A., Fedin M. V.
CHEMISTRY-A EUROPEAN JOURNAL, vol.27, no.27, pp.7572-7587, 2021 (SCI-Expanded)
- LII. **Twisted BODIPY derivative: intersystem crossing, electron spin polarization and application as a novel photodynamic therapy reagent dagger**
Dong Y., Kumar P., Maity P., Kurganskii I., Li S., ELMALI A., Zhao J., Escudero D., Wu H., KARATAY A., et al.
PHYSICAL CHEMISTRY CHEMICAL PHYSICS, vol.23, no.14, pp.8641-8652, 2021 (SCI-Expanded)
- LIII. **Spiro Rhodamine-Perylene Compact Electron Donor-Acceptor Dyads: Conformation Restriction, Charge Separation, and Spin-Orbit Charge Transfer Intersystem Crossing**

Hu M., Sukhanov A. A., Zhang X., ELMALI A., Zhao J., Ji S., KARATAY A., Voronkova V. K.

JOURNAL OF PHYSICAL CHEMISTRY B, vol.125, no.16, pp.4187-4203, 2021 (SCI-Expanded)

- LIV. **Tuning the linear and nonlinear optical absorption properties of ZnS/hydrochar nanocomposites by concentration of nanoparticles**
Tekin S., KARATAY A., DONAR Y. O., Bilge S., Yildiz E., SINAĞ A., ELMALI A.
OPTICAL MATERIALS, vol.113, 2021 (SCI-Expanded)
- LIV. **Shear bond strength of a self-adhesive resin cement to dentin surface treated with Nd:YAG and femtosecond lasers**
ÖZDOĞAN M. S., KARAOKUTAN I., YILDIRIM M., Aydemir K. A., KARATAY A., AYKENT F.
LASERS IN MEDICAL SCIENCE, vol.36, no.1, pp.219-226, 2021 (SCI-Expanded)
- LVI. **Ultrafast Electron/Energy Transfer and Intersystem Crossing Mechanisms in BODIPY-Porphyrin Compounds**
Tutel Y., SEVİNÇ G., Kucukoz B., Yildiz E., KARATAY A., Dumanogullari F. M., Yilmaz H., HAYVALI M., ELMALI A.
PROCESSES, vol.9, no.2, 2021 (SCI-Expanded)
- LVII. **Enhanced nonlinear absorption coefficient and low optical limiting threshold of NiO nanocomposite films**
PEPE Y., KARATAY A., DONAR Y. O., Yildiz E., SINAĞ A., ÜNVER H., ELMALI A.
OPTIK, vol.227, 2021 (SCI-Expanded)
- LVIII. **Thienyl/phenyl bay-substituted perylenebisimides: Intersystem crossing and application as heavy atom-free triplet photosensitizers**
Sadiq F., Wang Z., Hou Y., Zhao J., ELMALI A., Escudero D., KARATAY A.
DYES AND PIGMENTS, vol.184, 2021 (SCI-Expanded)
- LIX. **Effect of Cr/Sb doping and annealing on nonlinear absorption coefficients of SnO₂/PMMA nanocomposite films**
PEPE Y., KARATAY A., DONAR Y. O., Bilge S., Yildiz E., YÜKSEK M., SINAĞ A., ELMALI A.
MATERIALS CHEMISTRY AND PHYSICS, 2020 (SCI-Expanded)
- LX. **Linear Optical Absorption, Emission Properties and Ultrafast Carrier Dynamics of Aqua-chloro-bis(1,10-phenanthroline)manganese(II) 4-formylbenzoate Trihydrate**
YÜKSEK M., OzturkkanOzbek F. E., SERTÇELİK M., KARATAY A., NECEFOĞLU H., HÖKELEK T.
CHEMISTRYSELECT, vol.5, no.41, pp.12721-12726, 2020 (SCI-Expanded)
- LXI. **A novel AB(3)-type trimeric zinc(II)-phthalocyanine as an electrochromic and optical limiting material**
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