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Personal Information

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Education Information

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Polimer Bilim Ve Teknolojisi (Dr), Turkey 2005 - 2009

Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Polimer Bilim Ve Teknolojisi (YI) (Tezli), Turkey 2003 - 2005

Undergraduate, Yildiz Technical University, Fen-Edebiyat Fakültesi, Kimya Bölümü, Turkey 1998 - 2003

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Macromolecular engineering by end group modifications, Istanbul Technical University, Fen Bilimleri Enstitüsü, Polimer Bilim Ve Teknolojisi (Dr), 2009

Postgraduate, Synthesis of side chain liquid crystal copolymers, Istanbul Technical University, Fen Bilimleri Enstitüsü, Polimer Bilim Ve Teknolojisi (YI) (Tezli), 2005

Research Areas

Health Sciences, Natural Sciences

Academic Titles / Tasks

Professor, Istanbul Medipol University, Mühendislik Ve Doğa Bilimleri Fakültesi, Biyomedikal Mühendisliği Bölümü, 2021 - Continues

Associate Professor, Istanbul Medipol University, Mühendislik Ve Doğa Bilimleri Fakültesi, Biyomedikal Mühendisliği Bölümü, 2016 - 2021

Academic and Administrative Experience

Director of The Institution, Istanbul Medipol University, Fen Bilimleri Enstitüsü, 2018 - Continues

Head of Department, Istanbul Medipol University, Mühendislik Ve Doğa Bilimleri Fakültesi, Biyomedikal Mühendisliği Bölümü, 2016 - Continues

Assistant Director of the Institute, Istanbul Medipol University, Fen Bilimleri Enstitüsü, 2016 - 2018

Advising Theses

Yasemin Y. D., Bioconjugated β -cyclodextrin-perfluorohexane nanocone clusters as functional agents for nanoparticle mediated histotripsy, Postgraduate, C.TOYDEMİR(Student), 2022

Yasemin Y. D., The development of multifunctional nanoplatfoms for targeted dual drug delivery, Doctorate, E.DEMİREL(Student), 2022

Yasemin Y. D., Mehmet K., Design and optimization of a durable gold-based microelectrode for dopamine detection, Postgraduate, B.BWOGI(Student), 2021

Yasemin Y. D., Experimental and computational investigation of clustering behavior of cyclodextrin-perfluorocarbon inclusion complexes through molecular dynamics simulations, Postgraduate, B.KAYMAZ(Student), 2021

Yasemin Y. D., Development of EPPT1 targeted biocompatible drug delivery system and investigation of its anticancer activity, Postgraduate, E.KARACA(Student), 2020

Yasemin Y. D., Aloe-vera extract as drag reducing polymer to regulate blood pressure and tissue oxygenation during hemorrhagic shock, Postgraduate, G.AKÇAY(Student), 2019

Yasemin Y. D., Development of a histotripsy agent using host-guest interaction, Postgraduate, T.UR(Student), 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **The effect of PEGylation components on drug release behavior of targeted reduced graphene oxide based drug delivery system**
Basavci E., Demirel E., Elhassan M., YÜKSEL DURMAZ Y.
European Polymer Journal, vol.215, 2024 (SCI-Expanded)
- II. **Investigation of Optimum Production Conditions and the Stability of β -Cyclodextrin-Perfluorocarbon Nanocone Clusters for Histotripsy Applications**
Mustafa W., Hall S., Huynh L., Mannasse R., Lüleburgaz S., Vlasisavljevich E., YÜKSEL DURMAZ Y.
Molecular Pharmaceutics, vol.21, no.5, pp.2383-2393, 2024 (SCI-Expanded)
- III. **PEGylated reduced graphene oxide as nanoplatfom for targeted gene and drug delivery**
Demirel E., Yuksel Durmaz Y.
EUROPEAN POLYMER JOURNAL, vol.186, 2023 (SCI-Expanded)
- IV. **A new strategy for direct solution electrospinning of phosphorylated poly(vinyl chloride)/polyethyleneimine blend in alcohol media**
Altınkök Ç., Sagdic G., Daglar O., Ercan Ayra M., YÜKSEL DURMAZ Y., Durmaz H., Acik G.
European Polymer Journal, vol.183, 2023 (SCI-Expanded)
- V. **Bioconjugated β -Cyclodextrin-Perfluorohexane Nanocone Clusters as Functional Nanoparticles for Nanoparticle-Mediated Histotripsy**
Toydemir C., Hall S., Demirel E., Elmaci D. N., Gol D., Vlasisavljevich E., YÜKSEL DURMAZ Y.
Biomacromolecules, vol.23, no.12, pp.5297-5311, 2022 (SCI-Expanded)
- VI. **Experimental and Computational Investigation of Clustering Behavior of Cyclodextrin-Perfluorocarbon Inclusion Complexes as Effective Histotripsy Agents**
Kaymaz B., Mustafa W., Hall S., Vlasisavljevich E., ŞENSOY Ö., YÜKSEL DURMAZ Y.
Molecular Pharmaceutics, vol.19, no.8, pp.2907-2921, 2022 (SCI-Expanded)
- VII. **BUBBLE CLOUD BEHAVIOR AND ABLATION CAPACITY FOR HISTOTRIPSY GENERATED FROM INTRINSIC OR ARTIFICIAL CAVITATION NUCLEI**
Edsall C., Khan Z. M., Mancina L., Hall S., Mustafa W., Johnsen E., Klibanov A. L., Durmaz Y., Vlasisavljevich E.

ULTRASOUND IN MEDICINE AND BIOLOGY, vol.47, no.3, pp.620-639, 2021 (SCI-Expanded)

- VIII. **Effective PEGylation method to improve biocompatibility of graphene derivatives**
Demirel E., Karaca E., YÜKSEL DURMAZ Y.
European Polymer Journal, vol.124, 2020 (SCI-Expanded)
- IX. **Nanoparticle-mediated histotripsy (NMH) using perfluorohexane 'nanococones'**
Khirallah J., Schmieley R., Demirel E., Rehman T. U., Howell J., Durmaz Y., Vlasisavljevich E.
PHYSICS IN MEDICINE AND BIOLOGY, vol.64, no.12, 2019 (SCI-Expanded)
- X. **Development of Acoustically Active Nanococones Using the Host-Guest Interaction as a New Histotripsy Agent**
Rehman T. U., Khirallah J., Demirel E., Howell J., Vlasisavljevich E., Yuksel Durmaz Y.
ACS Omega, vol.4, no.2, pp.4176-4184, 2019 (SCI-Expanded)
- XI. **Synergistic inhibition of aggressive breast cancer cell migration and invasion by cytoplasmic delivery of anti-RhoC silencing RNA and presentation of EPPT1 peptide on "smart" particles**
Kaushal N., Tiruchinapally G., Durmaz Y., Bao L., Gilani R., Merajver S. D., ElSayed M. E.
JOURNAL OF CONTROLLED RELEASE, vol.289, pp.79-93, 2018 (SCI-Expanded)
- XII. **Noninvasive Ablation of Prostate Cancer Spheroids Using Acoustically-Activated Nanodroplets**
AYDIN Ö., Vlasisavljevich E., Yuksel Durmaz Y., Xu Z., ElSayed M. E. H.
Molecular Pharmaceutics, vol.13, no.12, pp.4054-4065, 2016 (SCI-Expanded)
- XIII. **Formulation of Acid-Sensitive Micelles for Delivery of Cabazitaxel into Prostate Cancer Cells**
AYDIN Ö., Youssef I., Yuksel Durmaz Y., Tiruchinapally G., Elsayed M. E. H.
Molecular Pharmaceutics, vol.13, no.4, pp.1413-1429, 2016 (SCI-Expanded)
- XIV. **EFFECTS OF DROPLET COMPOSITION ON NANODROPLET-MEDIATED HISTOTRIPSY**
Vlasisavljevich E., AYDIN Ö., Durmaz Y., Lin K., Fowlkes B., Xu Z., ElSayed M. E.
ULTRASOUND IN MEDICINE AND BIOLOGY, vol.42, no.4, pp.931-946, 2016 (SCI-Expanded)
- XV. **The role of positive and negative pressure on cavitation nucleation in nanodroplet-mediated histotripsy**
Vlasisavljevich E., AYDIN Ö., Lin K., Durmaz Y., Fowlkes B., Elsayed M., Xu Z.
PHYSICS IN MEDICINE AND BIOLOGY, vol.61, no.2, pp.663-682, 2016 (SCI-Expanded)
- XVI. **Effects of Ultrasound Frequency on Nanodroplet-Mediated Histotripsy**
Vlasisavljevich E., AYDIN Ö., Yuksel Durmaz Y., Lin K., Fowlkes B., ElSayed M., Xu Z.
Ultrasound in Medicine and Biology, vol.41, no.8, pp.2135-2147, 2015 (SCI-Expanded)
- XVII. **Development of nanodroplets for histotripsy-mediated cell ablation**
YÜKSEL DURMAZ Y., Vlasisavljevich E., Xu Z., Elsayed M.
Molecular Pharmaceutics, vol.11, no.10, pp.3684-3695, 2014 (SCI-Expanded)
- XVIII. **Nanodroplet-mediated histotripsy for image-guided targeted ultrasound cell ablation**
Vlasisavljevich E., YÜKSEL DURMAZ Y., Maxwell A., ElSayed M., Xu Z.
Theranostics, vol.3, no.11, pp.851-864, 2013 (SCI-Expanded)
- XIX. **Development of degradable, pH-sensitive star vectors for enhancing the cytoplasmic delivery of nucleic acids**
YÜKSEL DURMAZ Y., Lin Y., Elsayed M. E. H.
Advanced Functional Materials, vol.23, no.31, pp.3885-3895, 2013 (SCI-Expanded)
- XX. **Synergistic combination of small molecule inhibitor and RNA interference against antiapoptotic Bcl-2 protein in head and neck cancer cells**
Lin Y., YÜKSEL DURMAZ Y., Nör J. E., Elsayed M. E. H.
Molecular Pharmaceutics, vol.10, no.7, pp.2730-2738, 2013 (SCI-Expanded)
- XXI. **Enzyme-activated nanoconjugates for tunable release of doxorubicin in hepatic cancer cells**
Medina S. H., Chevliakov M. V., Tiruchinapally G., YÜKSEL DURMAZ Y., Kuruvilla S. P., ElSayed M. E.
Biomaterials, vol.34, no.19, pp.4655-4666, 2013 (SCI-Expanded)
- XXII. **Targeting hepatic cancer cells with pegylated dendrimers displaying N-Acetylgalactosamine and SP94 peptide ligands**
Medina S. H., Tiruchinapally G., Chevliakov M. V., YÜKSEL DURMAZ Y., Stender R. N., Ensminger W. D., Shewach D. S.,

Elsayed M. E. H.

Advanced Healthcare Materials, vol.2, no.10, pp.1337-1350, 2013 (SCI-Expanded)

- XXIII. **A novel poly(p-phenylene) containing alternating poly(perfluorooctylethyl acrylate-co-methyl methacrylate) and polystyrene grafts by combination of atom transfer radical polymerization and Suzuki coupling processes**
YÜKSEL DURMAZ Y., Sahkulubey E. L., Yağcı Y., Martinelli E., Galli G.
Journal of Polymer Science, Part A: Polymer Chemistry, vol.50, no.23, pp.4911-4919, 2012 (SCI-Expanded)
- XXIV. **Film formation of poly (methyl methacrylate) latex with pyrene functional poly (divinylbenzene) microspheres prepared by click chemistry**
Uğur Ş., Yargı Ö., YÜKSEL DURMAZ Y., Karagöz B., Biäk N., Yağcı Y., Pekcan Ö.
Polymer Composites, vol.32, no.6, pp.869-881, 2011 (SCI-Expanded)
- XXV. **Modification of Polydivinylbenzene Microspheres by a Hydrobromination/Click-Chemistry Protocol and their Protein-Adsorption Properties**
YÜKSEL DURMAZ Y., Karagöz B., Bıak N., ODACI DEMİRKOL D., Yalcinkaya E. E., Timur S., Yağcı Y.
Macromolecular Bioscience, vol.11, no.1, pp.141-150, 2011 (SCI-Expanded)
- XXVI. **Synthesis and characterization of telechelic block co-polymers by combination of atom transfer radical polymerization and click chemistry processes**
Okcu S. S., YÜKSEL DURMAZ Y., Yağcı Y.
Designed Monomers and Polymers, vol.13, no.5, pp.459-472, 2010 (SCI-Expanded)
- XXVII. **Synthesis and characterization of polystyrene possessing triptycene units in the main chain by combination of ATRP and click chemistry processes**
Ates S., YÜKSEL DURMAZ Y., Torun L., Yağcı Y.
Journal of Macromolecular Science, Part A: Pure and Applied Chemistry, vol.47, no.8, pp.809-815, 2010 (SCI-Expanded)
- XXVIII. **Surface modification of UV-cured epoxy resins by click chemistry**
YÜKSEL DURMAZ Y., Sangermano M., Yağcı Y.
Journal of Polymer Science, Part A: Polymer Chemistry, vol.48, no.13, pp.2862-2868, 2010 (SCI-Expanded)
- XXIX. **Perfectly alternating amphiphilic poly(p-phenylene) graft copolymers by combination of controlled radical polymerization and suzuki coupling processes**
Sahkulubey E. L., YÜKSEL DURMAZ Y., Levent Demirel A., Yağcı Y.
Macromolecules, vol.43, no.6, pp.2732-2738, 2010 (SCI-Expanded)
- XXX. **Peculiarities of δ - and α -relaxations in thermotropic side chain liquid crystalline polymers with and without nematic reentrant phase**
Salehli F., Yıldız Ş., Özbek H., Uykur E., Gürsel Y., YÜKSEL DURMAZ Y.
Polymer, vol.51, no.6, pp.1450-1456, 2010 (SCI-Expanded)
- XXXI. **Functionalization of poly(divinylbenzene) microspheres by combination of hydrobromination and click chemistry processes: A model study**
Karagöz B., YÜKSEL DURMAZ Y., Gacal B., Bıak N., Yağcı Y.
Designed Monomers and Polymers, vol.12, no.6, pp.511-522, 2009 (SCI-Expanded)
- XXXII. **Sequential photodecomposition of bisacylgermane type photoinitiator: Synthesis of block copolymers by combination of free radical promoted cationic and free radical polymerization mechanisms**
YÜKSEL DURMAZ Y., Kukut M., Moszner N., Yağcı Y.
Journal of Polymer Science, Part A: Polymer Chemistry, vol.47, no.18, pp.4793-4799, 2009 (SCI-Expanded)
- XXXIII. **Graft copolymers by the combination of ATRP and photochemical acylation process by using benzodioxinones**
YÜKSEL DURMAZ Y., Kumbaracı İ. V., Demirel A. L., Talınlı E. N., Yağcı Y.
Macromolecules, vol.42, no.11, pp.3743-3749, 2009 (SCI-Expanded)
- XXXIV. **Photoinduced decomposition of dibenzoyldiethylgermane: A photochemical route to polygermanes**
YÜKSEL DURMAZ Y., Kukut M., Moszner N., Yağcı Y.
Macromolecules, vol.42, no.8, pp.2899-2902, 2009 (SCI-Expanded)

- XXXV. **Synthesis of block copolymers by combination of ATRP and photoiniferter processes**
YÜKSEL DURMAZ Y., Karagöz B., Bicak N., Yağcı Y.
Polymer International, vol.57, no.10, pp.1182-1187, 2008 (SCI-Expanded)
- XXXVI. **Visible light initiated free radical promoted cationic polymerization using acylgermane based photoinitiator in the presence of onium salts**
YÜKSEL DURMAZ Y., Moszner N., Yağcı Y.
Macromolecules, vol.41, no.18, pp.6714-6718, 2008 (SCI-Expanded)
- XXXVII. **Synthesis, characterization and thermally-activated curing of azobenzene-containing benzoxazines**
Kışkan B., Dogan F., YÜKSEL DURMAZ Y., Yağcı Y.
Designed Monomers and Polymers, vol.11, no.5, pp.473-482, 2008 (SCI-Expanded)
- XXXVIII. **Diethoxy-azobis(pyridinium) salt as photoinitiator for cationic polymerization: Towards wavelength tunability by cis-trans isomerization**
YÜKSEL DURMAZ Y., ZAİM Ö., Yağcı Y.
Macromolecular Rapid Communications, vol.29, no.11, pp.892-896, 2008 (SCI-Expanded)
- XXXIX. **A new photoiniferter/RAFT agent for ambient temperature rapid and well-controlled radical polymerization**
Tasdelen M. A., YÜKSEL DURMAZ Y., Karagöz B., Bicak N., Yağcı Y.
Journal of Polymer Science, Part A: Polymer Chemistry, vol.46, no.10, pp.3387-3395, 2008 (SCI-Expanded)
- XL. **Dielectric relaxation in a thermotropic side chain liquid crystalline polymer with nematic reentrant phase**
Salehli F., Yıldız Ş., Özbek H., Gürsel Y., YÜKSEL DURMAZ Y.
Journal of Physics Condensed Matter, vol.20, no.3, 2008 (SCI-Expanded)
- XLI. **Polymers with side chain N-alkoxy pyridinium ions as precursors for photoinduced grafting and modification processes**
YÜKSEL DURMAZ Y., Yılmaz A. G., Yağcı Y.
Macromolecular Chemistry and Physics, vol.208, no.16, pp.1737-1743, 2007 (SCI-Expanded)
- XLII. **Phenacyl onium salt photoinitiators: Synthesis, photolysis, and applications**
Yağcı Y., YÜKSEL DURMAZ Y., TEMEL B.
Chemical Record, vol.7, no.2, pp.78-90, 2007 (SCI-Expanded)
- XLIII. **N-alkoxy pyridinium ion terminated polystyrenes: A facile route to photoinduced block copolymerization**
YÜKSEL DURMAZ Y., Yılmaz A. G., Yağcı Y.
Journal of Polymer Science, Part A: Polymer Chemistry, vol.45, no.3, pp.423-428, 2007 (SCI-Expanded)

Articles Published in Other Journals

- I. **Particle-Mediated Histotripsy for the Targeted Treatment of Intraluminal Biofilms in Catheter-Based Medical Devices**
Childers C., Edsall C., Mehochko I., Mustafa W., YÜKSEL DURMAZ Y., Klibanov A. L., Rao J., Vlaisavljevich E.
BME Frontiers, vol.2022, 2022 (Scopus)
- II. **Selective Binding of pVTK Peptide-and Bisphosphonate-Functionalized Micelles to Prostate Cancer Cells, Osteoblasts, and Osteoclasts**
AYDIN Ö., Tiruchinapally G., Youssef I., Ramaraju H., Durmaz Y., Kozloff K. M., Kohn D. H., Elsayed M. E. H.
Precision Nanomedicine, vol.5, no.1, pp.851-869, 2022 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

- I. **USING DRAG REDUCING POLYMER INSTEAD OF BLOOD AND BLOOD SUPPLIES DURING HEMORRHAGIC SHOCK**

AKÇAY G., TANZEEL U. R., SAVAŞ A., YÜKSEL DURMAZ Y., SALİHOĞLU E.

INTERNATIONAL EURASIAN CONFERENCE ON BIOLOGICAL AND CHEMICAL SCIENCES, 26 - 27 April 2018