

## **Doç.Dr. Fuat Topuz**

### **Kişisel Bilgiler**

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ScopusID: 25825586400

Yoksis Araştırmacı ID: 362396

### **Eğitim Bilgileri**

Doktora, Rheinisch-Westfaelische Technische Hochschule Aachen, Almanya 2010 - 2015

Yüksek Lisans, Technische Universitaet Wien, Technische Chemie , Institute of Chemical, Environmental and Bioscience Engineering, Avusturya 2006 - 2007

Yüksek Lisans, Karadeniz Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Türkiye 2006 - 2007

Lisans, Karadeniz Teknik Üniversitesi, Türkiye 2000 - 2005

### **Araştırma Alanları**

Kimya, Fizikokimya

### **SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler**

- I. **Advances in Polymers of Intrinsic Microporosity (PIMs)-Based Materials for Membrane, Environmental, Catalysis, Sensing and Energy Applications**  
Topuz F., Abdellah M. H., Budd P. M., Abdulhamid M. A.  
Polymer Reviews, cilt.64, sa.1, ss.251-305, 2024 (SCI-Expanded)
- II. **Dialdehyde carbohydrates – Advanced functional materials for biomedical applications**  
Falsafi S. R., Topuz F., Rostamabadi H.  
Carbohydrate Polymers, cilt.321, 2023 (SCI-Expanded)
- III. **Encapsulation of antioxidant beta-carotene by cyclodextrin complex electrospun nanofibers: Solubilization and stabilization of beta-carotene by cyclodextrins**  
Yildiz Z. I., Topuz F., Kilic M. E., Durgun E., Uyar T.  
Food Chemistry, cilt.423, 2023 (SCI-Expanded)
- IV. **In-Situ and green photosynthesis of PVP-stabilized palladium nanoparticles as efficient catalysts for the reduction of 4-nitrophenol**  
Ermis S., Kaya K., Topuz F., Yağcı Y.  
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- V. **Green Electrospinning of Biodegradable Cellulose Acetate Nanofibrous Membranes with Tunable Porosity**

- Oldal D. G., Topuz F., Holtzl T., Szekely G.  
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- VI. **Advances in the development of cyclodextrin-based nanogels/microgels for biomedical applications: Drug delivery and beyond**  
Topuz F., Uyar T.  
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- VII. **Superoleophilic oil-adsorbing membranes based on porous and nonporous fluorinated polyimides for the rapid remediation of oil spills**  
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- VIII. **Rapid Sublingual Delivery of Piroxicam from Electrospun Cyclodextrin Inclusion Complex Nanofibers**  
Topuz F.  
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- IX. **Biobased thin-film composite membranes comprising priamine-genipin selective layer on nanofibrous biodegradable polylactic acid support for oil and solvent-resistant nanofiltration**  
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GREEN CHEMISTRY, cilt.24, sa.13, ss.5291-5303, 2022 (SCI-Expanded)
- X. **Valorization of Polyethylene Terephthalate (PET) Plastic Wastes as Nanofibrous Membranes for Oil Removal: Sustainable Solution for Plastic Waste and Oil Pollution**  
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INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH, cilt.61, sa.25, ss.9077-9086, 2022 (SCI-Expanded)
- XI. **Nanofibrous membranes comprising intrinsically microporous polyimides with embedded metal-organic frameworks for capturing volatile organic compounds**  
Topuz F., Abdulhamid M. A., Hardian R., Holtzl T., Szekely G.  
JOURNAL OF HAZARDOUS MATERIALS, cilt.424, 2022 (SCI-Expanded)
- XII. **Removal of polycyclic aromatic hydrocarbons (PAHs) from water through degradable polycaprolactone electrospun membrane**  
Topuz F.  
Turkish Journal of Chemistry, cilt.46, sa.6, ss.2080-2089, 2022 (SCI-Expanded)
- XIII. **Electrospun Adsorptive Nanofibrous Membranes from Ion Exchange Polymers to Snare Textile Dyes from Wastewater**  
Cseri L., Topuz F., Abdulhamid M. A., Alammar A., Budd P. M., Szekely G.  
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- XIV. **Scavenging organic micropollutants from water with nanofibrous hypercrosslinked cyclodextrin membranes derived from green resources**  
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- XV. **Fast-dissolving antibacterial nanofibers of cyclodextrin/antibiotic inclusion complexes for oral drug delivery**  
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- XVI. **Nanofiber engineering of microporous polyimides through electrospinning: Influence of electrospinning parameters and salt addition**  
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- XVII. **Water-insoluble polymer-free uniform nanofibers of peracetylated cyclodextrin by electrospinning**  
Topuz F., Shaikh A. Y., Guler M. O., Uyar T.  
JOURNAL OF MATERIALS SCIENCE, cilt.55, sa.25, ss.11752-11762, 2020 (SCI-Expanded)
- XVIII. **Electrospinning Combined with Atomic Layer Deposition to Generate Applied Nanomaterials: A Review**  
Vempati S., Ranjith K. S., Topuz F., Biyikli N., Uyar T.

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- XIX. **Electrospinning of Cyclodextrin Nanofibers: The Effect of Process Parameters**  
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- XX. **Hierarchically porous electrospun nanofibrous mats produced from intrinsically microporous fluorinated polyimide for the removal of oils and non-polar solvents**  
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- XXI. **Antioxidant, antibacterial and antifungal electrospun nanofibers for food packaging applications**  
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FOOD RESEARCH INTERNATIONAL, cilt.130, 2020 (SCI-Expanded)
- XXII. **Atomic layer deposition of palladium nanoparticles on a functional electrospun poly-cyclodextrin nanoweb as a flexible and reusable heterogeneous nanocatalyst for the reduction of nitroaromatic compounds**  
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- XXIII. **Electrospinning of uniform nanofibers of Polymers of Intrinsic Microporosity (PIM-1): The influence of solution conductivity and relative humidity**  
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- XXIV. **RNA-mediated, green synthesis of palladium nanodendrites for catalytic reduction of nitroarenes**  
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- XXV. **Electrospinning of nanocomposite nanofibers from cyclodextrin and laponite**  
Topuz F., Uyar T.  
COMPOSITES COMMUNICATIONS, cilt.12, ss.33-38, 2019 (SCI-Expanded)
- XXVI. **Efficient Removal of Polycyclic Aromatic Hydrocarbons and Heavy Metals from Water by Electrospun Nanofibrous Polycyclodextrin Membranes**  
Celebioglu A., Topuz F., Yildiz Z. I., Uyar T.  
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- XXVII. **One-step green synthesis of antibacterial silver nanoparticles embedded in electrospun cyclodextrin nanofibers**  
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- XXVIII. **Facile and green synthesis of palladium nanoparticles loaded into cyclodextrin nanofibers and their catalytic application in nitroarene hydrogenation**  
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- XXX. **Electrospinning of Cyclodextrin Functional Nanofibers for Drug Delivery Applications**  
Topuz F., Uyar T.  
PHARMACEUTICS, cilt.11, sa.1, 2019 (SCI-Expanded)
- XXXI. **Nanosilicate embedded agarose hydrogels with improved bioactivity**  
Topuz F., Nadernezhad A., Caliskan O. S., Menceloglu Y. Z., Koc B.  
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- XXXII. **Influence of Hydrogen-Bonding Additives on Electrospinning of Cyclodextrin Nanofibers**  
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Topuz F., Uyar T.  
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- XXXIV. **Electrospinning of gelatin with tunable fiber morphology from round to flat/ribbon**  
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MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, cilt.80, ss.371-378, 2017 (SCI-Expanded)
- XXXV. **Poly-cyclodextrin cryogels with aligned porous structure for removal of polycyclic aromatic hydrocarbons (PAHs) from water**  
Topuz F., Uyar T.  
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- XXXVI. **Cyclodextrin-functionalized mesostructured silica nanoparticles for removal of polycyclic aromatic hydrocarbons**  
Topuz F., Uyar T.  
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- XXXVII. **Pd nanocube decoration onto flexible nanofibrous mats of core-shell polymer-ZnO nanofibers for visible light photocatalysis**  
Arslan O., Topuz F., Eren H., Biyikli N., Uyar T.  
NEW JOURNAL OF CHEMISTRY, cilt.41, sa.10, ss.4145-4156, 2017 (SCI-Expanded)
- XXXVIII. **One-Step Fabrication of Biocompatible Multifaceted Nanocomposite Gels and Nanolayers**  
Topuz F., Bartneck M., Pan Y., Tacke F.  
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- XXXIX. **DNA Nanogels To Snare Carcinogens: A Bioinspired Generic Approach with High Efficiency**  
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ANGEWANDTE CHEMIE-INTERNATIONAL EDITION, cilt.55, sa.40, ss.12210-12213, 2016 (SCI-Expanded)
- XL. **Molecular response of liver sinusoidal endothelial cells on hydrogels**  
Bartneck M., Topuz F., Tag C. G., Sauer-Lehnen S., Warzecha K. T., Trautwein C., Weiskirchen R., Tacke F.  
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, cilt.51, ss.64-72, 2015 (SCI-Expanded)
- XLI. **Covalently layer-by-layer assembled homogeneous nanolayers with switchable wettability**  
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- XLII. **Stimuli-Sensitive Microgels from Native Elastin: An Easy Approach for a Drug Release System**  
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- XLIII. **Embedding of Active Proteins and Living Cells in Redox-Sensitive Hydrogels and Nanogels through Enzymatic Cross-Linking**  
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- XLIV. **Hydrogels in sensing applications**  
Buenger D., Topuz F., Groll J.  
PROGRESS IN POLYMER SCIENCE, cilt.37, sa.12, ss.1678-1719, 2012 (SCI-Expanded)
- XLV. **Magnesium ions and alginate do form hydrogels: a rheological study**  
Topuz F., Henke A., Richtering W., Groll J.  
SOFT MATTER, cilt.8, sa.18, ss.4877-4881, 2012 (SCI-Expanded)
- XLVI. **Formation of Hydrogels by Simultaneous Denaturation and Cross-Linking of DNA**  
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- XLVII. **Chalcone 3-hydroxylation is not a general property of flavonoid 3'-hydroxylase**  
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- XLIX. **Rheological Behavior of Responsive DNA Hydrogels**  
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### Diger Dergilerde Yayınlanan Makaleler

- I. **Green one-pot synthesis of bimetallic Pd-Pt nanospanges using biomolecules with enhanced catalytic activity for hydrogen evolution reactions**  
Topuz F., Patil B., Uyar T.  
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- II. **Catechin Encapsulated Antioxidant Electrospun Nanofibers: A Comparative Study between Cyclodextrin Complex Nanofibers and Poly(vinyl alcohol) Nanofibers**  
Yildiz Z. I., Topuz F., Uyar T.  
ACS Food Science and Technology, 2023 (Scopus)
- III. **Influence of salt addition on polymer-free electrospinning of cyclodextrin nanofibers**  
Topuz F., Celebioglu A., Aytac Z., Uyar T.  
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- IV. **Nanocomposite Bioinks Based on Agarose and 2D Nanosilicates with Tunable Flow Properties and Bioactivity for 3D Bioprinting**  
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### Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **Electrospun nanofibrous poly-cyclodextrin membrane for efficient removal of polycyclic aromatic hydrocarbons (PAHs) and heavy metals from water**  
Celebioglu A., Topuz F., Yildiz Z., Uyar T.  
ACS Fall National Meeting and Exposition, California, Amerika Birleşik Devletleri, 25 - 29 Ağustos 2019, cilt.258
- II. **Biocompatible Mg-alginate hydrogels: A rheological study**  
Topuz F., Henke A., Richtering W., Möller M., Groll J.  
24th European Conference on Biomaterials, EBS 2011, Dublin, İrlanda, 4 - 08 Eylül 2011
- III. **Maleimide-functional sPEG surfaces for specific tethering of biomolecules**  
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- IV. **Breeding for yellow flower colour**  
Schlangen K., Halbwirth H., Topuz F., Miosic S., Seitz C., Stich K.  
13th European Congress on Biotechnology (ECB 13), Barcelona, İspanya, 16 - 19 Eylül 2007, cilt.131

### Metrikler

Yayın: 61

Atıf (WoS): 1723

Atıf (Scopus): 2247

H-İndeks (WoS): 23

H-İndeks (Scopus): 25

## Ödüller

Topuz F., TÜBA-Üstün Başarılı Genç Bilim İnsanı Ödülleri (GEBİP), Türkiye Bilimler Akademisi, Kasım 2023

Topuz F., ITU - Genç Akademisyen Başarı Ödülü, İstanbul Teknik Üniversitesi, Ocak 2023

Topuz F., BAGEP-Outstanding Young Scientist Award given by Science Academy,, Bilim Akademisi, Mart 2022