

## Asst. Prof. Fuat Topuz

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### Education Information

Doctorate, Rheinisch-Westfaelische Technische Hochschule Aachen, Germany 2010 - 2015

Postgraduate, Technische Universitaet Wien, Technische Chemie , Institute of Chemical, Environmental and Bioscience Engineering, Austria 2006 - 2007

Postgraduate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Turkey 2006 - 2007

Undergraduate, Karadeniz Technical University, Turkey 2000 - 2005

### Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Advances in the development of cyclodextrin-based nanogels/microgels for biomedical applications: Drug delivery and beyond**  
Topuz F., Uyar T.  
Carbohydrate Polymers, vol.297, 2022 (SCI-Expanded)
- II. **Superoleophilic oil-adsorbing membranes based on porous and nonporous fluorinated polyimides for the rapid remediation of oil spills**  
Topuz F., Abdulhamid M. A., Szekely G.  
CHEMICAL ENGINEERING JOURNAL, vol.449, 2022 (SCI-Expanded)
- III. **Rapid Sublingual Delivery of Piroxicam from Electrospun Cyclodextrin Inclusion Complex Nanofibers**  
Topuz F.  
ACS OMEGA, 2022 (SCI-Expanded)
- IV. **Biobased thin-film composite membranes comprising priamine-genipin selective layer on nanofibrous biodegradable polylactic acid support for oil and solvent-resistant nanofiltration**  
Yang C., Topuz F., Park S., Szekely G.  
GREEN CHEMISTRY, vol.24, no.13, pp.5291-5303, 2022 (SCI-Expanded)
- V. **Valorization of Polyethylene Terephthalate (PET) Plastic Wastes as Nanofibrous Membranes for Oil Removal: Sustainable Solution for Plastic Waste and Oil Pollution**  
Topuz F., Oldal D. G., Szekely G.  
INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH, vol.61, no.25, pp.9077-9086, 2022 (SCI-Expanded)
- VI. **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, vol.424, 2022 (SCI-Expanded)
- VII. **Removal of polycyclic aromatic hydrocarbons (PAHs) from water through degradable**

## **polycaprolactone electrospun membrane**

Topuz F.

Turkish Journal of Chemistry, vol.46, no.6, pp.2080-2089, 2022 (SCI-Expanded)

- VIII. **Electrospun Adsorptive Nanofibrous Membranes from Ion Exchange Polymers to Snare Textile Dyes from Wastewater**  
Cseri L., Topuz F., Abdulhamid M. A., Alammari A., Budd P. M., Szekely G.  
ADVANCED MATERIALS TECHNOLOGIES, vol.6, no.10, 2021 (SCI-Expanded)
- IX. **Scavenging organic micropollutants from water with nanofibrous hypercrosslinked cyclodextrin membranes derived from green resources**  
Topuz F., Holtzl T., Szekely G.  
CHEMICAL ENGINEERING JOURNAL, vol.419, 2021 (SCI-Expanded)
- X. **Fast-dissolving antibacterial nanofibers of cyclodextrin/antibiotic inclusion complexes for oral drug delivery**  
Topuz F., Kilic M. E., Durgun E., Szekely G.  
JOURNAL OF COLLOID AND INTERFACE SCIENCE, vol.585, pp.184-194, 2021 (SCI-Expanded)
- XI. **Nanofiber engineering of microporous polyimides through electrospinning: Influence of electrospinning parameters and salt addition**  
Topuz F., Abdulhamid M. A., Holtzl T., Szekely G.  
MATERIALS & DESIGN, vol.198, 2021 (SCI-Expanded)
- XII. **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, vol.55, no.25, pp.11752-11762, 2020 (SCI-Expanded)
- XIII. **Electrospinning Combined with Atomic Layer Deposition to Generate Applied Nanomaterials: A Review**  
Vempati S., Ranjith K. S., Topuz F., Biyikli N., Uyar T.  
ACS APPLIED NANO MATERIALS, vol.3, no.7, pp.6186-6209, 2020 (SCI-Expanded)
- XIV. **Electrospinning of Cyclodextrin Nanofibers: The Effect of Process Parameters**  
Topuz F., Uyar T.  
JOURNAL OF NANOMATERIALS, vol.2020, 2020 (SCI-Expanded)
- XV. **Hierarchically porous electrospun nanofibrous mats produced from intrinsically microporous fluorinated polyimide for the removal of oils and non-polar solvents**  
Topuz F., Abdulhamid M. A., Nunes S. P., Szekely G.  
ENVIRONMENTAL SCIENCE-NANO, vol.7, no.5, pp.1365-1372, 2020 (SCI-Expanded)
- XVI. **Antioxidant, antibacterial and antifungal electrospun nanofibers for food packaging applications**  
Topuz F., Uyar T.  
FOOD RESEARCH INTERNATIONAL, vol.130, 2020 (SCI-Expanded)
- XVII. **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**  
Topuz F., Uyar T.  
NANOSCALE ADVANCES, vol.1, no.10, pp.4082-4089, 2019 (SCI-Expanded)
- XVIII. **Electrospinning of uniform nanofibers of Polymers of Intrinsic Microporosity (PIM-1): The influence of solution conductivity and relative humidity**  
Topuz F., Satilmis B., Uyar T.  
POLYMER, vol.178, 2019 (SCI-Expanded)
- XIX. **RNA-mediated, green synthesis of palladium nanodendrites for catalytic reduction of nitroarenes**  
Topuz F., Uyar T.  
JOURNAL OF COLLOID AND INTERFACE SCIENCE, vol.544, pp.206-216, 2019 (SCI-Expanded)
- XX. **Electrospinning of nanocomposite nanofibers from cyclodextrin and laponite**  
Topuz F., Uyar T.  
COMPOSITES COMMUNICATIONS, vol.12, pp.33-38, 2019 (SCI-Expanded)

- XXI. **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.  
ACS OMEGA, vol.4, no.4, pp.7850-7860, 2019 (SCI-Expanded)
- XXII. **One-step green synthesis of antibacterial silver nanoparticles embedded in electrospun cyclodextrin nanofibers**  
Celebioglu A., Topuz F., Yildiz Z. I., Uyar T.  
CARBOHYDRATE POLYMERS, vol.207, pp.471-479, 2019 (SCI-Expanded)
- XXIII. **Facile and green synthesis of palladium nanoparticles loaded into cyclodextrin nanofibers and their catalytic application in nitroarene hydrogenation**  
Celebioglu A., Topuz F., Uyar T.  
NEW JOURNAL OF CHEMISTRY, vol.43, no.7, pp.3146-3152, 2019 (SCI-Expanded)
- XXIV. **Water-Insoluble Hydrophilic Electrospun Fibrous Mat of Cyclodextrin-Epichlorohydrin Polymer as Highly Effective Sorbent**  
Celebioglu A., Topuz F., Uyar T.  
ACS APPLIED POLYMER MATERIALS, vol.1, no.1, pp.54-62, 2019 (SCI-Expanded)
- XXV. **Electrospinning of Cyclodextrin Functional Nanofibers for Drug Delivery Applications**  
Topuz F., Uyar T.  
PHARMACEUTICS, vol.11, no.1, 2019 (SCI-Expanded)
- XXVI. **Influence of Hydrogen-Bonding Additives on Electrospinning of Cyclodextrin Nanofibers**  
Topuz F., Uyar T.  
ACS OMEGA, vol.3, no.12, pp.18311-18322, 2018 (SCI-Expanded)
- XXVII. **Nanosilicate embedded agarose hydrogels with improved bioactivity**  
Topuz F., Nadernezhad A., Caliskan O. S., Menciloglu Y. Z., Koc B.  
CARBOHYDRATE POLYMERS, vol.201, pp.105-112, 2018 (SCI-Expanded)
- XXVIII. **Cyclodextrin-assisted synthesis of tailored mesoporous silica nanoparticles**  
Topuz F., Uyar T.  
BEILSTEIN JOURNAL OF NANOTECHNOLOGY, vol.9, pp.693-703, 2018 (SCI-Expanded)
- XXIX. **Electrospinning of gelatin with tunable fiber morphology from round to flat/ribbon**  
Topuz F., Uyar T.  
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.80, pp.371-378, 2017 (SCI-Expanded)
- XXX. **Poly-cyclodextrin cryogels with aligned porous structure for removal of polycyclic aromatic hydrocarbons (PAHs) from water**  
Topuz F., Uyar T.  
JOURNAL OF HAZARDOUS MATERIALS, vol.335, pp.108-116, 2017 (SCI-Expanded)
- XXXI. **Cyclodextrin-functionalized mesostructured silica nanoparticles for removal of polycyclic aromatic hydrocarbons**  
Topuz F., Uyar T.  
JOURNAL OF COLLOID AND INTERFACE SCIENCE, vol.497, pp.233-241, 2017 (SCI-Expanded)
- XXXII. **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, vol.41, no.10, pp.4145-4156, 2017 (SCI-Expanded)
- XXXIII. **One-Step Fabrication of Biocompatible Multifaceted Nanocomposite Gels and Nanolayers**  
Topuz F., Bartneck M., Pan Y., Tacke F.  
BIOMACROMOLECULES, vol.18, no.2, pp.386-397, 2017 (SCI-Expanded)
- XXXIV. **DNA Nanogels To Snare Carcinogens: A Bioinspired Generic Approach with High Efficiency**  
Topuz F., Singh S., Albrecht K., Moeller M., Groll J.  
ANGEWANDTE CHEMIE-INTERNATIONAL EDITION, vol.55, no.40, pp.12210-12213, 2016 (SCI-Expanded)
- XXXV. **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, vol.51, pp.64-72, 2015  
(SCI-Expanded)

- XXXVI. **Covalently layer-by-layer assembled homogeneous nanolayers with switchable wettability**  
Topuz F., Moeller M., Groll J.  
POLYMER CHEMISTRY, vol.6, no.25, pp.4690-4697, 2015 (SCI-Expanded)
- XXXVII. **Stimuli-Sensitive Microgels from Native Elastin: An Easy Approach for a Drug Release System**  
Singh S., Topuz F., Albrecht K., Groll J., Moeller M.  
HIERARCHICAL MACROMOLECULAR STRUCTURES: 60 YEARS AFTER THE STAUDINGER NOBEL PRIZE II, vol.262,  
pp.415-430, 2013 (SCI-Expanded)
- XXXVIII. **Embedding of Active Proteins and Living Cells in Redox-Sensitive Hydrogels and Nanogels through Enzymatic Cross-Linking**  
Singh S., Topuz F., Hahn K., Albrecht K., Groll J.  
ANGEWANDTE CHEMIE-INTERNATIONAL EDITION, vol.52, no.10, pp.3000-3003, 2013 (SCI-Expanded)
- XXXIX. **Hydrogels in sensing applications**  
Buenger D., Topuz F., Groll J.  
PROGRESS IN POLYMER SCIENCE, vol.37, no.12, pp.1678-1719, 2012 (SCI-Expanded)
- XL. **Magnesium ions and alginate do form hydrogels: a rheological study**  
Topuz F., Henke A., Richtering W., Groll J.  
SOFT MATTER, vol.8, no.18, pp.4877-4881, 2012 (SCI-Expanded)
- XLI. **Formation of Hydrogels by Simultaneous Denaturation and Cross-Linking of DNA**  
TOPUZ F., Okay O.  
BIOMACROMOLECULES, vol.10, no.9, pp.2652-2661, 2009 (SCI-Expanded)
- XLII. **Chalcone 3-hydroxylation is not a general property of flavonoid 3'-hydroxylase**  
Schlangen K., Miosic S., Topuz F., Muster G., Marosits T., Seitz C., Halbwirth H.  
PLANT SCIENCE, vol.177, no.2, pp.97-102, 2009 (SCI-Expanded)
- XLIII. **Macroporous hydrogel beads of high toughness and superfast responsivity**  
TOPUZ F., Okay O.  
REACTIVE & FUNCTIONAL POLYMERS, vol.69, no.5, pp.273-280, 2009 (SCI-Expanded)
- XLIV. **Rheological Behavior of Responsive DNA Hydrogels**  
TOPUZ F., Okay O.  
MACROMOLECULES, vol.41, no.22, pp.8847-8854, 2008 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Influence of salt addition on polymer-free electrospinning of cyclodextrin nanofibers**  
Topuz F., Celebioglu A., Aytac Z., Uyar T.  
NANO EXPRESS, vol.1, no.2, 2020 (ESCI)
- II. **Nanocomposite Bioinks Based on Agarose and 2D Nanosilicates with Tunable Flow Properties and Bioactivity for 3D Bioprinting**  
Nadernezhad A., Caliskan O. S., Topuz F., Afghah F., Erman B., Koc B.  
ACS APPLIED BIO MATERIALS, vol.2, no.2, pp.796-806, 2019 (ESCI)

## Refereed Congress / Symposium Publications in Proceedings

- 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, United States Of America, 25 - 29 August 2019, vol.258

## **II. 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, Spain, 16 - 19 September 2007, vol.131

### **Metrics**

Publication: 50

Citation (WoS): 1709

Citation (Scopus): 1799

H-Index (WoS): 23

H-Index (Scopus): 23

### **Awards**

Topuz F., ITU - Young Scientist Award, İstanbul Teknik Üniversitesi, January 2023

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