

## Assoc. Prof. İlknur KÜÇÜK

### Personal Information

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### International Researcher IDs

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### Education Information

Doctorate, Yildiz Technical University, Fen Bilimleri, Kimya Mühendisliği, Turkey 1995 - 2001

Postgraduate, Yildiz Technical University, Fen Bilimleri, Kimya Mühendisliği, Turkey 1992 - 1995

Undergraduate, Yildiz Technical University, Mühendislik Fakültesi, Kimya Mühendisliği, Turkey 1988 - 1992

### Foreign Languages

English, C1 Advanced

### Research Areas

Chemical Engineering and Technology, Chemical Technologies, Polymer Technology, Engineering and Technology

### Academic and Administrative Experience

Deputy Head of Department, Yildiz Technical University, Faculty Of Chemical And Metallurgical Engineering, Department Of Chemical Engineering, 2021 - Continues

Deputy Head of Department, Yildiz Technical University, FACULTY OF CHEMICAL AND METALLURGICAL ENGINEERING, Department of Chemical Engineering, 2004 - 2009

### Courses

#### Doctorate

Polymer Structure and Properties, Doctorate, 2018 - 2019, 2016 - 2017, 2015 - 2016

#### Undergraduate

Basic Computer Science, Undergraduate, 2018 - 2019

Chemical Engineering Laboratory III, Undergraduate, 2018 - 2019

Chemical Engineering Laboratory III, Undergraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015

Basic Computer Science, Undergraduate, 2017 - 2018, 2014 - 2015  
Computer Applications in Chemical Engineering, Undergraduate, 2018 - 2019  
Introduction to Chemical Engineering, Undergraduate, 2018 - 2019, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2010 - 2011, 2009 - 2010, 2008 - 2009, 2006 - 2007  
Computer Applications in Chemical Engineering, Undergraduate, 2016 - 2017, 2015 - 2016  
Membrane and Membrane Processes, Undergraduate, 2013 - 2014  
Chemical Reaction Engineering, Undergraduate, 2006 - 2007, 2005 - 2006, 2004 - 2005  
**Associate Degree**  
Genel Kimya, Associate Degree, 2010 - 2011, 2009 - 2010, 2008 - 2009, 2007 - 2008, 2006 - 2007, 2005 - 2006

## Supervised Theses

Küçük İ., Çeşitli dolguların kullanılması ile polimerik esaslı membranların hazırlanması ve karakterizasyonu, Postgraduate, A.Bekir(Student), Continues  
Küçük İ., Gıda ambalajı olarak yenilebilir biokompozit filmlerin geliştirilmesi, Postgraduate, F.ŞAHİN(Student), 2019  
Küçük İ., Yara Örtücü Kitosan Jelatin İçerikli Biyokompozit Film Eldesi ve Karakterizasyonu, Postgraduate, N.YILDIRIM(Student), 2018  
Küçük İ., Alginat esaslı hibrit taneciklerle ağır metal giderimi, Postgraduate, I.ULUTAŞ(Student), 2017  
Küçük İ., Akrilik Esaslı Bir Çapraz Bağlayıcı Sentezine Etki Eden Parametrelerin İncelenmesi, Postgraduate, S.SERT(Student), 2010  
Küçük İ., Polimerik esaslı dış dolgu kompozitlerinin kompozitlerinin özelliklerine çeşitli doldurucu partiküllerin etkisi, Postgraduate, Ç.YÜKSEL(Student), 2010  
Küçük İ., Polimerik esaslı dental maddelerin sentez ve karakterizasyonu, Postgraduate, S.ÖZTÜRK(Student), 2008  
Küçük İ., Dental amaçlı polimerik kompozitlerin sentez ve karakterizasyonu, Postgraduate, Z.KARA(Student), 2008  
Küçük İ., Akrilik esaslı gözenekli polimerler ile çevreye zararlı maddelerin giderimi, Postgraduate, A.Elif(Student), 2008

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

- I. **Efficient Separation of Oil-Water and Fatty Alcohol-Water Emulsions by Vacuum Filtration Using Bacterial Cellulose Membranes**  
Çalhan A., Hasanoglu A., KÜÇÜK İ., GÜNDÜZ O.  
Journal of Environmental Engineering (United States), vol.151, no.1, 2025 (SCI-Expanded)
- II. **Optimization of adaptive neuro-fuzzy inference system (ANFIS) parameters via Box-Behnken experimental design approach: The prediction of chromium adsorption**  
DURANOĞLU DİNÇER D., Sinan Altın E., KÜÇÜK İ.  
Heliyon, vol.10, no.3, 2024 (SCI-Expanded)
- III. **Ultrasonic supported dye removal by a novel biomass**  
Gulen J., Küçük İ., Yalcin B. S., Çelik S. E., Özgür M.  
ZEITSCHRIFT FÜR PHYSIKALISCHE CHEMIE-INTERNATIONAL JOURNAL OF RESEARCH IN PHYSICAL CHEMISTRY & CHEMICAL PHYSICS, vol.236, pp.1651-1670, 2022 (SCI-Expanded)
- IV. **pH -responsive double network alginate/kappa-carrageenan hydrogel beads for controlled protein release: Effect of pH and crosslinking agent**  
Sariyer S., Duranoğlu D., Doğan Ö., Küçük İ.  
JOURNAL OF DRUG DELIVERY SCIENCE AND TECHNOLOGY, vol.56, 2020 (SCI-Expanded)
- V. **Preparing and characterization of St.John's Wort (Hypericum perforatum) incorporated wound dressing films based on chitosan and gelatin**  
Yildirim N., KÜÇÜK İ.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.35, no.1, pp.127-135, 2020 (SCI-Expanded)

- VI. **Development of chitosan-based edible biocomposite films incorporated with Kumquat peels extract as food packaging**  
Şahin F., Küçük İ., Doymaz İ.  
JOURNAL OF THE INDIAN CHEMICAL SOCIETY, vol.96, no.9, pp.1211-1216, 2019 (SCI-Expanded)
- VII. **Pretreatments and temperature effects on the drying kinetics of peas**  
DOYMAZ İ., KÜÇÜK İ.  
BULGARIAN CHEMICAL COMMUNICATIONS, vol.49, pp.90-97, 2017 (SCI-Expanded)
- VIII. **Extrusion of poly(ether imide) foams using pressurized CO<sub>2</sub>: Effects of imposition of supercritical conditions and nanosilica modifiers**  
Aktas S., Gevgilili H., Küçük İ., Sunol A., Kalyon D. M.  
Polymer Engineering And Science, vol.54, no.9, pp.2064-2074, 2014 (SCI-Expanded)
- IX. **Effects of dispersion and deformation histories on rheology of semidilute and concentrated suspensions of multiwalled carbon nanotubes**  
Kucuk I., Gevgilili H., Kalyon D. M.  
JOURNAL OF RHEOLOGY, vol.57, no.5, pp.1491-1514, 2013 (SCI-Expanded)
- X. **Preparation of Fe oxide nanoparticles for environmental applications: arsenic removal**  
BEKER Ü., Cumbal L., DURANOĞLU D., KÜÇÜK İ., Sengupta A. K.  
ENVIRONMENTAL GEOCHEMISTRY AND HEALTH, vol.32, no.4, pp.291-296, 2010 (SCI-Expanded)
- XI. **The effect of mixed diluent on the porous structure of crosslinked PMMA beads**  
Aykurt M., Kucuk I., Kuyulu A.  
POLYMER BULLETIN, vol.44, no.3, pp.325-330, 2000 (SCI-Expanded)
- XII. **Effect of diluents on the porous structure of crosslinked poly(methyl methacrylate) beads**  
Küçük İ., Kuyulu A., Okay O.  
POLYMER BULLETIN, vol.35, pp.511-516, 1995 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Investigation of Mass Transfer in Infrared Drying of Ahlat Pears: Experimental and Modelling Approaches**  
Alshamhazı O., Küçük İ., Doymaz İ.  
BULGARIAN CHEMICAL COMMUNICATIONS, vol.56, no.3, pp.228-232, 2024 (Scopus)
- II. **Polysaccharide-based films for transdermal drug delivery systems**  
Ekşi D., AKYOL E., KÜÇÜK İ.  
Bulgarian Chemical Communications, vol.55, no.3, pp.289-294, 2023 (Scopus)
- III. **Preparation of modified polyethersulfone membranes for hemodialysis**  
Kahraman Ö., Phoo M., Küçük İ., Hasanoglu A.  
Bulgarian Chemical Communications, vol.54, no.3, pp.242-246, 2022 (Scopus)
- IV. **Potansiyel Bir Adsorban Olarak Perlit İçeren Polisakkarit Esaslı Küresel Hibrit Tanecikler**  
Küçük İ., Sarısakal İ.  
Avrupa Bilim ve Teknoloji Dergisi, vol.20, pp.216-222, 2020 (Peer-Reviewed Journal)
- V. **Experimental and Modeling Investigation of Mass Transfer during Infrared Drying of Kumquat Slices**  
Küçük İ., Doymaz İ.  
Adıyaman Üniversitesi Fen Bilimleri Dergisi, vol.9, no.1, pp.48-65, 2019 (Peer-Reviewed Journal)

## Papers Published in Refereed Scientific Meetings

- I. **Experimental and modeling investigation of mass transfer during hot air drying of Ahlat pear**  
Alshamhazı O. T., Küçük İ., Doymaz İ.  
2nd International Karatekin Science and Technology Conference, Çankırı, Turkey, 21 - 22 December 2023, pp.75-

- II. **Hot Air Drying of Celery: Drying Kinetics, Pretreatment Effect and Color Changes**  
Kurt C., Küçük İ., Doymaz İ.  
9th Jordan International Chemical Engineering Conference (JICHEC9), Amman, Jordan, 12 October 2021 - 14 January 2022, pp.761-768
- III. **DRYING KINETICS OF PEAR SLICES IN A CABINET DRYER**  
Doymaz İ., Küçük İ.  
5TH INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING, İstanbul, Turkey, 17 December 2019 - 19 January 2020, pp.1466-1472
- IV. **Water Purification by a Biomass Adsorbent under Ultrasonic Effect**  
Gülen F. J., Küçük İ., Salt İ., Saygı Yalçın B.  
, 5. International Turkic World Conference on Chemical Science and Technologies, ITWCCST 2019 Conference, Sakarya, Turkey, 25 - 29 October 2019, pp.11-12
- V. **Development of Chitosan-Based Edible Biocomposite Films Incorporated with Kumquat Peels Extract as Food Packaging**  
Sahin F., Küçük İ., Doymaz İ.  
5th International Conference on New Trends in Chemistry (ICNTC), Athens, Greece, 22 April 2019
- VI. **Drying Kinetics of Pea in an Infrared Dryer**  
DOYMAZ İ., KÜÇÜK İ.  
4th Conference on Advances in Mechanical Engineering (ICAME), İstanbul, Turkey, 19 December 2018, pp.624-630
- VII. **Development and Characterization of Propolis Incorporated Films as Wound Dressing Materials**  
Yıldırım N., Küçük İ.  
5th International conference on materials science and nanotechnology for next generation (MSNG2018), Nevşehir, Turkey, 4 - 06 October 2018, pp.291
- VIII. **Hot-air Drying of Kumquat Slices in Convective Cabinet Dryer**  
KÜÇÜK İ., DOYMAZ İ.  
4th International Conference on New Trends in Chemistry, St. Petersburg, Russia, 11 May 2018, pp.52
- IX. **Edible Films Based on Chitosan: Preparation and Physico-Chemical Evaluation**  
Şahin F., Hut N. G., Özçelik G. H., KÜÇÜK İ., DOYMAZ İ.  
4th International Conference on New Trends in Chemistry, St. Petersburg, Russia, 11 May 2018, pp.103
- X. **Experimental and Modeling Investigation of Mass Transfer for Kumquat Slices during Infrared Drying**  
KÜÇÜK İ., DOYMAZ İ.  
International Eurasian Conference on Biological and Chemical Sciences, Ankara, Turkey, 26 April 2018, pp.297
- XI. **Preparation and Characterization of Wound Dressing Biocomposite Film based on Chitosan and Gelatin**  
YILDIRIM N., KÜÇÜK İ.  
3rd INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING, İstanbul, Turkey, 19 December 2017, pp.237
- XII. **Modeling of Mushroom Drying in A Closed Loop Heat Pump Dryer**  
DOYMAZ İ., Tunçalp C., KÜÇÜK İ.  
International Conference on Engineering Technologies, Konya, Turkey, 07 December 2017, pp.108
- XIII. **Characterization of Zeolite 5A Filled-Sodium Alginate Membranes Prepared for Dehydration of Aqueous Organic Mixtures by Pervaporation**  
Saka T., SALT Y., KÜÇÜK İ.  
4th International conference on materials science and nanotechnology for next generation (MSNG2017), Saraybosna, Bosnia And Herzegovina, 28 June 2017, pp.69
- XIV. **Removal of copper by hybrid gel beads based on biopolymers and Perlite**  
KÜÇÜK İ., Ulutas İ.  
3rd International Conference on New Trends in Chemistry (ICNTC), Helsinki, Finland, 28 April 2017, pp.92
- XV. **The Controlled Release of Bovine Serum Albumin From Polysaccharide Based Hydrogel Beads**

- Sariyer S., Duranođlu D., Dođan Ö., Küçük İ.  
3rd International Conference on New Trends in Chemistry (ICNTC), Helsinki, Finland, 28 April 2017, pp.96
- XVI. **Adsorption Of Bovine Serum Albumin (BSA) On Hydrogel Beads**  
Sariyer S., Küçük İ., Duranođlu D., Dođan Ö.  
International Conference on Energy and Thermal Engineering, İstanbul, Turkey, 25 April 2017, pp.299
- XVII. **Alginate Esaslı Hibrit Taneciklerle Ağır Metal Giderimi**  
Ulutas I., KÜÇÜK İ.  
12. Ulusal Kimya Mühendisliği Kongresi, İzmir, Turkey, 23 August 2016, pp.394
- XVIII. **Production of Iron Oxide Coated Modified Activated Carbon**  
Duranođlu Gulbayır D., Avcı A. O., Beker Ü., Küçük İ.  
Carbon 2008, Nagano, Japan, 13 July 2008, pp.327
- XIX. **Removal of Heavy Metals Using Activated Carbon Prepared From Cornelian Cherry Stones**  
Küçük İ., Duranođlu Dinçer D., Beker Ü.  
Carbon 2006, Aberdeen, United Kingdom, 16 July 2006, pp.1-4
- XX. **Separation Behaviour of pH Sensitive Gels in Various Mixtures**  
KÜÇÜK İ., KUYULU A.  
8 th International Symposium on Polymers for Advanced Technologies, Budapes, Hungary, 13 September 2005, pp.115
- XXI. **Characterization of Activated Carbon Prepared From Cornelian Cherry Stones by Chemical Activation**  
Küçük İ., Duranođlu D., Beker Ü.  
Carbon 2005, Gyeonggi-Do, South Korea, 03 July 2005, pp.291
- XXII. **Removing boron and polycyclic aromatic hydrocarbons from water**  
KÜÇÜK İ., PEKGUNDUZ S., BEKER Ü., GUNER F., ERCIYES A., KUYULU A.  
23 rd Discussion Conference Current and Future Trends in Polymeric Materials, Prag, Czech Republic, 26 June 2005, pp.12
- XXIII. **Various Methacrylate Polymers for use in Dental Composites**  
KÜÇÜK İ., SARAÇ A., KEYF S., YILDIRIM H.  
23 rd Discussion Conference Current and Future Trends in Polymeric Materials, Prag, Czech Republic, 26 June 2005, pp.11
- XXIV. **VARIOUS METHACRYLATE POLYMERS FOR USE DENTAL COMPOSITES**  
KÜÇÜK İ., SARAÇ A., KEYF S., YILDIRIM H.  
23. CURRENT AND FUTURE TRENDS IN POLYMERIC MATERIALS, 2005, PRAG, Czech Republic, 26 - 30 June 2005, pp.11
- XXV. **DİŞ RESTORASYON MALZEMELERİNDE POLİMER MATRİSKLER**  
KÜÇÜK İ., SARAÇ A., KEYF S., YILDIRIM H.  
2004 INTERNATIONAL WORKSHOP ON BIOENGINEERING PROMISES AND PERSPECTIVES, İstanbul, Turkey, 20 - 23 October 2004, pp.103-104
- XXVI. **Akrilik Asit Esaslı Süper Absorban Polimerlerin Absorpsiyon Özelliğine Akrilik Asitin Nötralizasyonunda Kullanılan NaOH ve KOH in Etkisinin İncelenmesi**  
İSMAİL O., KÜÇÜK İ., Abdülkadir K.  
V. Ulusal Kimya Mühendisliği Kongresi, Ankara Üniversitesi, ANKARA, Ankara, Turkey, 2 - 05 September 2002
- XXVII. **Characterization of Temperature Sensitive Polymer Gels in the Ethyl alcohol Water and N N Dimethyl Acetamide-Water Mixtures**  
KÜÇÜK İ., KUYULU A.  
Polymers in the Third Millennium, Montpellier, France, 02 September 2001, pp.101
- XXVIII. **The Effect of PEG on the Water Absorption Capacity and Rate of Water Absorption of Super Absorbent Polymers Based on Acrylic Acid**  
İSMAİL O., Küçük İ., Kuyulu A.  
Polymers in the Third Millennium, Montpellier, France 2-6 September , Université Montpellier II, 2001., 01 September 2001

- XXIX. **İnvers Süspansiyon Polimerizasyonu Tekniđi ile Elde Edilen Akrilik Asit Esaslı Süper Absorban Polimerlerin Sentezi ve Karakterizasyonu**  
İSMAİL O., Küçük İ., Kuyulu A.  
XIII. Ulusal Kimya Kongresi, 31 Ağustos-4 Eylül, Ondokuz Mayıs Üniversitesi, SAMSUN, 01 September 1999
- XXX. **İnvers Süspansiyon Polimerizasyonu Tekniđi ile Elde Edilen Akrilik Asit Esaslı Süper Absorban Polimerlerin Bitki ve Toprak Üzerindeki Etkilerinin İncelenmesi**  
İSMAİL O., Küçük İ., Kuyulu A.  
XIII. Ulusal Kimya Kongresi, 31 Ağustos-4 Eylül, Ondokuz Mayıs Üniversitesi, SAMSUN, 01 September 1999

## Supported Projects

- AKYOL E., Aydın H., KÜÇÜK İ., Günay E., Mutlu H., Project Supported by Higher Education Institutions, Hidroksi Etil Selüloz Bazlı Özgün Transdermal Yama Formülasyonlarının Geliştirilmesi ve Donepezil Hidroklörürün İn Vitro Salım Kinetiđinin İncelenmesi, 2021 - 2024
- KÜÇÜK İ., AKYOL E., Günay E., Özensoy Turan Ş. A., Ekşi D., Project Supported by Higher Education Institutions, DOĞAL BİLEŞENLER İÇEREN BİYOPOLİMERİK LİF TRANSDERMAL YAMALARIN HAZIRLANMASI KARAKTERİZASYONU VE YAMA BİLEŞİMİNİN DONEPEZİL HCl SALINIMINA ETKİSİ, 2021 - 2024
- KÜÇÜK İ., Project Supported by Higher Education Institutions, Alginat Esaslı Hibrit Taneciklerin Sentezi ve Ağır Metal Gideriminde Kullanımları, 2014 - 2017
- Beker Ü., Duranođlu Dinçer D., Küçük İ., TÜBİTAK International Bilateral Joint Cooperation Program Project, Su ve Proses Teknolojisi için Magnetik Özellikli Mikro ve Nano Boyutlu Sorbentlerin Sentezi ve Uygulamaları, 2008 - 2010
- KÜÇÜK İ., DURANOĐLU DİNÇER D., Project Supported by Higher Education Institutions, Farklı Karakterdeki Adsorbanlar ile Çevreye Zararlı Organiklerin Giderimi,, 2005 - 2007
- Küçük İ., Beker Ü., TÜBİTAK International Bilateral Joint Cooperation Program Project, Nanoboyutlu manyetik dağıtılmış polimer partiküllerin hazırlanması ve çevresel uygulamaları, 2002 - 2005

## Peer Reviews in Scientific Publications

- Gazi Üniversitesi Mühendislik-Mimarlık Fakültesi Dergisi, National Scientific Refreed Journal, February 2017
- Sigma Journal of Engineering and Natural Sciences, National Scientific Refreed Journal, January 2017

## Scientific Research / Working Group Memberships

- Highly Filled Materials Institute, Stevens Institute of Technology, Amerika Birleşik Devletleri,  
<http://www.hfmi.stevens.edu/>, 2011 - 2013

## Metrics

- Publication: 54  
Citation (WoS): 61  
Citation (Scopus): 132  
H-Index (WoS): 4  
H-Index (Scopus): 5

## Non Academic Experience

- Stevens Inst. of Technology, Ziyaretçi Araştırmacı

İstanbul Sanayi Odası, Teknik Danışman  
Wroclaw University of Technology, Ziyaretçi Araştırmacı