

Assoc. Prof. Mehmet Murat ÖZMEN

Personal Information

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Education Information

Post Doctorate, The University of Melbourne, Melbourne School of Engineering, Department of Chemical and Biomolecular Engineering, Australia 2014 - 2015

Doctorate, Istanbul Technical University, İtü Fen Bilimleri Enstitüsü, Polimer Bilimi Ve Teknolojisi, Turkey 2002 - 2009

Postgraduate, Istanbul Technical University, İtü Fen Bilimleri Enstitüsü, Polimer Bilimi Ve Teknolojisi, Turkey 2000 - 2002

Undergraduate, Kocaeli University, Fen-Edebiyat Fak., Kimya, Turkey 1996 - 2000

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Synthesis of macroporous hydrogels from frozen monomer solutions and their characterization, İstanbul Teknik Üniversitesi, İtü Fen Bilimleri Enstitüsü, Polimer Bilimi Ve Teknolojisi, 2009

Postgraduate, Swelling properties and elastic behavior of temperature sensitive ionic poly(N-Tbutylacrylamide-co-acrylamide) hydrogels, İstanbul Teknik Üniversitesi, İtü Fen Bilimleri Enstitüsü, Polimer Bilimi Ve Teknolojisi, 2002

Research Areas

Tissue Engineering, Biomaterials, Polymers and Their Applications, Medical Applications of Polymers

Academic Titles / Tasks

Associate Professor, Yildiz Technical University, Kimya-Metalurji Fakültesi, Biyomühendislik Bölümü, Biyomühendislik, 2018 - Continues

Assistant Professor, Yildiz Technical University, Kimya-Metalurji Fakültesi, Biyomühendislik Bölümü, Biyomühendislik, 2012 - 2018

Courses

Polymer Science and Technology, Undergraduate, 2020 - 2021

Biopolymers, Undergraduate, 2020 - 2021

Biomaterials, Undergraduate, 2020 - 2021

Biomedical Polymers, Doctorate, 2020 - 2021
Tissue Engineering, Undergraduate, 2017 - 2018

Advising Theses

- Özmen M. M., Nişasta nanojellerinin sentezi karakterizasyonu ve antimikrobiyal aktivitesinin belirlenmesi, Postgraduate, P.SARAÇOĞLU(Student), 2022
- Özmen M. M., Abdurrahmanoğlu S., FARKLI ZİNCİR UZUNLUKLARINA SAHİP KİLLEYİCİ AJANLARLA POLİ(4-VİNİL PİRİDİN-CO-N-VİNİL PİROLİDON) KOPOLİMERİNİN KUARTERNİZASYONU VE ANTİBAKTERİYEL UYGULAMALARI, Postgraduate, D.GÖKKAYA(Student), 2019
- Özmen M. M., SICAK ERİYİK EKSTRÜZYON TEKNOLOJİSİ İLE POSAKONAZOL ETKEN MADDESİNİN ÇÖZÜNÜRLÜĞÜNÜ ARTIRMAK İÇİN HİDROFİLİK POLİMERLERİN KULLANIMI, Postgraduate, A.AKINCIOĞLU(Student), 2019
- Özmen M. M., CONTRA PREPARATION APPROACHES TO OBTAIN ALGINATE HYDROGELS AS ADSORBENTS, Postgraduate, S.Hafizoğlu(Student), 2019
- ÖZMEN M. M., BİYOPOLİOL BAZLI POLİÜRETAN YARI SERT KÖPÜKLERİN ÜRETİMİ VE KARAKTERİZASYONU, Postgraduate, G.Balamut(Student), 2018
- ÖZMEN M. M., Core-Crosslinked Amphiphilic Block Copolymer Micelles For Antibacterial Applications, Postgraduate, M.Şeyma(Student), 2018
- ÖZMEN M. M., Gaz Köpüklendirme Yöntemi Kullanılarak Polietilen Glikol Bazlı Doku İskelelerinin Sentezi, Postgraduate, B.Aytuğrul(Student), 2016
- ÖZMEN M. M., Hiyerarşik Gözenekli İskelelerin Doğal Polimerler Kullanılarak Doku Mühendisliği Uygulamaları İçin Hazırlanması, Postgraduate, T.Şen(Student), 2016
- ÖZMEN M. M., Doku İskeleleri olarak Protein Bazlı Biyokompozit Kriyojeller, Postgraduate, K.Burcu(Student), 2016

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Excellent cyclic stability of symmetric and asymmetric supercapacitors constructed by graphene deposited Cu and Ni electrodes**
YARGI Ö., ÖZMEN M. M., Buyukpehlivan S., Gelir A.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.46, no.14, pp.20801-20810, 2022 (SCI-Expanded)
- II. **Antimicrobial cryogel dressings towards effective wound healing**
Akın B., Özmen M. M.
PROGRESS IN BIOMATERIALS, vol.1, no.1, pp.1, 2022 (SCI-Expanded)
- III. **Highly Effective Covalently Crosslinked Composite Alginate Cryogels for Cationic Dye Removal**
Sezen S., Kumar Thakur V., Özmen M. M.
GELS, vol.7, no.4, pp.178, 2021 (SCI-Expanded)
- IV. **Antibacterial properties of cationic copolymers as a function of pendant alkyl chain length and degree of quaternization**
Gokkaya D., TOPUZOĞULLARI M., Arasoglu T., Trabzonlu K., ÖZMEN M. M., Abdurrahmanoglu S.
POLYMER INTERNATIONAL, vol.70, no.6, pp.829-836, 2021 (SCI-Expanded)
- V. **Starch Based Nanogels: From Synthesis To Miscellaneous Applications**
Saracoglu P., Özmen M. M.
Starch-Starke, vol.1, no.1, pp.1, 2021 (SCI-Expanded)
- VI. **Core-crosslinking as a pathway to develop inherently antibacterial polymeric micelles**
Kadayifci M. S., Gokkaya D., Topuzoğulları M., Isoglu S. D., Atabey ., Arasoğlu T., Özmen M. M.
JOURNAL OF APPLIED POLYMER SCIENCE, vol.137, 2020 (SCI-Expanded)
- VII. **Tough and hierarchical porous cryogel scaffolds preparation using n-butanol as a non-solvent**
Sen T., Ozcelik B., Özmen M. M.
INTERNATIONAL JOURNAL OF POLYMERIC MATERIALS AND POLYMERIC BIOMATERIALS, vol.68, pp.411-416,

2019 (SCI-Expanded)

- VIII. **Sulfur Chemistry in Polymer and Materials Science**
Mutlu H., Ceper E. B., Li X., Yang J., Dong W., ÖZMEN M. M., Theato P.
MACROMOLECULAR RAPID COMMUNICATIONS, vol.40, no.1, 2019 (SCI-Expanded)
- IX. **Hierarchical porous hybrid chitosan scaffolds with tailorable mechanical properties**
Sen T., Ozcelik B., Qiao G. G., Özmen M. M.
MATERIALS LETTERS, vol.209, pp.528-531, 2017 (SCI-Expanded)
- X. **Polypeptide-Based Macroporous Cryogels with Inherent Antimicrobial Properties: The Importance of a Macroporous Structure**
Shirbin S. J., Lam S. J., Chan N. J., Ozmen M. M., Fu Q., O'Brien-Simpson N., Reynolds E. C., Qiao G. G.
ACS MACRO LETTERS, vol.5, no.5, pp.552-557, 2016 (SCI-Expanded)
- XI. **A rapid and facile preparation of novel macroporous silicone-based cryogels via photo-induced thiol-ene click chemistry**
Ozmen M. M., Fu Q., Kim J., Qiao G. G.
CHEMICAL COMMUNICATIONS, vol.51, no.98, pp.17479-17482, 2015 (SCI-Expanded)
- XII. **Highly Efficient Method Towards In Situ Immobilization of Invertase Using Cryogelation**
Olcer Z., ÖZMEN M. M., Sahin Z. M., Yilmaz F., Tanriseven A.
APPLIED BIOCHEMISTRY AND BIOTECHNOLOGY, vol.171, no.8, pp.2142-2152, 2013 (SCI-Expanded)
- XIII. **Formation of macroporous poly(acrylamide) hydrogels in DMSO/water mixture: Transition from cryogelation to phase separation copolymerization**
Ozmen M. M., Okay O.
REACTIVE & FUNCTIONAL POLYMERS, vol.68, no.10, pp.1467-1475, 2008 (SCI-Expanded)
- XIV. **Preparation of macroporous poly(acrylamide) hydrogels in DMSO/water mixture at subzero temperatures**
Ozmen M. M., Dinu M. V., Okay O.
POLYMER BULLETIN, vol.60, pp.169-180, 2008 (SCI-Expanded)
- XV. **Preparation of macroporous acrylamide-based hydrogels: Cryogelation under isothermal conditions**
Ozmen M. M., Dinu M. V., Dragan E. S., OKAY O.
JOURNAL OF MACROMOLECULAR SCIENCE PART A-PURE AND APPLIED CHEMISTRY, vol.44, pp.1195-1202, 2007 (SCI-Expanded)
- XVI. **Freezing as a path to build macroporous structures: Superfast responsive polyacrylamide hydrogels**
Dinu M. V., Ozmen M. M., Dragan E. S., OKAY O.
POLYMER, vol.48, no.1, pp.195-204, 2007 (SCI-Expanded)
- XVII. **Superfast responsive ionic hydrogels: Effect of the monomer concentration**
Ozmen M. M., OKAY O.
JOURNAL OF MACROMOLECULAR SCIENCE PART A-PURE AND APPLIED CHEMISTRY, vol.43, no.8, pp.1215-1225, 2006 (SCI-Expanded)
- XVIII. **Swelling deswelling kinetics of ionic poly acrylamide hydrogels and cryogels**
CEYLAN TUNCABOYLU D., ÖZMEN M. M., Okay O.
Journal Of Applied Polymer Science, vol.99, pp.319-325, 2006 (SCI-Expanded)
- XIX. **Superfast responsive ionic hydrogels with controllable pore size**
Ozmen M. M., OKAY O.
POLYMER, vol.46, no.19, pp.8119-8127, 2005 (SCI-Expanded)
- XX. **Non-Gaussian elasticity of poly(2-acrylamido-2-methylpropane sulfonic acid) gels**
ÖZMEN M. M., OKAY O.
POLYMER BULLETIN, vol.52, pp.83-90, 2004 (SCI-Expanded)
- XXI. **Swelling behavior of strong polyelectrolyte poly(N - t -butylacrylamide-co-acrylamide) hydrogels**
Ozmen M. M., Okay O.
European Polymer Journal, vol.39, no.5, pp.877-886, 2003 (SCI-Expanded)

Books & Book Chapters

I. Polymeric Biomaterials

Şen T., Özmen M. M.

in: Biomaterials, S.YuceI,P.Terzioğlu,İ. Göker, Editor, Nobel Yayın Dağıtım, İstanbul, pp.391-418, 2022

Refereed Congress / Symposium Publications in Proceedings

I. SYNTHESIS AND CHARACTERIZATION OF POLYMERIC NANOPARTICLE EMBEDDED CATIONIC CRYOGELS

Daaboul M., Topuzoğulları M., Özmen M. M.

ULUSLARARASI KATILIMLI VIII. POLİMER BİLİM ve TEKNOLOJİ KONGRESİ, Malatya, Turkey, 20 - 23 June 2022, pp.121

II. Nişasta-Polietilen Glikol Diglisidil Eter Nanojellerinin Sentezi Ve Karakterizasyonu

Saracoglu P., Topuzoğulları M., Özmen M. M.

33. Ulusal Kimya Kongresi, 7 - 09 October 2021, pp.1

III. Asymmetric and Symmetric Coin cell Capacitors by Deposition of Graphene for Energy Storage Applications

Yargı Ö., Özmen M. M., Büyükpehlivan S., Gelir A.

TUBA World Conference on Energy Science and Technology (TUBA WCEST-2021), İstanbul, Turkey, 8 - 12 August 2021, pp.257

IV. Dielectric Spectroscopy of Ovalbumin Under Different Temperatures

Serin M., Yakut Ş., Çalışkan M., Ulutaş H. K., Bozoğlu Parto D., Ulutaş D., Özmen M. M.

Turkish Physical Society 35th International Physics Congress, Muğla, Turkey, 4 - 08 September 2019, vol.1, no.1, pp.336

V. Solubility and Dissolution Enhancement of Posaconazole with Polymethacrylate Carrier using Hot Melt Extrusion

Akincioglu A., ÖZMEN M. M.

2nd International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2019), 28 - 29 June 2019

VI. Farklı zincir uzunluklarına sahip alkilleyici ajanlarla Poli(4-Vinilpiridin-ko-N-Vinil Prolidon) kopolimerlerinin kuarternizasyonu ve antibakteriyel uygulamaları

Gökkaya D., Topuzoğulları M., ÖZMEN M. M., Arasoğlu T., Trabzonlu K., Abdurrahmanoğlu S.

2nd International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2019), 28 - 29 June 2019

VII. Highly effective alginate-based composite cryogels as adsorbents for dye removal

ÖZMEN M. M., Hafizoğlu S.

2nd International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2019), 28 - 29 June 2019

VIII. ESSENTIAL OIL LOADED ANTIMICROBIAL THERMOPLASTIC ELASTOMERS

Pamukoğulları B., Öner T., ÖZMEN M. M.

35th International Conference of the Polymer Processing Society, 26 - 30 May 2019

IX. Post-Crosslinked Alginate/Montmorillonite Composite Hydrogels for Methylene Blue Removal

Hafizoğlu S., ÖZMEN M. M.

4th International Mediterranean Science and Engineering Congress, 25 - 27 April 2019

X. Kuarternize Edilmiş (4-vinilpiridin-ko-N-vinilpirolidon) Kopolimerinin Antimikrobiyal Uygulamaları

Gökkaya D., Topuzoğulları M., ÖZMEN M. M., Arasoğlu T., Trabzonlu K., Abdurrahmanoğlu S.

IV. Yaşam Bilimleri Kongresi, Turkey, 22 - 23 February 2019

XI. Core-Crosslinked Block Copolymer Micelles for Antibacterial Applications

Kadayıfçı M. Ş., TOPUZOĞULLARI M., Gökkaya D., ATABEY T., ARASOĞLU T., ÖZMEN M. M.

ANCON, 5 - 07 October 2017

- XII. **DIELECTRIC PROPERTIES OF POLYETHYLENE GLYCOL BASED SCAFFOLDS PREPARED VIA GAS FOAMING METHOD**
Serin M., Özmen M. M., Ulutaş K., Bozoglu D., Caliskan M., Aytugrul B., Değer D.
Türk Fizik Derneği 33. Uluslararası Fizik Kongresi, Muğla, Turkey, 6 - 10 September 2017
- XIII. **DIELECTRIC CHARACTERIZATION OF NATURAL POLYMER BASED HIERARCHICAL POROUS SCAFFOLDS**
Serin M., Özmen M. M., Ulutaş K., Bozoglu D., Caliskan M., Sen T., Deger D.
Türk Fizik Derneği 33. Uluslararası Fizik Kongresi, Muğla, Turkey, 6 - 10 September 2017
- XIV. **Characterisation of Immobilized Geobacillus Stearothermophilus L-Arabinose Isomerase**
Kizilcay Z. N., Holsbeek M. V., ÖZMEN M. M., De Voorde I. V.
6th International Congress on Food, Agricultural, Biological and Medical Sciences, İstanbul, Turkey, 17 May 2017, pp.256
- XV. **Polietilen Glikol Bazlı Biyokompozit Süngerlerin Gaz Köpüklendirme Yöntemi ile Üretimi**
Aytugrul B., Ozcelik B., ÖZMEN M. M.
12. Ulusal Kimya Mühendisliği Kongresi, İzmir, Turkey, 23 August 2016
- XVI. **Polyelectrolyte Complexes of poly(4-vinylpyridine)-g-poly(ethyleneglycol) with C-myc Antisense Oligonucleotide as a Potential Non-viral Vector**
Topuzogullari M., Gokkaya D., ÖZMEN M. M.
46th IUPAC World Polymer Congress, İstanbul, Turkey, 17 July 2016, pp.206
- XVII. **Preparation and Antimicrobial Properties of Macroporous Polypeptide-Based Cryogels**
ÖZMEN M. M., Shirbin S. J., Lam S. J., Fu Q., Chan N. J., O'brien Simpson N., Reynolds E. C., Qiao G. G.
46th IUPAC World Polymer Congress, İstanbul, Turkey, 17 July 2016, pp.150
- XVIII. **Hierarchical Porous Ovalbumin-Chitosan Cryogel Scaffolds for Tissue Engineering Applications**
Sen T., Ozcelik B., ÖZMEN M. M.
46th IUPAC World Polymer Congress, İstanbul, Turkey, 17 July 2016, pp.200
- XIX. **Novel Polydimethylsiloxane Based Cryogels via Low Temperature Photoclick Thiol-ene Coupling**
ÖZMEN M. M., Fu Q., Qiao G. G.
35th Australasian Polymer Symposium, Gold Coast, Australia, 10 July 2015, pp.42
- XX. **Ovalbumin Biocomposite Cryogels as Tissue Engineering Scaffolds**
Kutuk K. B., ÖZMEN M. M., Patterson J.
11th International Symposium on Frontiers in Biomedical Polymers, Trento / Riva Del Garda, Italy, 08 July 2015, pp.12
- XXI. **Makrogözenekli Poliakrilamid Hidrojellerinin Enzim İmmobilizasyonu Uygulamaları**
ÖZMEN M. M., Ölçer Z., Şahin Z. M., Tanrıseven A., Yılmaz F.
4. Polimer Bilim ve Teknoloji Kongresi, Çanakkale, Turkey, 05 September 2012, pp.24
- XXII. **Preparation of macroporous poly acrylamide hydrogels in DMSO water mixture**
ÖZMEN M. M., OKAY O.
73rd Prague Meeting on Macromolecules, 5 - 09 July 2009
- XXIII. **Macroporous Ionic Hydrogels: Cryogelation Under Isothermal Conditions**
Dinu M. V., ÖZMEN M. M., Dragan E. S., Okay O.
Romanian International Conference on Chemistry and Chemical Engineering Ricce XV, Sinaia, Romania, 19 September 2007
- XXIV. **Synthesis of Macroporous Hydrogels From Frozen Monomer Solutions Under Various Experimental Conditions**
Dinu M. V., ÖZMEN M. M., Dragan E. S., OKAY O.
The European Polymer Congress 2007, Portoroz, Slovenia, 02 July 2007
- XXV. **Strategies Toward The Synthesis of Fast Responsive Gels with Improved Mechanical Properties**
OKAY O., ÖZMEN M. M., Dinu M. V., Ceylan D., Can V.
The European Polymer Congress 2007, Portoroz, Slovenia, 02 July 2007
- XXVI. **Fast Responsive Macroporous Hydrogels**

Dinu M. V., ÖZMEN M. M., Dragan E. S., Okay O.

Proceedings of the 22th International Symposium on Physicochemical Methods of Separation "ARS SEPARATORIA 2007", Szklarska Poreba, Poland, 10 June 2007, pp.109

XXVII. Swelling Deswelling of Ionic Poly acrylamide Hydrogels and Cryogels

CEYLAN TUNCABOYLU D., ÖZMEN M. M., OKAY O.

Polymer Networks 2006, Functional and Biological Gels: Theory and Experiment, 3 - 07 September 2006

XXVIII. Effect of preparation temperature on properties of gels based on sodium 2 acrylamido 2 methylpropane 1 sulfonate

ÖZMEN M. M., OKAY O.

Polymer Gels and Networks, 44th Microsymposium of P.M.M, 10 - 14 July 2005

XXIX. Sıcaklığa Duyarlı İyonik Poli(N-t-Bütillakrilamid-co-Akrilamid) Hidrojellerinin Şişme Özellikleri ve Şişme Davranışı

ÖZMEN M. M., Okay O.

XVII. Ulusal Kimya Kongresi, İstanbul, Turkey, 08 September 2003, pp.700

Supported Projects

TOPUZOĞULLARI M., ÖZMEN M. M., DOKUZ S., ÖZBEK T., DERMAN S., Daaboul M., Alhamvi S., Paşaoğlu H., Project Supported by Higher Education Institutions, Kendiliğinden Antibakteriyel Polimerik Malzemelerin Geliştirilmesi, 2022 - Continues

Özmen M. M., Ömür S. E., TÜBİTAK Project, Fıtık Tedavisi için 3B Biyoyazıcı ile Polimerik Cerrahi Meş'lerin Geliştirilmesi, 2022 - 2023

Özmen M. M., Hacıoğlu A., TÜBİTAK Project, Üzüm Bağlarında Görülen Mantar Hastalıklarına karşı Bitkisel Biyofungusitlerin Geliştirilmesi, 2021 - 2023

Yargı Ö., Büyükpehlivan S., Özmen M. M., TÜBİTAK Project, FARKLI TÜRDE BİYOPOLİMER TABANLI SEPERATÖR(AYIRICI) VE Cr2032 SÜPERKAPASİTÖR ÜRETİMİ, 2021 - 2022

Özmen M. M., Kahveci M. U., TÜBİTAK Project, Işıklı Tetiklenen Çok Yüksek Hızlı Diels-Alder Click Reaksiyonlarının Geliştirilmesi ve Fonksiyonel Polimerik Malzemelerin Bu Reaksiyonlarla Hazırlanması, 2018 - 2020

Özmen M. M., Abdurrahmanoğlu S., Project Supported by Higher Education Institutions, Farklı Zincir Uzunluklarına Sahip Alkilleştirici Ajanlarla Poly(4-vinilpyridine-co-N-vinylpyrrolidone) Kopolimerinin Kuarternizasyonu ve Antibakteriyel Uygulamaları, 2019 - 2019

ÖZMEN M. M., Hafızoğlu S., Project Supported by Higher Education Institutions, Adsorbent Olarak Aljinat Hidrojellerinin Eldesi için Kontra Hazırlama Yöntemlerinin Kullanılması, 2018 - 2019

ÖZMEN M. M., TÜBİTAK Project, Yenilenebilir Kaynaklardan Yenilebilir Nanokompozit Su Toplarının Üretimi, 2018 - 2018

ÖZMEN M. M., Project Supported by Higher Education Institutions, Biyopolimer Bazlı Kriyojel Doku İskelelerinin Tasarımı, 2013 - 2018

ÖZMEN M. M., Project Supported by Higher Education Institutions, Protein Bazlı Doğal Polimerlerden Makrogözenekli Doku iskelesi Eldesi, 2014 - 2016

ÖZMEN M. M., Project Supported by Higher Education Institutions, Donmuş Monomer Çözeltilerinden Makroporlu Hidrojellerin Sentezi ve Karakterizasyonu, 2007 - 2009

ÖZMEN M. M., TÜBİTAK Project, Jellerde mikro ve nano boyutlarda bölgelerin tasarımı, 2005 - 2008

Scientific Refereeing

STARCH-STARKE, SCI Journal, July 2021

Macromolecular Materials and Engineering, Journal Indexed in ESCI, September 2020

INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES, SCI Journal, July 2020

TURKISH JOURNAL OF CHEMISTRY, National Scientific Refreed Journal, March 2020

Macromolecular Research, SCI Journal, June 2019

Turkish Journal of Chemistry, National Scientific Refreed Journal, April 2018

Turkish Journal of Chemistry, SCI Journal, January 2018

Macromolecular Research, SCI Journal, August 2017

Designed Monomers Polymers, SCI Journal, January 2012

Metrics

Publication: 52

Citation (WoS): 519

Citation (Scopus): 549

H-Index (WoS): 12

H-Index (Scopus): 12

Congress and Symposium Activities

World Polymer Congress, (Macro 2016), Session Moderator, İstanbul, Turkey, 2016

Scholarships

2219 DOKTORA SONRASI ARAŞTIRMA BURSUSU, University, 2015 - 2015

Awards

ÖZMEN M. M., Tübitak Üniversitelerarası Proje Yarışmaları, 2018 İstanbul Bölge Sergisi, 2241 Özel Sektöre Yönelik Lisans Bitirme Tezleri Yarışması, Tübitak, October 2018