



## Assoc. Prof. Dr. Yılmaz YÜREKLİ

### CONTACT INFORMATION

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|-------------------|------------------------------------------------------------------------------------------------------------|-------------------|-------------------------|
| <b>Address</b>    | Celal Bayar University, Faculty of Engineering, Bioengineering Department, Muradiye, Manisa, 45140, Turkey |                   |                         |
| <b>Work Phone</b> | +90 (0236) 201 2454 (Extension: 2454)                                                                      |                   |                         |
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### EDUCATION

| Degree        | University                    | Department/Program   | Years     |
|---------------|-------------------------------|----------------------|-----------|
| <b>B.Sc.</b>  | Ege University                | Chemical Engineering | 1993-2000 |
| <b>Master</b> | Izmir Institute of Technology | Chemical Engineering | 2000-2003 |
| <b>Ph.D.</b>  | Izmir Institute of Technology | Chemical Engineering | 2003-2011 |

### RESEARCH INTERESTS

|   |                                                                            |
|---|----------------------------------------------------------------------------|
| 1 | Preparation & characterization of biocatalytic membranes                   |
| 2 | Design of a membrane based separation & purification unit                  |
| 3 | Modeling the transport characteristics of a solute through porous membrane |
| 4 | Biomedical applications of membrane systems                                |
| 5 | Biocompatible polymers and drug delivery systems                           |

| <b>THESIS</b> |                                                                                                  |
|---------------|--------------------------------------------------------------------------------------------------|
| <b>Ph.D.</b>  | Preparation, Characterization of Enzyme Immobilized Membranes and Modeling of Their Performances |
| <b>Master</b> | Measurement of Transport Properties of Polyacrylic Systems Using a Gravimetric Sorption Method   |

| <b>AWARDS AND HONORS</b> |                                                                                                                                |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>1</b>                 | Project Award, Manisa Celal Bayar University, 2013                                                                             |
| <b>2</b>                 | Euromembrane 2009 travel awards given by European Membrane Society, 2009                                                       |
| <b>3</b>                 | PIA Bosphore Research Grand (for 40 days research in Institute European Des Membranes, Montpellier, France, 2007)              |
| <b>4</b>                 | Erasmus Student-Study Mobility Grand (for sixth month research in Institute European Des Membranes, Montpellier, France, 2006) |
| <b>5</b>                 | TUBITAK Grand (for EMCC-4 meeting in Dead Sea, Israel, 2006)                                                                   |

| <b>EXPERIENCE</b>                   |                                  |                                                                                                    |              |
|-------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------|--------------|
| <b>Title</b>                        | <b>University</b>                | <b>Position/Research Topics</b>                                                                    | <b>Years</b> |
| <b>Assoc. Prof. Dr.</b>             | Manisa Celal Bayar University    | Head of Department, Bioengineering                                                                 | 2018         |
| <b>Assist. Prof. Dr.</b>            | Manisa Celal Bayar University    | Department Vice Chair, Bioengineering                                                              | 2012-2018    |
| <b>Assist. Prof. Dr.</b>            | Ondokuz Mayıs University         | Department Vice Chair, Chemical Engineering                                                        | 2011-2012    |
| <b>Graduate Research Assisstant</b> | Izmir Institute of Technology    | "Preparation, Characterization of Enzyme Immobilized Membranes and Modeling of Their Performances" | 2009-2011    |
| <b>Researcher</b>                   | Institute European Des Membranes | "Preparation, Characterization of Enzyme Immobilized Membranes"                                    | 2006         |
| <b>Research Assisstant</b>          | Izmir Institute of Technology    | "Measurement of Transport Properties of Polyacrylic Systems Using a Gravimetric Sorption Method"   | 2000-2003    |

### **PROFESSIONAL DEVELOPMENT**

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| 1 | New Horizons in Biocatalysis for Biomaterials Workshop, April 2014, İzmir-TURKEY               |
| 2 | Workshop France Taiwan on Membranes and Their Applications, September 2006, Montpellier-FRANCE |
| 3 | Training about Hygiene and Safety in IEM Laboratories, September 2006, Montpellier-FRANCE      |

### **PROJECTS MANAGED**

|   |                                                                                                                                                                                                                                              |
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| 1 | "Complete Removal of Urea by Using Polymer/Inorganic/Urease Bio-Composite Membrane", supported by the Scientific and Technical Research Council of Turkey, 2014-2016, Project Number:114Y178                                                 |
| 2 | "Removal of Heavy Metals From Wastewater by Using Zeolite Nano Particles Supported Polysulfone Composite Membranes", supported by the Scientific and Technical Research Council of Turkey, 2013-2015, Project Number:113Y159                 |
| 3 | "Production of Multifunctional Enzymatic Ultrafiltration Membranes and Determination of Their Performances Under Dynamic Conditions" supported by the Scientific and Technical Research Council of Turkey, 2012-2013, Project Number:112M078 |
| 4 | "Determination of Zeolite Nano Particles Adsorption Isotherm", supported by Scientific Research Projects Funding of CBU., 2014-2015, Project number:2014-117                                                                                 |
| 5 | "Preparation and Characterization of Biocatalytic Membranes", supported by Scientific Research Projects Funding of CBU., 2014-2015, Project number:2014-035                                                                                  |
| 6 | "Removal of heavy metal ions and dyes in industrial waste-water by using Zeolite nano-particles", supported by Scientific Research Projects Funding of CBU., 2014-2015, Project number: 2014-119                                             |
| 7 | "Production of multifunctional enzymatic ultrafiltration membranes and determination of their performances under dynamic conditions", supported by Scientific Research Projects Funding of CBU., 03,2013-09,2013, Project number: 2013-011   |

### **PROJECTS ASSISTED**

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| 8 | "Preparation and Characterization of Enzyme Immobilized Membranes, Modeling of Their Performances" supported by the Scientific and Technical Research Council of Turkey and the Ministry of Foreign Affairs of the Republic of France, 2006-2008, Project Number: 105M325 |
| 9 | "Measurement of Transport Properties of Polyacrylic Systems Using A Gravimetric Sorption Method", supported by the Scientific and Technical Research Council of Turkey, 2000-2003, Project Number: MİSAG-144                                                              |

### **ACTING AS A SUPERVISOR**

|   |                                                                                                                                                              |
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| 1 | Mehmet Yildirim, MSc Thesis, "Removal of Heavy Metals From Wastewater by Using Zeolite Nano Particles Supported Polysulfone Composite Membranes", 2013- 2015 |
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### **PUBLICATIONS (SCI & SCI EXPANDED)**

|    |                                                                                                                                                                                                                                                                                                                                 |
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| 1  | <b>Yilmaz Yurekli</b> , Layer-by-Layer Self-Assembly of Multifunctional Enzymatic UF Membranes, Journal of Applied Polymer Science (2019) 137 48750,                                                                                                                                                                            |
| 2  | <b>Yilmaz Yurekli</b> , Determination of adsorption characteristics of synthetic NaX nanoparticles, Journal of Hazardous Materials, 378 (2019) 120743                                                                                                                                                                           |
| 3  | <b>Yilmaz Yürekli</b> , “Determination of adsorption capacities of NaX Nano-particles against heavy metals and dyestuff, Journal of the Faculty of Engineering and Architecture of Gazi University 34:4 (2019) 2113-2124.                                                                                                       |
| 4  | <b>Yilmaz Yurekli</b> , Mehmet Yildirim, Levent Aydin, Melih Savran, “Filtration and removal performances of membrane adsorbers”, Journal of Hazardous Materials 332 (2017) 33–41                                                                                                                                               |
| 5  | <b>Yilmaz Yurekli</b> , “Removal of heavy metals in wastewater by using zeolite nano-particles impregnated polysulfone membranes”, Journal of Hazardous Materials 309 (2016) 53–64                                                                                                                                              |
| 6  | Filiz Yasar Mahlicli, Sacide Alsoy Altinkaya, <b>Yilmaz Yurekli</b> , “Preparation and characterization of polyacrylonitrile membranes modified with polyelectrolyte deposition for separating similar sized proteins”, Journal of Membrane Science 415–416 (2012) 383–390                                                      |
| 7  | <b>Yurekli Y</b> , Altinkaya S.A, “Catalytic performances of chemically immobilized urease under static and dynamic conditions: A comparative study”, Journal of Molecular Catalysis B: Enzymatic 71 (2011) 36-44,                                                                                                              |
| 8  | Guedidi S, <b>Yurekli Y</b> , Deratani A, Déjardin P, Innocent C, Altinkaya S.A, Roudesli S, Yemenicioglu A, “Effect of enzyme location on activity and stability of Trypsin and Urease immobilized on porous membranes by using layer-by-layer self-assembly of polyelectrolyte”, Journal of Membrane Science 365 (2010) 59-67 |
| 9  | Altinkaya S.A, Topcuoglu O, <b>Yurekli Y</b> , Balkose D, “The influence of binder content on the water transport properties of waterborne acrylic paints”, Progress in Organic Coatings 69 (2010) 417-425                                                                                                                      |
| 10 | <b>Yürekli Y.</b> , Altinkaya S.A., “Measurement of Ternary Polymer/Solvent Equilibrium Data by Vapor-Phase Infrared Spectroscopy, Fluid Phase Equilibria 277 (2009) 35-41                                                                                                                                                      |
| 11 | <b>Yürekli Y.</b> , Altinkaya S.A., Zielinski J.M., “Solubility and Diffusivity of Methylmethacrylate (MMA) and Butylacrylate (BA) Monomers in a MMA-BA copolymer”, J.Polymer Sci. Part B: Polym.Phys. 45 (2007) 1996-2006                                                                                                      |

### **PUBLICATIONS (OTHERS)**

|   |                                                                                                                                                                                                                                                              |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Bahar Baştürk, Kürşat Kanbur, İlker Polatoğlu, <b>Yilmaz Yürekli</b> , “Mechanical properties of acorn and pine cone filled polymer composites”, American Scientific Research Journal for Engineering, Technology, and Sciences (ASRJETS) 14 (2015) 144-153. |
| 2 | <b>Yilmaz Yürekli</b> , İlker Polatoğlu, Suat Bahar Baştürk, “Filtrasyon Membranları Üretim ve Karakterizasyon Yöntemleri - Fabrication and Characterization Techniques of Filtration Membranes”, CBU J. of Sci. 11 (2015) 175-181.                          |

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| 3                                   | İlker Polatoğlu, <b>Yılmaz Yürekli</b> , Suat Bahar Baştürk, Estimating Solubility of Parathion in Organic Solvents, AKU J. Sci. Eng. 15 (2015) 037101 (1-5)                                                                                                                                     |
| <b>PUBLICATIONS (BOOK CHAPTERS)</b> |                                                                                                                                                                                                                                                                                                  |
| 1                                   | <b>Yılmaz Yurekli</b> , (2021) Recovery of Heavy Metals by Membrane Adsorbers. In: Inamuddin, Mohd I.A., Eric L., Abdullah M. A. (eds) Green Adsorbents to Remove Metals, Dyes and Boron from Polluted Water, Springer, Cham.                                                                    |
| 2                                   | <b>Yılmaz Yürekli</b> , (2021) Principles of Membrane Surface Modification for Water Applications. In: Iqbal A., Wastewater treatment, (eds) IntechOpen.                                                                                                                                         |
| 3                                   | Seah M.Q., <b>Yurekli Y.</b> , Lau W.J. (2020) Surface Modification of Polymeric Membranes Using Nanomaterials for Water Applications. In: Kharissova O., Martínez L., Kharisov B. (eds) Handbook of Nanomaterials and Nanocomposites for Energy and Environmental Applications. Springer, Cham. |

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| <b>PRESENTATIONS PRESENTED AT INTERNATIONAL MEETINGS</b> |                                                                                                                                                                                                                                                                                                       |
| 1                                                        | Yildirim Mehmet, <b>Yurekli Yilmaz</b> , “Application of Zeolite Nano-Particles Impregnated Polysulfone Ultrafiltration Membrane for the Removal of Heavy Metals” Euromembrane 2015, September 6-10, (2015), RWTH Aachen University, Aachen, Germany                                                  |
| 2                                                        | <b>Yurekli Yilmaz</b> , Zeolite Impregnated Polysulfone Membrane for the Removal of Metals in Wastewater. Advances in Functional Materials, 29 June-3 July (2015), Stony Brook University, NY, USA                                                                                                    |
| 3                                                        | <b>Yürekli Y</b> , Guedidi S, Altinkaya S.A, Yemenicioğlu A, Innocent C, Deratani A, Roudesli S, “Modeling the Performance of Enzyme Immobilized Membranes”, Euromembrane 2009, September 6-10, (2009), Montpellier, France                                                                           |
| 4                                                        | <b>Yürekli Y</b> , Guedidi S, Altinkaya S.A, Yemenicioğlu A, Innocent C, Deratani A, Roudesli S, “Preparation and Characterization of Urease Immobilized Ultrafiltration membranes”, Euromembrane 2009, September 6-10, (2009), Montpellier, France                                                   |
| 5                                                        | Guedidi S, Deratani A, Innocent C, Dejardin P, <b>Yürekli Y</b> , Roudesli S, Altinkaya S.A, “Enzymatic Membranes Prepared by Using Polyelectrolyte Multilayer Immobilization. Role of the Enzyme Location on the Catalytic Reaction”, Euromembrane 2009, September 6-10, (2009), Montpellier, France |
| 6                                                        | <b>Yürekli Y.</b> , Altinkaya S.A., “Sorption and Diffusion Behaviors of Butylacrylate in Rubbery Methylmethacrylate-Butylacrylate Copolymer”, 31st International Vacuum Microbalance Techniques Conference, İzmir, Turkey, September 12-14, (2007)                                                   |
| 7                                                        | <b>Yürekli Y.</b> , Altinkaya S.A., “Predicting Emission Characteristics of Volatile Organic Compounds from Surface Coatings”, The 4th Eastern Mediterranean Chemical Engineering Conference (EMCC4) Dead Sea, Israel, January (2006)                                                                 |

#### **PRESENTATIONS PRESENTED AT NATIONAL MEETINGS**

|   |                                                                                                                                                                        |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <b>Yürekli Y.</b> , “Zeolit Nano-taneciklerin Adsorpsiyon Davranışlarının Tespit Edilmesi”, 13. Ulusal Kimya Mühendisliği Kongresi, Van Yüzüncü Yıl Üniversitesi, 2018 |
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| 2 | <b>Yürekli Y.</b> , Altinkaya S.A., "Metilmetakrilat-n-Bütilakrilat Kopolimerinin Transport Özelliklerinin Gravimetrik Yöntemle Ölçülmesi", 6. Ulusal Kimya Mühendisliği Kongresi, Ege Üniversitesi, 2004 |
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#### **PROFESSIONAL MEMBERSHIP**

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|---|---------------------------------------------------------------------------|
| 1 | Chamber of Chemical Engineers, Aegean Branch Management Department Member |
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#### **COURSES TAUGHT**

|                 |                         |
|-----------------|-------------------------|
| <b>BIE 2111</b> | Stoichiometry           |
| <b>ENG 3121</b> | Mass Transfer           |
| <b>BIE 3109</b> | Bioprocess Engineering  |
| <b>BIE 3110</b> | Biotransport            |
| <b>BIE 3112</b> | Bioreaction Engineering |

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