CURRICULUM VITAE

(last updated: January 2014)

PERSONAL DATA

Name and Surname	:	Mehmet MUTLU
Date of Birth	:	August 2, 1957
Place of Birth	:	Ankara, TURKEY
Sex	:	Male
Nationality	:	Republic of Türkiye
Mailing Address	:	Biomedical Engineering Department, Engineering Faculty, TOBB ETU, University of Economics and Technology, Söğütözü Cad. No: 43, Söğütözü, Ankara, 06560 Türkiye
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EDUCATION

B.Sc. in Chemical Engineering, Middle East Technical University, Ankara, 1980
M.Sc. in Chemical Engineering, Hacettepe University, Ankara, 1983
Ph.D. in Chemical Engineering, Hacettepe University, Ankara, 1988

CAREER

2013- , Professor in Biomedical Engineering Department, Engineering Faculty, TOBB University of Economics and Technology
2008-2009 Spring Semester, Marie-Curie Professor, University of Maribor, Mechanical Engineering Faculty, MTKD-CT-2005-029540 POLYSURF, Maribor, Slovenia
2007-2013, Professor in Nanomedicine and Nanotechnology Division, Institute for Graduate Studies in Pure and Applied Sciences, Hacettepe University
2001, Fulbright Scholar, University of Wisconsin-Madison, Department of Biological Systems Engineering, USA
1998-2013, Professor in Bioengineering Division, Institute for Graduate Studies in Pure and Applied Sciences, Hacettepe University
1998-2013, Professor in Food Technology Division, Food Engineering Department, Engineering Faculty, Hacettepe University
1994-1998, Associate Professor in Bioengineering Division, Institute for Graduate Studies in Pure and Applied Sciences, Hacettepe University
1991-1998, Associate Professor in Food Technology Division, Food Engineering Department, Engineering Faculty, Hacettepe University
1990-1991, Research Fellow, University of Manchester, Medical School, Hope Hospital, Salford, United Kingdom (16 months)
1988-1990, Assistant Professor in Unit Operations and Thermodynamics Division, Hacettepe University, Chemical Engineering Department
1985-1988, Research Assistant (part time), Hacettepe University, Medical School, Nuclear Medicine Department
1980-1988, Teaching Assistant, Hacettepe University, Chemical Engineering Department

AWARDS AND FELLOWSHIPS

Research Group Success Award "2003-2004"; Hacettepe University, 2005

Fulbright Foundation, Senior Scholar Fellowship, 2001

FAB-YAKULT AWARD-1999, FAB 99, Thirteenth Forum for Applied Biotechnology, Gent, Belgium

International Atomic Energy Agency (IAEA), Vienna, Austria, Fellowship in Biomedical Engineering and Biotechnology, (Grant No: C6/TUR/8813), 1990-91

PRESENT POSITIONS

Professor in Biomedical Engineering Department, Engineering Faculty, TOBB University of Economics and Technology, Ankara, TURKEY

COST MP1101 *Biomedical Applications of Atmospheric Pressure Plasma Technology*, Management Committee Member

POSITIONS HELD (1990-2013)

Professor in Nanomedicine and Nanotechnology Division, Hacettepe University, Institute for Graduate Studies in Pure and Applied Sciences, Beytepe, 06532 Ankara, TURKEY

Professor in Bioengineering Division, Hacettepe University, Institute for Graduate Studies in Pure and Applied Sciences, Beytepe, 06532 Ankara, TURKEY

Professor in Food Technology Division, Hacettepe University, Engineering Faculty, Food Engineering Department, Beytepe, 06532 Ankara, TURKEY

COST 868 *Biotechnical Functionalization of Renewable Polymeric Mater*ials, Management Committee Member (2006-2010)

ICP, Institutional Contact Point of Hacettepe University for FP6 (2005-2008)

COST 527 *Plasma Polymers and Related Materials*, Chairman of Working Group-B (2003-2005)

COST 527 *Plasma Polymers and Related Materials*, Management Committee Member (2000-2005)

Scientific Advisor, DeltaMed R&D Inc. Co., Hacettepe University Technology Development Zone, Beytepe, 06532 Ankara, TURKEY (2008-2011)

Scientific Advisor, Dizayn Teknoloji, Hacettepe University Technology Development Zone, Beytepe, 06532 Ankara, TURKEY (2008-present)

Scientific Advisor, Troy-Öztek, Hacettepe University Technology Development Zone, Beytepe, 06532 Ankara, TURKEY (2008-2010)

COMMITEE ASSIGNMENTS

1. Chairman, Biotechnology and Biopolymers in Textile, Packaging, Cosmetics and Medical Applications, WG-B and WG-C joint meeting of COST 868 ***"Biotechnical Functionalization of Renewable Polymeric Materials"***, February 19-20, 2009, Istanbul, Turkey.
2. Chairman, ***International Workshop on Plasma Polymers and Related Materials***, October 7-9, 2004, Antalya, Turkey
3. Chairman, ***COST 527 Plasma Polymers and Related Materials, Joint Working Groups and Management Committee Meetings***, May 2-5, 2002, Hacettepe University, Ankara-Cappadocia, Turkey.
4. Member of organizing committee of "***Summer School on Biotechnology***" June 26- July 1, 1994, Hacettepe University, Ankara, Turkey.
5. Member of organizing committee of ***NATO ASI on "Biopolymers"*** August 27 - September 5, 1984, İzmir, Turkey.
6. Member of organizing committee of ***International Symposium on "Management of Scientific and Technological Research and Development"***, December 12-13, 1983, Ankara, Turkey.
7. Member of local organizing committee of "***4th International Symposium on Hemoperfusion and Artificial Organs***", September 10 - 11, 1982, Ankara, Turkey.

INTERNATIONAL SCIENTIFIC MEMBERSHIPS

Member of New York Academy of Sciences, Membership No: 443572

ADVANCED STUDY INSTITUTES

1. PLASMA DECONTAMINATION: Plasma Assisted Decontamination of Biological and Chemical Agents, NATO ASI, September 16-26, 2007, Çeşme, İzmir, TURKEY
2. Plasma Treatments and Deposition of Polymers, NATO ASI, May 19 - June 2, 1996, Acquafredda di Maratea, ITALY
3. Drug Targeting: Advances in System Constructions, NATO ASI, July 23 - August 5, 1993, Cape Sounion, Athens, GREECE
4. Biopolymers: Polymeric Biomaterials, NATO ASI, August 27 - September 5, 1984, Çeşme, İzmir, TURKEY
5. Polymer Blends and Mixtures, NATO ASI, June 2-14, 1984, Imperial College, London, UNITED KINGDOM

RESEARCH INTERESTS

1. Biotechnology & Bioengineering; Nanomedicine & Nanobiotechnology

    - Plasma polymerization technique for surface modification
    - Plasma Sterilization and detoxification
    - Electrospinning
    - Biomaterials: Modification and Applications
    - Enzyme immobilization and immobilized enzyme kinetics
    - Process monitoring and control by enzyme electrodes
    - Textile Technologies, Medical Textiles, Smart Textiles
    - Process modeling and simulation; Mathematical modeling
    - Data acquisition; Stimulus-response analysis
    - Adsorption and other separation techniques

2. Biosensors & Nanobiosensors:

    Enzyme electrodes
    Immunosensors
    DNA sensors
    Aptamer Sensors

INTERNATIONAL PROJECTS DIRECTED AND INVOLVED

	Mehmet Mutlu, ***Environmental and Biomedical Applications of Microplasmas Produced by Gliding Arc Discharges (ENV-BIO-GA),*** KORANET Project, Collaborators: Prof. Dr. H. Stryczewska (Poland), Prof. Dr. D.W. Park (Korea), Prof. Dr. K. Ebihara (Japan), ***KORANET 2-20,*** start up: November 2012.
	Mehmet Mutlu, Baran Önal Ulusoy, Yasin Şen, Demet Ataman, Nurşen Ziğal, ***A New Decontamination and Detoxification Strategy for Food: Athmospheric Plasma Processing,*** COST Project, in COST Action "**COST MP1101** ***Biomedical Applications of Atmospheric Pressure Plasma Technology"***, General Coordinator: Prof. Dr. Miles Turner, Supported by Turkish Scientific and Technical Research Council, TUBITAK, Project No: 111O570, 2012.
	Targeting of material's antimicrobial activity by newly engineered peptides, ANTIMICROB PEPTIDES, Project Coordinator: Vanja Kokol (SL), Turkish Collaborator: DeltaMed R&D, Project Advisor: Mehmet Mutlu (TR), **FP7 Project**: MATERA+, BBM 1845, 2011.
	Mehmet Mutlu, Baran Önal Ulusoy, Ebru Akdoğan, ***A New Method for Degumming Process of Vegetable Oils: Preparation of Hydrophobic Composite Membranes with Plasma Polymerization Technique and It's Application for Filtration of Crude Oil***, COST Project, in COST Action "**COST 868** ***"Biotechnical Functionalization of Renewable Polymeric Materials"***, General Coordinator: Prof. Dr. Georg Guebitz, Supported by Turkish Scientific and Technical Research Council, TUBITAK, Project No: 106O116, 2006.
	Mehmet Mutlu, Hüseyin Avni Öktem, ***Development of Quartz Crystal Microbalance (QCM) Based Diagnosis Systems and Instruments to be used for Hemoglobinopaties and Genetically Modified Organism Detection***, **EUREKA Project, No E! 3466 PLASMA//GMO//QCM**; Collaborators; Middle East Technical University, Biology Department, Ankara-Turkey; Hacettepe University, Bioengineering Division and Food Engineering Departments, Ankara-Turkey; National Laser Institute, Plasma and Radiation Physics Department, Low Temperature Plasma Physics Laboratory, Bucharest, Romania, VASCO Co. Ltd., Ankara-Turkey, 2005.
	Mehmet Mutlu, ***Infection Free Biomaterials and High Performance Biosensors by Plasma Polymerisation Techique***, COST Project, in COST Action "**COST 527** ***Plasma Polymers and Related Materials***", General Coordinator: Prof. Dr. Hynek Biederman, Supported by Turkish Scientific and Technical Research Council, TUBITAK, Project No: MISAG-COST 527, Collaborators; Başkent University, Medical School, Department of Neurosurgery (Assoc. Prof. Dr. Hakan Caner), Hacettepe University, Chemical Engineering Department (Assoc. Prof. Dr. Selma Mutlu), VITO-Belgium (Dr. Sabine Paulussen), Czech Republic, Charles University, Faculty of Mathematics and Physics, Department of Polymer Physics, (Prof. Dr. Hynek Biederman), 2001.
	Mehmet Mutlu, ***Preparation of Mass Sensitive Immunosensors and Single Layer Multienzyme Electrodes by Plasma Polymerisation Technique***, **EUREKA Project, No E! 2080 PLASMA//BIOSENSE**; Collaborators; Hacettepe University, Bioengineering Division and Food Engineering Departments (Asst. Prof. Dr. Selma Mutlu and Res. Asst. I.H. Boyacı), Czech Republic, Charles University, Faculty of Mathematics and Physics, Department of Polymer Physics, (Prof. Dr. Hynek Biederman), SEM Laboratory Equipment Co. Ltd., (Marketing Manager Mr. Salih Öztunaoğlu), 2000.
	Mehmet Mutlu, Hamit Köksel, ***Utilization of Turkish Corn Crop for High Fructose Corn Syrup Production***, United Nations Developing Program, UNDP and State Planning Organization, SPO Joint Project, No: TUR/92/004/A/01/99, 1997.

NATIONAL PROJECTS DIRECTED AND INVOLVED

TÜBİTAK	Mehmet Mutlu, Beyhan Günaydın Daşan, Design of Low Temperature-Atmospheric Pressure Fluidized Bed Plasma Reactor for Food Decontamination, TUBITAK, Project No: 113O740, 2013.
TÜBİTAK	Mehmet Mutlu, Baran Önal Ulusoy, ***Environmental and Biomedical Applications of Microplasmas Produced by Gliding Arc Discharges,*** TUBITAK, Project No: 112M740, 2012.
TÜBİTAK	Mehmet Mutlu, Baran Önal Ulusoy, Yasin Şen, Demet Ataman, Nurşen Ziğal, ***A New Decontamination and Detoxification Strategy for Food: Athmospheric Plasma Processing,*** TUBITAK, Project No: 111O570, 2012.
TÜBİTAK	Mehmet Mutlu, Demet Ataman, ***Preparation of Gold Nanodot Array Transducer for Biosensors and Testing its Performance with Thrombin Aptamer,*** TUBITAK, Project No: 211T103, 2012.
Bilim, Sanayi ve Teknoloji Bakanlığı	Mehmet Mutlu, ***Prevention of Bacterial Colonization on Cerebrospinal Fluid Shunt Surfaces***, Collaborator: DeltaMed R&D, Ebru Akdoğan (Post graduate student), Ministry of Industry and Trade, SANTEZ Project (00350.STZ.2009-1), 2009.
TÜBİTAK	Mehmet Mutlu, Ozan Selvi, ***Development of a Novel Method for Aptamer Immobilization via Plasma Polymerization Technique***, Supported by Turkish Scientific and Technical Research Council, TUBITAK, Project No: 109T041, 2009.
Bilim, Sanayi ve Teknoloji Bakanlığı	Mehmet Mutlu, ***A Novel Method for Regeneration of Used/Waste Frying Oils: Preparation of Hydrophobic Composite Membranes with Plasma Polymerization Technique and Investigation of It's Application Possibilities***, Collaborator: DeltaMed R&D, Ankara-Turkey, Eren Tur (Graduate student), Ministry of Industry and Trade, SANTEZ Project (00032.STZ.2006-1), 2007.
TÜBİTAK	Aysun Cireli, Mehmet Mutlu, ***Development of Flame Retardant Properties of Synthetic and Natural Fibers Using Plasma Polymerization Technology***, Collaborator; Hacettepe University, Bioengineering Division and Food Engineering Departments, Ankara-Turkey Turkish Scientific and Technical Research Council, TUBITAK, No:105M099, 2006.
	Mehmet Mutlu, ***Dynamic Investigation of Reversible Enzymatic Processes by Membrane Reactors in Food Industry***, Hacettepe University Research Foundation Project, 2002.
TÜBİTAK	Mehmet Mutlu, Selma Mutlu, Meral T. Ercan, Burçak Alp, Ismail H. Boyacı, ***Process Monitoring by Multienzyme Singlelayer Enzyme Electrodes in Food Industry: Determination of Sucrose, Lactose, ß-glucan and Starch Level***, Turkish Scientific and Technical Research Council, TUBITAK, Agricultural Research Project No: TARP-2057, 2000.
TÜBİTAK	Ahmet R. Özdural, Mehmet Mutlu, Devlet Demirel, Zafer Demircan, ***The Applications of Enzymes Immobilised on Paramagnetic Polymeric Particles in Food Industry***, Turkish Scientific and Technical Research Council, TUBITAK, Agricultural Research Project No: TARP-2065, 1998.
TÜBİTAK	Jale Acar, Mehmet Mutlu, ***Total Liquefaction of Carrot Juices by Immobilized Enzymes***, Turkish Scientific and Technical Research Council, TUBITAK, Research Project No: TOGTAG-1673, 1997.
TÜBİTAK	Mehmet Mutlu, Hynek Biederman, ***Preparation of High Performance Enzyme Electrodes by Plasma Polymerisation Technique***, Hacettepe University Food Engineering Department and Charles University Polymer Physics Department Collaborative Research Project, Supported by TUBITAK and Czech Academy of Science, 1997.
TÜRKİYE CUMHURİYETİ KALKINMA BAKANLIĞI	Jale Acar, Mehmet Mutlu, Meral T. Ercan, ***Total Liquefaction of Lactoferment Process Carrot Juices by Immobilized Enzymes***, State Planning Organisation (DPT) Project, No: 96K120890,

	1996.
TÜBİTAK	Mehmet Mutlu, Meral Gürer, Meral T. Ercan, ***Investigation of Release Kinetics of Radiolabelled Herbicides Immobilized in Various Polymer Matrices***, Turkish Scientific and Technical Research Council, TUBITAK, Research Project No: TOAG-982, 1994, Ankara.
TÜBİTAK	İlbilge Saldamlı, Mehmet Mutlu, Mahir Turhan, Mert Kaytanlı, Meral T. Ercan, ***Alternative Cheese Processing Method for Industrial Rennet Utilization: Application of Immobilized Rennet Systems in Cheese Production***, Turkish Scientific and Technical Research Council, TUBITAK, TOAG-741, 1990, Ankara.
	Erhan Piskin, Mehmet Mutlu, ***Surface Modification of Polyurethane for Biomedical Applications***, Hacettepe University Project, No: 84-01-010-61, Ankara, 1985.
TÜBİTAK	Research Fellow, ***Oxygenators***, Turkish Scientific and Technical Research Council, Directed by Assoc. Prof. Dr. Erhan Piskin, Research Project No:MAG-581, Ankara, 1985.
TÜBİTAK	Project Engineer, ***Hemoperfusion***, Turkish Scientific and Technical Research Council, Directed by Assoc. Prof. Dr. Erhan Pişkin, Research Project No: TAG-413, Ankara, 1983.

THESES DIRECTED

Ongoing Theses in Nanotechnology and Nanomedicine

Student	Name of the Thesis	Start Year
Ozan Selvi	Investigation of Aptamer Conjugated Magnetic Nonaparticles as a Novel Biosensor Technology	**2009**
Başak (Beyhan) Güdüllüoğlu	Combination of Metamaterials with Mimetics of Biomolecules for Meta-Bio-Sensor Preparation	**2010**
Demet Ataman	Preparation of Gold Nanodot Array Transducer for Biosensors and Testing its Performance with Thrombin Aptamer	**2011**
Devrim Ulusal	Developing Method for DNA Self-Assembly Based Nano-template Preparation	**2009**

Ongoing Theses in Bioengineering

Student	Name of the Thesis	Start Year
Nurşen Ziğal	on qualification exam stage	**2012**
Nesrin Şir	on qualification exam stage	**2010**
Mert Baranoğlu	Comparison and Performance Review of Direct Hydrogen Peroxide Sterilization versus Plasma Aided Hydrogen Peroxide Sterilization and Investigation of the Role of Plasma in Sterilization	**2010**

Ongoing Theses in Food Engineering

Student	Name of the Thesis	Start Year
Gonca Bilge	Determination of the Kinetic and Dynamic Performance of Immobilized Beta-Cyclodextrinz on Packed Bed Column Reactors by Stimulus-Response Analysis	**2011**
Yasin Şen	Atmospheric Pressure Plasma Decontamination of Food Staff	**2010**
Beyhan Günaydın	The Design of Fluidized Bed Atmospheric Pressure Plasma Reactor and Investigation of the Performance on Fungi Decontamination	**2009**
Yalçın Öksüz	Modelling of Enzymatic Glucose-Fructose Conversion in Packed Column Reactor with Computational Fluid Dynamics (CFD) Method	**2009**

Completed Theses

Ph.D. Theses

Student	Name of the Thesis	from-to
Ebru Akdoğan	Prevention of Bacterial Colonization on Cerebrospinal Fluid Shunt Surfaces	**2007-2010**
Sevim Gürdaş	The use of Packed-Bed Reactor in Enzymatic Hydrolysis of Lactose: Investigation of the Geometry of the Packed-Bed Column and Flow Properties	**2005-2010**
Baran Önal Ulusoy	The Production of Oleic Acid Terpenyl Esters as Frying Antioxidants	**2005-2008**
Dilek Cökeliler	A Mass Sensitive Immunosensor for Aflatoxin by Plasma Polymerisation Technique	**2000-2006**
Kemal Sarıoğlu	Surface Energy Reduction by Plasma Polymerisation Technique and Characterization	**1998-2004**
Devlet Demirel	Immobilisation of Pectinase on Magnetic Particles	**1997-2003**
İsmail Hakkı Boyacı	Determination of Glucose, Sucrose and Lactose Content of Food Samples with Packed Bed Column Integrated Enzyme Electrode Systems	**1998-2001**
Ferit Leblebici	Use of Immobilized Dextranase for the Processing of Deteriorated Sugar Beet	**1995-1999**
Mahir Turhan	Investigation of Reaction Kinetics between Immobilized Rennet in Ca-alginate Matrix and Casein	**1990-1995**

M. Sc. Theses

Student	Name of the Thesis	from-to
Dilara Bozkurt	Effect of Cold Plasma Treatment on Vitamins and Polyphenol Oxidase (PPO) Enzyme Activity	**2012-2014**
Dilber Ece Sezgin	Investigation of Aptamer Production for a Model Green Fluorescent Protein and Its Application to Optic Biosensors	**2011-2013**
Adil Burak Turhan	Developing a Transducer Based on Localised Surface Plasmon Resonance (LSPR) of Metallic Nano Structures for Nanobiosensor Applications	**2010-2013**
Nurşen Ziğal	Imporvement of the Performance of Mass Sensitive Biosensors by Nanofiber Coated Quartz Crystal Microbalance surfaces	**2009-2012**
Didem Rodoplu	Modifications of Quartz Crystal Microbalance Surfaces by Electrospinning Method Intended for Biosensor Applications	**2009-2011**
Yasin Şen	Investigation of Sterilization of Polymeric and Metallic Materials via Non-thermal Plasma Treatments by Using Different Precursor Gas Composition	**2008-2009**
Ozan Selvi	Investigation of a Novel Technique for "Tag-Free" Aptamer Immobilization	**2007-2009**
Nesrin Şir	Determination of Conductivity and Biomolecule Immobilization Function Polymeric Membrane Surfaces Patterned by Plasma Polymerization Technique	**2007-2009**
Beyhan Günaydın	Preparation of Electrochemical Sensors by Plasma Polymerization Technique for Phenolic Compounds	**2007-2009**
Eren Tur	A Novel Method for Regeneration of Used/Waste Frying Oils: Preparation of Hydrophobic Composite Membranes with Plasma Polymerization Technique and Investigation of It's Application Possibilities	**2006-2009**
Başak Beyhan	Development of Aptamer Based Mass Sensitive Biosensor for HIV1 Diagnosis: Formation of Recognition Layer,	**2006-2008**
Pelin Atillasoy	Characterization of Glow Discharge Modified Smart Gel Materials	**2003-2006**
Yalçın Öksüz	Determination of Glucose Isomerase Kinetics by Kalman Filtration Method	**2003-2006**
Ebru Akdoğan	Dynamic Investigation of Reversible Enzymatic Processes by Membrane Reactors in Food Industry	**2003-2005**
Temel N Karslı	Determination of Diffusion Coefficients of Some Aminoacids	**2002-2005**
H. Ali Gulec	Wettability and Surface Energy measurements of Plasma Polymerisation Modified Surfaces	**2002-2004**
Dilek Cökeliler	Improvement of High Sensitive Enzyme Electrode For Determination of Alcohol	**1998-2000**
Kemal Sarıoğlu	Viscosimetric Determination of Apparent Activities of Commercialized Enzyme Complexes in Immobilised Form	**1996-1998**
İsmail Hakkı Boyacı	Preparation of Single Layer Enzyme Electrode by Plasma Polymerisation	**1994-1998**
Nilüfer Hızarcıoğlu	Patulin Removal in Model Solutions by Adsorption on Activated Carbon: Kinetics and Mathematical Modelling for Batch and Continuous Systems	**1995-1997**
Burçak Alp	Single Layer Glucose Enzyme Electrode with Extended Linearity in Food Industry	**1994-1997**
Ayşe Kartal	Determination of Suitable Polymer Matrix for Controlled Release of Water Soluble Vitamins in GI-Tract	**1992-1994**
Nazan Turhan	Surface Modification of Polystyrene by Poly-phe-lys Activation for Enzyme Immobilization	**1992-1994**

COURSES GIVEN AT UNIVERSITY

Undergraduate Courses

- Ch.E. 351 Thermodynamics (to Food Engineering Department)
- Ch.E. 212 Chemical Engineering Thermodynamics I
- Ch.E. 201 Statics and Dynamics
- Ch.E. 404 Graduation Project
- Food E. 445 Design in Food Engineering
- Food E. 353 Chemical Kinetics and Reaction Engineering
- Food E. 417 Process Control
- Food E. 411 Graduation Project
- Ch.E. 443 Petroleum Refining Technology
- Ch.E. 495 Energy Technology
- Food E. 417 Biotechnology
- Food E. 418 Biotechnology Laboratory
- Food E. 130 Materials and Strength

Graduate Courses

- NNT 715 Nanobiosensors
- BioEng 609 Transport Phenomena in Biological Systems
- Ch.E. 501 Advanced Thermodynamics
- BioEng 605 Membrane Technology
- Ch.E. 512 Advanced Biochemical Engineering
- Food E. 573 Applied Mathematics in Food Engineering
- Food E. 593 Transport Theory
- Food E. 583 Design and Optimization
- Food E. 703 Applied Kinetics
- Food E. 542 Advanced Biotechnology
- Food E. 593 Membrane Separation Techniques
- Ch.E. 543 Advanced Petrochemical Technology

SCIENTIFIC ACTIVITIES

BOOKS:

Biosensors in Food Processing, Safety, and Quality Control, Mehmet Mutlu, editor, Taylor and Francis, Boca Raton, 2011

Plasma Polymers and Related Materials, Mehmet Mutlu (editor-in-chief) George Dinescu, Renate Förch, Jose Miguel Martin-Martinez, Jiri Vyscocyl (editors), ESF-COST Publication, Hacettepe University Press, 2005.

BOOK CHAPTERS:

1. Boyacı İH, Mutlu M, Amperometric Biosensors in Food Processing, Safety and Quality Control, in "Biosensors in Food Processing, Safety and Quality Control", Mehmet Mutlu (ed.), Taylor and Francis, CRC Press, Boca Raton, 1-52, (2011).
2. Akdoğan E, Mutlu M, Basic Principles of Optical Biosensors in Food Engineering, in "Biosensors in Food Processing, Safety and Quality Control", Mehmet Mutlu (ed.), Taylor and Francis, CRC Press, Boca Raton, 53-70, (2011).
3. Atillasoy P, Mutlu M, Landete-Ruiz MD, Romero-Sanchez MD, Martin-Martinez JM, Topaçlı A, Topaçlı C, Characterization of Smart Gel Materials Modified by Glow Dischanrge, in "*Plasma Polymers and Related Materials"*, Mehmet Mutlu, editor-in-chief, George Dinescu, Renate Förch, Jose Miguel Martin-Martinez, Jiri Vyscocyl, editors; ESF-COST Publication, Hacettepe University Press, 159-165, (2005).
4. Akdoğan E, Çökeliler D, Aydın E, Tan E, Mutlu M, Glow-Discharge Treated Polyethersulphone, Polycarbonate and Cellulose Acetate Ultrafiltration Membranes for Sugar Separation: Effect of Ethylenediamine and 2-Hydroxyethylmethacrylate as Precursors, in "*Plasma Polymers and Related Materials"*, Mehmet Mutlu, editor-in-chief, George Dinescu, Renate Förch, Jose Miguel Martin-Martinez, Jiri Vyscocyl, editors; ESF-COST Publication, Hacettepe University Press, 171-178, (2005).
5. Çökeliler D, Erkut S, Zemek J, Biederman H, Mutlu M, Reinforcement of Polymethylmetacrylate to Modified Glass Fibers by Using Plasma wpolymerization Technique, in "*Plasma Polymers and Related Materials"*, Mehmet Mutlu, editor-in-chief, George Dinescu, Renate Förch, Jose Miguel Martin-Martinez, Jiri Vyscocyl, editors; ESF-COST Publication, Hacettepe University Press, 186-190, (2005).
6. Mutlu S, Zeaire MH, Piskin E, Mutlu M, Glow-Discharge-Treated Quartz Crystal Microbalance as Immunosensor, in "Biomedical Diagnostic Science and Technology", WT Law, N Akmal and AM Usmani, eds., Marcel Dekker, Inc., 203-214, (2002).
7. Mutlu M, Mutlu S, Boyacı İH, Alp B, Pişkin E, High Linearity Glucose Enzyme Electrodes for Food Industries by Plasma Polymerization Technique, in "Polymers in Sensors: Theory and Practice", N. Akmal and A.M. Usmani, eds, *American Chemical Society (ACS) Symposium Series*, 690, 57-65, (1998).
8. Mutlu M, Mutlu S, Alp B, Boyacı IH, Piskin E, Preparation of a Single Layer Enzyme Electrode by Plasma Polymerization Technique, in "Plasma Processing of Polymers", Ricardo D'Agustino (ed.), NATO ASI Series, Kluwer Academic Publishers, Dordrecht, 477-485, (1997).
9. Mutlu S, Mutlu M, Vadgama P, Piskin E, Sandwich Type Amperometric Enzyme Electrodes for Determination of Glucose, in "Diagnostic Polymeric Materials", A.M. Usmani and N. Akmal, eds., *American Chemical Society (ACS) Symposium Series*, 556, 71-83. (1994).

RECENT SELECTED PUBLICATIONS (1990-2013):

1. Rodoplu D, Şen Y, Mutlu M, Modification of Quartz Crystal Microbalance Surfaces via Electrospun Nanofibers Intended for Biosensor Applications, *Nanoscience and Nanotechnology Letters*, 5, 1-8, (2013)
2. Onal-Ulusoy B, Tur E, Mutlu M, Plasma Modified Membrane for Daily Recovery of Oil from Repeated Frying Operation with Frequent Oil Replenishment, *J Am Oil Chem Soc*, 90:1653-1659, DOI 10.1007/s11746-013-2288-y (2013)
3. Şen Y, Mutlu M, Sterilization of Food Contacting Surfaces via Non-Thermal Plasma Treatment: A Model Study with Escherichia coli-Contaminated Stainless Steel and Polyethylene Surfaces, Food Bioprocess Technol, 6:3295–3304, DOI 10.1007/s11947-012-1007-2, (2013)
4. Tur E, Onal-Ulusoy B, Akdoğan E, Mutlu M, Surface modification of polyethersulfone membrane to improve its hydrophobic characteristics for waste frying oil filtration: Radio frequency plasma treatment, *Journal of Applied Polymer Science*, 123, 3402-3411, (2012)

5. Turhan AB, Ataman D, Şen Y, Mutlu M, Özbay E, Nanofabrication and Plasma Polymerization Assisted Surface Modification of a Transducer Based on Localized Surface Plasmon Resonance (LSPR) of Gold Nanostructure Arrays for Biosensor Applications, *J Nanophotonics*, 6, 061602, 1-12, DOI:10.1117/1.JNP.6.061602 (2012)

6. Gürdaş S, Güleç HA, Mutlu M, Immobilization of *Aspergillus oryzae* ß-Galactosidase onto Duolite A568 Resin via Simple Adsorption Mechanism, *J Food and Bioprocess Technology*, 5, 904-911, (2012)

7. Rodoplu D, Mutlu M, Effects of Electrospinning Setup and Process Parameters on the Nanofiber Morphology Intended For the Modification on Quartz Crystal Microbalance Surfaces, *J Engineered Fibers and Fabrics*, 7(2), 23-38, (2012)

8. Akdoğan E, Mutlu M, Generation of Amphoteric Surfaces via Glow-Discharge Technique with Single Precursor and the Behavior of Bovine Serum Albumin at the Surface, *Colloids and Surfaces B: Biointerfaces*, 89, 289-294, (2012)

9. Sen Y, Bağcı U, Guleç HA, Mutlu M, Modification of Food Contacting Surfaces By Plasma Polymerisation Technique: Reducing The Biofouling of Microorganisms on Stainless Steel Surface, *J Food and Bioprocess Technology* 5, 166-175, (2012)

10. Onar N, Aksit AC, Sen Y and Mutlu M, Antimicrobial, UV-Protective and Self-Cleaning Properties of Cotton Fabrics Coated by Dip-Coating and Solvothermal Coating Methods, *Fibers and Polymers*, 12 (4), 461-470, (2011)

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