

## CURRICULUM VITAE

### Personal

**Name:** Bora Garipcan

**Date of Birth:** November 9, 1975

**Birth of Place:** Adana, Turkey

**Citizenship:** Republic of Turkey

**Mobile:** +90 535 6494777

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### EDUCATION

- 09/2001-07/2008**                      **Philosophy of Doctorate in Bioengineering,** Hacettepe University, Faculty of Engineering, Department of Chem. Engineering, Bioengineering Division, Ankara, Turkey.
- 09/1999-09/2001**                      **Master of Science in Chemistry/Biochemistry Division,** Hacettepe University, Faculty of Science, Department of Chemistry, Ankara, Turkey.
- 09/1994-08/1999**                      **Bachelor Science of Chemistry,** Hacettepe University, Faculty of Science, Department of Chemistry, Ankara, Turkey.
- 09/1986-06/1993**                      **High School, Science Section,** Private Adana High School, Adana, Turkey (Secondary and High School Integrated).
- 09/1981-06/1986**                      **Elementary School,** Ismet Inonu Elementary School, Adana, Turkey.

## EMPLOYMENT

- 07/2011-... Assistant Prof. Dr. Boğaziçi University, Institute of Biomedical Engineering, Kandilli Campus, Çengelköy, Istanbul, Turkey
- 05/2009-08/2009 Post Doctoral Fellow, Institute of Materials Science and Technology (IMT) Friedrich-Schiller-University Jena, Germany (A joint project with Department of General, Visceral and Vascular Surgery, University Hospital Jena, Germany)
- 08/2008-04/2009 Marie Curie Post Doctoral Fellow, Institute of Materials Science and Technology (IMT) Friedrich-Schiller-University Jena, Germany
- 12/2001-06/2008 Teaching Assistant, Hacettepe University, Department of Chemical Engineering, Bioengineering Division.
- 02/2001-06/2001 Teaching Assistant, Başkent University. Faculty of Engineering, Department of Biomedical Engineering.

## RESEARCH EXPERIENCE

**Post Doctoral Fellow**, Institute of Materials Science and Technology (IMT) Friedrich-Schiller-University Jena, Germany, A joint project with Department of General, Visceral and Vascular Surgery, University Hospital Jena, Germany (05-08/2009)

**Marie Curie Post Doctoral Fellow**, Institute of Materials Science and Technology (IMT) Friedrich-Schiller-University Jena, Germany (08/2008-04/2009)

**Visiting Scholar**, Drexel University, Department of Materials Science and Engineering, Philadelphia, USA (June-July 2007).

**Visiting Scholar**, Drexel University, Department of Materials Science and Engineering, Philadelphia, USA (Sep 2005-Sep 2006).

## **TEACHING EXPERIENCE**

**Assistant Prof. Dr.**, Institute of Biomedical Engineering, Boğaziçi University, Kandilli, Istanbul, Turkey, Course BM 519 Biosensors, BM 589 Biomedical Nanostructures (09/2010-Current).

**Mentor, Annual Work**, Institute of Materials Science and Technology (IMT) Friedrich-Schiller-University Jena, Germany, 2009.

**Teaching assistant at General Chemistry Laboratory** at Hacettepe University, Faculty of Science, Department of Chemical Engineering, 2004-2005/2007-2008.

**Mentor, Sensors Project**, Drexel University, Department of Materials Science and Engineering, Philadelphia, USA, 2006.

**Teaching assistant at Biochemistry Laboratory** (CHEM-317) at Hacettepe University, Faculty of Science, Department of Chemistry, 2000-2007.

**Teaching assistant at General Chemistry Laboratory and Organic Chemistry** at Başkent University, Faculty of Engineering, 2001.

## **CONFERENCES**

**16th International Biomedical Science & Technology Symposium (BIOMED 2010)**, 29 September- 2 October 2010, Istanbul, Turkey.

Ellipsometry based sensor surfaces for oligonucleotide and oligopeptide probes

Bora Garipcan, Mustafa O. Çağlayan, Gökhan Demirel, Özlem K. Nazlı, Burcu Çelen, Burcu Otman, Erhan Pişkin

**EMBO Young Scientists Forum, Boğaziçi University**, 20-22 February, 2008, Istanbul, Turkey.

Silicon nanowires as a potential tissue support constructs Part I:

B. Garipcan, S. Odabas, G. Demirel, K.D. Jandt, J.E. Spanier, E. Piskin

**Plasma Decontamination: Plasma Assisted Decontamination of Biological and Chemical Agents**, NATO (ASI), 16-26 September, 2007, Çeşme, Turkey.

Electron Plasma for High Speed, High Sensitivity Detection.

Bahram Nabet, Eric Gallo, Jonathan Spanier, Adriano Cola, Fabio Quranta, Bora Garipcan, Erhan Pişkin

**3<sup>rd</sup> National Affinity Techniques Congress**, September 12-14, 2007, Bursa, Turkey.

Applications of Si Nanostructures as Biosensors (Invited Speaker)

Bora Garipcan, Bahram Nabet, Jonathan E. Spanier, Erhan Pişkin

**NanoTR3 Nanoscience and Nanotechnology Conference**, June 11-14, 2007, Ankara, Turkey.

Conductive-AFM Nanolithography on Alkene-silane Modified Si Wafers (Oral Presentation).

Bora Garipcan, Erhan Pişkin, Stephan Nonnenmann, Eric Gallo, Jonathan Spanier, Bahram Nabet

Protein Chip Application by Multiple-Step Process Based on a Self-Assembly Approach

Gökhan Demirel, Mustafa Oğuzhan Çağlayan, Bora Garipcan, Erhan Pişkin

Self-Assembly Mechanism of Organic Molecules on Si(001)

Gökhan Demirel, Mustafa Oğuzhan Çağlayan, Bora Garipcan, Erhan Pişkin

**Plastic, Reconstructive and Aesthetic Surgery, Stem Cell and Tissue Engineering Symposium**,

10-12 May, 2007, Samsun, Turkey (Participant).

**COST B28 Meeting**, April 20-22, 2007, Plovdiv, Bulgaria.

Patterning and Immobilization Techniques for Array Platforms/Technologies.

Erhan Piskin, Bora Garipcan, Gokhan Demirel, Memed Duman, Oguzhan Caglayan, Sinan Egri

**8<sup>th</sup> Drexel University's Research Day**, April 17, 2007, Philadelphia, USA.

On the near-field and far-field electromagnetic scattering from functionalized silicon nanocones and nanowires.

Alia Sabur , Linyou Cao , Bora Garipcan , Eric Gallo , Stephen Nonnenmann , Bahram Nabet , Jonathan Spanier

Instability and Transport of Metal Catalysts in the Growth of Tapered Silicon Nanowires

Jennifer Atchison , Linyou Cao , Bora Garipcan , Ghaoying Ni , Bahram Nabet , Jonathan Spanier

**MRS Fall Meeting, Symposium L, Group IV Semiconductor Nanostructures**, November 27-December 1, 2006, Boston, MA, USA.

Instability and Transport of Metal Catalyst in the Growth of Silicon Nanostructures.

Jennifer Atchison , Linyou Cao , Bora Garipcan , Ghaoying Ni , Bahram Nabet , Jonathan Spanier

**XV INTERNATIONAL MATERIALS RESEARCH CONGRESS**, August 22-26, 2006, Cancun, Mexico.

Synthesis and Characterization of Nano-Scaled Semiconductor and Metal Ferroelectric Hybrid Nanostructures.

Stephen S. Nonnenmann, Rahul S. Joseph, Linyou Cao, Eric M. Gallo, Bora Garipcan, Bahram Nabet and Jonathan E. Spanier

**7<sup>th</sup> Drexel University's Research Day**, April 25, 2006, Philadelphia, USA.

Ordered Arrays of Silicon Nanowires by Conductive AFM Nanolithography.

Bora Garipcan, Erhan Piskin, Stephan Nonnenmann, Eric Gallo, Cristian Staii, Bahram Nabet, Jonathan Spanier

Semiconductor Nanocones and Nanowires: Shedding Light on an Expanding Role of Silicon in Photonics

Linyou Cao, Bora Garipcan, Cristian Staii, Stephen S Nonnenmann, Lee Laim, Eric Gallo, Bahram Nabet, Jonathan E Spanier

**1<sup>st</sup> National Affinity Techniques Congress**, June 22-24, 2005 Eskişehir, Turkey.

Interaction of Hg<sup>2+</sup> ions with Glutamic Acid incorporated PHEMA Microspheres

Bora Garipcan, Rıdvan Say, Abdülkerim Karabakan, Süleyman Patır, Adil Denizli

**11th International Biomedical Science and Technology Days**, September 6-10, 2004 Ankara, Turkey.

A Novel Magnetic Adsorbent for Immunoglobulin-G Purification in MSFB (Oral Presentation).

Serpil Özkara, Bora Garipcan, Sinan Akgöl, Yalçın Çanak, Adil Denizli

Phenylalanine Containing Hydrophobic Adsorbents for Lysozyme Purification

Şerife Öncel, Lokman Uzun, Bora Garipcan, Adil Denizli

**5<sup>th</sup> National Chromatography Symposium**, June 30- July 2, 2004, Eskişehir, Turkey.

Antibody Purification by Pseudospecific Affinity Adsorbents

Serpil Özkara, Bora Garipcan, Erhan Pişkin, Adil Denizli

**10<sup>th</sup> Biomedical Science and Technology Symposium**, October 9-12 2003, Girne, Turkish Republic of Northern Cyprus.

Determination of the effects of temperature and pH sensitive polycations carrying Cu<sup>2+</sup>/1,4,8,11 tetraazacyclotetradecane complex on tumor cell lines.

Murat Demirbilek, Bora Garipcan, Erhan Pişkin,

A Novel Metal Chelate Affinity Adsorbent for Purification of Immunoglobulin G from Human Plasma

Adil Denizli, Murat Alkan, Bora Garipcan, Serpil Özkara, Erhan Pişkin

**4<sup>th</sup> National Chromatography Symposium**, September 17-19 2003, Ankara, Turkey.

Preparation of Metal Chelate Affinity Adsorbents for IgG Purification.

Adil Denizli, Murat Alkan, Bora Garipcan, Serpil Özkara, Erhan Pişkin

**XXX<sup>th</sup> European Society for Artificial Organs (ESAO) Congress “High Tech & Medicine”**

September 3-6 2003, Aachen, Germany.

Pseudospecific ligands used in bioaffinity separation.

Serpil Özkara, Bora Garipcan, Adil Denizli, Erhan Pişkin,

**27<sup>th</sup> Symposium on High Performance Liquid Phase Separations and Related Techniques,**

June 15-19 2003, Nice, France.

Poly(Styrene-hydroxyethylmethacrylate) monodisperse microspheres for high performance dye-affinity separation of albumin.

Lokman Uzun, Handan Yavuz, Mehmet Odabaşı, Sinan Akgöl, Serpil Özkara, Bora Garipcan, Müge Andaç, Adil Denizli

**MBCAC 4<sup>th</sup> Mediterranean Basin Conference on Analytical Chemistry,** September 15-20, 2002,

Portoroz, Slovenia.

Novel Chelating Adsorbents for Heavy Metal Removal: Poly(hydroxyethyl methacrylate-methacrylamidocysteine).

Bora Garipcan, Handan Yavuz, Rıdvan Say, Adil Denizli

**3<sup>rd</sup> National Chromatography Symposium,** June 19-21 2002, Süleyman Demirel University,

Isparta, Turkey.

Preparation and characterization of novel pseudospecific ligand containing chromatographic support for the purification of antibodies (Oral Presentation).

Bora Garipcan, Serpil Özkara, Süleyman Patır, Adil Denizli

Methacryloylamidocysteine functionalized Cu<sup>2+</sup> incorporated poly(2-hydroxyethyl methacrylate) beads and its design as a metal-chelate affinity support for human serum albumin adsorption.

Müge Andaç, Bora Garipcan, Süleyman Patır, Adil Denizli

**Europolymer Congress,** July 15-20, 2001, EPF 2001, Eindhoven University of Technology,

Eindhoven, Netherlands.

Synthesis and characterization of p(hydroxyethylmethacrylate-co methacrylamidohistidine) beads for heavy metal removal from aqueous solutions.

Handan Yavuz, Rıdvan Say, Bora Garipcan, Süleyman Patır, Adil Denizli

**2<sup>nd</sup>National Chromatography Symposium** June 6-8 2001, Kırıkkale University, Kırıkkale, Turkey.

Preparation and characterization of newly synthesized amino acid based metal-complexing-ligand containing PHEMA beads for heavy metal removal from aqueous solutions.

Rıdvan Say, Bora Garipcan, Sibel Emir, Süleyman Patır, Adil Denizli

Preparation and characterization of pseudospecific amino acid ligand containing chromatographic support materials

Bora Garipcan, Lokman Uzun, Müge Andaç, Süleyman Patır, Adil Denizli

Methacrylamidohistidine in affinity ligands for immobilized metal-ion affinity chromatography of human serum albumin.

Mehmet Odabaşı, Bora Garipcan, Semir Dede, Süleyman Patır, Adil Denizli

**7<sup>th</sup> International Biomedical Science and Technology Symposium**, September 25-28, 2000, Hacettepe University, Ankara, Turkey.

Lysozyme adsorption on amino acid incorporated membranes.

**World Polymer Congress, IUPAC Macro 2000, 38<sup>th</sup> Macromolecular IUPAC Symposium**, July 9-14 2000, Polish Chemical Society, Center of Molecular and Macromolecular Studies, Lodz and Warsaw University of Technology, Warsaw, Poland.

Monosize and Non-porous P(HEMA-co-MMA) Microparticles for Metal-Chelate Affinity Separation of Proteins.

Adil Denizli, Handan Yavuz, Bora Garipcan, Serpil Özkara, Yakup Arica, Erhan Pişkin

**1<sup>st</sup>National Chromatography Symposium** June 16-18 1999, Kırıkkale University, Kırıkkale, Turkey (Participant).

**5<sup>th</sup> National Biomedical Science and Technology Symposium** December 16-18 1998, METU, Ankara, Turkey (Participant).



## **INTERNSHIP**

Hacettepe University, Faculty of Science, Department of Chemistry, Biochemistry Division, July-August, 1998.

## **LABORATORY TECHNIQUES**

- UV-Visible spectrophotometer
- FTIR, FTIR-ATR
- Spectrofluorophotometer
- Ozone generator
- Goniometer
- Quartz Crystal Microbalance System (QCM)
- Ellipsometry/Surface Plasmon Resonance (SPR) Biosensor (**Nanofilm EP<sup>3</sup>**)
- Atomic Force Microscope (AFM) (**Ambios, Asylum Research, NANOSURF, DI Multimode**)
- Scanning Electron Microscope (SEM) (**AMRAY, FEI/Phillips XL30**)
- Chemical Vapor Deposition System (CVD) (**Atomate**)
- Thermal Evaporator (**NANOVAC**)
- Confocal Laser Microscope (**Leica, Zeiss**)

## **SEMINARS AND COURSES**

**TUBA II. Stem cell Course and Symposium**, 24-25 June 2011, Ankara, Turkey.

**"EXPERTISSUES" "Novel Therapeutic Strategies for Tissue Engineering of Bone and Cartilage Using Second Generation Biomimetic Scaffolds" EU FP-6 Project, Training Course on "CRANIO-MAXILLOFACIAL ANIMAL MODELS"**, 28-31 July, Ankara, Turkey.

**QCM, SPR/ellipsometer & AFM as novel Biosensors & Imaging Systems**, FEBS Practical Course, 22-29 June, 2008, Ankara, Turkey.

**Plasma Decontamination: Plasma Assisted Decontamination of Biological and Chemical Agents**, NATO (ASI), 16-26 September, 2007, Çeşme, Turkey.

**Training on AFM Nanolithography, (NANOSURF)** April, 24-26, 2006, Basel, Switzerland.

**Dynamics of Complex Interconnected Biosensor Systems: Networks and Bioprocesses, NATO-ASI**, April 11-21, 2005, Geilo, Norway. NATO (ASI)

**From Cells to Proteins: Imaging Nature across Dimensions, NATO-ASI**, September 12-23, 2004, Pisa, Italy

**EMBO/FEBS Workshop on AFM Applications in Biology**, July 7-9 2004, Instituto Gulbenkian de Ciência, Oeiras, Portugal.

**Advanced Practical Course on The Design and Building of Quartz Crystal Microbalance (QCM) Biosensors**, June 20-27, 2004, Ankara, Turkey.

**Training on Imaging Ellipsometry and Surface Plasmon Resonance (SPR)**, June 7-8, 2004, Göttingen, Germany.

**Affinity Separations in Biotechnology**, Advance course by Prof. Igor Galaev, November 3-5, 2003, Hacettepe University, Ankara, Turkey.

**Laser Processing of Biological Tissues and Biocompatible Materials, NATO-ASI**, 23 September-2 October, 2003, Crete, Greece.

**Graduate Summer School for Basic and Modern Techniques in Biochemistry**, 27 August-3 September, 2000, Ege University and Berlin Technical University, Aydın, Turkey.

## **REPORTS AND THESIS**

### **Philosophy of Doctorate thesis:**

Preparation and Use of Single and Multichannel Ellipsometry Based Sensor Surfaces Carrying Oligonucleotide and Oligopeptide Probes

### **Master of Science thesis:**

Histidine incorporated pseudo-specific affinity sorbents for separation of human-immunoglobulin-G from human plasma.

## BOOKS/BOOK CHAPTERS

Denizli, A., Denkbaş, E.B., Yavuz, H., Akgöl, S., Odabaşı, M., **Garipcan, B.**, Özkara, S., **Biochemistry Laboratory**, Hacettepe University, Faculty of Science, Department of Chemistry, Ankara, 2000.

**Bora Garipcan** and Adil Denizli, N-methacryloyl-(L)-glutamic Acid Incorporated Porous Poly (2-hydroxyethyl Methacrylate) Beads for Hg<sup>2+</sup> Removal, *Advances in Chemistry Research*, Edited by Francois L. Gerard, Nova Publishing, Vol 1, **2004**.

Pişkin, E., **Garipcan, B.**, Duman, M., Probe Immobilization Techniques in Array Technologies, **Detection of Highly Dangerous Pathogens**, Kostic, Tanja; Butaye, Patrick; Schrenzel Jacques, Editors, *Microarray Methods for BSL 3 and BSL 4 Agents*, Wiley-VCH; **2009**.

Pişkin, E., **Garipcan, B.**, Gökhan, D., Çağlayan, O., Patterning Techniques for Array Platforms, **Detection of Highly Dangerous Pathogens**, Kostic, Tanja; Butaye, Patrick; Schrenzel Jacques, Editors, *Microarray Methods for BSL 3 and BSL 4 Agents*, Wiley-VCH; **2009**.

**Garipcan B.**, Caglayan M.O., Demirel G., " A new generation Biosensors Based on Ellipsometry" in *Biosensors for Health, Environment and Biosecurity*, Intech Publishing Group, 2011, Chapter 9, 197-214. (ISBN: 978-953-307-448-1).

## PROJECTS

Imaging Endothelial Structure of Arterial Blood Vessels Institute of Materials Science and Technology (IMT) Friedrich-Schiller-University Jena, Germany (A joint project with Department of General, Visceral and Vascular Surgery, University Hospital Jena) **Research Scientist**.

Solitech (Biological applications of Soft Lithography, FP6-14084, EU project) **Research Scientist**

Alternative Nanochips for Pathogenic Bacteria, TUBITAK, **Research scientist**.

Monoclonal Antibody production and applications Scientific Research Council, Hacettepe University (02G101), **Research scientist**.

Preparation of bioaffinity sorbent for purification of proteins, Scientific Research Council, Hacettepe University (0102601012), **Research scientist**.

Al(III) ion removal from dialysis solutions by Alizarin Red immobilized magnetic PHEMA Microbeads, Scientific Research Council, Hacettepe University, **Research scientist**.

Synthesis and Characterization of Poli(HEMA-MAC) Monolithic Materials for Cu(II) ion removal, Scientific Research Council, Hacettepe University, **Research scientist**.

Histidine incorporated pseudo-specific affinity sorbents for separation of human-immunoglobulin-G from human plasma Scientific Research Council, Hacettepe University (0101704001), **Research scientist**.

Removal of cholesterol from human plasma with anti-LDL antibody immobilized membranes, TUBITAK, TBAG-1992 (100T123), **Research scientist**.

Removal of cholesterol from human plasma with anti-LDL antibody attached PHEMA microspheres, Scientific Research Council, Hacettepe University (01 G 008), **Research scientist**.

## **SCHOLARSHIPS**

TUBITAK-NATO A2 Scholarship, Drexel University, Department of Materials Science and Engineering, Philadelphia, USA (Sep 2005-Mar 2006).

Department of Health of the Commonwealth of Pennsylvania Scholarship, Drexel University, Department of Materials Science and Engineering, Philadelphia, USA (Mar-Sep 2006).

## **AWARDS**

7<sup>th</sup> Drexel University's Research Day. April 25, 2006, **Honorable Mention**, Poster in Basic/Applied Science, "Ordered Arrays of Silicon Nanowires by Conductive AFM Nanolithography".

## **COURSES**

**BM 519 BIOSENSORS**, Biological components involved in biosensors, immobilization of biological components to transducers, electrochemical, optical, piezoelectric, and thermistor based biosensors, principal performance characteristics, fabrication and biomedical applications.

**BM 589 BIOMEDICAL NANOSTRUCTURES**, Nanotechnology and Nanobiotechnology terms and definitions, Nanostructure synthesis, characterization, Nanofabrication, Protein, Cell and Tissue interactions with Nanostructures., biomedical and clinical applications of nanostructures.

## **PUBLICATIONS**

**2011**

**32. B. Garipcan**, M.O. Çağlayan, G. Demirel, K. Ö. Nazlı B. Otman, B. Çelen, M. Duman, E. Pişkin, Ellipsometry based Oligopeptide sensor for the detection of Cd (II) ions (**Article in Preparation**).

**31. B. Garipcan**, M.O. Çağlayan, G. Demirel, K. Ö. Nazlı B. Otman, B. Çelen, M. Duman, E. Pişkin, Ellipsometry based Oligonucleotide sensor for the detection of M. Gordonea (**Article in Preparation**).

**30. Bora Garipcan**, Stefan Maenz, Jürgen Zanow, Jörg Bossert, Utz Settmacher, and Klaus D. Jandt, Imaging Endothelial Microstructure and Endothelial Cell Dimensions, **Advanced Biomaterials**, (13,1-2, B3-9, **2011**).

**29. Garipcan, B.; Odabas, S.**; Demirel, G.; Burger, J.; Nonnenmann, S.S.; Coster, T.M.; Gallo, M.E.; Nabet, B.; Spanier, J.E.; Piskin, E., In vitro Biocompatibility of n-type and Undoped Silicon Nanowires, **Advanced Biomaterials**, (13,1-2, B54-57, **2011**).

**2010**

**28.** Jian-Tao Zhang, Thomas F. Keller, Rahila Bhat, **Bora Garipcan**, Klaus D. Jandt, A novel two-level microstructured poly(*N*-isopropylacrylamide) hydrogel for controlled release, **Acta Biomaterialia**, (6, (10) 3890-3898, **2010**).

**27.** Rahila Bhat, Stephan Sell, Ralf Wagner, Jiantao Zhang, Changjiang Pan, **Bora Garipcan**, Wilhelm Boland, Jörg Bossert, Elisabeth Klemm, and Klaus D. Jandt, The Janus - SAM Approach for the Flexible Functionalization of Gold and Titanium Oxide Surfaces **SMALL**, (6 (3) 465-470, **2010**).

## 2009

26. David C. Trimbach, Dmitry Spitkovsky, **Bora Garipcan**, Sergiy Zankovych, Cornelia Böttinger, Yaki Duan, Jürgen Hescheler, Klaus D. Jandt, A Method for the Real-Time Observation of Endodermal Cell Behavior on Micropatterned Surfaces **Advanced Engineering Materials**, (11, 8 B106-B113, **2009**).

25. M.O. Çağlayan, G. Demirel, F. Sayar, **B. Garipcan**, B. Otman, B. Çelen, E. Pişkin, Stepwise Formation approach to improve Ellipsometric Biosensor Response, **Nanomedicine: Nanotechnology, Biology and Medicine**, (5 (2) 152-161, **2009**).

## 2008

24. **Garipcan, B.**; Winters, J.; Atchison, J. S.; Cathell, M. D.; Schiffman, J. D.; Leaffer, O. D.; Nonnenmann, S. S.; Schauer, C. L.; Pişkin, E.; Nabet, B.; Spanier, J. E. Conductive-AFM Nanolithography on Alkene-silane Modified TiO<sub>2</sub> Substrates, **Langmuir**, (**Research Article**) (24(16); 8944-8949, **2008**).

23. Cao, L.; **Garipcan, B.**; Nonnenman, S.; Gallo, E.; Nabet, B.; Spanier, J. E., Excitation of Local Field Enhancement on Silicon Nanowires, **Nano Lett.**, (8 (2), 601 -605, **2008**).

22. Demirel, G.; Çağlayan, M. O.; **Garipcan, B.**; E. Pişkin, E.; A Novel DNA Biosensor Based on Ellipsometry, **Surface Science**, (602, 952–959, **2008**).

## 2007

21. Demirel, G.; Çağlayan, M. O.; Garipcan, B.; Duman, M.; E. Pişkin, E.; Oriented Immobilization of IgG on Hydroxylated Si(001) Surfaces via Protein-A by a Multiple-step Process Based on a Self-Assembly Approach, **Journal of Materials Science**, (42 (22), 9402-9408, **2007**).

20. Demirel, G.; Çağlayan, M. O.; **Garipcan, B.**; Duman, M.; Pişkin, E.; Formation and Organization of Amino Terminated Self-assembled Layers on Si(001) Surface, **Nanoscale Research Letters**, (Vol. 2, 7, 350-354, **2007**).

## 2006

19. Cao, L.; **Garipcan, B.**; Atchison, J. S.; Ni, C.; Nabet, B.; Spanier, J. E. Instability and Transport of Metal Catalyst in the Growth of Tapered Silicon Nanowires, **Nano Lett.**, (Letter) (Vol. 6, No. 9, 1852-1857, **2006**).

## 2005

18. Oncel, S; Uzun, L.; **Garipcan, B.**; Denizli, A., Synthesis of Phenylalanine-Containing Hydrophobic Beads for Lysozyme Adsorption, **Industrial and Engineering Chemistry Research**, (44 (18) 7049-7056, **2005**).

17. Adil Denizli, **Bora Garipcan**, Abdülkerim Karabakan, Hülya Şenöz, Synthesis and characterization of a poly(hydroxyethyl methacrylate-N-methacryloyl-(L)-glutamic acid) copolymer beads for removal of lead ions, **Materials Science and Engineering: C**, (25 (4) 448-454, **2005**).

## 2004

16. Piskin, E., **Garipcan, B.**, Biochips: focusing on surfaces and surface modification. **Adv Exp Med Biol.**, (553, 149-66, **2004**).

15. Denizli, A., Şanlı, N., **Garipcan, B.**, Patır, S., Alsancak, G., Methacryloylamidoglutamic acid incorporated porous poly(methylmethacrylate) beads for heavy metal removal, **Industrial and Engineering Chemistry Research** (43 (19) 6095-6101, **2004**).

14. **Garipcan, B.**, Andaç, M., Uzun, L., Denizli, A., Methacryloylamidocysteine functionalized poly(2-hydroxyethyl methacrylate) beads and its design as a metal-chelate affinity support for human serum albumin adsorption, **Reactive and Functional Polymers**, (59, 119-128, **2004**).

13. Denizli, A., Say, R., **Garipcan, B.**, Patır, S., Methacryloylamidoglutamic acid functionalized poly(2-hydroxyethyl methacrylate) beads for  $UO_2^{+2}$  removal, **Reactive and Functional Polymers**, (58, 123-130, **2004**).

## 2003

12. Denizli, A., Alkan, M., **Garipcan, B.**, Özkara, S., Pişkin, E., A novel metal-chelate affinity adsorbent for purification of immunoglobulin-G from human plasma, **Journal of Chromatography B**, (759 (1) 93-103, **2003**).
11. Emir, S., Say, R., **Garipcan, B.**, Denizli, A., Novel methacryloylamidophenylalanine functionalized porous chelating beads for adsorption of heavy metal ions, **Advances in Polymer Technology**, (22 (4) 355-364, **2003**).
10. Özkara, S.; **Garipcan, B.**; Denizli, A.; Pişkin, E., Histidine carrying pseudospecific affinity sorbent for immunoglobulin-G isolation from human plasma in column system, **Journal of Biomaterial Science Polymer Edition**, (14 (8) 761-776, **2003**).
9. Odabaşı, M., **Garipcan, B.**, Denizli, A., Methacryloamidohistidine carrying novel in metal-affinity sorbent for albumin separation from human plasma in batch system, **J. Applied Polymer Science**, (90, 2840-2847, **2003**).
8. Denizli, A., Say, R., **Garipcan, B.**, Emir, S., Karabakan, A., Patir, S., Metal-complexing ligand methacryloamidocysteine containing polymer beads for Cd (II) removal, **Separation and Purification Technology**, (30 (1) 3-10, **2003**).

## 2002

7. Denizli, A., **Garipcan, B.**, Emir, S., Patir, S., Say, R., Heavy metal ion adsorption properties of methacryloamidocysteine containing porous polyhydroxyethylmethacrylate chelating sorbents, **Adsorption Science and Technology**, (20 (7) 607-617 **2002**).
6. Say, R., **Garipcan, B.**, Emir, S., Patir, S., Denizli, A., Preparation and characterization of newly synthesized metal-complexing-ligand N-methacryloyl histidine having PHEMA beads for heavy metal removal from aqueous solutions, **Macromolecular Materials and Engineering**, (287 (8) 539-545, **2002**).
5. **Garipcan, B.**, Say, R., Patir, S., Arica, Y., Denizli, A., poly(hydroxyethyl methacrylate-co-methacrylateamidoalanine) membranes and its utilization as a metal chelate affinity sorbent for lysozyme adsorption, **Journal of Biomaterials Science Polymer Edition**, (13 (5) 563-577, **2002**).
4. **Garipcan, B.**, Denizli, A., A novel chromatographic affinity support material for separation of immunoglobulin-G from human plasma, **Macromolecular Bioscience** (2 (3) 135-144, **2002**).



3. Say, R., **Garipcan, B.**, Emir, S., Patir, S., Denizli, A., Preparation of poly(hydroxyethyl methacrylate-co-methacrylateamidohistidine) beads and its design as an affinity adsorbent for Cu (II) removal from aqueous solutions, **Colloids and Surfaces A: Physicochemical and Engineering Aspects**, (196 (2-3) 199-207, **2002**).

#### **2001**

2. **Garipcan, B.**, Bereli, N., Patir, S., Arica, Y., Denizli, A., Synthesis of poly(hydroxyethyl methacrylate-co-methacrylateamidoalanine) membranes and its utilization as a affinity sorbent for lysozyme adsorption, **Macromolecular/Bioscience**, (8 (1) 332-340, **2001**).

#### **2000**

1. Denizli, A., Yavuz, H., **Garipcan, B.**, Arica, Y., Nonporous Monosize Polymeric Sorbents: Dye and Metal Chelate Affinity Separation of Lysozyme, **J. Applied Polymer Science**, (76 (2) 115-124, **2000**).

#### **PROCEEDINGS AND MEETING ABSTRACTS**

1. **Garipcan B.**, Caglayan MO, Demirel G, et al, Ellipsometry based sensor surfaces for oligonucleotide and oligopeptide probes, Abstracts of Papers of the American Chemical Society, (237, 10-NANO, MAR 22, **2009**).

2. **Garipcan, B.; Odabas, S.;** Demirel, G.; Burger, J.; Nabet, B.; Spanier, J.E.; Piskin, E., In vitro biocompatibility of plain and doped silicon nanowires, *Tissue Engineering Part A* , (14 ( 5) 863-864, P205, **2008**).

#### **MEMBER OF SCIENTIFIC COMMITTEES**

**Chromatography, 2009**, Karadeniz Technical University, Trabzon, Turkey. Member of Scientific Committee.

**16th International Biomedical Science & Technology Symposium (BIOMED 2010), 29**  
September- 2 October 2010, Istanbul, Turkey, National Advisory Board.

## **RESEARCH AREAS**

1. Polymer Technology: Production of polymers which have different type of bulk and surface characteristics, shapes and geometries.
2. Biomaterials: Production and characterization of polymeric biomaterials and modification of the surface of polymeric biomaterials by different methods (by chemically, biologically, plasma etc.).
3. Affinity Chromatography applications (e.g., dye-ligand, metal chelate, pseudospecific).
4. Biosensors.
5. DNA and protein biochip technology: Preperation of oligonucleotide and oligopeptide microarrays and their applications.
6. AFM Nanolithography
7. Synthesis and characterization of Semiconductor Nanostructures and their applications.
8. Interaction of nanomaterials with cells and tissues.
9. Soft Lithography and Microcontact printing
10. Biomimetic Materials

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International Cuisine and Cooking Arts, Photography, History, II. World War Models, Volleyball.