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## CURRICULUM VITAE

### Electra Gizeli

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Group Leader, Inst. of Molecular Biology and Biotechnology, FORTH  
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#### 1. EDUCATION

- 1988-1994 PhD, University of Cambridge, Institute of Biotechnology (Newnham College), UK  
Supervisor: Prof. C.R. Lowe
- 1987-1988 MSc in Applied Molecular Biology and Biotechnology, University College London, UK
- 1982-1987 BSc in Chemistry, University of Athens, Greece

#### 2. POST-DOCTORAL WORK

- 1996-2002 BBSRC David Phillips Research Fellow, University of Cambridge, Institute of Biotechnology, UK
- 1998 Visiting Research Fellow, Sandia National Laboratory, Albuquerque, New Mexico, USA
- 1995 Visiting Fellow, Ecole Polytechnique Federal de Lausanne, Switzerland
- 1993-1996 Senior Research Associate, University of Cambridge, Institute of Biotechnology, UK

#### 3. ACADEMIC POSITIONS

- 2010 Associate Professor, Department of Biology, University of Crete
- 2006–2009 Tenured Assistant Professor, Department of Biology, University of Crete
- 2003-2006 Assistant Professor, Department of Biology, University of Crete
- 2004-today Group Leader, IMBB, FORTH, Crete, Greece
- 2002-2003 Lecturer, Sidney Sussex College, University of Cambridge, Inst. of Biotechnology, UK

#### 4. AWARDS/FELLOWSHIPS/DISTINCTIONS

- 2008 Adjunct Professor, Department of Electrical & Computer Engineering, Marquette University, Milwaukee, USA
- 1998 Visiting Fellowship, National Research Laboratories, USA
- 1998 Travel Grant, Royal Society, UK
- 1997 Fellowship, Sidney Sussex College, University of Cambridge, UK
- 1996-2002 Junior Research Fellowship, Biotechnology and Biological Sciences Research Council (BBSRC), UK
- 1995 Visiting Research Fellowship, Royal Society, UK

#### 5. MEMBER OF SOCIETIES

- The Royal Society of Chemistry (UK)
- Institute of Electrical and Electronic Engineering (IEEE) (USA)
- Biophysical Society (USA)
- Association of Greek Chemists (Greece)

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## 6. REFEREE FOR RESEARCH PROGRAMS AND FELLOWSHIPS

- For the Human Frontier Science Program (HFSP)
- For the European Union within FW6, "Development of Novel Technologies for Proteomics and Genomics"
- For the Biotechnology and Biological Sciences Research Council (BBSRC), UK
- For the Royal Society of Chemistry (RSC), UK
- For the Engineering and Physical Sciences Research Council (EPSRC), UK

## 7. REFEREE FOR SCIENTIFIC JOURNALS

- Analytical Chemistry
- Biosensors and Bioelectronics
- Journal of the American Chemical Society
- Reviews in Analytical Chemistry
- Trends in Biotechnology
- IEEE Journal of Sensors
- IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control
- Biochemistry
- Journal of Applied Physics
- Biophysical Journal
- Langmuir
- Journal of Physical Chemistry
- Colloids and Surfaces B: Biointerfaces
- Sensors and Actuators
- Journal of Polymer Science
- American Chemical Society (ACS) Nano
- Smart Materials and Structures
- Current Opinion in Biotechnology

## 8. PRESENTATIONS

### Participation in International Conferences

1. NanobioEurope, E. Gizeli, K. Mitsakakis, Multi-analyte acoustic microsystem for biomedical analysis; application in cardiac markers detection, Cork, Ireland, 2011 (oral)
  2. NanobioEurope, A.Tsortos, G. Papadakis, E. Gizeli, Acoustic characterization of a DNA nanoswitch; a conformation study, Cork, Ireland, 2010 (poster)
  3. FACSS 2010, L. Steller, M. Laughsh, H. Schmidt, R. Jessberger, E. Gizeli, 2010, (poster), Raleigh, USA
  4. NanobioEurope, E. Gizeli, A.Tsortos, G. Papadakis, Germany 2010 (oral)
  5. 2<sup>nd</sup> ICDDT, A.K. Pantazis, E. Gizeli and G. Konstantinidis, Dubai, UAE, 2010 (??)
  6. 54<sup>th</sup> Annual Meeting of the Biophysical Society, A. Tsortos, G. Papadakis, E. Gizeli, San Francisco, U.S.A, 2010 (poster)
  7. E-MRS 2009, A.K. Pantazis, E. Gizeli and G. Konstantinidis, Poland, 2009 (oral)
  8. MEMSWAVE 2009, A.K. Pantazis, E. Gizeli, D. Vasilache, E. Aperathitis, A. Muller and G. Konstantinidis, Trento, Italy (oral)
  9. MEMSWAVE 2008, A.K. Pantazis, E. Gizeli, A. Adikimenakis, A. Georgakilas, A. Stavriniadis and G. Konstantinidis, Greece 2008 (poster)
  10. 2008 IEEE International Frequency Control Symposium, May 19-21, Honolulu, USA, K. Mitsakakis, A. Tserepi & E. Gizeli 2008 (oral)
  11. IEEE International Frequency Control Symposium, K. Mitsakakis, A. Tserepi, E. Gizeli, Hawaii, USA, 2008 (oral)
  12. IEEE International Frequency Control Symposium, A. Tsortos, G. Papadakis, E. Gizeli, Hawaii, USA, 2008 (oral)
  13. IEEE International Frequency Control Symposium, M. Saitakis, E. Gizeli, Hawaii, USA, 2008 (oral)
  14. 10<sup>th</sup> International Symposium on Biomaterials: Fundamentals and Clinical Applications, M. Chatzinikolaidou & E. Gizeli, Essen, Germany, 2008 (oral)
  15. 8th World Biomaterials Congress, M. Chatzinikolaidou & E.Gizeli, The Netherlands, 2008 (oral)
  16. 33<sup>rd</sup> International Conference on Micro- and Nano-Engineering, K. Mitsakakis, A. Tserepi, E. Gizeli, Copenhagen, Denmark, 2007 (poster)
  17. 2006 IEEE International Frequency Control Symposium, K. Mitsakakis, G. Papadakis, E. Gizeli, Miami, USA, 2007 (oral)
  18. The IEEE International Conference on Sensors, Vienna, Austria, 2004 (oral)
  19. International Conference on Biosensors, Granada, Spain, 2004 (oral)
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20. Biophysical Complexity, 2003, Southampton, UK, 2003 (oral)
  21. The 202<sup>nd</sup> Meeting of the Electrochemical Society, K. Saha, E. Gizeli, UTAH, USA, 2002 (oral)
  22. Eurosensors XVI, Prague, Czech Republic, 2002 (poster)
  23. 7<sup>th</sup> World Congress on Biosensors, K. Melzak, E. Gizeli, Kyoto, Japan, 2002 (oral)
  24. The IEEE International Conference on Sensors, Orlando, USA, 2002 (oral)
  25. 3<sup>rd</sup> Acoustic Wave Sensor Workshop, New Mexico, USA, 2001 (oral)
  26. The 8<sup>th</sup> International Meeting on Chemical Sensors, Switzerland, 2001 (oral)
  27. Biophysical Conference, The Royal Society of Chemistry, London, UK, 2001 (oral)
  28. Gordon Research Conference on Chemical Sensors and Interfacial Design, Italy, 2000 (poster)
  29. International Conference on Biosensors, San Diego, USA, 2000 (oral)
  30. The 107<sup>th</sup> Discussion of the Royal Society of Chemistry, Faraday Division, UK, 1997 (poster)
  31. The 12th International Symposium on Affinity Interactions: Fundamentals and Applications of Bio-molecular Recognition, Kalmar, Sweden, 1997 (poster)
  32. Gordon Conference on Chemical Sensors and Interfacial Design, USA, 1996 (poster)
  33. International Conference on Transducers '95-Eurosensors IX, Sweden, 1995 (poster)
  34. International Conference on Biosensors, New Orleans, USA, 1994 (oral)
  35. The 4th International Meeting on Chemical Sensors, Tokyo, Japan, 1992 (poster)
  36. Eurosensors V, Rome, Italy, 1991 (poster)
  37. Chemical Sensors, Cleveland, USA, 1990 (oral)

### **Invited Speaker**

#### (a) Conferences

1. 1<sup>st</sup> International Workshop on Novel Developments & Applications in Sensor Technology, Coburg, Germany 2009
2. "Research activities on Nanobiotechnology in Greece", Organized by Nano2Life EU-funded Consortium, Crete, Greece
3. "Omics and Nanotechnology in Biomedicine", BIOMED and School of Health Sciences, University of Thessalia, Greece, 2007
4. 2006 IEEE International Ultrasonics Symposium, Vancouver, Canada, section on "Biochemical Sensors", 2006
5. EuroNanoForum 2005, Nanotechnology and the Health of the EU Citizen in 2020, Organized by the European Commission, Edinburgh, UK, 2005
6. The Gordon Research Conference, Chemical Sensors and Interfacial Design, California, USA, 2000
7. The Electrochemical Meeting, Boston, USA, 1999
8. The 1997 Joint International Meeting of the Electrochemical Society and the Society of Electrochemistry, France, 1997
9. Immunoassays of the '90s, The Royal Society of Chemistry, London, UK, 1993
10. Diagnostics '91, London, UK, 1991

#### (b) Universities-Institutes-Companies

1. Centre for DNA Nanotechnology (CDNA), Interdisciplinary Nanoscience Center (iNANO), Aarhus University, Denmark, 2010
  2. Bio-center of the Goethe University, Inst. of Biochemistry, Germany, 2009
  3. 8<sup>th</sup> FORTH Meeting, Crete, Greece 2007
  4. Institute of Biology, Demokritos Research Institute, Greece, 2006
  5. Department of Chemistry, Univ. of Athens, Greece, 2005
  6. Institute of Physical Chemistry, Demokritos Research Institute, Greece, 2005
  7. University of Copenhagen, Nano-Science Centre, Copenhagen, Denmark, 2004
  8. Company "Atonomics", Copenhagen, Denmark, 2004
  9. Dept. of Material Science, Univ. of Crete, 2003
  10. Department of Engineering, University of Cambridge, UK, 2001
  11. "Unilever Research Colworth", Bedford, UK, 2000
  12. University of California, Sensor & Actuator Center, Berkeley, USA, 2000
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13. Technische Universität of Bundeswehr, Munich, Germany, 1997  
 14. University of Heidelberg, Heidelberg, Germany, 1997  
 15. Bioaffinity Sensors, Fissons, Cambridge, UK, 1992

## 9. RESEARCH GRANTS

2011-2013	<u>Ministry of Education</u> , Heraclitus II “Study of the mechanism of interaction of antimicrobial peptides $\alpha$ -defensins using biosensors” <i>No of participating groups:</i> 1 <i>Project role:</i> Principal Investigator <i>Total Budget:</i> €45,000
2010-2013	<u>European Union</u> , Cost Action CM0902 “Molecular machineries for ion translocation across membranes” <i>Network role:</i> Management Committee Member
2009-2011	<u>General Secretariat for Research and Technology (GSRT)/ DAAD</u> “Biosurfaces and devices for the study of cancerous cells and the specific activation of T-lymphocytes” <i>No of participating groups:</i> 2 <i>Project role:</i> Principal Investigator <i>Total Budget:</i> €20,000 <i>Biosensor’s lab budget:</i> €10,000
2008	<u>ELKE</u> , Univ. of Crete “Study of the mechanism of action of the antimicrobial peptide Crp4 by using biosensors” <i>Project role:</i> Principal Investigator <i>Budget:</i> €3,500
2007-2009	<u>European Union</u> , Marie Curie Research Training Network “European network on selection and analysis of protein-protein interactions” <i>No of participating groups:</i> 10 <i>Project role:</i> Participating Member <i>Total Budget:</i> €2,207,554 <i>Biosensor’s lab budget:</i> €147,139
2006-2008	<u>Greek Secretariat of Research and Technology</u> , ENTER “Study of the elusion profile of immobilized BMP-2 and VEGF proteins from implants using biosensors” <i>Project role:</i> Principal Investigator <i>Biosensor’s lab budget:</i> €80,000
2006-2009	<u>Greek Secretariat of Research and Technology</u> , PENED “Biosensor for the detection of protein interactions” <i>No of participating groups:</i> 3 <i>Project role:</i> Coordinator <i>Total Budget:</i> €139,450 <i>Biosensor’s lab budget:</i> €46,483
2005	<u>European Union</u> , Marie Curie European Return and Reintegration Grant “Mechanism of interaction of antimicrobial peptides with the cell membrane – a study using biosensing technologies” <i>Project role:</i> Principal Investigator <i>Biosensor’s lab budget:</i> €40,000
2005-2006	<u>Ministry of Education</u> , Pythagoras II, “Development of polymer surfaces for the formation of membrane arrays” <i>Project role:</i> Principal Investigator <i>Biosensor’s lab budget:</i> €37,250
2004-2007	<u>Human Frontier Science Program</u> (HFSP) “Mechanism of antimicrobial peptide interactions with the target cell membrane” <i>No of participating groups:</i> 4

	<i>Project role:</i>	Coordinator
	<i>Total Budget:</i>	€1,106,557
	<i>Biosensor's lab budget:</i>	€377,050
2004-2006	<u>Greek Secretariat of Research and Technology and British Council</u>	
	"Polymer patterns for the formation of membrane arrays"	
	<i>No of participating groups:</i>	2
	<i>Project role:</i>	Group Leader
	<i>Total Budget:</i>	€23,000
	<i>Biosensor's lab budget:</i>	€11,500
2003-2006	<u>European Union, FW6</u>	
	"Nano-2-Life Consortium"	
	<i>Project role:</i>	IMBB participating member
	<i>Total Budget:</i>	€315,000
1999-2002	<u>Biotechnology and Biological Sciences Research Council (BBSRC)</u>	
	<i>Project role:</i>	Group Leader
	<i>Budget:</i>	€315,000
1999	<u>Nuffield Foundation, Oxford, UK</u>	
	<i>Project role:</i>	Group Leader
	<i>Budget:</i>	€2,000
1999-2000	<u>Sandia National Laboratory, USA</u>	
	<i>Project role:</i>	Group Leader
	<i>Budget:</i>	€67,940
1998-1999	<u>Royal Society, Equipment Grant, UK</u>	
	<i>Project role:</i>	Group Leader
	<i>Budget:</i>	€7,900
1997-1999	<u>British Council (Research Grant)</u>	
	<i>Project role:</i>	Group Leader
	<i>Budget:</i>	€6,320
1996-2002	<u>David Phillips BBSRC Research Fellowship</u>	
	<i>Budget:</i>	€323,900
1995	<u>British Council (Collaborative work between Ecole Polytechnique Federal de Lausanne (EPFL), Switzerland and UK)</u>	
	<i>No of participating groups:</i>	2
	<i>Project role:</i>	Group Leader of UK team
	<i>Budget:</i>	€15,800

### Research funded by companies

1/1-31/3/2006	<u>Microtechnology Centre Ltd, Australia</u>	
	"Evaluation of the sensitivity of the Love wave sensor towards the detection of <i>Legionella</i> bacteria"	
	<i>Project role:</i>	Principal Investigator
	<i>Budget:</i>	€30,000
2001-2003	<u>Unilever Research Colworth, UK</u>	
	"Development of sensitive immunoassays for protein detection"	
	<i>Project role:</i>	Principal Investigator
	<i>Budget:</i>	€47,400

## 10. TEACHING EXPERIENCE-SUPERVISION

### Undergraduate

2004-today	Organic Chemistry, 1 <sup>st</sup> Semester, Dept. of Biology, University of Crete
2001-2003	Biology of Cells, Trinity Hall and Sidney Sussex College, Natural Sciences, University of Cambridge, UK
1997-1998	Inorganic Chemistry, Sidney Sussex College, 2 <sup>nd</sup> Semester, Natural Sciences, University of Cambridge, UK

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**Graduate**

- 2009 “Biosensors”, MSc. course in Analytical Instruments, Measurement & Sensor Technology, School of Optical, Electrical & Computer Engineering, University of Shanghai for Science & Technology/CHINA & Coburg University/GERMANY
- 2004-*today* “Technologies for the study of protein interactions”, MSc. course in Protein Biotechnology, University of Crete
- 2004 “Application of AFM in biological studies”, MSc. course in Molecular Biology and Biotechnology, University of Crete
- 1997 "Molecular Sensor Technology", Graduate Course funded by Erasmus EU Program

**Summer Schools**

- 2004 "Biosensors; Application in Biology and Biotechnology" Dept. of Physics, University of Crete
- 2006- "Acoustic Wave Sensors: Principles of acoustic waves and acoustic wave devices; biological applications" Methods in Macro-Nanotechnology and Nanobiotechnology, funded by EU (Nano2Life), Demokritos Research Institute, Greece

**Supervision of Students**

Ph.D.: 6 (5 awarded, 1 in progress); M.Sc.: 8; Rotation: 12

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## 12. PUBLICATIONS

### Edited Books & Book Chapters

1. *Biomolecular Sensors*, Eds E. Gizeli & C.R. Lowe, Taylor & Francis, UK, 2002
2. K. Melzak, E. Gizeli “Love Wave Biosensors” in *Handbook of Biosensors and Biochips*, Eds C.R. Lowe, D. Cullen, H.W. Weetall and I. Karube, John Wiley & Sons, 2007
3. K. Melzak, E. Gizeli “High frequency acoustic wave devices for analyses of planar lipid bilayers” in *Advances in planar lipid bilayers and liposomes*, Eds H.T. Tien & A. Ottava, Elsevier Academic Press, 2005
4. E. Gizeli “Acoustic Immunosensors” in *Biomolecular Sensors*, Eds E. Gizeli & C.R. Lowe, Taylor & Francis, UK, 2002

### Patents

1. M. Saitakis, E. Gizeli “Analysing the binding of cell membrane bound molecules” WO 2009/037660
2. A. Tsortos, G. Papadakis, E. Gizeli, “Molecular conformation biosensing” WO 2008/155692
3. E. Gizeli and A.C. Stevenson “Chemical sensor for detecting binding reactions” WO9201931

### Peer reviewed articles (\* corresponding author)

1. M. Saitakis, E. Gizeli<sup>\*</sup>, Acoustic sensors as a biophysical tool for probing cell attachment and cell/surface interactions, *Cellular and Molecular Life Sciences*, in press.
  2. A. Tsortos, G. Papadakis, E. Gizeli, The intrinsic viscosity of linear DNA, *Biopolymers*, 95, 2011, 12, 824-832.
  3. K. Mitsakakis & E. Gizeli<sup>\*</sup>, Multi-sample acoustic biosensing microsystem for protein interaction analysis, *Biosensors and Bioelectronics*, 26, 2011, 4579-4584.
  4. K. Mitsakakis, E. Gizeli<sup>\*</sup>, Detection of multiple cardiac markers with an integrated acoustic platform for cardiovascular risk assessment, *Analytical Chimica Acta*, 699, 2011, 1-5 (selected on the cover page as “featured article”).
  5. M. Saitakis, E. Gizeli<sup>\*</sup>, Quantification of the effect of glycocalyx condition on membrane receptor interactions using an acoustic wave sensor, *European Biophysics Journal*, 40, 2011, 209.
  6. G. Papadakis/A. Tsortos, E. Gizeli<sup>\*</sup>, Acoustic characterization of nanoswitch structures; application to the DNA Holliday Junction, *Nano Letters*, 10, 2010, 5093-5097.
  7. A. Pantazis, E. Gizeli<sup>\*</sup>, G. Kostantinidis, A high frequency GaN Lamb-wave sensor device, *Applied Physics Letters*, 96, 2010, 194103.
  8. G. Papadakis, A. Tsortos, K. Mitsakakis, & E. Gizeli<sup>\*</sup>, Characterization of DNA-Hv1 histone interactions; discrimination of DNA size and shape, *FEBS Letters*, 584, 2010, 935-940.
  9. M. Saitakis, A. Tsortos, E. Gizeli<sup>\*</sup>, Probing the interaction of a membrane receptor with a surface-attached ligand using whole cells on acoustic biosensors, *Biosensors and Bioelectronics*, 25, 2010, 1688-1693.
  10. K. Melzak, A. Tsortos, E. Gizeli<sup>\*</sup>, Use of Acoustic Sensors to probe the mechanical properties of liposomes, *Methods in Enzymology*, 465, 2009, 21-41.
  11. F. Bender, P. Roach, A. Tsortos, G. Papadakis, M.I. Newton, G. McHale, E. Gizeli<sup>\*</sup>, Development of a combined surface plasmon resonance/surface acoustic wave device for the characterization of biomolecules, *Measurement Science and Technology*, 20, 2009, Art. No: 124011.
  12. G. Papadakis, A. Tsortos, E. Gizeli<sup>\*</sup>, Triple-helix DNA structural studies using a Love wave acoustic biosensor, *Biosensors & Bioelectronics*, 25, 2009, 702-707.
  13. K. Mitsakakis, A. Tserepi, E. Gizeli<sup>\*</sup>, SAW device integrated with microfluidics for array-type biosensing, *Microelectronic Engineering*, 86, 2009, 1416-1418.
  14. K. Mitsakakis, A. Tsortos, J. Kondoh, E. Gizeli<sup>\*</sup>, Parametric study of SH-SAW device response to various types of surface perturbations, *Sensors and Actuators B: Chemical*, 138, 2009, 408.
  15. K.A. Melzak, E. Gizeli<sup>\*</sup>, Relative activity of cholesterol in OPPC/cholesterol/sphingomyelin mixtures measured with an acoustic sensor, *Analyst*, 134, 2009, 609-614.
  16. C. Hadjicharalambous, T. Sheynis, R. Jelinek, M. Shanahan, A. Ouellette, E. Gizeli<sup>\*</sup>, Mechanism of  $\alpha$ -defensin bactericidal action: comparative membrane disruption by Cryptidin-4 and its disulfide-null analogue, *Biochemistry*, 47, 2008, 12626-12634.
  17. M. Saitakis, A. Dellaporta, E. Gizeli<sup>\*</sup>, Measurement of 2D binding constants between cell bound MHC and immobilized antibodies with an acoustic biosensor, *Biophysical Journal*, 95, 2008, 4963-4971.
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18. A. Tsortos, G. Papadakis, E. Gizeli\*, Shear acoustic wave biosensor for detecting DNA intrinsic viscosity and conformation: A study with QCM-D, *Biosensors and Bioelectronics*, 24, 2008, 836-841.
  19. T. Shahal, K.A. Melzak, C.R. Lowe, E. Gizeli\*, Poly(dimethylsiloxane)-coated sensor devices for the formation of supported lipid bilayers and the subsequent study of membrane interactions, *Langmuir*, 24, 2008, 11268-11275.
  20. K.A. Melzak, F. Bender, A. Tsortos & E. Gizeli\*, Probing mechanical properties of liposomes using acoustic sensors, *Langmuir*, 24, 2008, 9172-9180.
  21. K. Mitsakakis, A. Tserepi, E. Gizeli\*, Integration of microfluidics with a Love wave sensor for the fabrication of a multisample analytical microdevice, *Journal of Microelectromechanical Systems*, 17, 2008, 1010-1019.
  22. A. Tsortos/G. Papadakis, K. Mitsakakis, K.A. Melzak, E. Gizeli\*, Quantitative determination of size and shape of surface-bound DNA using an acoustic wave sensor, *Biophysical Journal*, 94, 2008, 2706-2715.
  23. M. Farsari, G. Filippidis, T. Drakakis, K. Sambani, S. Georgiou, G. Papadakis, E. Gizeli, C. Fotakis, Three-dimensional biomolecule patterning, *Applied Surface Science*, 253, 2007, 8115-8118.
  24. T. Drakakis, G. Papadakis, K. Sambani, G. Filippidis, S. Georgiou, E. Gizeli, C. Fotakis & M. Farsari, Construction of three-dimensional biomolecule structures employing femtosecond lasers, *Applied Physics Letters*, 89, 2006, 144108.
  25. E. Gizeli\* & J. Glad, Single-step formation of a biorecognition layer for assaying histidine-tagged proteins, *Analytical Chemistry*, 76 (14), 2004, 3995-4001.
  26. K.A. Melzak, D.J. Ellar, E. Gizeli\*, Interaction of cytolytic toxin CytB with a supported lipid bilayer; study using an acoustic wave device, *Langmuir*, 20 (4), 2004, 1386-1392.
  27. F. Martin, G. McHale, K. Melzak, E. Gizeli, M.I. Newton, Pulse mode shear-horizontal surface acoustic wave (SH-SAW) system for liquid-based sensing applications, *Biosensors and Bioelectronics*, 19, 2004, 627-632.
  28. E. Gizeli\*, F. Bender, A. Rasmusson, K. Saha, F. Josse, R. Cernosek, Sensitivity of the acoustic waveguide biosensor to protein binding as a function of the waveguide properties, *Biosensors and Bioelectronics*, 18, 2003, 1399-1406.
  29. K. Saha, F. Bender, A. Rasmusson, E. Gizeli\*, Probing the viscoelasticity and mass of a surface-bound protein layer with an acoustic waveguide device, *Langmuir*, 19, 2003, 1304-1311.
  30. K. Saha, F. Bender, E. Gizeli\*, Comparative study of IgG binding to proteins G and A: non-equilibrium kinetic and binding constant determination with the acoustic waveguide device, *Analytical Chemistry*, 75, 2003, 835-842.
  31. M.I. Newton, G. McHale, F. Martin, E. Gizeli, K. Melzak, Generalized Love waves, *Europhysics Letters*, 58, 2002, 818-822.
  32. K.A. Melzak, F. Martin, M.I. Newton, G. McHale: E. Gizeli\*, Acoustic determination of polymer molecular weights and rotation times, *Journal of Polymer Science B: Physics*, 40, 2002, 1490-1495.
  33. K.A. Melzak, E. Gizeli\*, A silicate gel promoting deposition of lipid bilayers, *Journal of Colloid and Interface Science*, 246, 2002, 21-28.
  34. A. Rasmusson, E. Gizeli\*, Comparison of poly(methylmethacrylate) and Novolak waveguide coatings for an acoustic biosensor, *Journal of Applied Physics*, 90, 2001, 5911-5914.
  35. G. McHale, M.I. Newton, F. Martin, K. Melzak, E. Gizeli, Resonant conditions for Love wave guiding layer thickness, *Applied Physics Letters*, 79, 2001, 3542-3543.
  36. M.I. Newton, F. Martin, K.A. Melzak, E. Gizeli, G. McHale, Harmonic Love wave devices for biosensing applications, *Electronics Letters*, 37, 2001, 340-341.
  37. K.A. Melzak, E. Ralph, E. Gizeli\*, Effect of the surface hydrophilicity on the formation of a membrane-type interface; Study using an acoustic wave device, *Langmuir*, 17, 2001, 1594.
  38. M.I. Newton, G. McHale, F. Martin, E. Gizeli, K.A. Melzak, Pulse mode operation of Love wave devices for biosensing applications, *Analyst*, 126, 2001, 2107-2109.
  39. E. Gizeli\*, Study of the sensitivity of the acoustic waveguide sensor, *Analytical Chemistry*, 72, 2000, 5967-5972.
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40. C. MacMullen, H. Mehta, E. Gizeli<sup>\*</sup>, C. Lowe, Modelling of the mass sensitivity of the Love wave device in the presence of a viscous liquid, *Journal of Physics: D Applied Physics*, **33**, 2000, 3053-3059.
  41. E. Gizeli<sup>\*</sup>, M. Liley, C.R. Lowe, H. Vogel, Antibody binding to a functionalized supported lipid layer: A direct acoustic immunosensor, *Analytical Chemistry*, **69**, 1997, 4808-4813.
  42. E. Gizeli<sup>\*</sup>, Design considerations for acoustic wave biosensors, *Smart Materials and Structures*, **6**, 1997, 700-706, (invited).
  43. E. Gizeli, M. Liley, C.R. Lowe, H. Vogel, Detection of supported lipid layers with the acoustic Love waveguide device: Application to biosensors, *Sensors and Actuators B Chemical*, **34**, 1996, 295-300.
  44. E. Gizeli, C.R. Lowe, Immunosensors, *Current Opinion in Biotechnology*, **7**, 1996, 66-79.
  45. A.C. Stevenson, E. Gizeli, N.J. Goddard, C.R. Lowe, Acoustic Love plate sensors: a theoretical model for the optimization of the surface mass sensitivity, *Sensors and Actuators B-Chemical*, **14**, 1993, 635-637.
  46. E. Gizeli, A.C. Stevenson, N.J. Goddard, C.R. Lowe, Acoustic Love plate sensors: comparison with other acoustic devices utilising surface SH waves, *Sensors and Actuators B-Chemical*, **14** (1-3), 1993, 638-639.
  47. C.R. Lowe, D.C. Cullen, E. Gizeli, N.J. Goddard, L.D. Gray -Stephens, P. Maynard & B. Yon-Hin, Biosensors, *Clinical Biochemistry Review*, **13**, 1992, 22-26.
  48. E. Gizeli, A.C. Stevenson, N.J. Goddard, C.R. Lowe, A Love plate biosensor utilising a polymer layer, *Sensors and Actuators B-Chemical*, **6** (1-3), 1992, 131-137.
  49. E. Gizeli, A.C. Stevenson, N.J. Goddard, C.R. Lowe, A novel Love-plate acoustic sensor utilising polymer overlayers, *IEEE Transactions on Ultrasonics Ferroelectric and Frequency Control*, **39** (5), 1992, 657-659.

#### Conference Proceedings

1. K. Mitsakakis, A. Tserepi, E. Gizeli<sup>\*</sup>, An integrated microfluidics-on-SAW setup for multi-sample sensing, *IEEE International Frequency Control Symposium Proceedings*, Hawaii 2008, 337-340.
2. A. Tsortos, G. Papadakis, E. Gizeli<sup>\*</sup>, Acoustic wave biosensor for detecting DNA conformation; a study with QCM-D, *IEEE International Frequency Control Symposium Proceedings*, Hawaii 2008, 346-349.
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  3. **Report** in “*Biotech Business Week*” (*NewsRx*, p.796, 16/6/2008)
- For the article in *Biophysical Journal* (Saitakis et al. 2008): **Report** in “*Biotech Business Week*” (*NewsRx*, 08/01/2009)
- For the article in *Biosensors & Bioelectronics* (Papadakis et al. 2009): **Hot-off-the-press** report by the Human Frontier Science Program: «Novel biophysical method to characterize drug candidates for anti-gene therapy»