



## Profile:

Experimental researcher with experience in microfluidics for cell manipulation and chemical analysis. Interested in microsystems for rapid screening, with applications in chemical detection and diagnostics.

## Education:

- 2008-2013 Ph.D. in Biochemistry and Molecular Biology**, emphasis in Bioengineering  
University of California, Santa Barbara, CA, USA. Advisor: Carl Meinhart.
- 2006-2008 M.Sc. in Electrical Engineering**  
University of Cyprus, Nicosia, Cyprus. Advisor: George Georgiou.
- 2004-2006 B.Sc. (Hons) in Physics**, emphasis in Electronics  
**B.Sc. in Mathematics**  
Pennsylvania State University, University Park, PA, USA.

## Publications:

### Peer-reviewed journals:

- B. Piorek, **C. Andreou**, M. Moskovits, and C. D. Meinhart: Discrete Free- Surface Millifluidics for Rapid Capture and Analysis of Airborne Molecules Using Surface Enhanced Raman Spectroscopy, *Analytical Chemistry* 2014 86 (2), 1061–1066.
- C. Andreou**, M. R. Hoonejani, M. R. Barmi, M. Moskovits, and C. D. Meinhart, Rapid Detection of Drugs of Abuse in Saliva Using Surface Enhanced Raman Spectroscopy and Microfluidics, *ACS Nano* 2013 7 (8), 7157-7164.
- M. R. Barmi, **C. Andreou**, M. R. Hoonejani, M. Moskovits, and C. D. Meinhart: Aggregation Kinetics of SERS-Active Nanoparticles in Thermally Stirred Sessile Droplets, *Langmuir* 2013 29 (44), 13614-13623.

### Conference Presentations:

- C. Andreou**, M.R. Hoonejani, M.R. Barmi, B. Piorek, M. Moskovits, and C.D. Meinhart, *Microfluidic Device for Detection of Chemicals in Aqueous Mixtures using Surface Enhanced Raman Spectroscopy*, The 15th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS 2011), Seattle, Washington, USA, October 2-6, 2011.
- C. Andreou**, S.J. Lee, B. Piorek, M. Moskovits, C. Meinhart, *Multiphase microfluidics and Surface Enhanced Raman Spectroscopy*, 63<sup>rd</sup> Annual Meeting of the APS Division of Fluid Dynamics, Long Beach, California, USA, Nov. 21-23, 2010.
- C. Andreou**, S.J. Lee, B. Piorek, M. Moskovits, C. Meinhart, *Mapping concentration dependencies of SERS in a microfluidic device*, Gordon Research Conference, Microfluidics (Physics and Chemistry of), Lucca, Italy, June 28- July 3, 2009.
- C. Andreou**, E. Demosthenous, C. Odiatis, N. Loucaides, P. Georgiades, A. Ramos, G. Georgiou, *Dielectrophoretic capture and separation of Trophoblast Stem Cells and their differentiated progeny*, 34<sup>th</sup> Micro- and Nano-Engineering Conference, Athens, Greece, 15-19 September 2008.

## Seminars

University of Cyprus, Electrical Engineering seminar series, Multiphase Microfluidics and Surface Enhanced Raman Spectroscopy for Chemical Detection, 19-Jun-2013.

UCSB, Systems Biology seminar series, Multiphase Microfluidics and Surface Enhanced Raman Spectroscopy for Chemical Detection, 07-Jun-2013.

## Theses/Other publications

*Ph.D. Thesis:* Interfacial transport processes in microfluidic systems for precision surface enhanced Raman spectroscopy, **2013**.

*M.Sc. Thesis:* Design and fabrication of dielectrophoresis-based devices for cell manipulation and separation, **2008**.

*B.Sc. Honors Thesis:* Tunnelling and phase-sensitive studies of odd-parity superconductor  $\text{Sr}_2\text{RuO}_4$ . Advisor: Ying Liu, **2006**.

## Science Journalism:

July 25, 2013 Nanowerk News "*Microfluidic device detects drugs in saliva fast*"

## Honors and Awards:

- 2013 Best fifth-year graduate student Friday noon seminar
- 2011 Best third-year graduate student Friday noon seminar
- 2008-2009 Dean's Fellowship, UC Santa Barbara Graduate Division
- 2006 'Standard Bearer' of Penn State Physics graduating class
- 2004-2006 Penn State Schreyer Honors College Scholar
- 2002-2006 Penn State Eberly College of Science Dean's list for 8/8 semesters
- 2002-2006 Full scholarship from the AMIDEAST Cyprus-America Scholarship Program (CASP) for undergraduate studies
- 1998-2000 National Scholarship from the Cyprus Scholarship Committee and the Italian Government to attend the United World College of the Adriatic

## Teaching/Mentoring Experience:

- Summer 2014 Organizer/supermentor: UCSB *Jack Kent Cooke Bridges for Engineering and Science Transfers* and UCSB *Condor Techs* program.
- Spring 2014 Guest Lecturer, UCSB: "*Physical Chemistry for Chemical and Biological Sciences*" (40 students).
- Winter 2014 Organizer/lecturer: "*Graphics rendering using Blender for scientific illustrations*".
- Fall 2012 Teaching Assistant/Replacement Lecturer, UCSB: "*Thermodynamics for Engineers*" (100+ students).
- Summer 2013 Research Mentor: UCSB *Jack Kent Cooke Bridges for Engineering and Science Transfers* and UCSB *Condor Techs* program.
- Summer 2012 Research Mentor: UCSB *SABRE* program.

## Languages

Greek (native proficiency), English (bilingual proficiency), Italian (professional working proficiency), French (limited working proficiency), Turkish (elementary proficiency).

## Contact Information:

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