

CEDRIC HURTH, PhD

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EDUCATION

PhD, The University of Texas at Austin & Université de Bordeaux, France

Jun 2006 & Dec 2005

Major: Physical Chemistry

Awarded through an Academic and Scientific Cooperation and Exchange Agreement

Thesis Title: “Scanning Probe Microscopy studies of active enzymes at solid surfaces”

Advisors: Prof. Allen J. Bard, University of Texas at Austin and Dr. Jean-Pierre Aimé, Université Bordeaux 1

M.Sc., Ecole Normale Supérieure de Cachan, France

May 2001

B.Sc., Université Paris Sud, France

Jun 2000

Major: Molecular Physical Chemistry

Specialization: Protein Structure, Function & Engineering

Thesis Title: “Interactions of yeast prion protein Ure2p with putative partners”

Advisor: Dr. Ronald Melki, Centre National de la Recherche Scientifique (C.N.R.S.)

B.Sc. Coursework includes Spectroscopy and Lasers, Quantum Chemistry, Theory of Orbitals, Crystallography, Organic/Inorganic synthesis, Bio-inorganic chemistry

SKILLS

Laser and optics: development of optics for instrumentation; Ar-ion and Ti-sapphire, diode pumped solid state lasers (DPSSL); non-linear optics (SHG, SFG); guided optics; fiber optics; applications to fluorescence and scattering; optical design of detection systems for bioengineering and biomedical prototypes.

Capillary Electrophoresis/Microfluidics: microchip-based CE (μ CE); electro-osmotic flow (EOF) measurements (current-based, videomicroscopy and fluorescence); on-chip DNA separation for forensics (STR typing); on-chip real-time PCR; portable fluorescence detection; flow cytometry; microchip design; fluidic process automation; SU-8/PDMS prototyping; hard plastic processing (hot-embossing, injection-molding).

Scanning probe microscopy: static and dynamic, ex situ and in situ Atomic Force Microscopy (AFM); ex situ and in electrochemical environment (EC-STM) Scanning Tunneling Microscopy (STM); Scanning Electrochemical Microscopy (SECM); Scanning Electrochemical Potential Microscopy (SECPM)

Surface treatment and surface chemistry: surface functionalization via anodization, self-assembled monolayers (SAM) for enzyme immobilization in biosensor applications; electrode functionalization.

Surface/probe preparation: vacuum evaporation, cathodic sputtering; chemical etching of glass; Focused Ion Beam (FIB);

Electrochemistry: potential sweep/step techniques; amperometry; ultramicroelectrodes; impedance techniques; electrodeposition/stripping

Electron Beam techniques: Scanning Electron Microscopy (SEM), Energy Dispersive Spectroscopy (EDS)

Protein biochemistry: protein expression and purification by High Performance Liquid Chromatography (HPLC); fluorescence; electrophoresis; western blot; co-immunoprecipitation

Molecular biology: cell culture of *Saccharomyces cerevisiae*, *Hansenula polymorpha*, and *Escherichia coli*; electroporation; DNA extraction; agarose DNA electrophoresis gel; southern blot; Polymerase Chain Reaction (PCR) gene amplification; ultracentrifugation analysis

Synthetic Organic Chemistry: general synthesis via organometallic, Diels-Alder, substitutions; vacuum distillation; NMR/IR characterization of products; polyacrylamides

Data Acquisition and Treatment: Data Treatment with Wavemetrics IGOR, GNUPlot; Programming in FORTRAN; Instrument Interfacing with LabView

Scientific Publications: regular reviewer for *Biosensors & Bioelectronics* (Elsevier), *Analytical and Bioanalytical Chemistry* (Springer), and *Angewandte Chemie International Edition* (Wiley);

Languages: native French speaker, fluent in English and German.

RESEARCH EXPERIENCE

Mint Diagnostics, Ltd. (Sittingbourne, Kent, UK)

Aug 2019 –

Principal Engineer

- Develop microfluidic devices for ELISA bioassay
- Explore automation of the assay sequence.

Ntech_DNA (Paris, France)

Jan 2018 –

Co-founder & Biotechnology development leader

- Pursue investment sources and research programs to constitute the activity
- Perform preliminary experiments assessing the applicability of a disruptive method for bio-target selection to genome sequencing and biomolecule enrichment methods.

ICFO – The Institute of Photonic Sciences

Nov 2016 – Jul 2019

Research Fellow

- Develop applications for the SixSenso lens-free optical reader focusing on microorganisms (bacteria, phytoplankton, etc...) sample preparation and detection in industrial waters.
- Provide expert support in biological sample preparation and analysis for various projects.
- Develop novel point-of-care diagnosis methods.

WhiteSpace Enterprise Corp. (Phoenix, AZ, USA)

Jan 2016 –

Consultant

- Pursue continuous funding sources in terms of government grants (NIH, NSF, Department of Defense...) as well as private venture capitalist funding
- Advise on existing research projects: direction of experiments, current data analysis, experimental plans, scope of work...

Translational Genomics Research Institute (TGen)

Staff Scientist

Sep 2014 – Dec 2015

- Lead the development of a multilane capillary electrophoresis instrument for DNA forensics using SNP or STR assays.
- Develop programs to build point-of-care (POC) devices for personalized medicine.

Center for Applied Nanobioscience & Medicine - University of Arizona College of Medicine

Assistant Research Scientist (promotion)

Sep 2011 – Jul 2014

- Obtained a starter grant to develop a novel method to measure rheological properties of biological fluid. In particular, we assessed how viscosity differences and changes can be used to characterize pleural effusions. We investigated to what extent a biological interaction with the fluid can be sensed for particular biomarkers;
- Investigated the effect of the presence of a receptor on the surface to a ligand in solution on the drying mechanism of a microliter droplet and assessed the application to a clinical setting. Active collaboration with Dr. Daniel Attinger (Iowa State University);
- Developed an on-chip real-time PCR module with integrated-optics for DNA quantification in forensics;
- Designed and characterized a tunable gradient mixer microfluidic device in collaboration with colleagues at the Center;
- Served as a mentor for the TGen Helios Scholar program (1.5 months, summer 2012 and 2013);
- Laser laboratory manager for the University of Arizona Office of Radiation, Chemical and Biological Safety; maintaining the laser inventory and passing on standard operating procedures to new users.

Center for Applied Nanobioscience & Medicine - University of Arizona College of Medicine

Postdoctoral Research Associate (transfer)

Nov 2009 – Jun 2011

- Conducted a preliminary Phase 0 clinical research project at the Scottsdale Healthcare Clinical Research Institute to develop an innovative method to discriminate pleural effusions collected from patients on-site. In collaboration with Drs. Ronald Korn and Kris Vijay, this led to a publication in 2011.
- Developed a microchip capillary electrophoresis (μ CE) system detection method in a microfluidic forensic STR typing platform with integrated DNA extraction and amplification.
- Designed disposable plastic (cyclic olefin copolymer (COC)) microchips for μ CE in collaboration and developed a polymer matrix suitable for plastic μ CE for high resolution DNA separation.
- Served as a mentor in the ThirdBiotech LabApprentice program (city of Chandler, AZ) for 3 months (2 senior undergraduate students).

Center for Applied Nanobioscience - The Biodesign Institute at Arizona State University

Postdoctoral Research Associate

Jul 2006 – Oct 2009

- Designed, built, and evaluated a compact LED excitation source for lab-on-chip applications such as μ CE.
- Evaluated a method to characterize elastic properties of thin polymer films to discriminate melanoma cancer cells and benign cells.
- Characterized micro- and nano- imprinted surfaces to be used for 3D microenvironment cell culture; co-authored a poster presented at an international conference;

- Supervised a research technician, several undergraduate students, and an analytical chemist as they assisted on developing (μ CE) for DNA separation for STR typing; Mentored a high-school student for the Biodesign Summer Internship Program (1.5 months);
- Served as compliance officer and lab manager, a liaison with the Environmental Health and Safety office at Arizona State University to maintain Occupational and Safety and Health Administration rules dealing with chemical waste management, chemical inventory, and laboratory safety equipment.

Department of Chemistry and Biochemistry - The University of Texas at Austin *Graduate Research Assistant* **Apr 2002 – Jun 2006**

- Used Scanning Electrochemical Microscopy (SECM) to study a catalase biosensor and platinum nanoparticles on a surface to illustrate heterogeneous catalysis of H_2O_2 ; published a paper in *Journal of Physical Chemistry B (American Chemical Society)*
- Designed SECM experiments to characterize the influence of the solid support on the performance of a glucose oxidase biosensor.
- Developed Scanning Electrochemical Potential Microscopy (SECPM) to probe electrical double layers on metals, Si/SiO₂ and mica in collaboration with an industrial partner.

Department of Physics & Centre de Recherche Paul Pascal - Université Bordeaux 1 *Graduate Research Assistant* **Sep 2001 – Dec 2005**

- Combined Atomic Force Microscopy (AFM) with UV-visible spectrophotometry to evaluate the influence of the intrinsic surface properties on the residual activity in a phosphoglycerate kinase sensor; results published in *Biosensors and Bioelectronics (Elsevier Publishing, BV)*
- Developed Tapping Mode AFM in liquid media; improved the acoustic excitation of the cantilever and reduced the perturbation from the hydrodynamic drag in fine measurements on enzyme activity or the layering of an organic liquid at the surface; published a series of papers in journals from the American Institute of Physics
- Attended a summer school in Scanning Probe Microscopy organized by the C.N.R.S.
- Supervised a high-school student for her career prospecting project (2 months).

Laboratoire d'Enzymologie et de Biochimie Structurales - C.N.R.S. & Université Paris-Sud *Research Assistant* **Jul 2000 – Sep 2001**

- Investigated the genetically predicted interaction of Ure2p, a yeast prion, and Gln3p by coimmunoprecipitation;
- Quantified the interaction of fluorescent analog of glutathione binding to the GST structural domain of Ure2p; acknowledged in publication;
- Acquired specific training in microbiology on the overexpression of μ -opioid receptors at the Ecole Supérieure de Biotechnologies de Strasbourg (France).

Surface Science Center, Department of Chemistry - University of Pittsburgh *Undergraduate Research Assistant* **May – Aug 2000**

- Published the effect of chemical surface treatment on the charge transfer at the Si/SiO₂ interface by Second-Harmonic Generation (SHG) as second author with Dr. Eric Borguet.
- Performed time-dependent SHG experiments on SiGe interfaces.

TEACHING EXPERIENCE

Mentored 11 undergraduate students (for periods between 3 and 18 months (~20-30 h/week), from 2006 to present.

Most notably:

Translational Genomics Institute, “Helios Foundation” Program	Jul – Aug 2013
Translational Genomics Institute, “Helios Foundation” Program	Jul – Aug 2012
ThirdBiotech, City of Chandler, AZ “LabApprentice”	May – July 2011

Assisted Prof. Zenhausern in the “Electronic Thin Films” class (ASU MSE494/598); organizing AFM and contact angle goniometry labs, presenting chemical surface modifications, grading final exam
Feb – May 2008

Undergraduate “Scanning Tunneling Microscopy” lab, Department of Physics, Université de Bordeaux, France
May – Dec 2005

Presented Scanning Tunelling Microscopy to a general audience at the “2005, World Year of Physics” event focused on “Physics & the Environment”, Arcachon, France
19 – 21 Jul 2005

Initiation to chemistry experiments at the “Chemists Celebrate Earth Day” A.C.S. event at the Austin Nature and Science Center , Austin, TX, USA
22 Apr 2005

Undergraduate physical chemistry tutoring at the Centre de Mathématiques Médecine Pharmacie Paramédical, Bordeaux, France
Mar – Jun 2003

AWARDS/GRANTS

Invited Speaker Award – Advanced Materials Failure Analysis (AMFA) workshop
Indianapolis, IN
August 4th 2013

Arizona Biomedical Research Commission – “A rapid viscosity-based method to characterize biological fluids” – \$ 425,000
July 2011 – June 2013

Ibis Foundation of Arizona – “Relation between Blood Molecular Properties and Cardiovascular Event Rate” – \$ 10,000
May 2008 – June 2011

Appel d’offres “Co-Tutelles de Thèse”, Ministère de l’Education Nationale, de la Recherche et des Technologies (France) – € 12,500
September 2003 – December 2005

LIST OF PUBLICATIONS

Peer-reviewed journal articles [served as corresponding author]*

1. Sibilo R., Perez Rosas J.M., *Hurth C., and Pruneri V. “A surface cytometer for fluorescent detection and growth monitoring of bacteria over a large field-of-view”, Biomed. Optics Express, 10, 2101 (2019).

2. *[Hurth C.](#), Contente-Cuomo T., Murtaza M., and Zenhausern F. “Drying droplet method analysis of EGFR SNP rs1050171 binding”, *J. Nanomed.*, 2, 1010 (2018).
3. *[Hurth C.](#), Bhardwaj R., Andalib S., Frankiewicz C., Dobos A., Attinger D., and Zenhausern F., “Biomolecular interactions control the shape of stains from drying droplets of complex fluids”, *Chem. Eng. Sci.*, 137(8), 398-403 (2015).
4. Jung W., *[Hurth C.](#), Becker A.E., and Zenhausern F., “Real-time monitoring of viscosity changes triggered by chemical reactions using a high-speed imaging method”, *Sens. Biosens. Res.*, 5(5), 8-12 (2015).
5. Jung W., Yang J., Barrett M., Duane B., Brooks C., [Hurth C.](#), Nordquist A., Smith S., and Zenhausern F., “Recent Improvements in miniaturization and integration of a DNA analysis system for rapid forensic analysis (MiDAS)”, *J. Forensic Investigation*, 2(2), 7-14 (2014).
6. *[Hurth C.](#), Yang J., Brooks C., Nordquist A., Smith S., and Zenhausern F., “A miniature quantitative PCR device for directly monitoring sample processing onto a microfluidic rapid DNA system”, *Biomedical Microdevices*, 16(6), 905-914 (2014).
7. *[Hurth C.](#), Duane B., Whitfield D., Smith S., Nordquist A., and Zenhausern F., “Automation of a highspeed imaging setup for differential viscosity measurements”, *Journal of Applied Physics*, 114(24), 244701 (2013). **Front cover feature.**
8. Yang, J., Brooks, C., Estes, M.D., [Hurth, C.](#), and Zenhausern, F., “An integratable microfluidic cartridge for forensic swab sample lysis”, *Forensic Science International: Genetics*, 8(1), 147-158 (2014).
9. Estes, M.D., [Hurth, C.](#), Barrett, M., and Zenhausern, F., “A tunable array of unique steady-state microfluidic gradients”, *Physical Chemistry Chemical Physics*, 15(31), 12804-12815 (2013). **Front cover feature.**
10. *[Hurth C.](#), Aboud M., Estes, M.D., McCord B.R., and Zenhausern F., “Direct loading of polymer matrices in plastic microchips for rapid DNA analysis: a comparative study”, *Electrophoresis*, 33(16), 2604-2611 (2012).
11. Kim N., Li Z., [Hurth C.](#), Zenhausern F., Chang S.F., and Attinger D., “Identification of fluid and substrate chemistry based on automatic pattern recognition of stains”, *Analytical Methods*, 4(1), 50-57 (2012). **Front cover feature.**
12. *[Hurth C.](#), Klein K., Van Nimwegen L., Korn R., Vijayaraghavan K., and Zenhausern F., “Clinical diagnostic of pleural effusions using a high-speed viscosity measurement method”, *Journal of Applied Physics*, 110(3), 0347011-0347014 (2011)
13. *[Hurth C.](#), Smith S.D., Nordquist A.R., Lenigk R., Duane B., Nguyen D., Surve A., Hopwood A.J., Estes M.D., Yang J., Cai Z., Chen X., Lee-Edghill J.G., Elliott K., Tully G., and Zenhasuern F., “An automated instrument for STR Human identification: design, characterization and experimental validation”, *Electrophoresis*, 31(11), 3510-3517 (2010)
14. Hopwood A.J., [Hurth C.](#), Yang J., Cai Z., Moran N., Lee-Edghill J.G., Nordquist A.R., Lenigk R., Estes M.D., Haley J, McAllister C., Chen X., Brooks C., Smith S.D., Elliott K., Koumi P., Zenhausern F., and Tully G., “Integrated microfluidic system for rapid forensic DNA analysis: sample collection to DNA profile”, *Analytical Chemistry*, 82(16), 6991-6999 (2010). **Front cover feature.**
15. *[Hurth C.](#), Lenigk R., and Zenhausern F., “A compact LED-based module for capillary electrophoresis of DNA samples”, *Applied Physics B*, 93, 693-699 (2008)
16. [Hurth C.](#), Li C., and Bard A.J., “Direct measurement of double-layer potential profiles by Scanning Electrochemical Potential Microscopy (SECPM)”, *Journal of Physical Chemistry C*, 111(12), 46204627 (2007)
17. *[Hurth C.](#), Tassius C., Talbot J.C., Maali A., Moskalenko C., Minard P., Aimé J.P. and Argoul F., “Enzymatic activity of immobilized recombinant yeast phosphoglycerate kinase”, *Biosensors and Bioelectronics*, 22(11), 2449-2455 (2007)
18. Maali A., [Hurth C.](#), Cohen-Bouhacina T., Couturier G., and Aimé J. P., “Improved acoustic excitation of AFM cantilevers in liquid”, *Applied Physics Letters*, 88(16), 1635041-1635043 (2006)
19. Maali A., Cohen-Bouhacina T., Jai C., [Hurth C.](#), Boisgard R., Aimé J.P., Mariolle D., and Bertin F., “Reduction of the AFM cantilevers hydrodynamic drag close to the surface by ion beam milling”, *Journal of Applied Physics*, 99(2), 0249081-0249086 (2006)
20. Fernandez J., [Hurth C.](#) and Bard, A.J., “Scanning Electrochemical Microscopy #54. Application to the study of heterogeneous catalytic reactions – Hydrogen peroxide decomposition”, *Journal of Physical Chemistry B*, 109(19), 9532-9539 (2005)

21. Maali A., Hurth C., Boisgard R., Jai C., Cohen-Buhacina T. and Aimé J.P., “Hydrodynamics of oscillating atomic force microscopy cantilevers in viscous fluids”, *Journal of Applied Physics*, 97(7), 0749071-0749076 (2005)
22. Fomenko V., Hurth C., Ye T. and Borguet E., “Second-Harmonic Generation investigations of charge transfer at chemically modified semiconductor interfaces”, *Journal of Applied Physics*, 91(7), 43944398 (2002)

Book chapters and conference proceedings

1. Estes M.D., Hurth C., Yang J., Brooks C., Nordquist A., Smith S., Lenigk R., Moran N., Hopwood A., Tully G., and Zenhausern F., “Rapid DNA human identification system: optimization of microfluidic integration”, *MicroTAS 2011 Proceedings*, 2102-2104 (2011)
2. Maali A., Cohen-Bouhacina T., Hurth C., Jai C., Boisgard R., and Aimé J.P., “Dynamic AFM in liquid: viscous damping and applications to study confined liquid” in *Applied Scanning Probe Methods*, vol. 11-13, Bhushan B., Fuchs H., and Yamada H. Eds., Springer-Verlag, Heidelberg (2009)
3. Agrawal P., Gu J., Hurth C., Iyer N., Yang J., and Zenhausern F., “Imprinting of soft biological gels down to submicron regime”, *Materials Research Society Symposium Proceedings*, 1097E (2008)

Patents and disclosures

1. Perez Rosas J.M., Sibilo R., Hurth C., and Pruneri V., “Optical Device for the Detection of Fluorescence Emission”, PCT Application 119906 (2019)
2. Attinger D., Zenhausern F., Hurth C., Chang S.F., and Li Z., “Systems and methods for identification of fluid and substrate composition or physic-chemical properties”, U.S. Patent Appl., US 20130073221 A1 (2013)
3. Zenhausern F., Nordquist R., Lenigk R., Hurth C. et al, “Electrophoresis system for processing samples”, PCT Int. Appl. WO 2012168737 A1 (2012)
4. Smith S., Duane B., Hurth C. et al, “Improvements in an relating to performance of an analyzer for biological samples”, PCT Int. Appl. WO 2012027567 A1 (2012)
5. Zenhausern F., Nordquist A., Lenigk R., Hurth C. et al, “Method and system for analyzing a sample”, PCT Int. Appl. WO 20120200257 A1 (2012)
6. Zenhausern F., Nordquist A., Lenigk R., Hurth C., et al, “Improvements in and relating to devices”, PCT Int. Appl. WO 2010091406 A2 (2010)
7. Zenhausern F., Nordquist R., Lenigk R., Hurth C., and Yang J. “Optical detection system, alignment system, and temperature control for capillary electrophoresis apparatus, and use in PCR applications”, PCT Int. Appl., WO 2010091400 A2 (2010).
8. Hurth C., Korn R., Vijay K., and Zenhausern F., “Apparatus and method for measuring rheological properties of biological fluids and assaying constituents of the biological fluid”, U.S. Provisional Patent Application, docket number M9-061L (2009). Abandoned.
9. Gu J., Yang J., Hurth C., and Zenhausern F., “Method suitable for patterning a biological media and monitoring a biological signal thereof”, U.S. Provisional Patent Appl., docket number M6-443 (2007). Abandoned.
10. Chaput J., Hurth C., Yan H., and Zenhausern F., “Novel Cellular and Display Structures”, U.S. Provisional Patent Application, docket number M6-115 (2007). Abandoned.

Presentations

1. Advanced Material Failure Analysis, Indianapolis, IN, August 3-4 2013, *Invited Speaker*
2. Lab-on-a-Chip World Congress, San Diego, CA, 25-26 September 2012, *2 posters, oral*
3. American Association for Cancer Research, *Frontiers in Basic Cancer Research*, Boston, MA, 8-11 October 2009, *2 posters*
4. American Physical Society 2009 March Meeting, Pittsburgh, PA, 16-20 March 2009, *oral*
5. NSTI 2008 Nanotechnology Conference and Trade Show, Boston, MA, 1-5 June 2008, *poster*
6. Materials Research Society Spring Meeting, San Francisco, CA, 24-28 March 2008, *poster*
7. 2nd International Meeting on Advances in Materials, Processes and Applications of Nanotechnology, London, United Kingdom, 6-8 January 2008, *poster*
8. “Forum des microscopies à sonde locale”, La Grande Motte, France, 25-31 March 2003, *poster*

9. “DNA in Chromatin: At the Frontiers of Biology, Biophysics and Genomics”, an international workshop, Arcachon, France, 23-29 March 2002, *student member of the organizing committee*
10. 4th European Symposium of the Protein Society”, Paris, France, 22-27 April 2001, *poster*
11. “9th Summer Undergraduate Research Symposium”, Pittsburgh, PA, 28 July 2000, *poster*

OTHER ACTIVITIES

Editor for *51 SCI Help Academic Editing (Zhengzhou, China)*

Regular reviewer for *Biosensors & Bioelectronics, Electrophoresis, Analytical and Bioanalytical Chemistry, Electrochimica Acta* and others.

When refocusing away from science, I stay in shape mentally and physically, playing badminton, cycling, running, hiking, or at the gym or fitness center.

PROFESSIONAL REFERENCES

Group Leader, supervisor: 2016-current

Prof. Valerio Pruneri

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Phone: +34 935 53 4052, Fax: +34 935 53 4000, Email: Valerio.pruneri@icfo.eu

Center Director, supervisor: 2006-2016

Prof. Frederic Zenhausern

University of Arizona College of Medicine | 550 E Van Buren Street, Building 1, Phoenix, AZ 85004-2230

Phone: (602) 827-2051, Fax: (602) 827-9115, Email: fzenhaus@email.arizona.edu

Collaborator: 2009-current

Dr. Daniel Attinger

Department of Mechanical Engineering – Iowa State University | 2036 Black Engineering Building, Ames, IA 50011

Phone: (515) 294-1692, Fax: (515) 294-1692, Email: attinger@iastate.edu

Collaborator: 2010-current

Prof. Tuan Vo-Dinh

Fitzpatrick Institute for Photonics - Duke University | 101 Science Drive, 2589 FCIEMAS, Durham, NC 27708

Phone: (919) 660-8520, Fax: (919) 613-9145, Email: tuan.vodinh@duke.edu

Collaborator: 2009-2012

Prof. Bruce McCord

Department of Chemistry – Florida International University | 11200 SW 8th St, CP 304, Miami, FL 33199

Phone: (305) 348-7543, Fax: (305) 348-3772, Email: mccordb@fiu.edu

Collaborator: 2010-2011

Dr. Ronald Korn, M.D.

Scottsdale Medical Imaging, Ltd. | 9700 N 91st Street, Suite B-200, Scottsdale, AZ 85258

Phone: (602) 318-7261, Email: rkorn@eSMIL.com

Graduate adviser: 2001-2006

Prof. Allen J. Bard

The University of Texas at Austin | 1 University Station, A5300, Austin TX 78712-0165

Phone: (512) 471-3761, Fax: (512) 471-0088, Email: ajbard@mail.utexas.edu

Graduate committee member (2005) and undergraduate adviser (2000):

Prof. Eric Borguet

Department of Chemistry – Temple University | 252 Beury Hall, 1901 N. 13th Street, Philadelphia, PA 19122

Phone: (210) 204-9696, Fax: (215) 204-9530, Email: eborguet@temple.edu

Graduate adviser: 2001-2005

Dr. Jean-Pierre Aimé

Université Bordeaux 1 | 351 cours de la Liberation, F-33405 Talence Cedex, France

Phone: +33-5-4000-8956, Fax: 33-5-4000-6970, Email: jp.aime@cpmoh.u-bordeaux1.fr

Industrial collaborator: 2005-2006

Dr. Chunzeng Li

Bruker Nanosurface Offices | 112 Robin Hill Road, Santa Barbara, CA 93117

Phone: (805) 201-8710, Fax: (805) 967-7717, Email: chunzeng.li@bruker-nano.com

Graduate adviser: 2000-2001

Dr. Ronald Melki

Centre National de la Recherche Scientifique | 34 avenue de la Terrasse, F-91198 Gif-sur-Yvette, France

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