Jose Francisco Cerda, Ph.D.

Associate Professor
Department of Chemistry
Saint Joseph's University
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EDUCATION

Ph.D. 2001, Physical Chemistry
Advisors: Gerald Babcock and Warren Beck
Michigan State University, East Lansing, MI
Dissertation: "Elucidation of intermediates formed in Cytochrome *c* Oxidase, prostaglandin H_2 synthase and histidine rich protein II by using time resolved resonance Raman spectroscopy"

M.S. 1997, Chemistry
Advisor: Juan Lopez Garriga
University of Puerto Rico at Mayaguez, Mayaguez, PR
Dissertation title: "Resonance Raman Spectroscopy of Deoxy, Oxy and Carbonmonoxy Hemoglobin I from the Clam *Lucina pectinata*"

B.S. 1994, Chemical Engineering
University of Puerto Rico at Mayaguez, Mayaguez, PR
Certificate of Engineer in Training (Lic. #: 18529)

AWARDS

- Dye Endowed Fellowship (Michigan State University, 2000)
- Chemistry Olympiads (1st place Puerto Rico, 1989)
- Chemistry Olympiads (3rd place Puerto Rico, 1988)
- SJU Faculty Merit Award for Research (2014)

PROFESSIONAL AFFILIATIONS

- Sigma Xi Scientific Research Society
- American Chemical Society
- Biophysical Society

RESEARCH EXPERIENCE

Chemistry Department, Saint Joseph's University (2009 to present)
Philadelphia, PA

UV/Vis Spectroelectrochemistry

- Developed an in-house UV/Vis spectroelectrochemical apparatus at SJU to study protein-heme interactions of heme proteins in the presence of heme-bound fluoride ion
- Study the UV/Vis spectral and redox properties of safranine and safranine derivatives used in synthetic

proteins.
- Study heme model compounds in aprotic solvents to quantify specific protonation and hydrogen bonding interaction to specific heme peripheral groups.

School of Medicine, Department of Biochemistry and Biophysics (2002 to 2007)
University of Pennsylvania, Philadelphia PA

UV/Vis and FTIR Spectroelectrochemistry

- Used UV/Vis spectroelectrochemistry to study *de novo* proteins.
- Study the UV/Vis spectral and redox properties of an artificial amino acid containing a napthoquinone.

Cyclic Voltammetry.

- Used cyclic voltammetry (CV) to study synthetic flavins, designed to be soluble in highly aprotic solvents such as benzene. Ligand binding and electrochemical studies were performed to elucidate how hydrogen-bonding between the flavin analogue and a ligand receptor controls the redox chemistry of flavins.

- Study the one- and two-electron redox chemistry of a synthetic naphthoquinone amino acid in aqueous and aprotic media.

- General electrochemical characterization studies of cofactors such as heme *b*, heme *a*, quinones and free flavins.

Protein Film Voltammetry

Applied cyclic voltammetry (CV) to the study of protein monolayer films on chemically-modified gold electrodes.

Michigan State University, Department of Chemistry (1997 – 2002)

Time-resolved Resonance Raman Spectroscopy

- Used nanosecond time-resolved resonance Raman sectroscopy to investigate the formation of intermediates in the reaction of fully reduced cytochrome *c* oxidase with dioxygen.

- Used picosecond time-resolved resonance Raman to detect structural changes in histidine rich protein II, an enzyme produced by the malaria parasite.

Resonance Raman Spectroscopy

- Studied the structure of the peroxidase site of native prostanglandin H_2 synthase 1 and -2, also known as cox-1 and -2, by using resonance Raman spectroscopy.
- Characterized the heme sites of heme peroxidases by using UV-Vis measurements, back-scattering resonance Raman on freeze quenched sample and time-resolved resonance Raman.

University of Puerto Rico at Mayaguez, Department of Chemistry (1994 – 1997)

Resonance Raman spectroscopy

Studied the structure of the heme site of clam hemoglobin (HbI from *Lucina pectinata*) by using resonance Raman spectroscopy. Developed the Raman setup used to study heme proteins in the University of Puerto Rico at Mayaguez.

PROFESSIONAL EXPERIENCE

2016 to present

Chemical Biology Program Director,
Associate Professor, Department of Chemistry, Saint Joseph's University, Philadelphia, PA

2014 to 2015

Chemical Biology Interim Program Director,
Associate Professor, Department of Chemistry, Saint Joseph's University, Philadelphia, PA

2008 to 2014

Assistant Professor, Department of Chemistry, Saint Joseph's University, Philadelphia, PA

Courses taught: General Chemistry I and II, General Chemistry Lab I and II, Physical Chemistry I and II, Physical Chemistry Lab I and II, Physical Chemistry for Chemical Biology I and II, and Biophysical Chemistry.

2007 to 2008

Visiting Assistant Professor, Department of Chemistry, Saint Joseph's University, Philadelphia, PA

2002 to 2007

Postdoctoral position at the Biochemistry and Biophysics department of the University of Pennsylvania.

1998 to 2002

Research assistant in the Department of Chemistry, Michigan State University.

1997 to 1998

Teaching assistant in the Department of Chemistry at Michigan State University.

1996 to 1997

Teaching Assistant in the Department of Chemistry at the Interamerican University Puerto Rico.

1994 to 1997

Research Assistant in the Department of Chemistry at the University of Puerto Rico at Mayaguez.

SERVICE

- Chemical Biology Program Director
- Board of Student Academic Review Member
- Health Professional Advisory Committee Member
- SJU Community Standard Board Member
- Faculty Selection Committee McNulty Scholars Program
- Faculty Senate Executive Council
- Sigma Xi Treasurer of the SJU Chapter
- Chemistry Majors Academic Advisor
- SJU Molloy Chemical Society Advisor
- Chemical Biology Board Member
- Chemistry Seminar Coordinator

PRESENTATIONS

ACS National Meeting
August 2017, Washington DC
Oral Presentation: "*Molecular Mechanisms in Heme Protein Function, a Thermodynamic Perspective from Fluoride-Binding Studies"*

ACS Regional Meeting
May 2017, Hershey PA
Oral Presentation: "*Molecular Mechanisms in Heme Protein Function, a Thermodynamic Perspective from Fluoride-Binding Studies"*

Chemistry Seminar Villanova University
October 2016, Villanova, PA
Oral Presentation: "*Molecular Mechanisms in Heme Protein Function, a Thermodynamic Perspective"*

ACS National Meeting
August 2015; Boston, MA
Poster Presentation: "*Heme peripheral groups interactions in proteins and the role of the dielectric constant of the medium"*

Biophysical Society National Meeting
February, 2013; Philadelphia PA
Poster Presentation: *Effects of Fluoride Binding on the Electrochemical Properties of Myoglobin*

Peptide Meeting
May 2013, University of Pennsylvania, Philadelphia, PA
Oral Presentation: "*Electrochemical and Spectroscopic Studies of Heme Interactions in Proteins and Aprotic Solvents"*

Chemistry Seminar Villanova University
November 2012, Villanova, PA
Oral Presentation: *The pH dependence of the electrochemical properties of heme proteins in the presence of fluoride*

ACS National Meeting
August 2012; Philadelphia, PA
Poster Presentation: *Determination of the Strength of Interactions to an Iron-bound Ligand in Heme Proteins: Free Energy Measurement of the H-Bond between His64 and the Fluoride-Heme Complex in Myoglobin*

Dean's Colloquia
January 2012; Saint Joseph's University, Philadelphia, Pa
Oral Presentation: *The Use of Sodium Fluoride in the Study of Myoglobin and Its Importance in Understanding the Structure-Function Relationship in Heme Proteins*

ACS Regional Meeting
May 2011; College Park, MD
Poster Presentation: *Application of an electrochemical method that can be used to probe the distal residues in heme proteins to elucidate their roles in oxygen binding and reduction*

Sigma Xi Local Chapter Meeting
November 2007; Saint Joseph University
Oral Presentation: *Probing the Reactivity of Redox Proteins by Using Electrochemical Techniques*

Rosemont College
April 2007; Rosemont, PA
Lecture Presentation: *Oxygen Storage and Transport: Myoglobin and Hemoglobin*

Biophysics Department Retreat at Swarthmore College
June 2006; Swarthmore, PA
Poster presentation: *Spectroscopic Characterization of the Individual Redox Centers in cytochrome bc1 using UV-Vis Spectroelectrochemistry*

Biophysics Department Retreat at Swarthmore College
June 2005; Swarthmore, PA
Poster presentation: *Cyclic Voltammetry Studies of Flavins in Aprotic Solvents*

ACS National Meeting
August 2004; Philadelphia, PA
Poster presentation: *Resonance Raman Detection of P_r in the Reaction of Fully Reduced Cytochrome c Oxidase and O_2*
Biophysics Department Retreat at Swarthmore College
June 2004; Swarthmore, PA
Poster presentation: *Cyclic Voltammetry Studies of Heme A Maquettes*

Biophysics Department Retreat at Swarthmore College
June 2003; Swarthmore, PA
Poster presentation: *Cyclic Voltammetry Measurements of Modified Electrode Surfaces*

Biophysics Department Retreat at Swarthmore College
June 2002; Swarthmore, PA
Poster presentation: *Film Voltammetry of Natural and Synthetic Proteins Using Modified Gold Surfaces*

Michigan State University
November 2001; East Lansing, MI
Oral Presentation: *Reactive intermediates and structure determination of oxygen-metabolizing enzymes studied by Resonance Raman spectroscopy*

ACS National Meeting
August 2001; Chicago, IL
Poster presentation: *Formation of a new photoinduced oxygen isotope-sensitive intermediate during the reduction of O_2 by fully reduced cytochrome c oxidase*

Michigan State University
January 1999; East Lansing, MI
Oral Presentation: *The Role of Asp251 in Cytochrome P450cam: Proton Inventory*

Annual Conference The National Alliance of Research Center of Excellence
March 1997; El Paso, TX
Poster presentation: *Resonance Raman Studies on Hemoglobin I from Lucina pectinata*

Regional Meeting The National Alliance of Research Center of Excellence
February, 1997; Lajas, PR
Oral presentation: Coordination, Spin and Oxidation States of Carbon Monoxy, Oxy, and deoxy- Hemglobin I from *Lucina Pectinata*

XVth International Conference on Raman Spectroscopy
August, 1996; Pittsburgh, PA
Poster presentation: *Resonance Raman Studies of an Unusual Hemoglobin (HbI) from Lucina pectinata*

The Eighth Annual Conference: "Science, Engineering and Mathematics Research at Minority Institutions: A Decade of Discovery"
March 1996; Nashville, TN
Poster presentation: *Kinetic studies on the electron transfer between reduced cytochrome c and cytochrome c oxidase from Marlin fish*

ACS XIX Senior Technical Meeting
November, 1996; Lajas, PR
Poster presentation*: Resonance Raman Studies on Hemoglobin I from Lucina pectinata*

Florida State University
August, 1991; Tallahassee, FL.
Oral presentation: *Ab initio calculation studies of trapped metal ions in C_{60}*

STUDENT RESEARCH PRESENTATIONS_____

ACS National Meeting
April 2017, San Francisco, CA
Poster presentation by Kaitlyn Frankenfield: *"Heme Pocket Interactions with Fluoride in the Hemoglobins from Lucina pectinata"*

ACS National Meeting
August 2016, Philadelphia, PA
1) Poster presentation by Thomas Nagle and Kimberly Wodzanowski: "*Thermodynamics of Fluoride Binding in Heme Proteins*"
2) Poster presentation by Kaitlyn Frankenfield and Kaleigh Williams: "Dissociation Constant Measurements of Fluoride Binding in Heme Proteins and the Effects of the Distal Amino Acid

ACS National Meeting
March 2015; Denver, CO
Poster presentation by Alaina Stockhausen: "*Evaluation of heme peripheral groups interactions in low-dielectric constant media"*

Biophysical Society National Meeting
February, 2015; Baltimore, MD
Poster presentation by Alaina Stockhausen and Nicolette Wilkes: "*Evaluation of heme peripheral groups interactions in low-dielectric constant media"*

ACS National Meeting
March, 2014; Dallas, TX
Poster presentation by Victoria Angelucci and Megan Forman: "*Determination of the Reduction Potential of Heme-Bound Fluoride Complexes of Horseradish Peroxidase as a Function of pH"*

The 5th Mid-Atlantic Seaboard Inorganic Symposium (MASIS)
July 2014; Temple University, Philadelphia, PA
Poster presentation: Alaina Stockhausen and Nicholete Wilkes: "*Heme Peripheral Group Interactions In Extremely Low Dielectric Media And Their Contributions To The Heme Reduction Potential"*

ACS National Meeting
April, 2013; New Orleans, LA
1)Poster presentation by Danielle N. Houchins and Brady Werkheiser: "*Heme Loss in Myoglobin and Hemoglobin in the Presence of Fluoride*""

2)Poster presentation by Margaret H. Roeder: "*Effects of Fluoride Binding on the Electrochemical Properties of Myoglobin"*

ACS Local Meeting
February, 2013; Drexel University, Philadelphia, PA
1)Poster presentation by Brady Werkheiser and Mary Malloy: " *Investigating the Electrochemical Properties of Hemes in Aprotic Solvents*"
2)Poster presentation by Margaret H. Roeder: "*Effects of Fluoride Binding on the Electrochemical Properties of Myoglobin"*
3) Poster presentation by Danielle N. Houchins: "*Heme Loss in Myoglobin and Hemoglobin in the Presence of Fluoride"*

Biophysical Society National Meeting
February, 2013; Philadelphia PA
Poster presentation: Margaret Roeder and Danielle Houchins: *pH Dependence of Fluoride Binding in Heme Proteins*

ACS Local Meeting
February, 2012; Temple University, Philadelphia, PA
1)Poster Presentation by Emily Amendola, Jacquelyn Castorino, and Andrea Fritz: *An Electrochemical Method used for Probing the Interactions between Distal Residues and a Heme-Bound Fluoride in Heme proteins***.** (won 3rd place for undergraduate poster presentation)
2)Poster Presentation by Michael Gallagher: *A Study of the Electrochemical Properties of Iron Protoporphyrin IX in an Aprotic Solvent* (won 4th place, honorable mention, for undergraduate poster presentation)

Micro Symposium at Swarthmore College
July, 2011; Swarthmore, PA
Poster Presentation by Emily Amendola and Jacquelyn Castorino: *Electrochemical Method used for Probing the Interactions between Distal Residues and a Heme Bound Fluoride*
The Dr. George W. Raiziss 28th Annual Retreat
June, 2011; Swarthmore College, Swarthmore PA
Poster Presentation by Emily Amendola and Jacquelyn Casorino and Michael Gallagher: *Electrochemical Method used for Probing the Interactions between Distal Residues and a Heme Bound Fluoride*

Sigma Xi Chapter Research Symposium at Thomas Jefferson University
April, 2011; Philadelphia, PA
Poster Presentation: by Carmen Guzman: *An Electrochemical Method that can be used to Probe the Distal Residues in Heme Proteins to elucidate their Roles in Oxygen Binding and Reduction*

ACS Local Meeting
February, 2011; Temple University, Philadelphia, PA
Poster Presentation by Carmen Guzman and Emily Amendola: *An Electrochemical Method that can be used for Probing the Interactions between a Heme bound Fluoride Ion and the Distal Residues in Heme Proteins*

PUBLICATIONS

*undergraduate students in bold

1. "*Designing Light-Activated Charge-Separating Proteins with a Naphthoquinone Amino Acid*" Bruce R. Lichtenstein, Chris Bialas, José F. Cerda, Bryan A. Fry, P. Leslie Dutton, and Christopher C. Moser. *Angewandte Chemie International Edition,* **2015** 54 (46) 13626-13629 .

2. "Extended Scope Synthesis of an Artificial Safranin Cofactor" Gheevarghese Raju, Sunaina Singh, Andrew C. Mutter, Bernard Everson, Jose F. Cerda, Ronald L.Koder. *Tetrahedron Letters* **2014** (55) 2487-2491.

3. "Heme Peripheral Groups Interactions in Extremely Low-Dielectric Constant Media and their Contributions to the Heme Reduction Potential" Jose F. Cerda*, **Mary C. Malloy**, **Brady O. Werkheiser**, **Alaina T. Stockhausen**, **Michael F. Gallagher,** and **Andrew C. Lawler**. *Inorganic Chemistry* **2014,** *53* (1), pp 182–188 .

4. "Electrochemical Determination of Heme-Linked pK_as and the Importance of Using Fluoride Binding in Heme Proteins" Jose F. Cerda, **Margaret H. Roeder, Danielle N. Houchins, Carmen X. Guzman, Emily J. Amendola, Jacquelyn D. Castorino, and Andrea L. Fritz**. *Analytical Biochemistry* **2013** (443) 75-77.

5. "Spectroelectrochemical measurements of redox proteins by using a simple UV/visisble cell" Jose F. Cerda, **Carmen X. Guzman,** Haibo Zhang**, Emily J. Amendola, Jacquelyn D. Castorino, Nina Millet, Andrea L. Fritz, Danielle N. Houchins, and Margaret H. Roeder**. *Electrochemistry Communications* **2013** (33) 76-79.

6. "A three-dimensional printed cell for rapid, low-volume spectroelectrochemistry" Joseph M. Brisendine, Andrew C. Mutter, Jose F. Cerda, and Ronald L. Koder. *Analytical Biochemistry* **2013**, (439) 1-3.

7. "Manipulating Reduction Potentials in an Artificial Safranin Cofactor" Gheevarghese Raju, **Joseph Capo**, Bruce R. Lichtenstein, Jose F. Cerda, Ronald L. Koder. *Tetrahedron Letters* **2012**, (53), 1201-1203.

8. "Electrochemical and Structural Coupling of the Naphthoquinone Amino Acid" Bruce R. Lichtenstein, Veronica R. Moorman, José F. Cerda, A. Joshua Wand and P. Leslie Dutton. *Chemical Communications* **2012**,(48) 1997–1999.

9. "Reversible Proton Coupled Electron Transfer in a Peptide-incorporated Naphthoquinone Amino Acid" Bruce R. Lichtenstein, Jose F. Cerda, Ronald L. Koder, P. Leslie Dutton. *Chemical Communications* **2009**, 168–170

10. "Hydrogen Bond-free Flavin Redox Properties: Managing Flavins in Extreme Aprotic solvents" Jose F. Cerda, Ronald L. Koder, Bruce R. Lichtenstein, Christopher C. Moser, Anne F. Miller, P. Leslie Dutton. *Organic & Biomolecular Chemistry* **2008**, 6, 2204-2212.

11. "A Flavin Analogue with Improved Solubility in Organic Solvents" Ronald L. Koder, Bruce R. Lichtenstein, Jose F. Cerda, Anne F. Miller, P. Leslie Dutton. *Tetrahedron Letters* **2007**, *48*, 5517-5520.

12. **"**Structural Specificity in Designed Four α-helix Bundles Driven by Buried Polar Interactions" Ronald L. Koder, Kathleen G. Valentine, Jose Cerda, Dror Noy, A. Joshua Wand and P. Leslie Dutton. *Journal of the American Chemical Society* **2006** *(*128) 14450-14451**.**

13. "Hydrogen-bonding conformations of tyrosine B10 tailor the hemeprotein reactivity of ferryl species" Waleska De Jesus-Bonilla, Anthony Cruz, Ariel Lewis, Daniel, E. Barcelo, Jose F. Cerda, Carmen L. Cadilla, Juan Lopez-Garriga. *Journal of Biological Inorganic Chemistry* **2006** (11) 334-342.

14. "Evidence for Nonhydrogen Bonded compound II in Cyclic Reaction of Hemoglobin I from Lucina pectinata with Hydrogen Peroxide" Waleska De Jesus-Bonilla, Eunice Ramirez-Melendez, Jose F. Cerda, Juan Lopez-Garriga. *Biopolymers* **2002** (67) 178 -185.

15. **"**Interaction of Nitric Oxide with Prostaglandin Endoperoxide H Synthase-1: Implications for Fe-His Bond Cleavage in Heme Proteins" Johannes P. M. Schelvis, Steve A. Seibold, Jose F. Cerda, R. Michael Garavito, and Gerald T. Babcock. *The Journal of Physical Chemistry B* **2000** (104)10844-10850.

16. "Peroxidase Activity in Prostaglandin Endoperoxide H Synthase-1 Occurs with a Neutral Histidine Proximal Heme Ligand" Steve A. Seibold, Jose F. Cerda, Anne M. Mulichak, Inseok Song, R. Micheal Garavito, Toshiya Arakawa, William L. Smith and Gerald T. Babcock. *Biochemistry* **2000** (39) 6616 – 6624.

17. "Spectroscopic Characterization of the Heme-Binding Sites in *Plasmodium faciparum* Histidine-Rich Protein 2" Clara Y. H. Choi, Jose F. Cerda, Hsiu-An Chu, Gerald T. Babcock and Michael A. Marletta. *Biochemistry* **1999** (38) 16916-16924.

18. "Resonance Raman Studies of the Heme-Ligand Active Site of Hemoglobin I from *Lucina pectinata*" Jose Cerda, Yolanda Echevarria, Erick Morales and Juan Lopez-Garriga. *Biospectroscopy* **1999** (5) 289-301.

19. "Orientation of the Heme Vinyl Groups in the Hydrogen Sulfide-Binding Hemoglobin I from *Lucina pectinata*" Eilyn Silfa, Maritza Almeida, Jose Cerda, Shaoxiong Wu and Juand Lopez-Garriga. *Biospectroscopy* **1998** (4) 311-326.

20. "Unusual Rocking Freedom of the Heme in the Hydrogen Sulfide-Binding Hemoglobin from *Lucina pectinata*" Jose F. Cerda-Colon, Eilyn Silfa and Juan Lopez-Garriga. *Journal of the American Chemical Society* **1998** (120) 9312-9317.

21. "Structural characterization and dynamic events in hemoglobin I from *Lucina pectinata*: Unusual conformation of propionates and vinyl's peripheral groups" Eilyn Silfa, Maritza Almeida, Jose Cerda, S. Wu, and Juan Lopez-Garriga. *Spectroscopy Biology Molecular Trends* **1997** 79-80.

22. "Resonance Raman Studies of an Unusual Hemoglobin (HbI) from *Lucina pectinata*" Yolanda Echevarria, Jose Cerda, Jorge Colon and Juan Lopez-Garriga. *XVth International Conference on Raman Spectroscopy* **1996** 456-457.

PUBLISHED ABSTRACTS_____

*undergraduate students in bold

1. "Thermodynamics of Fluoride Binding in Heme Proteins" Kimberly Wodzanowski, Thomas Nagle, Julia Leonard, Christopher Moll, and Jose Cerda *American Chemical Society* **2016** 252 312-CHED

2. "Dissociation Constant Measurements of Fluoride Binding in Heme Proteins and the Effects of the Distal Amino Acid" Kaleigh Williams, Kaitlyn Frankenfield, Darya Rivera, Juan Lopez Garriga, and Jose Cerda. *American Chemical Society* **2016** 252 180-CHED

3. "Heme peripheral groups interactions in proteins and the role of the dielectric constant of the medium" Jose Cerda, **Alaina Stockhausen**, **Nicolette Wilkes**, **Allyson Langley**, **Kathleen Silva** *American Chemical Society* **2015** 250 80-BIOL

4. "Evaluation of heme peripheral groups interactions in low-dielectric constant media" Jose Cerda, Alaina Stockhausen, Nicolette Wilkes, Allyson Langley, and Kathleen Silva American Chemical Society 2015 249 590-INOR

5. "Evaluation of Heme Peripheral Groups Interactions in Low-Dielectric Constant Media" Jose F. Cerda, **Alaina T. Stockhausen**, **Nicolette D. Wilkes**, **Kathleen R. Silva**, **Allyson R. Langley**, **Mary C. Malloy**, and **Brady O. Werkheiser**. *Biophysical Journal* **2015** 603A-603A.

6. "Determination of the reduction potential of heme-bound fluoride complexes of horseradish peroxidase as a function of pH" **Megan F. Forman, Victoria C. Angelucci, Danielle N. Houchins, Margaret H. Roeder,** and Jose F. Cerda *American Chemical Society* **2014** 247 469-CHED

7. "Heme loss in myoglobin and hemoglobin in the presence of fluoride" **Danielle N. Houchins, Brady O. Werkheiser, Margaret H. Roeder, Katherine C. McGovern, Victoria C. Angelucci**, Jose F. Cerda *American Chemical Society* **2013** 245 318-CHED

8. "Effects of sodium fluoride binding on the electrochemical properties of heme proteins" **Margaret H. Roeder, Danielle N. Houchins, Emily J. Amendola, Jacquelyn D. Castorino, Andrea L. Fritz**, **Carmen X. Guzman**, and Jose F. Cerda *American Chemical Society* **2013** 245 288-CHED

9. "Synthesis and Characterization of an Fmoc Solid Phase Peptide Synthesis-Ready Naphthoquinone Amino Acid" Bruce Lichtenstein, Jose F. Cerda, Ronald Koder, P. Leslie Dutton. *Biophysical Journal* **2007** 219A-219A.

10. "Advances and opportunities in angstrom level electron tunneling simulations of natural photosynthetic and respiratory systems and de novo designed catalytic and energy converting proteins" Christopher C. Moser, Tammer A. Farid, Sarah E. Chobot, Haibo Zhang, Artur Osyczka, Ron L. Koder, Jose F. Cerda, Bruce R. Lichtenstein, Dror Noy, Anne K. Jones, Bohdana M. Discher, P. Leslie Dutton. *Biochimica et Biophysica Journal Acta –Bioenergetics* **2006** 347-348.

11. "Resonance Raman detection of P_r in the reaction of fully reduced Cytochrome *c* Oxidase and O_2" Jose F. Cerda, Denis A. Proshlyakov, Gerald T. Babcock. *American Chemical Society* **2004** 228 U182-U182.

12. "Redox centers involved in oxygen chemistry catalyzed by cytochrome oxidase" Denis A. Proshlyakov, Jose F. Cerda, Michelle A. Pressler, Catherine Demaso, J. F. Leykam, D.L. Dewitt and Gerald T. Babcock. *American Chemical Society* **2004** 86 384-384.

13. "Low-Frequency Fourier transform infrared (FTIR) spectroscopic studies related to the Oxygen Evolving Complex of PSII" Neil A. Law, Warwick Hillier, Andy H. Chu, W.Y. Hsieh, Shannon Haymond, Jose F. Cerda, Vincent L. Pecoraro, and Gerald T. Babcock. *Journal of Inorganic Biochemistry* **2001** 86 310-310.

14. "Evidence of compound I and compound II ferryl species from the reaction of hemoglobin I from lucina pectinata with hydrogen peroxide" Waleska De Jesus-Bonilla, Jose Cerda , Juan Lopez-Garriga, Eunice Ramirez-Melendez. *Journal of Inorganic Biochemistry* **2001** 86 197-197.

15. "Investigations of the peroxidase site of prostaglandin H synthase" Steve Seibold, Jose Cerda, Robert Cukier, Michael Garavito and W. Smith. *American Chemical Society* **2001** 222 U229-U229.

16. "Formation of a new photo-induced oxygen isotope-sensitive intermediate during the reduction of O_2 by fully reduced cytochrome c oxidase" Jose F. Cerda, Denis A. Proshlyakov and Geral T. Babcock. *American Chemical Society* **2001** 222 U228-U228.

17. "Heme-binding and hemozoin formation by histidine rich-protein 2 (HRP2)" Clara Y.H. Choi, Jose Cerda, Gerald T. Babcock and Michael A. Marletta. *American Chemical Society* **1998** 216 U219-U219.

18. "Resonance Raman studies of heme-CO isotopic complexes of hemoglobin I from Lucina pectinata" Erick Morales, Jose Cerda and Juan Lopez-Garriga. *American Chemical Society* **1997** 214 250-PHYS