Curriculum vitae

Reinhard Schweitzer-Stenner

Personal Information:

Date of Birth*: February 13, 1953*
Citizenship*: United States and Germany*
Affiliation: *Drexel University, Philadelphia, USA*
Major Research Interests*: Biophysical Chemistry, Spectroscopy, Chemical Immunology*

Address:

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Education and Training:

Universität Bremen	1986-1990	Venia Legend (Habilitation) in Physics 1990
The Weizmann Institute, Rehovot	1985-1986	Postdoc, Chemical Immunology
Universität Bremen	1984-1985	Postdoc, Biophysics
Universität Bremen	1980-1983	Dr. rer. nat. (Physics)
Bergische Universität Wuppertal	1974-1980	Diploma in Physics

Positions held

Professor Emeritus	*Drexel University, Philadelphia, USA*	*9/22-present*
Associate Department Head	*Drexel University, Philadelphia, USA*	*9/20-8/22*
Interim Department Head	*Drexel University, Philadelphia, USA,*	*9/11-8/13*
Professor	*Drexel University, Philadelphia, USA*	*9/09-8/22*
Associate Professor	*Drexel University, Philadelphia, USA*	*9/03-8/09*
Associate Professor	*University of Puerto Rico, San Juan, USA*	*7/99-8/03*
Distinguished Professor	*Universität Bremen, Bremen, Germany*	*10/97-6/99*
Visiting Professor	*University of Palermo, Palermo, Italy*	*7/98*
University Lecturer[1]	*Universität Bremen, Bremen, Germany*	*10/95-9/97*
Visiting Research Scientist	*University of Michigan, Ann Arbor, USA*	*10/93-9/94*
Senior Research Assistant[2]	*Universität Bremen, Bremen, Germany*	*10/90-9/93;10/94-9/95*
Junior Research Assistant[3]	*Universität Bremen, Bremen, Germany*	*10/83-8/85; 9/86-9/90*
Visiting Scientist	*The Weizmann Institute of Science, Rehovot, Israel*	*9/85-8/86*

[1] *Independent faculty position*
[2] *Faculty position assigned to a senior professor with entitles to teach and to supervise undergraduate and graduate students*
[3] *Postdoctoral position for obtaining the 'venia legendi' (habilitation), which in Germany is a pre-requisite for becoming a faculty member.*

Honors and Awards

1. Drexel University, Best Mentor Award, 2010.
2. Advisory Board Member *Vibrational Spectroscopy* 2006 - present
3. Advisory Board Member *Journal of Raman Spectroscopy* 2000 - present
4. Advisory Board Member *Biomolecules* 2020-present
5. Award of the title:**'Distinguished Professor'** by the Senator for Science, Education and Art of the 'Freie Hansestadt Bremen' 1997
4. Max Kade Fellowship 10/923-9/94
5. Minerva Foundation Fellowships 9/85-8/86,7/87-8/87,7/90-8/90, 7/91-8/91

Membership in scientific societies

American Biophysical Society

Citation record as of January 29, 2024 (Google Scholar)

Sum of the Times Cited: 8001 (includes books, dissertations, etc)
H-index: 50; five year H-index: 23; I10 index: 179

List of Publications

A. Publications in peer reviewed journals and periodicals

2024

1. N. O'Neill, T.A. Lima, F.F Ferreira, N.J. Alvarez and **R. Schweitzer-Stenner.** Determining the Nanostructure and Main Axis of Gly-His-Gly Fibrils Using the Amide I; Bands in FTIR, VCD and Raman Spectra. **Spectrochim. Acta A 306, 123584, 2024, https://doi.org/10.1016/j.saa.2023.123584**

2023

2. **R. Schweitzer-Stenner,** R. Kurbaj, N. O'Neill**,** B. Andrews, R. Shah, and B. Urbanc. Conformational Manifold Sampled by Two Short Linear Motif Segments Probed by Circular Dichroism, Vibrational, and Nuclear Magnetic Resonance Spectroscopy. **Biochemistry, 62, 2571-2586, 2023, https://doi.org/10.1021/acs.biochem.3c00212**
3. **R. Schweitzer-Stenner.** The Relevance of Short Peptides for an Understanding of Unfolded and Intrinsically Disordered Proteins. Invited Perspectives article, **Phys. Chem. Chem. Phys., 25, 11908–11933, 2023; https://do.org/10.1039/D3CP00483J.**
4. L. Thursch, T. Lima, N. O'Neill, F.F. Ferreira, R. Schweitzer-Stenner and N.J. Alvarez. Influence of central side chain on self-assembly of glycine-x-glycine peptides. **Soft Matter, 19, 394-409, 2023;** https://doi.org/10.1039/d2sm01082h.

2022

5. R. Schweitzer-Stenner. Heme-Protein interactions and Functional Relevant Heme Deformations: The Cytochrome c Case. **Molecules, 27, 8751, 2022;** https://doi.org/10.3390/molecules27248751.
6. N. O'Neill, T, Lima, F.F. Ferreira, L. Thursch, N. Alvarez, and R. Schweitzer-Stenner. Forbidden Secondary Structures Found in Gel-Forming Fibrils of Glycylphenylalanylglycine. **J. Phys. Chem. B 126, 8080-8093, 2022;** https://doi.org/10.1021/acs.jpcb.2c05010**.**
7. R. Schweitzer. Exploring Nearest Neighbor Interactions and Their Influence on the Gibbs Energy Landscape of Unfolded Proteins and Peptides. **Int. J. Mol. Sci. 23, 5643, 2022;** https://doi.org/10.3390/ijms23105643**.**
8. R.Schweitzer-Stenner, B. Milorey and H. Schwalbe. Randomizing of Oligopeptide Conformations by Nearest Neighbor Interactions between Amino Acid Residues. **Biomolecules, 12, 684, 2022**; https://doi.org/10.3390/biom12050684
9. B. Andrews, J. Guerra, R. Schweitzer-Stenner and B. Urbanc. Do molecular dynamics force fields accurately model Ramachandran distributions of amino acid residues in water? **Phys. Chem. Chem. Phys. 24, 3259-3279, 2022.** https**://**doi: 10.1039/d1cp05069a

2021

10. B. Milorey, H. Schwalbe, N. O'Neill, and R. Schweitzer-Stenner. Repeating Aspartic Acid Residues Prefer Turn-like Conformations in the Unfolded State: Implications for Early Protein Folding. **J. Phys. Chem. B 125, 11392-11407, 2021.** https://doi.org/10.1021/acs.jpcb.1c06472
11. R. Schweitzer-Stenner and N.J. Alvarez. Short Peptides as Tunable, Switchable, and Strong Gelators. **Invited Perspectives article, J. Phys. Chem. B, 125, 6760-6775, 2021,** https://doi.org/10.1021/acs.jpcb.1c01447
12. R. Schweitzer-Stenner. The combined use of amide I bands in polarized Raman, IR, and vibrational dichroism spectra for the structure analysis of peptide fibrils and disordered peptides and proteins. **Invited review, J. Raman Spectrosc. 52, 2479-2499, 2021,** https://doi.org/10.1002/jrs.613
13. M. Hesser, L. Thursch, T.Lima, T. Lewis, N.J. Alvarez and R. Schweitzer-Stenner. Concentration Dependence of a Hydrogel Phase Formed by the Deprotonation of the Imidazole Side Chain of Glycylhistidylglycine. **Langmuir, 37, 6935-6946, 2021,** https://doi.org/10.1021/acs.langmuir.1c00382
14. Thursch, T. A. Lima, R. Schweitzer-Stenner and N.J. Alvarez. The impact of thermal history on the structure of glycylalanylglycine ethanol/water gels. **J. Pept. Sci. 27:e.3305, 2021;** https://doi.org/10.1002/psc.3305
15. B. Milorey, R. Schweitzer-Stenner, B. Andrews, H. Schwalbe and B. Urbanc. Short peptides as predictors for the structure of polyarginine sequences in disordered proteins. **Biophys.J. 120, 662-676, 2021, https://doi.org/10.1016/j.bpj.2020.12.026**

2020

16. S. Zhang, B. Andrews, R. Schweitzer-Stenner and B. Urbanc. Intrinsic Conformational Dynamics of Alanine in Water/Ethanol Mixtures: An Experiment-Driven Molecular Dynamics Study. **J. Phys. Chem. B 124, 11600-11616, 2020,** https://dx.doi.org/10.1021/acs.jpcb.0c08245**.**
17. Levine, M. Gosh, M. Hesser, N. Hennessy, D. DiGuiseppi, L. Adler-Abramovitch, and R. Schweitzer-Stenner. Formation of peptide-based oligomers in dimethylsulfoxide: Identifying the precursor of fibril formation. **Soft Matter, 16, 7860-7868, 2020, DOI: 10.1039/D0SM00035C**
18. Andrews, S. Zhang, R.Schweitzer-Stenner and B. Urbanc. glycine in Water Favors the Polyproline II State. **Biomolecules, 10, 1121, 2020; http://dx.doi.org/10.3390/biom10081121**.
19. M. Hesser, L. Thursch, T. Lewis, D. DiGuiseppi, N.J. Alvarez, and R. Schweitzer-Stenner. The Tripeptide GHG as Unexpected Hydrogelator Triggered by Imidazole Deprotonation. **Soft Matter, 16, 4110-4114, 2020, DOI:10.1039/d0sm00224k.**
20. D. DiGuiseppi, L. Thursch, R. Schweitzer-Stenner and N.J. Alvarez. Exploring the gel phase cationic glycylalanylglycine in water/ethanol. II. Spectroscopic, kinetic and thermodynamic studies. **J. Coll. Int. Sci. 573, 123-134, 2020, DOI: 10.1016/j.jcis.2020.03.108,**

21. A.Kumar, S.E.Toal, D. DiGuiseppi, R. Schweitzer-Stenner and B.M. Wong. Water-Mediated Electronic Structure of Oligopeptides Probed by Their UV Circular Dichroism, Absorption Spectra, and Time Dependent DFT Calculations. **J. Phys. Chem. B, 124, 2579-2590, 2020, DOI:10.1021/acs.jpcb.0c00657.**
22. S. Zhang, R. Schweitzer-Stenner and B. Urbanc. Do molecular Dynamics Force Fields Capture Conformational Dynamics of alanine in Water. **J. Chem. Theo. Compt. 16, 510-527, 2020, https://doi.org/10.1021/acs.jctc.9b00588**
23. L. Thursch, D. DiGuiseppi, R. Schweitzer-Stenner and N.J. Alvarez. Exploring the gel phase of cationic glycylalanylglycine in water/ethanol. I. Rheology and Microscopy Studies. **J. Coll. Int. Sci, 564, 499-509, 2020. DOI:10.1016/j.jcis.2019.10.029**

2019

24. A. Kumar, R. Schweitzer-Stenner and B.Wong. A new interpretation of the structure and solvent dependence of the far UV circular dichroism spectrum of short oligopeptides. **Chem. Comm. 55, 58701-5704, 2019. DOI: 10.1039/c9cc01513b**
25. D. DiGuiseppi, L. Thursch, N. J. Alvarez, and R. Schweitzer-Stenner. Exploring the Thermal Reversibility and Tunability of a Low Molecular Weight Gelator using Vibrational and Electronic Spectroscopy and Rheology. **Soft Matter 15, 3418–3431, 2019; DOI: 10.1039/c9sm00104b**
26. R. Schweitzer-Stenner, I. Pecht and C. Guo. Orientation of Oligopeptides in Self-assembled Monolayers Inferred from Infrared Reflection Absorption Spectroscopy, **J. Phys. Chem. B, 123, 860-868, 2019; DOI: 10.1021/acs.jpcb.8b09180**
27. A. Archaryya, D. DiGuiseppi, B.L. Stinger, R. Schweitzer-Stenner, and T. D. Vaden. Structural Destabilization of Azurin by Imidazolium Chloride Ionic Liquids in Aqueous Solution. **J. Phys. Chem. B. 123, 6933-6945, 2019. DOI: 101021/acs.jpcb.9b04113**
28. B. Milorey, R. Schweitzer-Stenner, R. Kurbaj and D. Malyshka. pH Induced Switch Between Different Modes of Cytochrome c Binding to Cardiolipin Containing Liposomes. **ACS Omega, 4, 1386-1400, 2019; DOI: 10.1021/acsomega.8b02574.**

2018

29. J. Pavelec, D. DiGuiseppi, B.Y Zavlavsky, V. N. Uversky and R. Schweitzer-Stenner. Perturbation of water structure by water-polymer interactions probed by FTIR and polarized Raman spectroscopy. **J. Mol. Liq. 275, 463-479, 2019; DOI.org/10.1016/j.molliq.2018.11.023.**
30. D. Malyshka and R. Schweitzer-Stenner. Photoreduction of ferricytochrome c in the presence of potassium ferrocyanide. **Photochem. Photobiol. Sci. 17, 1462-1468, 2018; DOI.org: 10.1039/c8pp00286j.**
31. R. Schweitzer-Stenner. Relating the multifunctionality of cytochrome c to membrane binding and structural conversion. **Biophys. Rev. 10, 1151-1185, 2018.**
32. N. Ilawe, R. Schweitzer-Stenner, D. DiGuiseppi, and B.M. Wong. Is a cross-β-sheet structure of low molecular weight peptides necessary for the formaiton of fibrils and peptide hydrogels? **Chem. Phys. Phys. Chem. 10, 18158-18168, 2018.**

33. R. Schweitzer-Stenner and S.E. Toal. Anti-cooperative Nearest-Neighbor Interactions between Residues in Unfolded Peptides and Proteins. **Biophys. J. 114, 1046-1057, 2018.**

2017

34. R. Schweitzer-Stenner, H. Carson and D. DiGuiseppi. Probing the Replacement of Water by Dimethyl Sulfoxide in the Hydration Shell of N-Methylacetamide by FTIR Spectrosocopy. **Vib. Spectrosc. 92, 251-258, 2017.**
35. D. DiGuiseppi, B. Milorey, G. Lewis, N. Kubatova, S. Farrell, H. Schwalbe and R. Schweitzer-Stenner. Probing the Conformation-Dependent Preferential Binding of Ethanol to Cationic Glycylalanylglycine in Water/Ethanol by Vibrational and NMR Spectroscopy. **J. Phys. Chem. B. 121, 5744-5758, 2017.**
36. B. Milorey, D. Malyshka and R. Schweitzer-Stenner. pH Dependence of Ferricytochrome c Conformational Transitions During Binding to Cardiolipin Membranes: Evidence for Histidine as the Distal Ligand at Neutral pH. **J. Phys. Chem. Lett. 8, 1993-1998, 2017**
37. D.Malyshka, and R. Schweitzer-Stenner. Ferrocyanide-mediated Photoreduction of Ferricytochrome c Utilized to Selectively Probe Non-Native Conformation Induced by Binding to Cardiolipin Containing Membranes. **Chem. Eur. J. 23, 1151-1156, 2017**.

2016

38. L. Serpas, B. Milorey, L.A. Pandiscia, A.W. Addison, and R. Schweitzer-Stenner. Autoxidation of Reduced Horse Heart Cytochrome c Catalyzed by Cardiolipin-Containing Membranes. **J. Phys. Chem. B 120, 12219-12231, 2016.**
39. D. DiGuiseppi, J. Kraus, S.E. Toal, N. Alvarez and R. Schweitzer-Stenner.Investigating the Formation of a Repulsive Hydrogel of a Cationic 16mer Peptide at Low Ionic Strength in Water by Vibrational Spectroscopy and Rheology. **J. Phys. Chem B.120, 10079–10090, 2016**
40. Schweitzer-Stenner and S.E. Toal. Construction and Comparison of the Statistical Coil States of Unfolded and Intrinsically Disordered Proteins from Nearest-Neighbor Corrected Conformational Propensities of Short Peptides. **Mol. BioSys 12, 3294-3306, 2016**
41. J. Smith, D. Hagarman, D. DiGuiseppi, R. Schweitzer-Stenner and H.-F. Ji. Ultra-Long Crystalline Red Phosphorus Nanowires from Amorphous Red Phosphorus Thin Films. **Angew. Chemie (Int. Edition), 55, 11829-11833, 2016.**
42. S. Farrell, D. DiGuiseppi, N. Alvarez and R. Schweitzer-Stenner. The interplay of aggregation, fibrillization and gelation of an unexpected low molecular weight gelator: glycylalanylglycine in ethanol/water. **Soft Matter 12, 6096-6110, 2016.**
43. D. DiGuiseppi and R. Schweitzer-Stenner. Probing conformational propensities of histidine in different protonation states of the unblocked glycyl-histidyl-glycine peptide by vibrational and NMR spectroscopy. **J. Raman Spectrosc. 47, 1063-1072, 2016.**

2015

44. E. Crenshaw, B.P. Leung, C.K. Kwok, M.Sharoni, K. Olson ; N.P. Sebastian, S. Ansaloni, R. Schweitzer-Stenner, M.R. Akins ; P.C. Bevilacqua, and A.J. Saunders. Amyloid Precursor Protein Translation Is Regulated by a 3 ' UTR Guanine Quadruplex. **PLOS ONE, 10, e0143160, 2015.**
45. D. Meral, S.E. Toal, R. Schweitzer-Stenner and B. Urbanc. Water-Centered Interpretation of Intrinsic pPII Propensities of Amino Acid Residues: In Vitro-Driven Molecular Dynamics Study. **J. Phys. Chem. B 119, 13237-13251, 2015.**
46. L. Pandiscia and R. Schweitzer-Stenner. Coexistence of Native-Like and Non-Native Cytochrome c on Anionic Liposomes with Different Cardiolipin Content. **J. Phys. Chem. B. 119, 1334–1349, 2015.**
47. B. Milorey, S. Farrell, S.E. Toal and R. Schweitzer-Stenner. Demixing of water and ethanol causes conformational redistribution and gelation of the cationic GAG tripeptide. **Chem. Comm. 51, 16498-16501, 2015.**
48. N.V. Ilawe, A.E. Raeber, R. Schweitzer-Stenner, S.E. Toal, and B.M. Wong. Assessing backbone solvation effects in the conformational propensities of amino acid residues in unfolded peptides. **Phys.Chem.Chem.Phys. 17, 24917-24924, 2015.**
49. S.E. Toal, N. Kubatova, C.Richter, V. Linhard, H. Schwalbe, and R. Schweitzer-Stenner. Randomizing the Unfolded State of Peptides (and Proteins) by Nearest Neighbor interactions between Unlike Residues. **Chem. Eur. J. 21, 5173-5192, 2015 (designated as hot paper by the editor).**
50. Leah. A. Pandiscia and R. Schweitzer-Stenner. Coexistence of Native-like and Non-Native Partially Unfolded Ferricytochrome c on the Surface of Cardiolipin-Containing. **J. Phys. Chem. B. 119, 1334-1349, 2015.**

2014

51. D. Malyshka, L.A. Pandiscia and R. Schweitzer-Stenner. Cardiolipin containing liposomes are fully ionized at physiological pH. An FT-IR study of phosphate group ionization. **Vibr. Spectrosc. 75, 86-92. 2014**
52. R. Schweitzer-Stenner and S.E. Toal. Entropy reduction in unfolded peptides (and proteins) due to conformational preferences of amino acid residues. **PhysChemChemPhys. 16, 22527–22536, 2014**
53. S.E. Toal and R. Schweitzer-Stenner. Local Order in the Unfolded State: Conformational Biases and Nearest Neighbor Interactions. **Biomolecules, 4, 725-773, 2014 (invited review)**
54. R. Schweitzer-Stenner. Cytochrome c: A Multifunctional Protein Combining Conformational Rigidity with Flexibility. **New J. Sci. http://dx.doi.org/10.1155/2014/484538, 2014 (invited review).**
55. J.B. Soffer and R. Schweitzer-Stenner. Near-exact enthalpy–entropy compensation governs the thermal unfolding of protonation states of oxidized cytochrome c. **19, 1181–1194, 2014**

56. S.E. Toal, D. J. Verbaro and R. Schweitzer-Stenner. Role of Enthalpy–Entropy Compensation Interactions in Determining the Conformational Propensities of Amino Acid Residues in Unfolded Peptides. **J. Phys. Chem. B. 118, 1309-1318, 2014.**
57. L. A. Pandiscia and R. Schweitzer-Stenner. Salt as a catalyst in the mitochondria: returning cytochrome c to its native state after it misfolds on the surface of cardiolipin containing membranes. **Chem. Comm. 50, 3674-3676, 2014.**

2013

58. R. Schweitzer-Stenner. Different Degrees of Disorder in Long Disordered Peptides Can Be Discriminated by Vibrational Spectroscopy. **J. Phys. Chem B. 117, 6927-6936, 2013.**
59. S.E. Toal, D. Meral, D.J. Verbaro, B. Urbanc and R. Schweitzer-Stenner. The pH-Independence of Trialanine and the Effects of Termini Blocking in Short Peptides: A Combined Vibrational, NMR, UVCD, and Molecular Dynamics Study. **J. Phys. Chem. B. 117, 3689-3706, 2013.**
60. N. A. Dixon, A. B. McQuarters, J. S. Kraus, J. B Soffer, N. Lehnert, R. Schweitzer-Stenner, and E. T. Papish. Dramatic Tuning of Ligand Donor Properties in (Ttz) CuCO through Remote Binding of H^+(Ttz=Hydrotris (triazolyl borate). **Chem. Comm. 39, 5571-5573, 2013.**
61. J.B. Soffer, E. Fradkin, L. A. Pandiscia and R. Schweitzer-Stenner. The (Not Completely Irreversible) Population of a Misfolded State of Cytochrome c under Folding Conditions. **Biochemistry, 52, 1397-1408, 2013**
62. R. Schweitzer-Stenner, A. Hagarman, S. Toal, D. Mathieu and H. Schwalbe. Disorder and order in unfolded and disordered peptides and proteins: A view derived from tripeptide conformational analysis. I. Tripeptides with long and predominantly hydrophobic side chains. **Proteins 81, 955-967, 2013.**
63. K. Rybka, S. Toal, D. Verbaro, D. Mathieu, H. Schwalbe and R. Schweitzer-Stenner.Disorder and order in unfolded and disordered peptides and proteins: A view derived from tripeptide conformational analysis. II. Tripeptides with short side chains populating asx and β-type like turn conformations. **Proteins 81, 968-983, 2013.**

2012

64. D. Verbaro, D. Mathieu, S.E. Toal, H. Schwalbe, and R. Schweitzer-Stenner. Ionized Trilysine: A Model system for Understanding the Nonrandom Structure of Poly-L-lysine and Lysine-containing Motifs in Proteins. **J. Phys. Chem. B. 116, 8084-8094, 2012.**
65. L. Duitch, S. Toal, T.J. Measey, and R. Schweitzer-Stenner. Triaspartate: A Model System for Conformationally Flexible DDD Motifs in Proteins. **J. Phys. Chem B. 116, 5160-5171, 2012.**
66. R. Schweitzer-Stenner. Simulated IR, Isotropic and Anisotropic Raman, and Vibrational Circular Dichroism Amide I Band Profiles of Stacked β-Sheets. **J. Phys. Chem B., 116, 4141-4153 2012.**

67. R. Schweitzer-Stenner, Conformational propensities and residual structures in unfolded peptides and proteins. **(Invited Review) Mol. BioSys. 8, 122-133, 2012.**

2011

68. S. Toal, A. Omidi and R. Schweitzer-Stenner. Conformational Changes of Trialanine Induced by Direct Interactions between Alanine Residues and Alcohols in Binary Mixtures of Water with Glycerol and Ethanol. **J. Am. Chem. Soc. 133, 12728–12739, 2011.**

69. R. Schweitzer-Stenner. Using Spectroscopic Tools To Probe Porphyrin Deformation and Porphyrin-Protein Interactions. **J. Porphyrins Phthalocyanines (invited review for special issue dedicated to the 65th birthday of Prof. John A. Shelnutt), 15, 312-337, 2011.**

70. A. Hagarman. D. Mathieu, S. Toal, T.J. Measey, H. Schwalbe, and R. Schweitzer-Stenner. Amino Acids with Hydrogen-Bonding Side Chains have an Intrinsic Tendency to sample various Turn Conformations in Aqueous Solution. **Chem. Eur. J. 17, 6789-6797, 2011.**

71. M. Alessi, A. Hagarman, J. B. Soffer and R. Schweitzer-Stenner. In-plane deformations of the heme group in native and non-native oxidized cytochrome c probed by resonance Raman dispersion spectroscopy. **J. Raman Spectrosc. 42, 917-924, 2011.**

72. T.J. Measey and R. Schweitzer-Stenner. Vibrational Circular Dichroism as a Probe of Fibrillogenesis: The Origin of the Anomalous Intensity Enhancement of the Amide I Signal of Amyloid-like Fibrils. **J. Am. Chem Soc. 133, 1066-1076, 2011.**

2010

73. D. Verbaro, I. Gosh, W.M. Nau and R. Schweitzer-Stenner. Discrepancies between Conformational Distributions of a Polyalanine Peptide in Solution Obtained from Molecular Dynamics Force Fields and Amide I′ Band Profiles. **J. Phys. Chem. B. 114, 17201-17208, 2010.**

74. T.J. Measey, R. Schweitzer-Stenner, V. Sa, and K. Kornev. Anomalous Conformational Instability and Hydrogel formation of a cationic Class of Self-Assembling Oligopeptides. **Macromolecules, 43, 7800-7806, 2010.**

75. T. J. Measey and R. Schweitzer-Stenner, Simulation of IR, Raman and VCD Amide I Band Profiles of Self-Assembled Peptides. **Spectroscopy, 24, 25-36, 2010.**

76. S. Pizzanelli, C. Forte, S. Monti, G. Zandomeneghi, A. Hagarman, T.J. Measey, and Reinhard Schweitzer-Stenner. Conformations of Phenylalanine in the Tripeptides AFA and GFG Probed by Combining MD Simulations with NMR, FTIR, Polarized Raman, and VCD Spectroscopy. **J. Phys. Chem. B., 114, 3956-3978, 2010.**

77. A. Hagarman, T.J. Measey, D. Mathieu, H. Schwalbe and R. Schweitzer-Stenner. Intrinsic Propensities of Amino Acid Residues in GXG peptides Inferred from Amide I' Band Profiles and NMR Scalar Coupling Constants. **J. Am. Chem. Soc.132, 540-551, 2010.**

78. L. Tooke, L. Duitch, T.J. Measey and R. Schweitzer-Stenner. Kinetics of the Self-Aggregation and Film Formation of Poly-L-Proline at High Temperatures Explored by Circular Dichroism Spectroscopy. **Biopolymers, 93, 451-457, 2010.**

2009

79. T.J. Measey, K. Smith, S. Decatur, L. Zhao, G. Yang and R. Schweitzer-Stenner. The Self-aggregation of A Polyalanine Octamer Promoted by Its C-Terminal Tyrosine And Probed By A Strongly Enhanced VCD Signal. **J. Am. Chem. Soc. (communication), 131, 18218-18219, 2009.**

80. R. Schweitzer-Stenner, A. Hagarman, D. Verbaro, and J. Soffer. Conformational Stability of Cytochrome c Probed by Optical Spectroscopy. **Meth. Enzymol**. 466, **109-150, 2009.**

81. D. Verbaro, A. Hagarman, A. Kohli and R. Schweitzer-Stenner. Microperoxidase 11: a model system for porphyrin networks and heme–protein interactions. **J. Biol. Inorg. Chem. 14, 1289-1300, 2009.**

82. D. Verbaro, A. Hagarman, J. Soffer and R. Schweitzer-Stenner. The pH Dependence of the 695 nm Charge Transfer Band Reveals the Population of an Intermediate State of the Alkaline Transition of Ferricytochrome *c* at Low Ion Concentrations. **Biochemistry 48, 2990-2996, 2009.**

83. S. Jang, J-M. Yuan, J. Shin, T. J. Measey, R. Schweitzer-Stenner, and F-Y. Li. Energy Landscapes Associated with the Self-Aggregation of an Alanine-Based Oligopeptide $(AAKA)_4$. **J. Phys. Chem. B. 113, 6054-6061, 2009.**

84. R. Schweitzer-Stenner. Distribution of Conformations Sampled by the Central Amino Acid Residue in Tripeptides Inferred From Amide I Band Profiles and NMR Scalar Coupling Constants. **J. Phys. Chem. B**., 113, 2922-2932, 2009.

2008

85. A. Hagarman, C. J. Wallace, M.M. Laberge and R. Schweitzer-Stenner. Out-of-plane deformations of the heme group in different ferrocytochrome c proteins probed by resonance Raman spectroscopy. **J. Raman Spectrosc.** 39, 1848-1858, 2008.

86. A. Hagarman, L. Duitch and R. Schweitzer-Stenner. The Conformational Manifold of Ferricytochrome c Explored by Visible and Far-UV Electronic Circular Dichroism Spectroscopy. **Biochemistry,** 47, 9667-9677, 2008.

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2. R. Schweitzer-Stenner, N. O'Neill, T. Lima, F.F. Ferreira, And N.J. Alvarez. Structure and Properties of Gly-X-Gly Hydrogels and Their Potential as Biomaterials with Applications in Drug Delivery Part 2. RSC Materials Chemistry Conference, Dublin, Ireland, 2023
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4. R. Schweitzer-Stenner and B. Milorey. Analyses of experiment based ramachandran plots of tri-, tetra- and pentapeptides reveal residue dependent interactions between neighbors. Biophys. J. 120, P958, 2022 (Abstract for Annual Biophysical Society Meeting in San Francisco, 2022).
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39. E. Fradkin, J. B. Soffer, and R. Schweitzer-Stenner. Identification of a New Charge-Transfer Transition through the Partial Unfolding of Cytochrome C under Mild Acidic Conditions. **Biophys J 100, 221a-Pos.** (**Annual Meeting of the American Biophysical Society, Baltimore, 2011)**.
40. R. Schweitzer-Stenner, S. Toal and T.J. Measey. The Utilization of the Anomalous Intensity Enhancement of the Amide I Couplet for Probing the Formation of Peptide Fibrils in Solution. Biophys J 100, 14a-Pos. (Annual Meeting of the American Biophysical Society, Baltimore, 2011).
41. S. Toal, O. Amidi and R. Schweitzer-Stenner. Solvent Dependence of Trialanine Conformers. **Biophys J 100, 62a-Pos.** (**Annual Meeting of the American Biophysical Society, Baltimore, 2011)**.

42. S. Toal, O. Amidi and R. Schweitzer-Stenner. Modification of the Conformational Ensemble of Trialanine in Aqueous Solutions by Glycerol and Ethanol Co-solvents. **European Conference on the Spectroscopy of Biological Molecules, Coimbra University, Coimbra, Portugal, 2011.**
43. R. Schweitzer-Stenner, S. Toal and T.J. Measey. The Utilization of the Anomalous Intensity Enhancement of the Amide I Couplet for Probing the Formation of Peptide Fibrils in Solution. **Biophys J 100, 14a-Pos.** (**Annual Meeting of the American Biophysical Society, Baltimore, 2011)**.
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47. **Soffer, J. B.** and R. Schweitzer-Stenner. Conformational Changes of Ferricytochrome c Induced by pH and Temperature. **(Thermal TAFDV Symposium, Philadelphia, 2009).**
48. **Soffer, J.B** and R. Schweitzer-Stenner. Unraveling the Mystery of Ferricytochrome C: An Investigation into Induced Non-Native Conformational Changes. **Biophys J. 98(3) pp. 642a (54th Annual Meeting of the American Biophysical Society, San Francisco, 2010).** DOI: 10.1016/j.bpj.2009.12.3519.
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50. Soffer, J. B. and R. Schweitzer-Stenner. Unraveling the Mystery of Ferricytochrome c: An Investigation into Induced Non-Native Conformational Changes. Sixth International Conference on Porphyrins and Phthalocyanines. pp. 456 (Sixth International Conference on Porphyrins and Phthalocyanines, Santa Ana Pueblo, 2010).
51. T. J. Measey, K. B. Smith, S. M. Decatur, L. Zhao, G. Yang, and R. Schweitzer-Stenner. The Self-Aggregation of a Polyalanine Octamer Promoted by its C-Terminal Tyrosine and Probed by Strongly Enhanced VCD Signal. Biophys J 98, 1310-Pos (Annual Meeting of the American Biophysical Society, San Francisco, 2010).
52. D. Verbaro, T. Measey, I. Gosh, W. Nau, R. Schweitzer-Stenner. Investigating Conformational Ensembles in Alanine Based Peptides Using Vibrational and ECD Spectroscopy. **Biophys. J. 98(3) pp. 31a-32a (Annual Meeting of the American Biophysical Society, San Francisco, 2010).**

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57. A. Hagarman, C.J. Wallace and R. Schweitzer-Stenner. Out-of-plane Deformations Of The Heme Group Of Different Ferrocytochrome C Proteins Probed By Resonance Raman Spectroscopy. **(American Biophysical Society Meeting, Long Beach, CA) Biophys. J.** 94, 1887, 2008.
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60. T.J. Measey, R. Schweitzer-Stenner, K. B. Smith, and S. M. Decatur. Enhanced VCD Signal As A Marker For Tyrosine Ring Coupling In An Aggregated 8-residue Alanine Based Polypeptide. **(American Biophysical Society Meeting, Long Beach, CA) Biophys. J**. 94, 2825, 2008.
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65. A. Hagarman, T.J. Measey., and R. Schweitzer-Stenner. Conformational propensities of amino acids in glycine based tripeptides probed by 1H NMR, VCD, IR, Raman, and ECD spectroscopy. **(American Biophysical Society Meeting, Baltimore, MD) Biophys. J. Supp. S.** 397A, 2007.
66. T. J. Measey, G. L. Yang, J.M. Yuan, and R. Schweitzer-Stenner. Aggregation of the amphipathic peptides AAKAn into antiparallel beta-sheets. **(American Biophysical Society Meeting, Baltimore, MD) Biophys. J. Supp. S**. 562A, 2007.
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Abstracts of papers of the American Chemical Society, 228: U156-U157 734-ORGN Part 2, AUG 22 2004.
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89. R. Lipski, E. Unger, M. Beck, W. Dreybrodt, and R. Schweitzer-Stenner. Normal mode and molecular mechanics calculations with reduced sets of force constants for nonplanarily distorted porphyrins. (**Annual American Biophysical Society Meeting, Baltimore, MD, 1999)** Biophys. J. Supp. S. 76, A423, 1999.
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103. H. Gilch, W. Dreybrodt and R. Schweitzer-Stenner. Temperature dependence of the Fe2+-Nε His F8 Raman band of deoxymyoglobin **(Annual American Biophysical Society Meeting, New Orleans, LO, 1994) Biophys. J. Supp. S.** 66, A12, 1994.
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105. R. Schweitzer-Stenner, E. Ortega, and I. Pecht. Correlations between the kinetics of FcεRI dimerization by monoclonal antibodies and secretory response in mast cells. **(Annual American Biophysical Society Meeting, New Orleans, LO, 1994) Biophys. J. Supp. S**. 66, A248, 1994.
106. W. Jentzen, W. Dreybrodt, and R. Schweitzer-Stenner. The structural heterogeneity of Nickel-octaethylporphyrin in organic solvents revealed by resonance Raman spectroscopy. **(Annual American Biophysical Society Meeting, New Orleans, LO, 1994) Biophys. J. Supp.** S. 66, A262, 1994.
107. R. Schweitzer-Stenner, M. Bosenbeck and W. Dreybrodt. Raman Dispersion Spectroscopy probes central and peripheral heme-protein interactions in deoxyhemoglobin trout IV. (**Annual American Biophysical Society Meeting, Washington, DC, 1993) Biophys. J. Supp. S**. 64, A47, 1993.
108. H. Gilch, R. Schweitzer-Stenner and W. Dreybrodt. Structural heterogeneity of the Fe-Nε bond in hemoglobin probed by the Raman active Fe-His stretching mode. **Annual American Biophysical Society Meeting, Washington, DC, 1993) Biophys. J. Supp.** S. 64, A47, 1993.
109. W. Jentzen, W. Dreybrodt, and R. Schweitzer-Stenner. Resonance Raman spectroscopy probes two conformations of Ni-octaethylporphyrin in CH2Cl2. Annual

American Biophysical Society Meeting, Washington, DC, 1993) Biophys. J. Supp. S. 64, A155, 1993.

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111. R. Schweitzer-Stenner, P. Engelmohr, A. Licht and I. Pecht. Thermodynamic characterization of hapten binding to IgE class monoclonal antibodies. **Annual American Biophysical Society Meeting, Washington, DC, 1993) Biophys. J. Supp. S.** 64, A386, 1993.
112. R. Schweitzer-Stenner, A. Licht and I. Pecht. Dimerization kinetics of Fab-fragments of IgE-class antibodies by divalent haptens. **Annual American Biophysical Society Meeting, Houston, TX, 1992) FASEB. J.** 6, A43, 1992.
113. R. Schweitzer-Stenner, U. Dannemann and W. Dreybrodt. Investigations of heme distortions and heme-protein coupling in isolated subunits of oxy-HbA by resonance Raman dispersion spectroscopy. **Annual American Biophysical Society Meeting, Houston, TX, 1992) FASEB. J**. 6, A55, 1992.
114. R. Schweitzer-Stenner, U. Dannemann, M. Bosenbeck and W. Dreybrodt. Is heme-protein coupling involved in the allosteric mechanism governing the alkaline Bohr effect? **Annual American Biophysical Society Meeting, Houston, TX, 1992) FASEB. J.** 6, A55, 1992.
115. M. Bosenbeck, R. Schweitzer-Stenner and W. Dreybrodt. pH induced conformational changes of the Fe-His F8 interface in deoxyhemoglobin trout IV as detected by the Raman active Fe-His F8 stretching mode. **(Annual American Biophysical Society Meeting, Baltimore, MD, 1991) Biophys. J. Supp. S**. 57, A217, 1991.
116. E. Ortega, R. Schweitzer-Stenner, and I. Pecht. Kinetic analysis of ligand binding to the Fcε-receptor on mast cells. **(Annual American Biophysical Society Meeting, Baltimore, MD, 1991) Biophys. J. Supp. S**. 57, A284, 1991.

Invited Talks

A. Talks at Conferences and Symposia

1. R. Schweitzer-Stenner, Heme-protein interactions and heme deformations in cytochrome c. **CanBic, Parry Sound, Canada, 2023.**
2. R. Schweitzer-Stenner, B. Milorey, S. Zhang, B. Andrews and B. Urbanc. Vibrational Circular Dichroism Spectroscopy as a Tool for exploring Conformational Distributions of Oligopeptides. **7th Vibrational Optical Activity Conference, Edmonton, CA, 2022.**
3. R. Schweitzer-Stenner, B. Milorey and D. Malyshka. Conformational Diversity of Cytochrome c on Anionic Lipids Regulated by Ionic Strength and pH. **CanBic, Parry Sound, Canada, 2019.**

4. R. Schweitzer-Stenner,Probing the Binding of Cytochrome c to Cardiolipin by Optical and Resonance Raman Spectroscopy. **CanBic, Parry Sound, Canada, 2017.**
5. R. Schweitzer-Stenner. Exploring Binding of Cytochrome c to Liposomes By Fluorescence, CD and Resonance Raman Spectroscopy, C**anBic, Parry Sound, Canada, 2015.**
6. R. Schweitzer-Stenner, L. A. Pandiscia, L. Serpas, and D. Malyshka. Conformational Diversity of Cytochrome c on Cardiolipin Containing Liposomes Probed by Fluorescence and Circular Dichroism Spectroscopy. **Spring Meeting of the American Chemical Society. Denver, March, 2015 (unable to attend for medical reasons, the talk was given by the second author, L.A. Pandiscia).**
7. R. Schweitzer-Stenner and T.J. Measey: Unexpected Self-Asse`mbly of Peptides and their Structural Analysis**. PittCon 2013, Philadelphia.**
8. R. Schweitzer-Stenner: Partially Unfolded States of Cytochrome c in Solution and on Liposomes**. 4th. CanBic, Perry Sound, Canada, 2013.**
9. R. Schweitzer-Stenner, S. Toal, D. Verbaro, D. Meral and Brigita Urbanc Conformational Distributions of Amino Acid Residues in Unfolded Peptides and Proteins: How Random is The So Called Random Coil State. **International Scientific Seminar - Kavli Seminar: Multiscale systems: linking quantum chemistry, molecular dynamics, and microfluidic hydrodynamics. London, 2013**
10. R. Schweitzer-Stenner, S.E. Toal, S. Zimmer, Y. Lee, H. Schwalbe. Influence of nearest neighbors and solvent composition on conformational propensities of amino acid residues in unfolded peptides. **Annual Meeting of the American Chemical Society, San Diego, CA, March 2012.**
11. R. Schweitzer-Stenner, A. Hagarman, T.J. Measey, D. Verbaro and Siobhan Toal, Using Vibrational, Optical and NMR Spectroscopy to Explore Unfolded and Misfolded States of Peptides. **PittCon, Orlando, FL, March 2012.**
12. R. Schweitzer-Stenner. Using Vibrational, Optical and NMR Spectroscopy To Explore Unfolded and Misfolded State of Peptides. **1st Symposium on Higher Order Structure of Protein Therapeutics, Rockville, MD, September 2011.**
13. R. Schweitzer-Stenner, J.B. Soffer, L.Pandiscia, E. Fradkin, and D. Verbaro. Using Circular Dichroism and Resonance Raman Spectroscopy to Probe Non-Native States of Cytochrome c. **3rd Georgian Bay Conference on Bio-Inorganic Chemistry, Pary Sound, Canada, June 2011.**
14. R. Schweitzer-Stenner. Electronic and vibronic perturbations of porphyrins in heme proteins by combining absorption, circular dichroism and resonance Raman spectroscopy. **Sixth International Conference on Porphyrins and Phthalocyanines (ICPP**), Santa Ana Pueblo, New Mexico (July 2010).
15. R. Schweitzer-Stenner**.** Probing the VCD signal of amide I' is pivotal for probing conformational propensities of amino acids in unfolded peptides and peptide self-aggregation in aqueous solution. **2nd International Conference on the Vibrational optical activity of Biomolecules. Albany, NY, August 2010.**
16. R. Schweitzer-Stenner, Unfolded and Self-Aggregated States of Unfolded Peptides. **European Conference on the Spectroscopy of Biological Systems, Palermo, August 31-September 4, 2009.**

17. “Peptides as Model Systems for The Unfolded State of Proteins Explored By Vibrational Spectroscopy.” **International Conference on Perspectives in Vibrational Spectroscopy**, **Trivandrum, India, February, 2008.**
18. “Non-planar deformations of metal porphyrins in solution and in proteins probed by Resonance Raman spectroscopy.” **Pacifichem 2005, Honolulu, December, 2005.**
19. “The excitonic coupling between amide I modes as a tool for the structure analysis of polypeptides.” Invited lecture at COBRE II conference on the ‘**Structure, Function and Dynamics of Biomolecules, San Juan, Puerto Rico, San Juan, February 16-19, 2005.**
20. “Exploring the Structure of ‘Unfolded Peptides’ by Combining VCD and ECD with IR and Polarized Raman Spectroscopy.” Invited lecture at 10th **International Conference on Circular Dichroism Spectroscopy (CD 2005)**, **Destin, Florida, August 21- 25, 2005.**
21. “Structure Analysis of Unfolded Peptides by Combining IR, Polarized Raman, Vibrational and Electronic Circular Dichroism Spectroscopy.” Invited lecture at the **International Conference on Advanced Vibrational Spectroscopy (ICAVS 3), Delevan, Wisconsin, August 14-19, 2005.**
22. “Structure Analysis of Tripeptides in Solution by Polarized Raman, FTIR and Vibrational Circular Dichroism Spectroscopy” Invited Lecture at the **XVIIIth International Raman Conference in Budapest, Hungary, organized by Janos Minsk, July 2002.**
23. “Structure Analysis of Di- and Tripeptides by Polarized Raman, FTIR and Vibrational Circular Dichroism Spectroscopy” Invited Lecture at the **First International Conference on Biomedical Spectroscopy, Cardiff, UK, organized by Dr. Parvez Haris, June 2002.**
24. “Electronic and Vibronic Distortions of Metalloporphyrins in Organic Solvents Probed by Resonance Raman Dispersion Spectroscopy“ **Symposium lecture at the 1st International Conference on Porphyrins and Phthalocyanines, Dijon, France, organized by Roger Guilard and Karl M. Kadish, July 2000.**
25. "Resonance Raman Dispersion Spectroscopy probes asymmetric distortions of porphyrins in solution and proteins", **Plenary lecture at the 8th European Conference on the Spectroscopy on Biological Molecules, Enschede, NL, organized by Prof. Jan Greve, September, 1999.**
26. ”Life Time and Spatial Proximity. An Attempt to Quantitatively Assess the Relationship Between Receptor Aggregation and Transmembrane Signaling in Mast Cells” ‘**10th Symposium on Signals and Signal Processing in the Immune System**’ in **Balatonöszöd, Hungary, organized by Prof. Janós Gergely, Göd, September 1998.**
27. ”The Impact of Protein Dynamics on Metal-Containing Chromophores: Taxonomic versus Continous Distribution of Substates” ”Are proteins organized hierachically” **Workshop in the Academy of Telluride, Telluride, CO, organized by Profs. Friedmann (New York) and Agmon (Jerusalem), Telluride, USA, July 1997.**
28. Vibrational mixing between model peptides and water probed by Raman and FT-IR spectroscopy.” 2nd Workshop of the EU-network ‘**The Dynamics of Protein Func-**

tion' in San Miniato, Italy, organized by Prof. F. Parak, TU München, September 1996.

29. **"**Conformational substates of the proximal Fe-His F8 linkage in myoglobin and hemoglobin probed by resonance Raman and optical spectroscopy" '**The Dynamic-Heme Symposium**, **(organized by N. Agmon and J. Friedman) Jerusalem 1995.**
30. "Conformational substates of the proximal Fe- His F8 complex in hemoglobin trout IV" **Gordon Conference on 'Vibrational Spectroscopy' in Wolfboro**, New Hampshire, USA, July 1992.
31. "pH-induced heme-protein interactions in hemoglobin derivatives detected by resonance Raman spectroscopy" **Symposium on 'Dynamics and Function of Heme Proteins'**, **NIH, Bethesda, USA, June 1990.**
32. "Correlation between Root-effect and conformational changes of the active site detected by resonance Raman scattering at haemoglobin trout IV." **Annual Meeting of the 'Society for Experimental Biology**', **Edingburgh, April 1989.**

B. Invited Talks at Scientific Institutions

1. "Very Strong Hydrogels Formed by the Self-Assembly of GxG-type Tripeptides Explored by Vibrational Spectroscopy, Rheology, Microscopy and X-ray Diffraction." **University of Sciences, Philadelphia, April 2022.**
2. "Very Strong Hydrogels Formed by the Self-Assembly of GxG-type Tripeptides Explored by Vibrational Spectroscopy, Rheology, Microscopy and X-ray Diffraction." **Tel Aviv University (online), November 2021.**
3. "Exploring Multiple Processes of Cytochrome c Binding to Cardiolipin Containing Liposomes."**Invited seminar at the Department of Chemistry, St. Louis University, St. Louis, MO, February 2020**
4. "Exploring Multiple Processes of Cytochrome c Binding to Cardiolipin Containing Liposomes." **Invited seminar at the Department of Chemistry, Clarkson University, Potsdam, NY, April 2019.**
5. **"**The Demise of the Random Coil Model: The Use of Short Peptides as Model Systems for the Structure Analysis of Unfolded Peptides and Proteins." **Invited seminar at the Department of Chemistry, SUNY-Potsdam, Potsdam, NY, April 2019.**
6. The Unexpected Self-Assembly and Gelation of Alanine Based Peptides Probed by Combining Optical Spectroscopy, Microscopy and Rheology. **Invited seminar at St. Johns University, New York, NY, February 2019.**
7. **"**The Demise of the Random Coil Model: Structural Preferences of Amino Acid Residues in Short Peptides Determined by Vibrational and Nuclear Resonance

Spectroscopy." **Invited seminar at Rowan University, Glasboro, NJ, October 2018.**

8. "Exploring the Diverse Structure and Functions of Cytochrome c bound to Anionic Membranes". **Invited seminar at the Biocenter of the Johann Wolfgang Goethe Universität Frankfurt, July 2018.**
9. "The Demise of the Random Coil Model" **Invited seminar talk at the Institute of Physical Chemistry, Friedrich Wilhelm Universität Bonn, December 2017.**
10. "The unexpected self-assembly and gelation of alanine based peptides probed by combining vibrational spectroscopy, microscopy and rheology." **Seminar, Department of Molecular Microbiology and Nanotechnology, Tel Aviv University, Tel Aviv, June 2017.**
11. **"**Conformational Ensembles of Amino Acid Residues in Unfolded Peptides Probed by Combining Vibrational, Circular Dichroism and NMR spectroscopy." **Seminar, Institut für Organische Chemie und Chemische Biologie, Johann Wolfgang Goethe Universität, Frankfurt, Germany, December 2012.**
12. **"**Biophysical and Spectroscopic Investigations of Cytochrome." **Seminar, Department of Chemistry, University of Akron, February 2011**
13. **"**Is the Unfolded State of Peptides Really Random?" **Department of Chemistry Seminar. Mary and William College, Williamsburg, A, October 2010**
14. "Using vibrational, optical and NMR spectroscopy to explore unfolded and self-aggregated peptides." **Department of Chemistry, SUNY-Albany, NY,** September 2009.
15. "Different conformations of cytochrome c in solution Explored by resonance Raman, low temperature absorption and CD spectroscopy", **Department of Biophysics and Physiology, Albert Einstein College of Medicine, New York, NY,** May 2008.
16. "The conformational manifold of unfolded peptides probed by vibrational and NMR spectroscopy" **Department of Chemistry, University of Pennsylvannia, Philadelphia, PA** April 2008.
17. "Is the unfolded state of peptides (and proteins) really a random coil" **Department of Chemistry, Muhlenberg College, Allentown, PA,** September 2007.
18. "Is the unfolded state of peptides (and proteins) really a random coil" **Department of Chemistry, New York University, New York, NY**, March, 2007.
19. "Is the unfolded state of peptides (and proteins) really a random coil" **Department of Chemistry, Shippensburg University, Shippensburg, PA,** November 2006.
20. "Is the unfolded state of peptides (and proteins) really a random coil", **Department of Physics, Applied Physics and Astronomy, Rensselaer Polytechnic Institute, Troy, NY,** November 2006.
21. "A Physicists look on Myoglobin and Cytochrome c" **Department of Chemistry, Wikes University, Wilkes-Barre, PA**, November 2006.
22. "Is the unfolded state of peptides (and proteins) really a random coil" **Department of Chemistry, University of Illinois, Chicago, IL**, October, 2006.
23. "Is the unfolded state of peptides (and proteins) really a random coil" **Department of Chemistry, Rutgers University, Newark, NJ**, September, 2006.
24. "Is the unfolded state of peptides (and proteins) really a random coil" **Department of Chemistry, University of Science, Philadelphia, PA,** September, 2006.

25. “Deformations and Perturbations of Porphyrins in Solution and in Proteins Probed By Resonance Raman and Low Temperature Absorption Spectroscopy” **Institute of Physics and Astronomy, Palermo, Italy**, July 2006.
26. “Is the unfolded state of peptides (and proteins) really a random coil” **Institute of Physics and Astronomy, Palermo, Italy**, July 2006.
27. “Is the unfolded state of peptides (and proteins) really a random coil” **Consiglio Nazionale della Richereche, Pisa, Italy,** July 2006.
28. “Functionally relevant heme distortions in horseradish peroxidase and cytochrome c probed by resonance Raman dispersion and optical absorption spectroscopy. **Franklin and Marshall College, Lancaster, PA,** March 2006.
29. “Functionally relevant heme distortions in horseradish peroxidase and cytochrome c probed by resonance Raman dispersion and optical absorption spectroscopy.” **Department of Chemistry, Juniata College, Huntingdon, PA,** April 2005.
30. “Structure Analysis of Short Peptides in Solution: A Tool to Understand The Unfolded State of Peptides and Proteins.” **Department of Chemistry, SUNY-Potsdam, Potsdam, NY**, March 2005.
31. “Structure Analysis of Short Peptides in Solution: A Tool to Understand The Unfolded State of Peptides and Proteins.” **Department of Chemistry, St. Lawrence University, Canton, NY,** March 2005.
32. “Structure Analysis of Short Peptides in Solution: A Tool to Understand The Unfolded State of Peptides and Proteins.” **Center for Computational Biology, Washington University, St. Louis,** February 2005.
33. “Resonance Raman Dispersion Spectroscopy: An Ideal Tool to Probe Functionally Relevant Deformations of The Active Site of Heme Proteins. **Department of Biochemistry, University of Pennsylvania, Medical School, Philadlephia,** April 2004.
34. “Tri- and Tetrapeptides as Model Systems for The Understanding of the Unfolded State of Peptides and Proteins” Department of Biology, **International University Bremen, Bremen, Germany,** March 2004.
35. “Tri- and Tetrapeptides as Model Systems for The Understanding of the Unfolded State of Peptides and Proteins” `**Theoretical Biology and Biophysics Group, Los Alamos National Laboratory, Los Alamos**, February 2004.
36. “Tripeptides as Model Systems for The Understanding of the Unfolded State of Peptides and Proteins.” **Institut für Biophysik, Johann Wolfgang Goethe Universität, Frankfurt, Germany,** June 2003.
37. “Tripeptides as Model Systems for The Understanding of the Unfolded State of Peptides and Proteins.” **Department of Physics, Georgia State University, Atlanta**, GA, February 2003.
38. “Tripeptides as Model Systems for The Understanding of the Unfolded State of Peptides and Proteins.” **Department of Chemistry, Drexel University, Philadelphia, PA,** January 2003.
39. “Secondary structure of tripeptides in solution probed by visible Raman, IR and VCD spectroscopy” **Department of Immunology, The Weizmann Institute of Science, Rehovot, Israel,** October 2002.

40. “Secondary structure of tripeptides in solution probed by visible Raman, IR and VCD spectroscopy” **Department of Physical Chemistry, Hebrew University, Jerusalem, Israel**, October 2002.
41. “Secondary structure of tripeptides in solution probed by visible Raman, IR and VCD spectroscopy” **Institut für Physikalische Chemie, Johann Wolfgang Goethe Universität Frankfurt, Frankfurt, Germany,** October 2002.
42. “Secondary structure of tripeptides in solution probed by visible Raman, IR and VCD spectroscopy”. **Department of Chemistry, Duquesne University, Pittsburgh,** September 2002.
43. “Structure analysis of tripeptides by polarized visible Raman, FTIR and VCD spectroscopy”. **Department of Chemistry, University of Lethbridge, Lethbridge**, Canada, June, 2002. “Functional relevant distortions of the prosthetic groups in heme proteins probed by resonance Raman Dispersion Spectroscopy**”. Department of Chemistry, University of Western Ontario, London,** Canada, April 2002.
34. “Structure analysis of tripeptides by polarized visible Raman, FTIR and VCD spectroscopy.” **Department of Chemistry, University of Windsor**, Windsor, Canada, April 2002.
35. “Structure analysis of di- and tripeptides by polarized visible Raman and FTIR spectroscopy. **Department of Chemistry, Syracuse University**, Syracuse, February 2002.
36. “Functional relevant distortions of the prosthetic groups in heme proteins probed by resonance Raman Dispersion Spectroscopy. **Institute of Biophysics and Radiation Biology, Semmelweis University, Budapest, Hungary**, July 2001.
37. “Di- and Tripeptides as The Cornerstone for The Structure Analysis of Proteins” **Department of Chemistry, University of Maryland, Baltimore County,** April 2001.
38. “Vibrational and structural dynamics of model peptides” Department of Chemistry, **University of Louisville, Louisville, KY**, November 2000.
39. “Influence of peripheral substituents and metal on structure and dynamics of porphyrins” **Institute of Physical Chemistry, University of Würzburg, Würzburg**, May 2000.
40. "Structural Heterogeneity and Vibrational Dynamics of Model Peptides Probed by IR, Visible, and UV-Resonance Raman Spectroscopy" **Department of Chemistry, University of Copenhagen**, **Copenhagen, Denmark,** May 1999.
41. “Resonance Raman Dispersion Spectroscopy. A Tool to Probe Functionally Relevant Distortions of Chromophores in Biological Macromolecules.” **Department of Physics, Washington University**, **St. Louis, USA**, January 1999.
42. "Structural Heterogeneity and Vibrational Dynamics of Model Peptides Probed by IR, Visible, and UV-Resonance Raman Spectroscopy", **Department of Chemistry, University of Puerto Rico, Rio Pedras, San Juan, USA**, December 1998.
43. ”Peptide Structure and Vibrational Dynamics Probed By Non-Resonance, Resonance UV-Raman and FTIR-Spectroscopy” **Istituto di Fisica, Universita di Palermo**, **Palermo, Italia**, July 1998.
44. ”Peptide Structure and Vibrational Dynamics Probed By Non-Resonance And Resonance UV-Raman Spectroscopy” **National Institute of Standards, Gaithersburg, MA**, February, 1998.

45. ”Struktur und Dynamik von Peptiden” **Drittes Physikalisches Institut der Universität Göttingen**. **Göttingen,** December, 1997.
46. ”Ramanspektroskopie an Myoglobin: Subkonformationen und statische Verzerrungen des aktiven Zentrums.” **Institut für Biophysik, Universität Ulm, Ulm,** July 1997.
47. ”Raman- und optische Spektroskopie an Myoglobin” **Institut für Biophysik, TU München**, **München**, June 1997.
48. ”Raman Dispersionsspektroskopie an Porphyrinen in organischen Lösungen und Proteinen. **Institut für Physikalische und Theroretische Chemie, TU München, München,** May 1997.
49. ”Struktur und Dynamik von Modellpeptiden” **Insitut für Biophysik und Medizinische Physik, Universität Münster**, **Münster,** November 1996.
50. ”Raman dispersion spectroscopy probes out-off-plane distortions of metalloporphyrins in organic solvents” **Department of Physics, University of Palermo, Palermo, Italy**, März 1996.
51. ”Bindung von Liganden an den Typ I Fce - Rezeptor auf der Oberfläche von Mastzellen”, **Humboldt-Universität Berlin, Berlin**, October 1995.
52. ”Raman dispersion spectroscopy probes asymmetric distortions of porphyrins in solution and in a protein environment” **Sackler Institut of Medicine, Tel Aviv University, Tel Aviv,** Israel, September 1995.
53. "Conformational substates in hemoglobin and myoglobin probed by the Raman active Fe2+-Ne (His F8) stretching mode." **Department of Physics, University of Illinois, Urbana-Champaign**, USA, September 1994.
54. "Conformational substates in myoglobin probed by vibrational spectroscopies. Do proteins behave like glasses?" **Department of Chemistry, University of Pittsburgh, Pittsburgh, USA**, June, 1994.
55. "Raman dispersion spectroscopy probes electronic and vibronic coupling in metalloporphyrins and their dependence on steric and electronic properties of the peripheral substituents" **Fuel Science Division, Sandia National Laboratories and Department of Chemistry, University of New Mexico, Albuquerque, USA**, April, 1994.
56. ”Stimulus-Secretion Coupling. The Mast Cell Case” **Department of Chemistry, Cornell University, Ithaca, USA**, February 1994.
57. "Raman Dispersion Spectroscopy and the Fe2+ - His F8 Raman band are used to probe heme - protein interactions in hemoglobin and myoglobin" **Department of Biophysics and Physiology, Albert Einstein Institute of Medicine, Bronx**, USA, January, 1994.
58. "Resonance Raman Spectroscopy probes different conformations of metalloporphyrins in solution" **Department of Chemistry, University of Pittsburgh**, **Pittsburgh, USA**, December, 1993.
59. "Conformational substates in myoglobin and hemoglobin probed by vibrational spectroscopies" **Biophysics Research Division, University of Michigan, Ann Arbor, USA,** November, 1993.
60. "Conformational substates in myoglobin probed by vibrational spectroscopies." **Physics Department, University of Twente, Enschede, Netherland**, September, 1993.

61. "Receptor crosslinking by monoclonal antibodies in solution and on the surface of mast cells" **Department of Biological Chemistry**, **University of Michigan, Ann Arbor,** USA, November, 1993.
62. "Allosteric mechanism and heme - protein coupling in hemoglobin derivatives investigated by Raman Dispersion Spectroscopy" **Department of Physics, University of Illinois, Urbana-Champaign**, **USA**, February, 1993.
63. "Untersuchung von Konformationssubzustände in Hämoglobin durch resonante Ramanspektroskopie" **Max Delbrück Institut für Molekulare Medizin, Berlin, Germany,** September, 1992.
64. "Ramanspektroskopische Untersuchungen an Porphyrinen**" Institut für Physik, Medizinische Hochschule Lübeck, Lübeck, Germany,** February, 1992.
65. "Allosteric coupling in hemoglobin derivatives probed by resonance Raman spectroscopy" **Physics Department, University of Michigan, Ann Arbor, USA,** February, 1992.
66. "Untersuchung von allosterischen Wechselwirkungen in Hämproteinen durch resonante Ramanspektroskopie" **Institut für Physikalische Chemie, Universität Würzburg**, **Würzburg, Germany,** December, 1991.
67. "Vernetzung von Rezeptoren in Lösung und auf der Oberfläche von Mastzellen" **Institut für Physikalische Chemie, Johannes Gutenberg Universität, Mainz, Germany,** November, 1991.
68. "Allosteric mechanism in hemoglobin probed by resonance Raman spectroscopy" **Abteilung Biophysik, Biozentrum der Universität**, **Basel, Switzerland**, November, 1990.
69. "pH-induced distortions in hemoglobin investigated by resonance Raman spectroscopy" **Polymer Department, The Weizmann Institute of Science, Rehovot, Israel**, November, 1985.
70. "pH-induced distortions in hemoglobin investigated by resonance Raman spectroscopy" **Max Planck Institut für Biophysikalische Chemie (AG. Prof. Manfred Eigen)**, **Göttingen, Germany,** August, 1983.

Guest Teaching

1. Lectures on '**Vibrational spectroscopy on Bioinoganic Metal Complexes'** at '**Department of Chemsitry Summerschool', University of Ionannina, Ioannina, Greece**. May 26-31, 2008.
2. Lectures on : '**Raman Spectroscopy on Biological Molecules**' at '**Istituto di Fisica, Universita' di Palermo', Palermo, Italy,** July 13-25, 1998.

Organization of Conferences

1. **Raman Spectroscopy on Biological Molecules'** in **Bremen 1992** as a satellite meeting of the **XIV-th International Conference on Raman Spectroscopy in Würzburg (R. Schweitzer-Stenner and W. Dreybrodt, Co-Organizers).**

Official Tasks at National and International Meetings

1. **American Biophysical Society, Annual Meeting 2011 in Baltimore, MD:** Organizer and chairperson of the platform: 'Unfolded Peptides and Proteins.
2. **American Biophysical Society, Annual Meeting 2009 in Boston, MA:** Organizer and chairperson of the platform: 'Unfolded Peptides and Proteins.
3. **International Conference on Perspectives in Vibrational Spectroscopy, Trivandrum, India, 2008:** Session chair.
4. **American Biophysical Society, Annual Meeting 2007 in Baltimore, MD:** Organizer and chairperson of the platform: 'Unfolded Peptides and Proteins.
5. **American Chemical Society, Pacifichem 2004, Honolulu, HW** Chairperson of a session on porphyrin non-planarity.
6. **American Biophysical Society, Annual Meeting 2003 in San Antonio, TX:** Organizer and chairperson of the platform: 'Structure and Dynamics of Peptides'.
7. **First Colloquium on Protein Structure, Function and Dynamics 2003 in Ponce, Puerto Rico,** Organizer and Chairman of a session on "Vibrational Spectroscopy".
8. **First International Conference on Biomedical Spectroscopy 2002 in Cardiff, UK:** Chairman of a session on FTIR-spectroscopy.
9. **American Biophysical Society, Annual Meeting 2002 in San Francisco, CA:** Organizer and chairperson of the platform: 'Structure and Dynamics of Biomolecules Probed By Vibrational spectroscopy.
10. **American Biophysical Society, Annual Meeting 1998 in Kansas City, MO:** Organizer and chairperson of the platform: 'Vibrational spectroscopy on proteins, peptides and related model compounds'.
11. **American Biophysical Society, Annual Meeting 1997 in New Orleans, LO':** Chairperson of the platform on ' Conformations of Peptides and Proteins'
12. **XVth International Conference on Raman Spectroscopy, Pittsburgh, 1996:** Presider of the session on 'Vibrational Dynamics'.
13. **The Dynamic-Heme Symposium", Jerusalem 1995:** Chairperson of a session.

Review Services

1. Journals

(1) Proceedings of the National Academy of Science USA
(2) The Journal of American Chemical Society
(3) Biophysical Journal
(4) Proteins
(5) Journal of Molecular Biology
(6) Langmuir
(7) Biochemistry
(8) Journal of Physical Chemistry
(9) FEBS Journal
(10) Journal of Raman Spectroscopy
(11) FEBS-Letters
(12) Journal of Chemical Physics
(13) Chemical Physics Letters
(14) Chemical Physics
(15) Biospectroscopy
(16) European Biophysics Journal
(17) Biophysical Chemistry
(18) Vibrational Spectroscopy
(19) Journal of Luminescence
(20) Canadian Journal of Chemistry
(21) Thermochimica Acta
(22) Angewandte Chemie
(23) Biopolymers
(24) Chirality
(25) Physical Chemistry Chemical Physics
(26) European Journal of Medicinal Chemistry
(27) Journal of Biological Inorganic Chemistry
(28) Journal of Biophotonics
(29) Angewandte Chemie
(30) RSC Advance
(31) Chem. Communication
(32) Biochimica Biofisica Acta
(33) Archives of Biophysical and Biochemical Research
(24) Journal of Molecular Graphics and Modeling
(25) PLOS ONE
(26) New Journal of Chemistry
(27) Angewandte Chemie.
(28) Chemistry European Journal
(29) Zeitschrift für Physikalische Chemie
(30) Structure
(31) Biomacromolecules

(32) International Journal of Molecular Science
(33) Archives of Biochemistry and Biophysics
(34) Food Science
(35) Journal of Chemical Information and Modeling

2. Proposals

(1) Petroleum Research Funds
(2) National Science Foundation
(3) National Institute of Health
(4) Alzheimer Association
(5) Czech Science Foundation

Editorial Services

Guest Editor

Special issue of Journal of Raman Spectroscopy, April, 2005.

Editorial Board

(1) Journal of Raman Spectroscopy (2000-present)
(2) Vibrational Spectroscopy (2006 – present)
(3) Biomolecules (2021-present)

Research Grants

Drexel University

1. **Title:** Moving toward an Accurate Molecular Dynamics Force Field for Intrinsically Disordered Proteins.
   PI: Brigita Urbanc (Physics), **Co-PI:** Reinhard Schweitzer-Stenner,
   Agency: National Science Foundation,
   Funding period: 8/1//2018-7/31/2021
   Money awarded: $ 554,614.00

2. **Title:** Identifying the Rules Governing Tripeptide Gelation in Aqueous Solution
   PI: Reinhard Schweitzer-Stenner, CoPIs: Nicolas Alvarez (Chem. Engineering) and Brigita Urbanc (Physics).
   Agency: National Science Foundation
   Funding period: 8/15/2017-8/14/2020
   Money awarded: $390,000 (direct+indirect costs)

   Supplementary REU grant
   Funding period: July 2019-September 2019
   Money awarded: $6,750

3. **Title:** The Use of Vibrational Spectroscopy to Probe the Conformational Propensities of Amino Acid Residues in Unfolded Peptides.
   PI: Reinhard Schweitzer-Stenner
   Agency: National Science Foundation
   Funding period: 7/01/08-06/30/12
   Money awarded: $ 400,000 (direct+indirect costs)

   Supplementary REU grant:
   Funding period: 8/1/2009 to 7/31/2010
   Money awarded: $ 22,290 (direct+indirect costs)

   Supplementary REU grant:
   Funding period: 8/1/2010 to 7/31/2011
   Money awarded: $ 13,200 (direct+indirect costs)

4. **Title:** Vibronic coupling in heme proteins
   PI: Reinhard Schweitzer-Stenner
   Agency: National Science Foundation
   Funding period: 7/01/03-12/31/07 (includes no-cost extension)
   Money awarded: $ 576,645 (direct + indirect costs)

5. **Title:** Functionally relevant distortions in horseradish peroxidase
   PI: Reinhard Schweitzer-Stenner
   Agency: Petroleum Research Funds (American Chemical Society)
   Funding period: 9/1/2002-8/31/2005 (includes no-cost extension)
   Money awarded: $ 80,000 (direct + indirect costs)

B. University of Puerto Rico

6. **Title:** Structure and Dynamics of Peptides and Proteins

   PI: Reinhard Schweitzer-Stenner, **Co-PI:** Kai Griebenow
   Agency: National Institute of Health (Score Program)
   Funding period: 7/2002-6/2004
   Money awarded: ca. $ 375,000 (direct + indirect costs).

7. **Title**: Proteins in organic solvents

   PI: Kai Griebenow, **Co-PI:** Reinhard Schweitzer-Stenner
   Agency: National Institute of Health (COBRE Program)
   Funding period: 9/2001-8/2005
   Money awarded: ca. $ 200,000 for my research group

8. **Title**: Resonance Raman spectroscopy on metalloporphyrins

   PI: Reinhard Schweitzer-Stenner
   Agency: National Science Foundation (EPSCOR Program)
   Funding period: 3/2000-2/2002
   Money awarded: $ 150,000 (only direct costs)

University of Bremen

9. **Title:** Vibrational spectroscopy on model peptides
   PI: Reinhard Schweitzer-Stenner
   Agency: Deutsche Forschungsgemeinschaft
   Funding period: 7/1997-6/1999
   Money awarded: ca. $ 100,000 (indirect costs).

10. **Title:** Vibrational spectroscopy on model peptides
    PI: Reinhard Schweitzer-Stenner, **Co-PI:** Sanford A. Asher (U. of Pittsburgh)
    Agency: NATO
    Funding period: 9/1996-8/1998

Money awarded: ca. $ 10,000 (indirect costs).

11. **Title:** Protein Dynamics and Structure
PI: Reinhard Schweitzer-Stenner, Program Director: Fritz Parak (TU Munich)
Agency: European Union
Funding period: 1995-1996 (estimated)
Money awarded: ca. $ 10,000 (indirect costs).

12. **Title:** Influence of peripheral substituents on the electronic and structural properties of poprphyrins in organic solvents
PI: Reinhard Schweitzer-Stenner
Agency: Free Hanseatic City of Bremen (State of Bremen)
Funding period: 3 years, 1994-1997 (estimated)
Money awarded: ca. $ 150,000 (indirect costs).

13. **Title:** Investigation of model porphyrins in organic solvents
PI: Reinhard Schweitzer-Stenner
Agency: Free Hanseatic City of Bremen (State of Bremen)7
Funding period: 3 years, 1990-1992 (estimated)
Money awarded: ca. $ 150,000 (indirect costs).

14. **Title:** Conformational substates in myoglobin and hemoglobin
PI: Wolfgang Dreybrodt, **Co-PI:** Reinhard Schweitzer-Stenner
Agency: Deutsche Forschungsgemeinschaft
Funding period: 3 years, 1997-199 (estimated)
Money awarded: ca. $ 100,000 (indirect costs).

15. **Title:** Resonance Raman spectroscopy on trout hemoglobin
PI: Wolfgang Dreybrodt, **Co-PI**: Reinhard Schweitzer-Stenner
Agency: Deutsche Forschungsgemeinschaft
Funding period: 4 years, 1990-1994 (estimated)
Money awarded: ca. $ 200,000 (indirect costs).

Teaching

A. Drexel University (Department of Chemistry)

1. Graduate Physical Chemistry I (now Chem 557, 3 credits): **Spectroscopy**
2. Graduate Physical Chemistry II (now Chem 558, 3 credits): **Statistical Mechanics**
3. Graduate Physical Chemistry III (Chem 752, 3 credits): **Biophysical Chemistry**
4. Graduate **Quantum Chemistry II (**Chem 656, 3 credits).
5. Graduate Inorganic Chemistry III Chem 523, 3 credits): **Metal complexes and Methods**
6. Undergraduate Physical Chemistry I (Chem 251, later Chem.253, 4 credits): **Thermodynamics**
7. Undergraduate Physical Chemistry II (Chem 352, 3 credits): **Electrolytes and Electrochemistry.**
8. Undergraduate Physical Chemistry III (Chem 359, 3 credits): **Spectroscopy and Quantum Chemistry.**
9. Undergraduate Physical Chemistr Lab. I (Chem 357, 2.5 credits)
10. Undergraduate Physical Chemistr Lab. II (Chem 357, 2.5 credits)
11. Chemistry Seminar (Chem 865, 3 credits)
12. Undergraduate Physical Chemistry III (Chem 353, 3 credits)

B. University of Puerto Rico (Department of Chemistry)

10. General Chemistry I (1x)
11. Graduate Physical Chemistry I: **Quantum Chemistry** (1x)
12. Graduate Physical Chemistry II: **Statistical Mechanics** (4x)
13. Graduate **Biophysical Chemistry** (1x)

C. Universität Bremen (Department of Physics and Electrical Engineering)[1]

14. Physics for Chemists and Geologists (L, 1x) .
15. Advanced Experimental Physics II: Atomic and Molecular Physics (L, 6 x)
16. Advanced Physics Laboratory Lab, (> 6x)
17. Biophysics of membranes (L, 1x)
18. Optical spectroscopy (L, 2 x)
19. Molecular physics II (L, 1 x)
20. Kinetics of chemical reactions (L, 1x)
21. Physics of liquids (L, 1x)
22. Raman spectroscopy (L, 1x)
23. Classical experiments in nuclear and atomic physics (S, 3x).
24. Protein dynamics (S, 1x).
25. Proteins and glasses (S, 1x) .

[1] L: lecture course, S: seminar

26. Optical spectroscopy on biological molecules (S, 1x).
27. Membrane channels and signal transduction (S, 1x).
28. Theory of Raman scattering (S, 1x).

Mentoring of postdoctoral associates and students.

A. Drexel University (Department of Chemistry)

A1. Postdoctoral associate

1. Dr. Qing Huang (postdoctoral research associate)

A2: Graduate students

2. Thomas J. Measey (PhD-level, graduated in 2010).
3. Andrew Hagarman (PhD-level, graduated in 2010).
4. Widalys Gonzales (PhD-level student, left the group after obtaining her MS degree in 2007).
5. Jonathan B. Soffer (PhD-level, graduated in 2013).
6. Siobhan Toal (PhD-level, graduated in 2014).
7. Leah Pandiscia (PhD-level, graduated in 2015)
8. Guzeliya Korneva (PhD level, graduated in 2008), served as Co-advisor.
9. David DiGuiseppi (PhD level, graduated in 2019)
10. Bridget Milorey (PhD level, expected to graduate in 2020)
11. Nichole O'Neill (PhD level, expected to graduate in 2024)

A3: Undergraduate students

1. Thomas J. Measey (research from 2004 – 2006, graduated as BS in 2006).
2. Andrew Hagarman (research from 2006 – 2005, graduated as BS in 2006).
3. Alex Vicens (research from 2006-2007, graduated as BS in 2007).
4. John P. Gorden (research from 2006-2007, graduated as BS in 2007).
5. Jonathan B. Soffer (research from 2007-2008, graduated as BS in 2008).
6. Maria Alessi (research from since May 2008, graduate as BS in 2009).
7. Isabelle Dragomir (research from 2005-2008, graduated as BS in 2009).
8. Ronak Shah (research from 2006-2008, graduated as BA in 2008).
9. Laura Duitch (research from 2007-present, graduated as BS in 2011).
18. Melinda Bendon (research from April 2008-June 2009, graduated as BS in 2011).
19. Daniel Verbaro (research from April 2009-2012, graduated as BS/MS in 2012).
20. Omid Amidi (research from 2009-2012, graduated as BS in 2013).
21. Emma Fradkin (research from 2010-2012, graduated as BS in 2014).
22. Stephanie Zimmer (research in the summer 2011, graduated as BS in 2015)
25. Ivona Sassimovich (senior research, 2012-2013, graduated as BS in 2017)
26. Jodi Kraus (research 2013-2015, graduated as BS in 2015)
27. Lee Serpas (research 2013-2015, graduated as BS in 2015)

28. Stephanie Farrel (research from 2013-2016, graduated as BS/MS in 2016)
29. Bridget Milorey (research from 2014-2016, graduated as BS in 2016)
30. Dmitry Malyshka (research from 2013 - present, graduated as BS/MS in 2017)
31. Gabrielle Lewis (research from 2015-present, graduated as BS in 2018)
32. Matthew Levine (research from fall 2017 , graduated as BS in 2018)
33. Jessica Pavelec (research from fall 2017, graduated as BS in 2019)
34. Raghed Kurbaj (research from summer 2018-present, will graduate in 2022)
35. Morgan Hesser (research from fall 2018-present, graduated as BS/MS in 2020)
36. Nathan Hennessey (research from fall 2018-present, visiting student from Sheffield, UK)
37. Anna Gargano (research from fall 2019-present, will graduate in 2021)
38. Emily Hughes (research from summer 2021-present, will graduate 2025)

A4: High School students

1. Marjon Zamani (high school sophomore, did research from July to August 2008).
2. Hendrik Elsner (high school student from Essen/Germany, doing research as intern in August 2010).

B. University of Puerto Rico (Department of Chemistry)

1. Dr. Qing Huang (postdoctoral research associate)
2. Fatma Eker (graduate student, 2001-2004, graduated as Ph.D in 2004)11
3. Daniel Bigman (graduate student, 2002-2003, moved to another research group after I left UPR for Drexel).
4. Alejandro Perez (graduate student, 2002-2003, moved to another research group after I left UPR for Drexel).
5. Daniel Bigman (undergraduate research from 2001 to 2002, graduated as BS in 2002).

C. Universität Bremen (Department of Physics and Electrical Engineering

1. Christina Lemke (Postdoctoral Research Associate, 1997-1998).
2. Esko Unger (Postdoctoral Research Associate, 1996-1997).
3. Guido Mix (graduate student from 1998-2001, graduated as Dr. rer. nat. in 2001).
4. Robert J. Lipski (graduate student from 1997-1999, graduated as Dr. rer. nat in 1999).
5. Esko Unger (graduate student from 1992-1996, graduated as Dr. rer. nat in 1996).
6. Martin Kircheis (graduate student from 1990-1994, left before graduation).

7. Joachim Schott (graduate student from 1996-2001, graduated as Dr. rer. nat. in 2001), served as Co-advisor.
8. Christina Lemke (graduate student from 1993-1997, graduated as Dr. rer. nat. in 1997), served as Co-advisor.
9. Ulrich Kubitscheck (graduate student from 1987-1990, graduated as Dr. rer. nat in 1990), this student worked on a project for which I was solely responsible. However, I could not officially serve as an advisor of graduate students prior to my habilitation. I wrote the 1st review and graded the dissertation, but the review was officially signed by the head of the research group, Prof. W. Dreybrodt.
10. Esko Unger (undergraduate diploma student from 1991-1992, graduated as diploma physicist in 1992).
11. Guido Sieler (undergraduate diploma student from 1997-1998, graduated as diploma physicist in 1998).
12. Michael Beck (undergraduate diploma student from 1997-1998, graduated as diploma physicist in 1998).