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EDUCATION

Ph.D. in Food Science, University of Massachusetts, Amherst, MA, 1999
Thesis Title: Effect of Mass Transport Processes on Physicochemical Properties
of Surfactant-Stabilized Emulsions
Thesis Advisor: David Julian McClements

M.S. in Chemical Engineering, Universität Karlsruhe, Karlsruhe, Germany, 1996
Thesis Title: Comparison of Different Measurement Techniques to Study
Adsorption Kinetics of Surfactants at Liquid/Liquid and Liquid/Gas
Interfaces (in German)
Thesis Advisor: Helmar Schubert

B.S. in Chemical Engineering, Universität Karlsruhe, Karlsruhe, Germany, 1991
Thesis Title: Design of a Measurement Setup Including Software to Determine
the Washing Efficiency of Filter Cakes (in German)
Thesis Advisor: Werner Stahl

PROFESSIONAL EXPERIENCE

Department of Food Science and Biotechnology, University of Hohenheim, Stuttgart,
Germany (2008 to present)

Professor 70% Research 30% Teaching
Food Physicochemical Properties & Biophysics

Department of Food Science, University of Massachusetts, Amherst, MA, USA (2004 to
2008)

Assistant/Associate Professor 75% Research 25% Teaching (tenure June 2007)
Food Biophysics and Nanotechnology

Department of Food Science and Technology, University of Tennessee, Knoxville, TN,
USA (1999 to 2004)

Assistant/Associate Professor 85% Research 15% Teaching (tenure April 2004)
Food Biophysics and Colloidal Chemistry

Department of Food Science, University of Massachusetts, Amherst, MA, USA (1996 –
1999)

Research Assistant

Mass Transport Processes in Dispersed Systems Containing Surfactant Micelles

Department of Mechanical Process Engineering, Universität Karlsruhe, Karlsruhe,
Baden-Württemberg, Germany (1994)

Research Assistant, Filtration and Separation Technologies

HONORS AND AWARDS

- AOCS Food Structure Division Co-Chair
- Contributing Editor, Nutrition Review, 2008-2011
- Editorial Board, Journal of Food Science, 2008-2011
- Outstanding Teacher Award 2007, College of Natural Resources and the Environment, University of Massachusetts, Amherst
- Samuel L. Prescott Young Scientist Award, Institute of Food Technology, 2007.
- Associate Editor, Journal of Food Biophysics
- IFT Government Relations Committee Member, 2006-2009.
- IFT Web Communications Executive Committee Member, 2003-2005, Chair-Elect 2005.
- IFT International Division, Member at Large, 2003-2006, Technical Program Representative, 2005-2008, George Stewart International Paper Competition Member 2004-2007.
- Gamma Sigma Delta Honor Society Initiation, 2002.
- Outstanding Faculty Award – Under five year service, 2002, Department of Food Science and Technology, University of Tennessee, awarded by the Student Food Science Club.
- Outstanding Advisor Award – Under five year service, 2002, Department of Food Science and Technology, University of Tennessee, awarded by the Student Food Science Club.
- Outstanding Faculty Award – Under ten year service, 2001, Department of Food Science and Technology, University of Tennessee, awarded by the Student Food Science Club.
- NE Section AOCS Hans Kaunitz Award, 1999.
- General Mills Inc. James Ford Bell Fellowship, 1998 – 1999.
- American Oil Chemists' Society Honored Student Award, 1998.
- NE Section Institute of Food Technologists Graduate Scholarship, 1998.
- University of Massachusetts Graduate School Travel Grant, 1997.
- Institute of Food Technologists Graduate Fellowship, 1997 – 1998.

PROFESSIONAL MEMBERSHIP AND ACTIVITIES

- American Oil Chemists Society (AOCS)
- American Chemical Society (ACS)
- Institute of Food Technologists (IFT), Northeast Section of IFT (NEIFT)
- Society of German Engineers (VDI)
- Gamma Sigma Delta Honor Society

SUMMARY OF RESEARCH ACTIVITIES

Current Focus of Research

A multidisciplinary approach is used to study the *biophysical basis* of the relationship between structure and function of nanoparticulate and colloidal structures, macromolecules and biopolymers in agriculturally relevant biological systems. Special emphasis is given to the investigation of the relationship between biophysics and food microbiology to develop new food preservation and pathogen intervention technologies *e.g.* antimicrobials. A second focus area is the development of processing technologies that are capable of modifying the molecular structure of functional macromolecules (*e.g.* high intensity ultrasound) and to produce ordered structures on the nanoscale level (electrospinning).

Current Projects

- Development of micro- and nanoencapsulation methods for food antimicrobials with applications in foods and biofilms.
- Molecular and biophysical basis of activity of antimicrobials – fundamental mechanistic studies.
- Formation of functional nanofibers from food biopolymers using electrospinning.
- Architectural design of composite colloidal structures for use in foods
- Processing of foods with high-intensity ultrasound.
- Fate of bioactives during processing and storage

Experiment Station Research Project

Production, Characterization and Application of Nanostructured Food Antimicrobials
(USDA Hatch Project MAS-911)

PUBLICATIONS

Book Chapters (11)

1. Weiss J. Unit D 3.4: Emulsion Stability Determination. In: Decker E, editor. Current Protocols in Analytical Food Chemistry. New York: John Wiley & Sons; 2002. p. 3.4.1-3.4.17.
2. Weiss J, McClements DJ. Mass Transport Phenomena in Emulsions Containing Surfactants. In: Somasundaran P, Hubbard A, editors. Encyclopedia of Surface and Colloid Science. New York: Marcel Dekker; 2002. p. 3123-51.
3. Davidson PM, Weiss J. Decimal Reduction Times. In: Heldman DR, editor. Encyclopedia of Agricultural, Food, and Biological Engineering. New York: Marcel Dekker; 2003. p. 165 - 71.
4. Weiss J. Unit D 3.6: Static and Dynamic Surface Tension Measurements. In: Decker E, editor. Current Protocols in Analytical Food Chemistry. New York: John Wiley & Sons; 2003. p. 3.6.1-3.6.16.
5. Weiss J. Unit D 3.5: Key Issues in Interfacial Food Chemistry. In: Decker E, editor. Current Protocols in Analytical Food Chemistry. New York: John Wiley & Sons; 2003. p. 3.5.1-3.5.22.
6. McClements DJ, Weiss J. Lipid Emulsions. In: Shahidi F, editor. Bailey's Industrial Oil and Fat Products. 6th ed. New York: John Wiley Publishers; 2004.

7. Weiss J, Vladisavljevic G. Microencapsulation Systems With Emphasis on Successful Applications in Foods. In: Heldman D, editor. *Encyclopedia of Agricultural, Food, and Biological Engineering*. New York: Marcel Dekker; 2006.
8. Hao H, Weiss J. Food Processing With High-Intensity Ultrasound. In: Heldman D, editor. *Encyclopedia of Agricultural, Food, and Biological Engineering*. New York, NY: Taylor and Francis; 2008. p. in print.
9. Weiss J, Gulseren I, Kjartansson G. Physicochemical Effects of High-Intensity Ultrasonication on Food Proteins and Carbohydrates. In: Zhang HQ, Barbosa-Canovas GV, Balasubramaniam VM, Dunne P, Farkas DF, Yuan JTC, editors. *Handbook of Nonthermal Processing Technologies for Food*. Ames, Iowa: Blackwell Publishers; 2008. p. in print.
10. Weiss J, Kjartansson G, Kristbergsson K. Engineering food ingredients with high-intensity ultrasound. In: Feng H, Weiss J, Barbosa-Canovas GV, editors. *Acoustic Energy in Food and Bioprocessing*. New York: Springer; 2008. p. in print.
11. Weiss J, Gaysinsky S, Davidson PM, McClements DJ. Nanostructured Encapsulation Systems: Food Antimicrobials In: Barbosa-Canovas G, Mortimer A, Lineback D, Spiess W, Buckle K, Colonna P, editors. *Global Issues in Food Science and Technology*. NY: Academic Press; 2009.

Refereed Journal Articles (70)

1. Coupland JN, Weiss J, Lovy A, McClements DJ. Solubilization kinetics of triacyl glycerol and hydrocarbon emulsion droplets in a micellar solution. *Journal of Food Science*. 1996;61:1114-7.
2. Weiss J, Coupland JN, McClements DJ. Solubilization of hydrocarbon emulsion droplets suspended in nonionic surfactant micelle solutions. *Journal of Physical Chemistry*. 1996;100:1066-71.
3. Weiss J, Coupland JN, Brathwaite D, McClements DJ. Influence of molecular structure of hydrocarbon emulsion droplets on their solubilization in nonionic surfactant micelles. *Colloids and Surfaces A*. 1997;121:53-60.
4. Weiss J, Herrmann N, McClements DJ. Ostwald ripening of hydrocarbon emulsions in surfactant solution. *Langmuir*. 1999;15:6652-7.
5. Weiss J, Cancelliere C, McClements DJ. Mass Transport Phenomena in Oil-in-Water Emulsions Containing Surfactant Micelles: Ostwald Ripening. *Langmuir*. 2000;16(17):6833-8.
6. Weiss J, Liao W. Addition of Sugars Influences Color and Appearance of Oil-In-Water Emulsions. *Journal of Agricultural and Food Chemistry*. 2000;48:5053-8.
7. Weiss J, McClements DJ. Influence of Ostwald Ripening on Rheology of Oil-in-Water Emulsions Containing Electrostatically Stabilized Droplets. *Langmuir*. 2000;16(5):2145-50.
8. Weiss J, McClements DJ. Mass Transport Phenomena in Oil-in-Water Emulsions Containing Surfactant Micelles: Solubilization. *Langmuir*. 2000;16(14):5879-83.
9. Weiss J, McClements DJ. Color Changes in Hydrocarbon Oil-in-Water Emulsions Caused by Ostwald Ripening. *Journal of Agricultural and Food Chemistry*. 2001;49:4372-7.

10. Boland JS, Davidson PM, Weiss J. Enhanced Inhibition of Escherichia coli O157:H7 by Lysozyme and Chelators. *Journal of Food Protection*. 2003;66(10):1783-9.
11. Guzey D, McClements DJ, Weiss J. Effects of Sugars on Adsorption Kinetics of BSA. *Food Research International*. 2003;36(7):649-60.
12. Seshadri R, Mount JR, Hulbert G, Weiss J. High-Intensity Ultrasound Influences Optical and Rheological Properties of Pectin Gels. *Food Hydrocolloids*. 2003;17(2):191-7.
13. Boland JS. Cations Reduce Antimicrobial Activity of Lysozyme-Chelator Combinations. *Journal of Food Protection*. 2004;67(2):285-94.
14. Li H, Pordesimo LO, Weiss J. High-Intensity Ultrasound Assisted Extraction of Oil from Soybeans. *Food Research International*. 2004;37:731-8.
15. Li H, Pordesimo LO, Wilhelm LR, Weiss J. Microwave and Ultrasound Assisted Extraction of Soybean Oil. *ASAE Transactions*. 2004;47(7):1187-94.
16. Stanley KD, Golden DA, Williams RC, Weiss J. Inactivation of Escherichia coli O157:H7 by High-Intensity Ultrasonication in the Presence of Salts. *Foodborne Pathogens and Disease*. 2004;1(1):267-73.
17. Thongson C, Davidson PM, Mahakarnchanakul W, Weiss J. Antimicrobial Activity of Ultrasound-Assisted Solvent-Extracted Thai Spices. *Letters in Applied Microbiology*. 2004;39:401-6.
18. Were LM, Bruce BD, Davidson PM, Weiss J. Encapsulation of nisin and lysozyme in liposomes enhances efficacy against *Listeria monocytogenes*. *Journal of Food Protection*. 2004;67(5):922-7.
19. Were LM, Bruce BD, Davidson PM, Weiss J. Size, stability and entrapment efficiency of phospholipid nanocapsules containing polypeptide antimicrobials. *Journal of Agricultural and Food Chemistry*. 2004;51(27):8073-9.
20. Zivanovic S, Basurto CC, Chi S, Davidson PM, Weiss J. Molecular Weight of Chitosan Influences Antimicrobial Activity of Oil-in-Water Emulsions. *Journal of Food Protection*. 2004;67(5):952-9.
21. Baxter SR, Zivanovic S, Weiss J. Molecular Weight and Degree of Acetylation of High-Intensity Ultrasonicated Chitosan. *Food Hydrocolloids*. 2005;19:821-30.
22. Gaysinsky S, Davidson PM, Bruce BD, Weiss J. Growth Inhibition of Escherichia coli O157:H7 and *Listeria monocytogenes* by Carvacrol and Eugenol Encapsulated in Surfactant Micelles. *Journal of Food Protection*. 2005;68(12):2559-66.
23. Gaysinsky S, Davidson PM, Bruce BD, Weiss J. Stability and Antimicrobial Efficiency of Eugenol Encapsulated in Surfactant Micelles as Affected by Temperature and pH. *Journal of Food Protection*. 2005;68(7):1359-66.
24. Mun S, Decker EA, Park Y, Weiss J, McClements DJ. Influence of Interfacial Composition on In Vitro Digestibility of Emulsified Lipids: Potential Mechanism for Chitosan's Ability to Inhibit Fat Adsorption. *Food Biophysics*. 2005;1:21-9.
25. Russell K, Weiss J, Morris WC, Penfield M, Zivanovic S. A Research Note: The Effect of Glass Shape on the Concentration of Polyphenolic Compounds and Perception of Merlot Wine. *Journal of Food Quality*. 2005;28:377-84.

26. Taylor TM, Davidson PM, Bruce BD, Weiss J. Liposomal Nanocapsules in Food Science and Agriculture. *Critical Reviews in Food Science and Technology*. 2005;45:587-605.
27. Taylor TM, Davidson PM, Bruce BD, Weiss J. Ultrasonic Spectroscopy and Differential Scanning Calorimetry of Liposomal Encapsulated Nisin. *Journal of Agricultural and Food Chemistry*. 2005;53:8722-8.
28. Chen H, Weiss J, Shahidi F. Nanotechnology in Nutraceuticals and Functional Foods. *Food Technology*. 2006;03.06:30-6.
29. Güzey D, Gülseren I, Bruce BD, Weiss J. Interfacial Properties and Structural Conformation of Thermo-sonicated Bovine Serum Albumin. *Food Hydrocolloids*. 2006;20:669-77.
30. Kjartansson G, Zivanovic S, Kristbergsson K, Weiss J. Sonication Assisted Extraction of Chitin from North Atlantic Shrimps (*Pandalus borealis*). *Journal of Agricultural and Food Chemistry*. 2006;54(16):5894-902.
31. Kjartansson GT, Zivanovic S, Kristbergsson K, Weiss J. Sonication assisted extraction of chitin from shells of fresh water prawns (*Macrobrachium rosenbergii*). *Journal of Agricultural and Food Chemistry*. 2006;54(9):3317-23.
32. McLandsborough L, Rodriguez A, Perez-Conesa D, Weiss J. Biofilms: At the Interface Between Biophysics and Microbiology. *Food Biophysics*. 2006;2:94-114.
33. Pérez-Conesa D, McLandsborough L, Weiss J. Inhibition and Inactivation of *Listeria monocytogenes* and *Escherichia coli* O157:H7 Colony Biofilms by Micellar-Encapsulated Eugenol and Carvacrol. *Journal of Food Protection*. 2006;69(12):2947-54.
34. Weiss J, Takhistov P, McClements DJ. IFT Status Summary: Nanotechnology – Applications in Food Processing and Product Development. *Journal of Food Science*. 2006;71(9):R107-R16.
35. Wongsasulak S, Yoovidhya T, Bhumiratana S, Honsprabhas P, McClements DJ, Weiss J. Thermo-mechanical properties of egg albumin - cassava starch composite films containing sunflower - oil droplets as influenced by moisture content. *Food Research International*. 2006;39:277-84.
36. Chaiyasit W, McClements DJ, Weiss J, Decker EA. Impact of Surface Active Compounds on Physicochemical and Oxidative Properties of Edible Oil. *Journal of Agricultural and Food Chemistry*. 2007;56:550-6.
37. Gaysinsky S, Taylor TT, Davidson PM, Bruce BD, Weiss J. Antimicrobial efficacy of eugenol microemulsions in milk against *Listeria monocytogenes* and *Escherichia coli* O157:H7. *Journal of Food Protection*. 2007;70:2631-7.
38. Gaysinsky S, Weiss J. Aromatic and Spice Plants: Uses in Food Safety. *Stewart Postharvest Solutions*. 2007;4:9-16.
39. Gülseren I, Güzey D, Bruce BD, Weiss J. Structural and Functional Changes in Ultrasonicated Bovine Serum Albumin. *Ultrasonics Sonochemistry*. 2007;14(2):173-83.
40. Iwanga D, Gray D, Decker EA, Weiss J, McClements DJ. Extraction and Characterization of Oil Bodies from Soy Beans: A Natural Source of Pre-Emulsified Soybean Oil. *Journal of Agricultural and Food Chemistry*. 2007;55(21):8711-6.

41. McClements DJ, Weiss J, Decker EA. Emulsion-Based Delivery Systems for Lipophilic Bioactive Components. *Journal of Food Science*. 2007;72(8):R109-R24.
42. Park GY, Mun S, Park Y, Rhee S, Decker EA, Weiss J, et al. Influence of encapsulation of emulsified lipids with chitosan on their in vivo digestibility. *Food Chemistry*. 2007;104(2):761-7.
43. Santipanichwong R, Suphantharika M, Weiss J, McClements DJ. Adsorption of protein-coated lipid droplets onto gellan gum surfaces. *Food Research International*. 2007;41:237-46.
44. Taylor TM, Gaysinsky S, Davidson PM, Bruce BD, Weiss J. Characterization of Antimicrobial Bearing Liposomes by Zeta-Potential, Vesicle Size and Encapsulation Efficiency. *Food Biophysics*. 2007;2(1):1-9.
45. Taylor TT, Bruce BD, Weiss J, Davidson PM. *Listeria monocytogenes* and *Escherichia coli* O157:H7 Inhibition in vitro by Liposome-Encapsulated Nisin and Ethylene Diamine Tetraacetic Acid. *Journal of Food Safety*. 2007;28(2):183-97.
46. Vargas M, Weiss J, McClements DJ. Adsorption of Protein-Coated Lipid Droplets to the Surfaces of Mixed Biopolymer Hydrogels: Role of Biopolymer Diffusion. *Langmuir* 2007;231:13059-65.
47. Weiss J, McClements J, Takhistov P. Functional Materials in Food Nanotechnology. *Food Australia*. 2007;59(6):274-5.
48. Wongsasulak S, Yoovidhya T, Kit K, McClements DJ, Weiss J. The effect of solution properties on the morphology of ultrafine electrispun egg-albumen-PEO composite fibers. *Polymer*. 2007;48(2):448-57.
49. Yuji H, Weiss J, Villeneuve P, Lopez-Giraldo LJ, Figueroa-Espinoza MC, Decker EA. Ability of surface-active antioxidants to inhibit lipid oxidation in oil-in-water emulsions. *Journal of Agricultural and Food Chemistry*. 2007;55:11052-6.
50. Asker D, Weiss J, McClements DJ. Analysis of the Interactions of a Cationic Surfactant (Lauric Arginate) with an Anionic Biopolymer (Pectin): Isothermal Titration Calorimetry, Light Scattering and Micro-electrophoresis. *Langmuir*. 2008;in print.
51. Awad TS, Helgason T, Decker EA, Weiss J, McClements DJ. Temperature Scanning Ultrasonic Velocity Study of Complex Thermal Transformations in Solid Lipid Nanoparticle. *Langmuir*. 2008;in print.
52. Awad TS, Helgason T, Kristbergsson K, Decker EA, Weiss J, McClements J. Effect of cooling and heating rates on polymorphic transformations and gelation of tripalmitin solid lipid nanoparticle (SLN) suspensions. *Food Biophysics*. 2008;3(2):155-62.
53. Bonnaire L, Sandra S, Helgason T, Decker EA, Weiss J, McClements J. Influence of lipid physical state on the in-vitro digestibility of emulsified lipids. *Journal of Agricultural and Food Chemistry*. 2008;56(10):3791-7.
54. Boon CS, Xu Z, Yue X, McClements J, Weiss J, Decker EA. Factors affecting lycopene oxidation in oil-in-water emulsions. *Journal of Agricultural and Food Chemistry*. 2008;56:1408-14.

55. Gaysinsky S, Davidson PM, McClements DJ, Weiss J. Formulation and Characterization of Phytophenol-Carrying Microemulsions. *Food Biophysics*. 2008;3(1):54-65.
56. Helgason T, Awad TS, Kristbergsson K, McClements J, Weiss J. Influence of polymorphic transitions on gelation of triplamitin solid lipid nanoparticle suspensions. *Journal of the American Oil Chemists Society*. 2008;85(5):501-11.
57. Helgason T, Weiss J, McClements J, Gislason J, Einarsson JM, Thormodsson FR, et al. Examination of the interaction of chitosan and oil-in-water emulsions under conditions simulating the digestive system using confocal microscopy. *Journal of Aquatic Food Product Technology*. 2008;17(3):216-33.
58. Iwanga D, Gray D, Decker EA, Weiss J, McClements J. Stabilization of soybean oil bodies using protective pectin coatings formed by electrostatic deposition. *Journal of Agricultural and Food Chemistry*. 2008;56(6):2240-5.
59. Kriegel C, Arecchi A, Kit K, McClements J, Weiss J. Fabrication, functionalization and application of electrospun biopolymer nanofibers. *Critical Reviews in Food Science and Nutrition*. 2008;48(8):775-97.
60. Kriegel C, Kit K, McClements DJ, Weiss J. Electrospinning of Chitosan – Poly (Ethylene Oxide) Blend Nanofibers in The Presence of Micellar Surfactant Solutions. *Polymer*. 2008;in print.
61. Kriegel C, Kit K, McClements DJ, Weiss J. Influence of Surfactant Type and Concentration on Electrospinning of Chitosan – Poly (ethylene oxide) Blend Nanofibers. *Biomacromolecules*. 2008;submitted.
62. Laye C, McClements J, Weiss J. Formation of biopolymer-coated liposomes by electrostatic deposition of chitosan. *Journal of Food Science*. 2008;73(5):N7-N15.
63. López-Giraldo LJ, Laguerrea M, Lecomte J, Figueroa- Espinoza MC, Baréa B, Weiss J, et al. Stationary and kinetic study of antiradical activity of chlorogenic acid and its alkyl esters by DPPH method. *Journal of Agricultural and Food Chemistry*. 2008;submitted.
64. McClements DJ, Decker EA, Park Y, Weiss J. Designing food structure to control stability, digestion, release and adsorption of lipophilic food components. *Food Biophysics*. 2008;3(2):219-28.
65. Pérez-Conesa D, J. Cao J, Chen L, McLandsborough L, Weiss J. Inactivation of *Listeria monocytogenes* and *Escherichia coli* O157:H7 Biofilms by Micellar-Encapsulated Eugenol and Carvacrol. *Journal of Food Protection*. 2008;submitted.
66. Santipanichwong R, Suphantharika M, Weiss J, McClements DJ. Core-Shell Biopolymer Nanoparticles Produced by Electrostatic Deposition of Beet Pectin onto Heat-Denatured beta-Lactoglobulin Aggregates. *Journal of Food Science*. 2008;73(6):N23-N30.
67. Weiss J. State of Food Nanotechnology in the United States in 2007. *World of Food Science*. 2008;4(Food Nanotechnology):<http://www.worldfoodscience.org/cms/?pid=1004045>.
68. Weiss J, Decker EA, McClements J, Kristbergsson K, Helgason T, Awad TS. Solid lipid nanoparticles as delivery systems for bioactive food components. *Food Biophysics*. 2008;3(2):146-54.

69. Wongsasulak S, Yoovidhya T, Patapeejumruswong M, Supaphol P, Weiss J. Electrospinning of Food-Grade Nanofibers From Cellulose Acetate - Egg Albumen Blends. *Polymer*. 2008;submitted.
70. Wu T, Zivanovic S, Hayes DG, Weiss J. Efficient reduction of chitosan molecular weight by high-intensity ultrasound: Underlying mechanism and effect of processing parameters. *Journal of Agricultural and Food Chemistry*. 2008;56(13):5112-9.

Patents (5)

1. McClements DJ, Decker EA, Weiss J, inventors; Novel procedure for creating nano-laminated edible films and coatings. 2006.
2. McClements DJ, Weiss J, Decker EA, inventors; Production of Reduced Fat Foods Using Gelled Biopolymer Particle Double Emulsions. 2007.
3. McClements DJ, Weiss J, Decker EA, Gray D, inventors; Preparation of novel stabilized oil bodies using absorbed polymeric layers. 2007.
4. Weiss J, McClements DJ, Decker EA, inventors; Stabilized antimicrobial compositions and related Methods of preparation. 2007.
5. Weiss J, McClements DJ, Decker EA, inventors; Novel procedure to stabilize liposomes by electrostatic deposition. 2007.

Thesis Publications (Self)

1. Weiss, J. 1999. Effect of Mass Transport Processes on Physicochemical Properties of Surfactant-Stabilized Emulsions. Ph.D. Dissertation. Department of Food Science, University of Massachusetts, Amherst, USA.
2. Weiss, J. 1996. Comparison of Different Measurement Techniques to Study Adsorption Kinetics of Surfactants at Liquid/Liquid and Liquid/Gas Interfaces. M.S. Thesis, Department of Food Process Engineering, Universität Karlsruhe, Karlsruhe, Germany.
3. Weiss, J. 1993. Design of a Measurement Setup Including Software to Determine the Washing Efficiency of Filter Cakes. B.S. Thesis, Department of Mechanical Process Engineering, Universität Karlsruhe, Karlsruhe, Germany.

Unrefereed Articles (2)

1. Weiss, J. & S. Zivanovic (2005). Chitosan: A Novel Value Added Product From FWP Shells. *USFPSGA Newsletter*. 4: 1-2.
2. Weiss, J. (2004). Antimicrobials in Global Food Trading. *IFT International Division Newsletter*. 73: 7-8.

ORAL PRESENTATIONS AND ABSTRACTS

Papers Presented With Abstracts (143)

1. Coupland JN, Weiss J, McClements DJ, editors. Effect of molecular structure on the release of oil from emulsion droplets into surfactant micelles. Annual Meeting of the Institute of Food Technologists; 1996 July; New Orleans, LA.
2. Weiss J, McClements DJ, editors. Influence of molecular structure on the solubilization kinetics in O/W emulsions. 10th Eastern Food Science Conference; 1997 November; Newport, RI.

3. Weiss J, Herrmann N, McClements DJ, editors. Ultrasonic attenuation spectroscopy study of Ostwald ripening of oil droplets in emulsions. Annual Meeting of the Institute of Food Technologists; 1998 June; Atlanta, GA.
4. Weiss J, McClements DJ, editors. Influence of molecular structure of nonionic micelles on the solubilization kinetics of O/W emulsions. Annual Meeting of the American Oil Chemist' Society; 1998; Chicago, IL.
5. Weiss J, Cancelliere C, McClements DJ, editors. Adverse effects of surfactants on the stability of emulsions. Annual Meeting of the Institute of Food Technologists; 1999 July; Chicago, IL.
6. Weiss J, McClements DJ, editors. Effect of aging on rheology of food emulsions. Annual Meeting of the Institute of Food Technologists; 1999 July; Chicago, IL.
7. Weiss J, McClements DJ, editors. Influence of nonionic surfactants on molecular mass transport mechanisms. Annual Meeting of the American Oil Chemists' Society; 1999 May; Orlando, FL.
8. Seshadri R, Hulbert G, Mount JR, Weiss J, editors. Modification of physicochemical properties of pectin using power ultrasound. 5th International Food Hydrocolloids Conference; 2000 September; Raleigh, NC.
9. Seshadri R, Hulbert G, Mount JR, Weiss J, editors. Effect of ultrasonic processing on physicochemical properties of pectin. Annual Meeting of the Southern Regional Sections of IFT; 2000; Lexington, KY.
10. Weiss J, editor. Modification of physicochemical properties of food hydrocolloids using high-intensity ultrasound. 5th International Food Hydrocolloids Conference; 2000 September; Raleigh, NC.
11. Weiss J, Farriols G, Liao W, editors. Rheological study of fermentation of ultrasonically-homogenized whey-protein-emulsions. 5th International Food Hydrocolloids Conference; 2000 September; Raleigh, NC.
12. Weiss J, Liao W, editors. Influence of concentration and molecular structure of sugars on the color of emulsions. Annual Meeting of the Institute of Food Technologists; 2000 June; Dallas, TX.
13. Weiss J, Liao W, editors. Rheological evaluation of emulsion fermentation: influence of droplet size and concentration. Annual Meeting of the Institute of Food Technologists; 2000 June; Dallas, TX.
14. Weiss J, McClements DJ, editors. Enhancing the stability of emulsions by adding salts. Annual Meeting of the Institute of Food Technologists; 2000 June; Dallas, TX.
15. Weiss J, Zhao L, editors. Temperature dependent effect of sugar type and concentration on the appearance and color of O/W emulsions. Annual Meeting of the Southern Regional Sections of IFT; 2000 January; Lexington, KY.
16. Beckett C, Davidson PM, Weiss J, editors. Comparison of surface activeity of antimicrobials and their activity against strains of *Listeria monocytogenes*. Annual Meeting of the Institute of Food Technologists; 2001 June; New Orleans.
17. Guzey D, Weiss J, editors. High-intensity ultrasonic processing improves emulsifying properties of proteins. Annual Meeting of the Institute of Food Technologists; 2001 June; New Orleans, LA.

18. Guzey D, Weiss J, McClements DJ, editors. Addition of sugars influences emulsifying properties of proteins. Annual Meeting of the Institute of Food Technologists; 2001 June; New Orleans, LA.
19. Sams T, Weiss J, editors. Effect of temperature on the stability of oil-in-water emulsions. Annual Meeting of the Institute of Food Technologists; 2001 June; New Orleans, LA.
20. Seshadri R, Weiss J, Hulbert G, Mount JR, editors. Influence of holding temperature and temperature cycling on the gelation kinetics and gel strength of pectins. Annual Meeting of the Institute of Food Technologists; 2001 June; New Orleans, LA.
21. Seshadri R, Weiss J, Hulbert G, Mount JR, editors. Rheological mapping of calcium and pH induced gelation of high-methoxyl pectin gels. Annual Meeting of the Institute of Food Technologists; 2001 June; New Orleans, LA.
22. Ueberall M, Weiss J, Penfield MP, Kunz B, editors. Influence of volume fraction and droplet size distribution of food emulsions on their sensory perception. Annual Meeting of the Institute of Food Technologists; 2001 June; New Orleans, LA.
23. Weiss J, Guzey D, editors. Modifying Interfacial and Colloidal Properties of Proteins Using Thermosonication. Annual Meeting of the American Chemical Society; 2001 August; Chicago, IL.
24. Boland JS, Beckett C, Davidson PM, Weiss J, editors. Altering antimicrobial efficiency of lysozyme against *Listeria monocytogenes* using high-intensity ultrasound. Annual Meeting of the Institute of Food Technologists; 2002 June; Anaheim, CA.
25. Boland JS, Davidson PM, Weiss J, editors. Enhanced Inhibition of *E. coli* O157:H7 by Lysozyme and Chelators. Annual Meeting of the Institute of Food Technologists; 2002 June 2002; Anaheim, CA.
26. Guzey D, Bruce BD, Weiss J, editors. Susceptibility of Various Food Proteins to Ultrasound-induced Physicochemical Changes. Annual Meeting of the American Oil Chemist' Society; 2002 May; Montreal, Canada.
27. Guzey D, Bruce BD, Weiss J, editors. Modeling of the Adsorption Kinetics of Ultrasonically-Treated Bovine Serum Albumin. Annual Meeting of the Institute of Food Technologists; 2002 June; Anaheim, CA.
28. Li H, Pordesimo L, Weiss J, editors. Ultrasound-assisted extraction of oil from soybeans. Annual Meeting of the Institute of Food Technologists; 2002 June; Anaheim, CA.
29. Russell K, Weiss J, Morris WC, Zivanovic S, editors. Effect of glass shape on the concentration of polyphenolic compounds in Merlot wine. 224th National Meeting of the American Chemical Society; 2002 August; Boston, MA.
30. Russell K, Weiss J, Zivanovic S, Morris WC, editors. Effect of Glass Shape and Storage Temperature on the Concentration of Polyphenolic Compounds in Merlot. Annual Meeting of the Institute of Food Technologists; 2002 June; Anaheim, CA.
31. Russell K, Weiss J, Zivanovic S, Mount JR, Morris WC, editors. Effect of Glass Shape and Storage Temperature on the Concentration of Polyphenolic

- Compounds in Merlot. Undergraduate Research Competition University of Tennessee; 2002 March; Knoxville, TN.
32. Seshadri R, Marsch S, Spencer S, Weiss J, editors. Evidence of Accelerated Lipid Oxidation Caused by High-Intensity Ultrasound. Annual Meeting of the Institute of Food Technologists; 2002 June; Anaheim, CA.
 33. Seshadri R, Zivanovic S, Weiss J, editors. Effect of molecular weight and acid solvent on the thermo-mechanical properties of solution-cast chitosan films. 6th International Food Hydrocolloids Conference; 2002 July; Guelph, Canada.
 34. Seshadri R, Zivanovic S, Weiss J, editors. Effect of acid solvent on the glass transition of solution-casted chitosan films. Southern Regional Meeting of the Society of Plastic Engineers; 2002 November; Knoxville, TN.
 35. Basurto CC, Zivanovic S, Davidson PM, Chi S, Weiss J, editors. Molecular weight and concentration influences antimicrobial activity of chitosan in oil-in-water emulsions. Annual Meeting of the Institute of Food Technologists; 2003 July; Chicago, IL.
 36. Boland JS, Davidson PM, Weiss J, editors. Antimicrobial effectiveness of sodium hexametaphosphate with lysozyme against *Escherichia coli* O157:H7. Annual Meeting of the Institute of Food Technologists; 2003 July; Chicago, IL.
 37. Chi S, Zivanovic S, Davidson PM, Basurto CC, Weiss J, editors. Influence of molecular weight and concentration on chitosan physicochemical stability of O/W emulsions. Annual Meeting of the Institute of Food Technologists; 2003 July; Chicago, IL.
 38. Chi S, Zivanovic S, Weiss J, Draughon FA, editors. Antimicrobial properties of chitosan films enriched with essential oils. Annual Meeting of the Institute of Food Technologists; 2003; Chicago, IL.
 39. Gaysinsky S, Davidson PM, Weiss J, editors. Production and characterization of emulsifier-based nanoparticles to encapsulate phytophenol antimicrobials. Annual Meeting of the Institute of Food Technologists; 2003 July; Chicago, IL.
 40. Gaysinsky S, Davidson PM, Weiss J, editors. Antimicrobial efficiency of eugenol and carvacrol encapsulated in emulsifier-based nanoparticles. Annual Meeting of the Institute of Food Technologists; 2003; Chicago, IL.
 41. Lang D, Weiss J, editors. Design of a novel lab-scale mano-thermo-sonication reactor to process foods. Annual Meeting of the Institute of Food Technologists; 2003 July; Chicago, IL.
 42. Li H, Pordesimo L, Weiss J, editors. Impact of solvent choice on microwave-assisted extraction of soybean oil. Annual Meeting of the Institute of Food Technologists; 2003 July; Chicago, IL.
 43. Moreno V, Mount JR, Zivanovic S, Weiss J, editors. Protein additives to modify texture of retorted egg products. Annual Meeting of the Institute of Food Technologists; 2003 July; Chicago, IL.
 44. Stanley KD, Golden DA, Weiss J, editors. Effect of Ultrasonication and Sodium Chloride Concentration on Inactivation of *Escherichia coli* O157:H7 and *Listeria monocytogenes*. Annual Meeting of the International Association of Food Protection; 2003 August 7-11; New Orleans, LA.

45. Were LM, Davidson PM, Bruce BD, Weiss J, editors. Stability and antimicrobial activity of liposomal nanocapsules containing nisin and lysozyme. Annual Meeting of the Institute of Food Technologists; 2003 July; Chicago, IL.
46. Baxter SR, Zivanovic S, Mount JR, Weiss J, editors. Molecular weight and degree of acetylation of ultrasonicated chitosan. Annual Meeting of the Institute of Food Technologists; 2004 July 12-16; Las Vegas, NV.
47. Carnahan D, Davidson PM, Bruce BD, Weiss J, editors. Preparation of Polylactic Acid Nanoparticles and Their Effect on Growth of *Listeria monocytogenes*. Annual Meeting of the International Association of Food Protection; 2004 August 16-20.
48. Chi S, Zivanovic S, Weiss J, Draughon FA, editors. Physicochemical properties of chitosan films enriched with oregano essential oils. Annual Meeting of the Institute of Food Technologists; 2004 July 12-16; Las Vegas, NV.
49. Gaysinksy S, Davidson PM, Bruce BD, Weiss J, editors. Properties, Stability and efficacy of Lipophilic Antimicrobial-Containing Surfactant Micelles. Annual Meeting of the American Oil Chemist' Society; 2004 May 15-19; Cincinnati, OH.
50. Gaysinksy S, Davidson PM, Bruce BD, Weiss J, editors. Antimicrobial efficiency of an encapsulated phyophenol in emulsifier-based nanoparticles at selected pH and temperature. Annual Meeting of the Institute of Food Technologists; 2004 July 12-16; Las Vegas, NV.
51. Gaysinksy S, Davidson PM, Bruce BD, Weiss J, editors. Temperature and pH stability of phytophenol antimicrobials encapsulated in emulsifier micelles. Annual Meeting of the Institute of Food Technologists; 2004 July 12-16; Las Vegas, NV.
52. Gulseren I, Bruce BD, Zivanovic S, Weiss J, editors. High-Intensity Ultrasound Induced Changes in Protein Structure Function relationship. Annual Meeting of the American Oil Chemist' Society; 2004 May 15-19; Cincinnati, OH.
53. Gulseren I, Bruce BD, Zivanovic S, Weiss J, editors. High-intensity ultrasound mediated modifications of BSA adsorption kinetics at different solution pH. Annual Meeting of the Institute of Food Technologists; 2004 July 12-16; Las Vegas, NV.
54. Hagh Nazari S, Entezari M, Hadduk Khodaparast M, Zadeh R, Weiss J, editors. The effect of power direct ultrasound on microbial count of date syrup. 5th World Congress Foodborne Infections and Intoxications; 2004 June 7-11; Berlin, Germany.
55. Jarrard M, Morris WC, Weiss J, editors. Development of a quartz crystal microbalance system (QCM) for detection and quantification of real-time volatile compound production in the headspace of wine glasses. Annual Meeting of the Institute of Food Technologists; 2004 July 12-16; Las Vegas, NV.
56. Kjartansson GT, Kristbergsson K, Zivanovic S, Weiss J, editors. Ultrasound-aided chitin extraction from freshwater Tennessee prawn shells. Annual Meeting of the Institute of Food Technologists; 2004 July 12-16; Las Vegas, NV.
57. Perry III H, Zivanovic S, Mount JR, Penfield MP, Weiss J, editors. Ingredient optimization to improve texture and color of retorted egg products. Annual Meeting of the Institute of Food Technologists; 2004 July 12-16; Las Vegas, NV.

58. Sams T, Rodriguez J, Zivanovic S, Kit K, Weiss J, editors. Production of antimicrobial electrospun PEO-chitosan fibers. Annual Meeting of the Institute of Food Technologists; 2004 July 12-16; Las Vegas, NV.
59. Stanley KD, Golden DA, Weiss J, editors. High-intensity ultrasound-induced inactivation of *Escherichia coli* O157:H7 in the presence of salts. Annual Meeting of the Institute of Food Technologists; 2004 July 12-16; Las Vegas, NV.
60. Taylor TM, Davidson PM, Bruce BD, Weiss J, editors. Stability of liposomal encapsulated antimicrobials as a function of pH, temperature and phospholipid composition. Annual Meeting of the Institute of Food Technologists; 2004 July 12-16; Las Vegas, NV.
61. Thongson C, Davidson PM, Mahakarnchanakul W, Weiss J, editors. Antimicrobial activity of ultrasound-assisted solvent-extracted Thai spices. Annual Meeting of the Institute of Food Technologists; 2004 July 12-16; Las Vegas, NV.
62. Carnahan D, Davidson PM, Bruce B, Weiss J, editors. Preparation and antimicrobial activity of nisin and lysozyme bound to silver nanoparticles. Institute of Food Technologists Annual Meeting; 2005 July 16-20; New Orleans, LA.
63. Gaysinsky S, Davidson PM, Bruce B, Weiss J, editors. Structural characterizations of encapsulated phytophenols in surfactant based-nanoparticles by 1D proton NMR and dynamic light scattering. Institute of Food Technologists Annual Meeting; 2005 July 16-20; New Orleans, LA.
64. Gaysinsky S, Davidson PM, Bruce B, Weiss J, editors. Antimicrobial effect of Eugenol encapsulates in surfactant micelles in milk against *Listeria monocytogenes* and *Escherichia coli* O157:H7. Institute of Food Technologists Annual Meeting; 2005 July 16-20; New Orleans, LA.
65. Kjartansson GT, Kristbergsson K, Zivanovic S, Weiss J, editors. Determination and characterization of chemical and morphological changes in ultrasonically extracted chitin from crustacean waste. Institute of Food Technologists Annual Meeting; 2005 July 16-20; New Orleans, LA.
66. Kristbergsson K, Helgason T, Gislason J, Einarsson JM, McClements DJ, Weiss J, editors. Effect of chitosan on the formation and binding of oil emulsion droplets from corn-, olive- and cod liver oils in an in vitro simulation of the digestive tract. Institute of Food Technologists Annual Meeting; 2005 July 16-20; New Orleans, LA.
67. Taylor TM, Davidson PM, Bruce B, Weiss J, editors. Ultrasonic spectroscopy and differential scanning calorimetric analyses of phase transitions of phosphatidylcholine vesicles. Institute of Food Technologists Annual Meeting; 2005 July 16-20; New Orleans, LA.
68. Taylor TM, Davidson PM, Bruce BD, Weiss J, editors. Effect of Surfactants on Antimicrobial Activity of Nisin Against Bacterial Pathogens. Annual Meeting of the International Association of Food Protection; 2005 August 14-18; Baltimore, M.D.
69. Weiss J, editor. Delivery of Food Antimicrobials in Micellar Surfactant Systems. 79th American Chemical Society Colloids and Surface Science Symposium; 2005 June 12-15; Potsdam, NY.

70. Weiss J, editor. Interaction of food biopolymers with high-intensity ultrasound. Institute of Food Technologists Annual Meeting; 2005 July 16-20; New Orleans, LA.
71. Weiss J, editor. Nanotechnological Approaches to Food Antimicrobial Delivery and Beyond. WorldNutra 2005; 2005; Anaheim, CA.
72. Wongsasulak S, Yoovidhya T, Bhumiratana S, Hongprabhas P, McClements DJ, Weiss J, editors. Thermo-mechanical properties of egg albumen-cassava starch film containing sunflower oil. Institute of Food Technologists Annual Meeting; 2005 July 16-20; New Orleans, LA.
73. Wu T, Zivanovic S, Baxter SR, Weiss J, editors. Molecular weight and conformation analysis of chitosan molecules treated by high intensity ultrasound. Institute of Food Technologists Annual Meeting; 2005 July 16-20; New Orleans, LA.
74. Gaysinsky S, Davidson PM, Weiss J, editors. Antimicrobial Activity of Lauric Arginate and Benzoic Acid against *Listeria monocytogenes* and *Escherichia coli* O157:H72006.
75. Gaysinsky S, McClements DJ, Weiss J, editors. Emulsions as antimicrobial delivery systems: Influence of essential oil concentration on emulsion stability. Annual Meeting of the Institute of Food Technologists; 2006; Orlando, FL.
76. Helgason T, McClements DJ, Kristbergsson K, Weiss J, editors. Chitosan as a fat reducer: Influence of molecular weight of chitosan on emulsion droplet complexation in an in vitro digestion model. Annual Meeting of the Institute of Food Technologists; 2006; Orlando, FL.
77. Helgason T, Weiss J, McClements DJ, Gislason J, Einarsson JM, Kristbergsson K, editors. Effects of physico-chemical characteristics of chitosan on its binding to corn oil-in-water emulsion droplets in an in vitro simulation of the digestive tract. IUFOST Iceland - Natural Science Symposia 2006; 2006; Reykjavik, Iceland.
78. Kjartansson GT, Kristbergsson K, Zivanovic S, Weiss J, editors. Deacetylation of crustacean chitin with high intensity ultrasound. Annual Meeting of the Institute of Food Technologists; 2006; Orlando, FL.
79. Kjartansson GT, Kristbergsson K, Zivanovic S, Weiss J, editors. Determination, characterization and comparison of chemical and morphological changes in ultrasonically extracted chitin from the shells of fresh water prawns (*M. rosenbergii*) and North Atlantic shrimp (*P. borealis*). IUFOST Iceland - Natural Science Symposium 2006; 2006; Reykjavik, Iceland.
80. Perez-Conesa D, McLandsborough LA, Weiss J, editors. Effect of Antimicrobials Eugenol and Carvacrol Encapsulated in Surfactant Micelles on *Listeria monocytogenes* and *Escherichia coli* O157:H7 Colony Biofilm Growth. Annual Meeting of the International Association of Food Protection; 2006; Calgary, Canada.
81. Perez-Conesa D, McLandsborough LA, Weiss J, editors. Susceptibility of CDC reactor grown *Listeria monocytogenes* and *Escherichia coli* O157:H7 biofilms to eugenol and carvacrol encapsulated in surfactant micelles. Annual Meeting of the International Association of Food Protection; 2006; Calgary, Canada.

82. Scheidig C, Weiss J, editors. Complex Coacervation May Reduce Antimicrobial Activity of Chitosan. Annual Meeting of the International Association of Food Protection; 2006; Calgary, Canada.
83. Taylor TM, Davidson PM, Bruce BD, Gaysinsky S, Weiss J, editors. Characterization of antimicrobial-bearing liposomes by zeta-potential, vesicle size, and encapsulation efficiency. Annual Meeting of the Institute of Food Technologists; 2006; Orlando, FL.
84. Taylor TM, Davidson PM, Bruce BD, Weiss J, editors. Inhibition of *Listeria monocytogenes* by liposome-encapsulated nisin in skim, lowfat, and whole milk. Annual Meeting of the Institute of Food Technologists; 2006; Orlando, FL.
85. Taylor TM, Davidson PM, Bruce BD, Weiss J, editors. Enhanced *Listeria monocytogenes* and *Escherichia coli* O157:H7 in vitro inhibition by liposome-encapsulated antimicrobial and chelator. Annual Meeting of the Institute of Food Technologists; 2006; Orlando, FL.
86. Weiss J, editor. Physicochemical Effect of High-Intensity Ultrasonication on Food proteins and Carbohydrates. 231st American Chemical Society National Meeting; 2006; Atlanta, GA.
87. Weiss J, editor. Advances in nanostructured design of encapsulation systems for use in foods. Annual Meeting of the Institute of Food Technologists; 2006; Orlando, FL.
88. Weiss J, editor. Panel speaker- point counterpoint: Where science meets funding. Annual Meeting of the Institute of Food Technologists; 2006; Orlando, FL.
89. Weiss J, Kit K, Zivanovic S, Davidson PM, editors. Challenges and Progress in the Production of Electrospun Biopolymer Nanofibers. 231st American Chemical Society National Meeting; 2006; Atlanta, GA.
90. Weiss J, Rosales D, Gaysinsky S, editors. Formation of Mixed Micelles Improves Antimicrobial Activity of Lauric Arginate against *Listeria monocytogenes* and *Escherichia coli* O157:H7 at Elevated pH Annual Meeting of the International Association of Food Protection; 2006; Calgary, Canada.
91. Weiss J, Rosales D, McClements DJ, editors. Improving pH and salt stability of lauric arginate (Mirenat®-N) for food applications. Annual Meeting of the Institute of Food Technologists; 2006; Orlando, FL.
92. Wongsasulak S, McClements DJ, Kit K, Weiss J, editors. Effect of Mw and Composition on Morphology of Chitosan-PEO Composite Electrospun Fibers. 231st American Chemical Society National Meeting; 2006; Atlanta, GA.
93. Wongsasulak S, McClements DJ, Kit K, Weiss J, editors. Influence of Solution Properties on Electrospun Egg Albumen-PEO Composite Nanofibers. 231st American Chemical Society National Meeting; 2006; Atlanta, GA.
94. Awad TS, Helgason T, Kristbergsson K, Decker EA, Weiss J, McClements DJ, editors. Effects of cooling and heating rates on polymorphic transformations inducing gelation of solid lipid nanoparticles (SLN) of tripalmitin. Delivery of Functionality in Complex Food Systems: Physically Inspired Approaches from Nanoscale to Microscale; 2007 October 10th; University of Massachusetts, Amherst, MA.

95. Gaysinsky S, Davidson PM, Weiss J, editors. Mixed micelles as food antimicrobial delivery systems. Annual Meeting of the Institute of Food Technologists; 2007 July 31st; Chicago, IL.
96. Gaysinsky S, Davidson PM, Weiss J, editors. Emulsions and Microemulsions as Antimicrobial Delivery Systems. American Oil Chemists' Society Annual Meeting; 2007 May 13-16th; Quebec City, Canada.
97. Gaysinsky S, Davidson PM, Weiss J, editors. Emulsions and Microemulsions as Antimicrobial Delivery Systems. Annual Meeting of the American Oil Chemist' Society; 2007; Quebec City, Canada.
98. Helgason T, editor. Delivering Carotenoids Using Solid Lipid Nanoparticles. Annual Meeting of the American Oil Chemist' Society; 2007; Quebec City, Canada.
99. Helgason T, Awad TS, Kristbergsson K, Decker EA, Weiss J, McClements DJ, editors. Evidence of polymorphic transitions induced gelation of tripalmitin solid lipid nanoparticles (SLN). Delivery of Functionality in Complex Food Systems: Physically-Inspired Approaches from Nanoscale to Microscale; 2007 October 9th; University of Massachusetts, MA.
100. Helgason T, Gislason J, McClements DJ, Kristbergsson K, Weiss J, editors. Bioavailability of dietary fat in the presence of chitosan using a model digestion system. Annual Meeting of the Institute of Food Technologists; 2007 July 31st; Chicago, IL.
101. Helgason T, McClements DJ, Decker EA, Kristbergsson K, editors. Delivering Bioactive Materials Using Solid-Lipid Nanoparticles. TUFTS Nutritional Regional Research Conference; 2007; Boston, MA.
102. Helgason T, McClements DJ, Decker EA, Kristbergsson K, Weiss J, editors. Bioactive materials delivery with solid-lipid nanoparticles. American Oil Chemists Society Annual Meeting; 2007 May 13-16th; Quebec City, Canada.
103. Kjartansson G, Kristbergsson K, Zivanovic S, Weiss J, editors. Comparison of short term and long term high intensity ultrasonication to improve efficiency of chitin to chitosan conversion. Annual Meeting of the Institute of Food Technologists; 2007 July 30th; Chicago, IL.
104. Koch J, Scheidig C, Schuchmann H, Weiss J, editors. Preparation of spray-dried and freeze-dried liposomes. Annual Meeting of the Institute of Food Technologists; 2007 July 30th; Chicago, IL.
105. Lopez-Giraldo LJ, Laguerre M, Lecomte J, Figuera-Espinoza MC, Weiss J, Decker EA, et al., editors. Free radical scavenging capacity of chlorogenated esters: A qualitative structure-activity relationship study. 5th EuroFed Lipid Congress and 24th Nordic Lipid Symposium on Oils, Fats and Lipids; 2007 Sept. 16th; Geotheburg, Sweden.
106. Prachai P, Weiss J, editors. Improving food quality and safety with lauric arginate: A comparison of results of microbiological model systems and food validation studies. Annual Meeting of the Institute of Food Technologists; 2007 July 30th; Chicago, IL.
107. Prachai P, Weiss J, editors. Inhibitory activity of lauric arginate (LAE) against *Listeria monocytogenes* and *Vibrio parahaemolyticus* in seafood. Annual Meeting of the Institute of Food Technologists; 2007 July 31st; Chicago, IL.

108. Rojanasasithara T, Davidson PM, Decker EA, Weiss J, editors. Influence of lipid oxidation of selected phytophenols on their antimicrobial activity. Annual Meeting of the Institute of Food Technologists; 2007 July 30th; Chicago, IL.
109. Rojanasasithara T, Davidson PM, Decker EA, Weiss J, editors. Antimicrobial activity of solvent-fractionated cranberry presscake powders. Annual Meeting of the Institute of Food Technologists; 2007 July 31st; Chicago, IL.
110. Rojanasasithara T, Davidson PM, Decker EA, Weiss J, editors. Oxidative stability and antimicrobial activity of selected phytophenols. American Oil Chemists Society Annual Meeting; 2007 May 13-16th; Quebec City, Canada.
111. Weiss J, Helgason T, Awad TS, McClements DJ, editors. Solid Lipid Nanoparticles as Delivery Systems for Bioactive Food Components. Delivery of Functionality in Complex Food Systems: Physically Inspired Approaches From Nanoscale to Microscale; 2007 October 9th; University of Massachusetts, Amherst, MA, USA.
112. Wu T, Zivanovic S, Weiss J, editors. Depolymerization kinetics of chitosan by ultrasound: Effect of acoustic parameters and solution properties. Annual Meeting of the Institute of Food Technologists; 2007 July 30th; Chicago, IL.
113. Arecchi A, Weiss J, Mannino S, editors. Emulsion electrospinning: An innovative encapsulation technique for food technology applications. Annual Meeting of the Institute of Food Technologists; 2008 July 1st; New Orleans, LA.
114. Asker D, McClements DJ, Weiss J, editors. Coating of mixed lauric arginate: Tween 20 micelles with oppositely charged food biopolymers. Annual Meeting of the Institute of Food Technologists; 2008 July 1st; New Orleans, LA.
115. Asker D, McClements DJ, Weiss J, editors. Formation and stabilization of coated mixed lauric arginate – Tween 20 micelles with oppositely-charged food biopolymers. 17th International Conference on Surfactants in Solution; 2008 August 21st; Berlin, Germany.
116. Asker D, McClements DJ, Weiss J, editors. Impact of electrostatic interactions on formation and stability of antimicrobial mixed micelles in the presence of gelatin. 17th International Conference on Surfactants in Solution; 2008 August 21st; Berlin, Germany.
117. Awad TS, Helgason T, Kristbergsson K, Decker EA, Weiss J, McClements DJ, editors. Effect of surfactant type on gelation of solid lipid nanoparticle (SLN) suspensions of tripalmitin. Annual Meeting of the Institute of Food Technologists; 2008 July 1st; New Orleans, LA.
118. Awad TS, Helgason T, Kristbergsson K, Decker EA, Weiss J, McClements DJ, editors. Effect of Omega-3 Fatty Acids on Polymorphic Transformations of Tripalmitin Solid Lipid Nanoparticle (SLN) Suspensions. 17th International Conference on Surfactants in Solution,; 2008 August 21st; Berlin, Germany.
119. Awad TS, Helgason T, Kristbergsson K, Weiss J, Decker EA, McClements DJ, editors. Physical and Chemical Stability of Encapsulated Solid Lipid Nanoparticles American Oil Chemists Society Annual Meeting; 2008 May 19th; Seattle, WA.
120. Cao J, Chen L, Perez-Conesa D, McLandsborough L, Weiss J, editors. Antimicrobial effects of micellar-encapsulated eugenol on Escherichia coli

- O157:H7 and *Listeria monocytogenes* biofilms. Annual Meeting of the Institute of Food Technologists; 2008 June 30th; New Orleans, LA.
121. Chen L, McLandsborough L, Weiss J, editors. Evaluation of fluorescent stains for detection of *Escherichia coli* and *Listeria monocytogenes* viability by confocal microscopy and fluorescence spectroscopy. Annual Meeting of the Institute of Food Technologists; 2008 July 1st; New Orleans, LA.
 122. Dai Y, Peleg M, Weiss J, editors. Yeast inhibition by triple combinations of lauric arginate, cinnamic acid and sodium benzoate or potassium sorbate. Annual Meeting of the Institute of Food Technologist; 2008 June 30th; New Orleans, LA.
 123. Dai Y, Peleg M, Weiss J, editors. Modeling of the Activity of Triple Combinations of Antimicrobials Using Lauric Arginate, Cinnamic Acid, and Sodium Benzoate or Potassium Sorbate as a Case Study. International Association of Food Protection Annual Meeting; 2008 August; Columbus, OH.
 124. Dai Y, Weiss J, editors. Antimicrobial activity of combinations of saponin and potassium sorbate against spoilage yeasts. Annual Meeting of the Institute of Food Technologists; 2008 June 30th; New Orleans, LA.
 125. Decker EA, Waraho T, Let MB, Weiss J, McClements DJ, editors. Role of Association Colloids on Lipid Oxidation in Bulk Oils. 6th EuroFed Lipid; 2008 September 10th; Athens, Greece.
 126. Edris A, Decker EA, Weiss J, editors. Manufacturing, characterization and stability of citral-loaded liposomes by a novel compounding method. Annual Meeting of the Institute of Food Technologists; 2008 July 31st; New Orleans, LA.
 127. Helgason T, Awad TS, Kristbergsson K, Decker EA, McClements DJ, Weiss J, editors. Effect of lipid composition physical stability of solid lipid nanoparticles. Annual Meeting of the Institute of Food Technologists; 2008 June 29th; New Orleans, LA.
 128. Helgason T, Awad TS, Kristbergsson K, McClements DJ, Weiss J, editors. Investigation of Shape Change and Stability of Solid Lipid Nanoparticles (SLN) after Crystallization by Post-Processing Adsorption of Surfactant. 17th International Conference on Surfactants in Solution; 2008 August 21st; Berlin, Germany.
 129. Helgason T, Kristbergsson K, Awad TS, McClements DJ, Decker EA, Weiss J, editors. Polymorphic transition in solid lipid nanoparticles (SLN) and its influence on suspension stability. American Oil Chemists' Society Annual Meeting; 2008 May 18th; Seattle, WA.
 130. Kjartansson G, Kristbergsson K, Zivanovic S, Weiss J, editors. FTIR spectroscopy to determine the degree of deacetylation of chitin and chitosan. Annual Meeting of the Institute of Food Technologists; 2008 June 30th; New Orleans, LA.
 131. Kjartansson G, Kristbergsson K, Zivanovic S, Weiss J, editors. Influence of high-intensity ultrasound to accelerate the conversion of chitin to chitosan. Annual Meeting of the Institute of Food Technologists; 2008 June 30th; New Orleans, LA.
 132. Kjartansson G, Kristbergsson K, Zivanovic S, Weiss J, editors. Influence of temperature during deacetylation of chitin to chitosan with high-intensity

- ultrasound as a pre-treatment. Annual Meeting of the Institute of Food Technologists; 2008 June 30th; New Orleans, LA.
133. Kjartansson G, Wu T, Zivanovic S, Weiss J, editors. Sonochemically-Assisted Conversion of Chitin to Chitosan. USDA National Research Initiative Principal Investigators Meeting; 2008 June 28th; New Orleans, LA.
 134. Kriegel C, Kit K, Weiss J, editors. Surfactant type influences the electrospinning of chitosan and chitosan-poly (ethylene oxide) blend nanofibers. Annual Meeting of the Institute of Food Technologists; 2008 June 29th; New Orleans, LA.
 135. Kriegel C, Weiss J, editors. Surfactants Influence Electrospinning of Chitosan – PEO Blend Composite Nanofibers. American Oil Chemists' Society Annual Meeting; 2008 May 20th; Seattle, WA.
 136. Laye C, McClements DJ, Weiss J, editors. Manufacturing, characterization and stability of electrostatically coated liposomes. Annual Meeting of the Institute of Food Technologists; 2008 July 1st; New Orleans, LA.
 137. Rojanasasithara T, Davidson PM, Decker EA, Weiss J, editors. Lipid Oxidation and Antimicrobial Activity of Polyphenols. American Oil Chemists Society Annual Meeting; 2008 May 19th; Seattle, WA.
 138. Rojanasasithara T, Davidson PM, Decker EA, Weiss J, editors. Antimicrobial and radical-scavenging activities of column-fractionated methanol crude extracts from cranberries. Annual Meeting of the Institute of Food Technologists; 2008 July 1st; New Orleans, LA.
 139. Suriyarak S, Gaysinsky S, McClements DJ, Davidson PM, Weiss J, editors. Emulsions as antimicrobial delivery systems: Emulsion stability and antimicrobial activity. Annual Meeting of the Institute of Food Technologists; 2008 July 1st; New Orleans, LA.
 140. Weiss J, editor. Efficacy, Structure and Physicochemical Properties of (Lipid) Antimicrobials -or- Why Many Antimicrobials Work Less Well in Foods – A Case Study for Food Structure Design Using Microemulsions. American Oil Chemists' Society Annual Meeting; 2008 May 20th; Seattle, WA.
 141. Weiss J, editor. Technologie Funktioneller Lebensmittel (150g) - Ein neues Forschungsprogramm an der Universitaet Hohenheim zur Schaffung neuer Lebensmittelstrukturen. Lebensmittelwissenschaftliches Kolloquium und Workshop; 2008 August 10th; Universitaet Hohenheim, Germany.
 142. Weiss J, Decker EA, McClements DJ, editors. An Integrated Approach to Research, Education and Outreach in the Area of Functional Foods. ISEKI Food 2008; 2008 September 10th; Porto, Portugal.
 143. Weiss J, Decker EA, McClements DJ, editors. Solid Lipid Nanoparticles as Novel Nutraceutical Carriers in Foods. 17th International Conference on Surfactants in Solution; 2008 August 22nd; Berlin, Germany.

Papers Presented Without Abstracts (48)

1. Weiss J. Emulsions - Value Added Products From Fats and Oils. Invited Presentation - Fall Meeting of the Northeast Section of the American Oil Chemist' Society. Brunswick, NJ1999.
2. Weiss J. Optimization of Textural Properties of Soymilk-Based Yogurt. Annual Meeting of the Tennessee Soybean Promotion Board. Pigeon Forge, TN2000.

3. Weiss J. Future Directions of Research in the Area of Physicochemical Properties of Food. Tenure Track seminar Series - Department of Food Science and Technology at the University of Tennessee. Knoxville, TN2000.
4. Weiss J. Station Project TEN 00236 - A Comprehensive Overview. Tennessee Agricultural Experiment Station Annual research Conference. Knoxville, TN2000.
5. Weiss J. The Rheology of Polymers and Additives. Invited Presentation - Spring Meeting of the Society of Plastics Engineers. Knoxville, TN2000.
6. Weiss J. The Use of Power Ultrasound in Polymer Chemistry. Invited Presentation - Department of Chemistry at the University of Tennessee. Knoxville, TN2000.
7. Weiss J. The Role of Colloidal and Interfacial Properties in Food Science and Technology - An Introduction to the Research Program at the Department of Food Science and Technology at UT Knoxville. Invited Presentation - Food and Agricultural Products research and Technology Center - Oklahoma State University. Stillwater, OK2001.
8. Weiss J. Von Nanotechnologie zur Biopolymerchemie 0 Einblicke in die physikalisch - chemischen Grundlagen der modernen Verfahrenstechnik (in german). Invited Presentation - University of Karlsruhe. Karlsruhe, Germany2001.
9. Weiss J. Interfacial Properties in Food Science and Technology. Invited Presentation - University of Bonn. Bonn, Germany2001.
10. Weiss J. Ultrasonic Processing of Soy - A Scale-up Study. Annual Meeting of the Tennessee Soybean Promotion Board. Pigeon Forge, TN2001.
11. Weiss J. Progress Report of Optimization of Textural Properties of Soymilk-Based Yogurt. Annual Meeting of the Tennessee Soybean Promotion Board. Pigeon Forge, TN2001.
12. Weiss J. Having Fun with Foods - An Introduction to the Research Program at the Department of Food Science and Technology at the University of Tennessee. Fulton High School Series of Excursions. Knoxville, TN2002.
13. Weiss J, Zivanovic S. The Food Chemistry and Biophysics Laboratories at the University of Tennessee - Insights into the Physicochemical Basis of Food Engineering and Processing. Invited Presentation - Icelandic Fishery Laboratories / University of Iceland. Reykjavik, Iceland2002.
14. Weiss J. Food Biophysics - The Missing Link Between Physicochemical Properties, Microbiology and Processing. Invited Presentation - University of Massachusetts. Amherst, MA2003.
15. Weiss J, Russell K, Zivanovic S, Morris WC. The Effect of Glas Shape on the Concentration of Polyphenolic Compounds and Perception of Merlot Wine. Tennessee Viticultural and Oenological Society. Murfreesborough, TN2003.
16. Weiss J, Zivanovic S, Mount JR. Rapid Retort Processing of Eggs - Recipe Formulation and Ingredient Optimization. Coranet II Egg Umbrella Workshop. Natick, MA2003.
17. Davidson PM, Weiss J. Food Additives: Benefits, Risks and Research. Case Media Fellowship - Food Safety Center of Excellence. Knoxville, TN2004.

18. Davidson PM, Weiss J. New perspectives on food additives. Invited Lecture - University of Massachusetts. Amherst, MA 010032004.
19. Jarrard M, Morris WC, Weiss J. Quantification of Real-time Volatile Compound Production in the Headspace of Wine Glasses. University of Tennessee Undergraduate Research Competition. Knoxville, TN2004.
20. Weiss J, editor. Study and research at the University of Massachusetts - An Introduction to the B.S., M.S. and Ph.D. Program in Food Science. Invited Lecture - Lebensmittelwissenschaftliches Kolloquium; 2004 December 20th, 2004; Universitaet Hohenheim, Stuttgart, Germany.
21. Weiss J, Davidson PM. Advances in Food Antimicrobials - Nanostructured Encapsulation Systems. Case Media Fellowship - Food Safety Center of Excellence. Knoxville, TN2004.
22. Weiss J, Davidson PM. Novel encapsulation systems for food antimicrobials. Invited Lecture University of Massachusetts. Amherst, MA2004.
23. Weiss J, Zivanovic S, Mount JR, Penfield MP. STP 2012 Final Report - Rapid Retort Processing for Retorted Egg Products - Ingredient Optimization. Coranet II Workshop. Cincinatti, OH2004.
24. Weiss J, editor. Food Biophysics and Nanotechnology - New Research Initiatives at the Department of Food Science at the University of Massachusetts Invited Lecture - Departmental Seminar Series; 2005 January 9th; University of Reykjavik, Reykjavik, Iceland.
25. Weiss J, editor. Novel Uses of High-Intensity Ultrasound in Food Processing. Departmental Seminar Series; 2005 February 9th; University of Massachusetts, Amherst, MA.
26. Weiss J, editor. Nanostructured Food Antimicrobial Delivery Systems. Annual Meeting of the Strategic Research Alliance of the Department of Food Science 2005 May 5th; University of Massachusetts, Amherst, MA.
27. Weiss J, editor. Novel Approaches to Food Antimicrobial Applications. Invited Lecture - Pepsico Seminar; 2005 June 20th; Valhalla, NY.
28. Weiss J, editor. Some Comments on Food Nanotechnology Invited Lecture - Seminar Series Department of Food Process Engineering; 2005 Dec 23; University of Karlsruhe, Germany.
29. Weiss J, editor. Electrospinning: A New Nanofabrication Technique Suitable For Processing of Food Biopolymers? Departmental Seminar Series, Department of Food Science; 2006; University of Massachusetts, Amherst, MA.
30. Weiss J, editor. An Introduction to Food Nanotechnology Invited Lecture King Monkuts Institute of Technology 2006 Jan 11; Bangkok, Thailand.
31. Weiss J, editor. Encapsulation Strategies to Improve Activity of Food Antimicrobials. Invited Lecture - Cluster B Industru Alliance Meeting, Department of Polymer Science; 2006 May 16; University of Massachusetts, Amherst, MA.
32. Weiss J, editor. Physikalisch-Chemische Grundlagen der modernen Lebensmittelverfahrenstechnik - Neue Ansätze zum Gestalten von Lebensmitteln. Invited Lecture - College of Process Engineering; 2006 Jan 19; University of Magdeburg, Germany.

33. Weiss J, editor. Formation of Functional Nanostructures for Application in Food Systems. Invited Lecture - Departmental Seminar Series - Department of Food Science; 2006 Apr 11; Cornell University, Ithica, NY.
34. Weiss J, editor. Nanotechnology Applications in the Food Industry - Functional Materials and Fabrication Processes. Frito Lay, Inc R&D Meeting; 2007 May; Dallas, Texas.
35. Weiss J, editor. Strukturelle Ansätze zum erfolgreichen Gestalten funktioneller Lebensmittel. Invited Lecture - College of Food Technology; 2007 February; University of Hohenheim, Germany.
36. Weiss J, editor. Nanotechnology: Implications for Food, Food Ingredients and Food Packaging. Invited Lecture - ILSI North America Annual Meeting; 2007 January 22; Cancun, Mexico.
37. Weiss J, editor. Microemulsions and Solid Lipid Nanoparticles - Examples of Nanoscale Delivery System For Bioactives -. Invited Lecture - National Food Research Institute; 2007 June; Tsukuba, Japan.
38. Weiss J, editor. Food Biophysics - Understanding Mechanism of Action of Preservatives and Improving Activity Through Nanoencapsulation. Invited Presentation - FOOMA 2007; 2007 June; Tokyo, Japan.
39. Weiss J, editor. Nanotechnology 101: Applications in the Food Industry - Functional Materials and Fabrication Processes -. SaraLee Annual R&D Meeting; 2007 May; Chicago, IL.
40. Weiss J, editor. Novel Uses of High-Intensity Ultrasound in Food Processing. Department of Food Science, UMASS, Strategic Research Alliance Annual Meeting; 2007 April; Amherst, MA.
41. Weiss J, editor. Nanoscience Applications in Food Products. National Research Council - Committee Identifying Technologies To Transform Agriculture in Sub-Saharan Africa and South Asia; 2007 July 9th; Washington, DC.
42. Weiss J, editor. Nano & Foods: The Application, Evaluation and Promise of Nanotechnology in Food Science and Nutrition. Invited Lecture - Friedman School Symposium; 2007 October 31st; Tufts University, Boston, MA.
43. Weiss J, editor. Nanotechnologie und Biophysik als Grundlagen der Gestaltung moderner Lebensmittel (in German). Invited Lecture - Food Lecture Series Bundesforschungsanstalt fuer Ernährung und Lebensmittel; 2007 September 18th; Karlsruhe, Germany.
44. Weiss J, editor. Quality and Stability of Functional Foods: Impact of Food Processing, Storage and Distribution. Invited Lecture - Institute of Food Technologist Annual Meeting; 2007 July 29th; Chicago, IL.
45. Weiss J, editor. Primer on Nanoscale Science For Foods - Applications. Invited Lecture - Institute of Food Technologist Annual Meeting; 2007 July 31st; Chicago, IL.
46. Weiss J, editor. Food Nanotechnology in the U.S. Invited Lecture - 2nd International Food Nanoscience Conference; 2007 August 1st; Chicago, IL.
47. Weiss J, editor. Nanotechnological Approaches to Food Antimicrobial Delivery and Beyond. Invited Lecture - Seminar Series Department of Food Science and Nutrition; 2007 October 11th, 2007; University of Murcia, Murcia, Spain.

48. Weiss J, editor. Electrosinning – A New Nanofabrication Technology for Encapsulation Systems, Packaging Materials, Sensors and Processing Aids? Invited Lecture - Pepsico R&D Luncheon Speaker Series; 2008 March 25th; Valhalla, NY.
49. Weiss J. Nanotechnological Food Applications - With a Focus on Novel Delivery System For Bioactives -. Invited Lecture - Perkin Elmer Seminar Series; May 8th; Shelton, CT2008.

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1. Kit K, Weiss J. Request for Funds to Purchase a Dynamic Mechanical Analyzer. In: SARIF Infrastructure and Equipment Grant - Material Interdisciplinary Council of the University of Tennessee, editor.2000.
2. Weiss J, Hulbert G. Ultrasonic Processing of Soybeans. In: Tennessee Soybean Promotion Board, editor.2000.
3. Magid L, Dadmun M, Weiss J. Request for Funds to Purchase a Dynamic Light Scattering Particle Sizer. In: Sarif Equipment and Infrastructure Grant - Material Interdisciplinary Council of the University of Tennessee, editor.2001.
4. Weiss J, Davidson PM, Golden DA. Development of a Novel Thermosonication Process to Inactivate Microorganisms. In: Food Safety Center of Excellence at the University of Tennessee, editor.2001.
5. Weiss J, Kit K, Mount JR. Coranet II Partnership Application. In: Defense Logistics Agency, editor.2001.
6. Bruce BD, Weiss JC. Acquisition of Microcalorimetry Instrumentation for Macromolecule and Polymer Analysis. In: SARIF Equipment and Infrastructure Grant - Material Interdisciplinary Council of the University of Tennessee, editor.2002.
7. Dadmun M, Sepaniak M, Xue X, Feigerle C, Mays J, Weiss J. Equipment for Uniform and Reproducible Nanoscale Thin Film Formation - Spin Coating. In: SARIF Equipment and Infrastructure Grant - Material Interdisciplinary Council of the University of Tennessee, editor.2002.
8. Golden DA, Weiss J. Inhibition of spoilage yeasts in fruit juices. In: Astaris LLC M, editor.2002.
9. Weiss J, Davidson PM, Bruce BD. Development of 'Release in Demand' Antimicrobial Delivery Systems to Improve Food Safety. In: Food Safety Center of Excellence at the University of Tennessee, editor.2002.
10. Weiss J, Zivanovic S. Prevention and Control of Foodborne Pathogens in Food Emulsions Using Chitosan. In: Food Safety Center of Excellence at the University of Tennessee, editor.2002.
11. Williams RC, Golden DA, Weiss J, Barbosa-Canovas G. Alternative Processing Technologies and Chemical Preservatives to Improve Food Safety. In: USDA Integrated Research EaECGP, editor.2002.
12. Zivanovic S, Draughon FA, Weiss J. Antimicrobial Activity of Essential Oils Incorporated in Chitosan Films Against *Listeria monocytogenes* and *Escherichia coli*. In: Food Safety Center of Excellence at the University of Tennessee, editor.2002.

13. Kit K, Hanson M, Weiss J. Development and Evaluation of Integrity Assessment Tests for Polymeric Hermetic Seals. In: Defense Logistics Agency - Coranet II, editor.2003.
14. Weiss J, Davidson PM, Bruce BD. Encapsulation of Polypeptide Antimicrobials in Biodegradable Polymeric Nanoparticles (BPN) To Improve Food Safety. In: Food Safety Center of Excellence at the University of Tennessee, editor.2003.
15. Weiss J, Davidson PM, Bruce BD. Targeted Delivery of Lipophilic Antimicrobials to Skin Using Surfactant Micelles. In: Proctor & Gamble, editor.2003.
16. Weiss J, Davidson PM, Bruce BD, Shetty K, McClements DJ. Antimicrobial Delivery Systems to Improve Food Safety. In: USDA CSREES NRI, editor.2003.
17. Weiss J, Mount JR, Zivanovic S. Rapid Retort Processing of Eggs - Product Development and Ingredient Optimization. In: Defense Logistics Agency - Coranet II, editor.2003.
18. Weiss J, Zivanovic S, Hill TK. Improving Antimicrobial Activity and Quality of Chitosan via High-Intensity Ultrasound Assisted Extraction. In: Food Safety Center of Excellence at the University of Tennessee, editor.2003.
19. Zivanovic S, Weiss J. Characterization of Biodegradable Antimicrobial Chitosan Films. In: High Temperature Materials Laboratories - Oakridge National Laboratories - Department of Energy, editor.2003.
20. Cooley D, Coli W, Schloemann S, Vanden Heuvel J, Greene D, Autio W, et al. Development of a Research and Education Program for Small-Scale, Sustainable Viticulture and Enology in Massachusetts. In: USDA CSREES, editor.2004.
21. Kit K, Weiss J, Zivanovic S, Davidson PM. Nanostructured Membranes for Filtration, Disinfection, and Remediation of Aqueous and Gaseous Systems In: US Environmental Protection Agency, editor.2004.
22. Levin R, Clydesdale F, Decker EA, Hultin H, Labbe R, McClements DJ, et al. Seafood Safety 2004-2006. In: USDA CSREES, editor.2004.
23. Weiss J. Production, Characterization and Application of Nanostructured Food Antimicrobial Systems. In: USDA CSREES Hatch Grant, editor.2004.
24. Weiss J, Zivanovic S. Ultrasonic Extraction and Sonochemical Modification of Chitin and Chitosan. In: USDA CSREES NRI, editor.2004.
25. McLandsborough LM, Weiss J. Request for Funding Towards the Purchase of an Atomic Force Microscope (AFM). In: Massachusetts Agricultural Experiment Station SNF, editor.2005.
26. Weiss J. Physicochemical Property Study To Determine the Influence of Processing Conditions on Gelation of Cranberry Sauce In: OceanSpray Inc. - Gift Research Grant, editor.2005.
27. Weiss J. Novel Antimicrobial Hurdle Technology to Improve Microbial Stability of Carbonated and Noncarbonated Beverages. In: Pepsico R&D - Gift Research Grant, editor.2005.
28. Weiss J, McClements DJ, Decker EA, Park Y. Food-Based Solutions to Health and Wellness - Proposal for Academic-Industry Strategic Alliance. In: University of Massachusetts - Presidents' Science and Technology Fund, editor.2005.

29. Weiss J, McLandsborough LM. Remediation of Foodborne Biofilms Using Antimicrobial Micelles. In: University of Massachusetts - Faculty Research Grant, editor.2005.
30. Levin R, Clydesdale F, Decker EA, Hultin H, Labbe R, McClements DJ, et al. Seafood Safety 2006-2008. In: USDA CSREES, editor.2006.
31. Weiss J. Novel Antimicrobial Hurdle Technology to Improve Microbial Stability of Carbonated and Noncarbonated Beverages – EXTENSION TO PHASE 1. In: Pepsico R&D - Research Gift Grant, editor.2006.
32. Weiss J, McLandsborough LM. Biofilm Inactivation and Removal Using Micellar Encapsulated Antimicrobials. In: USDA CSREES NRI, editor.2006.
33. Decker EA, Weiss J, McClements DJ. Role of Physical Structures in Food Oils on Lipid Oxidation. In: Programs UDoA-NRI, editor.2007.
34. Decker EA, Weiss J, McClements DJ. New Technologies for Emulsified Lipids in Food Beverages. In: CVIP Fund UoM, editor.2007.
35. Malcatta FX, Weiss J, Others. ISEKI-MUNDUS: Integrating Safety and Environmental Knowledge in Food Studies. In: Education AaCEA, European Union, editor.2007.
36. Weiss J. Cavitation Homogenization and Degassing of Milk. In: Corp. HAP, editor.2007.
37. Weiss J. Hurdle Concepts for Food Antimicrobials in Beverages. In: Inc P, editor.2007.
38. Weiss J, McClements DJ. Colloidal Approaches to Overcoming Bitterness of Mirenat in Food Applications. In: Vedeqsa I, editor.2007.
39. Decker EA, McClements DJ, Weiss J. Use of Lecithin from SDA Soybeans to Produce Omega-3-Containing Liposomes for use as a Functional Food Ingredient. In: Monsanto, editor.2008.
40. Decker EA, McClements DJ, Weiss J. Food Science Graduate Training in Food and Health with Emphasis on Ingredient Delivery Systems and Food Policy. In: Program UCNF, editor.2008.
41. Decker EA, McClements DJ, Weiss J. Experiments to Quantify the Potential of the Encapsulation. In: Wesfolk I, editor.2008.
42. McClements DJ, Decker EA, Weiss J. Designing Novel Food Functionality through Controlled Biopolymer Phase Separation In: 71.1 CUNRI, editor.2008.
43. McClements DJ, Decker EA, Weiss J. Design of Nano-laminated Coatings to Control Bioavailability of Lipophilic Food Components. In: 75.0 CUNRI, editor.2008.
44. Poltronieri P, Weiss J. CNR-ISPA Short-Term Mobility Grant. In: Italy NRAo, editor.2008.
45. Weiss J, Decker EA, McClements DJ. Encapsulation of Food Colorants in Liposomes to Improve Their Stability and Modulate Their Interactions with Light. In: Technologies S, editor.2008.
46. Weiss J, McClements DJ. Double Food Antimicrobial Systems Incorporated in Colloidal Carrier Systems to Improve Microbial Stability of Beverages. In: R&D P, editor.2008.

SUMMARY OF TEACHING AND MENTORING ACTIVITIES

Teaching Statement

In all my teaching activities, I focus on four key factors that I believe are essential to ensure that both students and teachers have a good class experience:

1. Motivation: Students that are interested in a subject and are motivated by their teacher have a natural desire to learn. I strongly believe that a good teacher can bring out the childlike curiosity in all students. This curiosity, once ignited, only needs to be supported and nourished. I therefore am also a strict opponent of the traditional lecturing and memorization type of teaching. I prefer informal discussion groups in which I use selected case studies from industry and academia to illustrate the need to have an in-depth knowledge of a subject in order to solve the selected problem. I believe that this prepares students significantly better for the challenges that await them once they enter the work force.
2. Enthusiasm: The teacher has to be enthusiastic about a subject. If he himself isn't convinced that the material is interesting, how can he try to convince the students that it's fun to study the subject? I therefore attempt to include as many topics and subjects in which I am myself highly interested as possible. This enables me to convey my own interest and emotional feelings about the subject of study and gives students a more personal insight into the topic. In cases where this is not entirely possible, I try to build bridges to topics that truly fascinate me.
3. Challenge: High goals need to be set for students. If we are to produce the best students possible, then we need to set the standards as high as possible. At the same time, we need to make sure that it is possible for the students to live up to the challenge. Since different people absorb material in many different ways, a personalized curriculum needs to be developed. I found that it is possible to provide base material and supply supplementary materials based on each student's interest and needs. I use novel information technologies (PHP based web pages and discussion boards) to deliver these supplementary materials and I highly encourage additional reading of research articles and current press releases.
4. Structure: A good course structure/outline is an essential requirement for students to follow the course. As in presentations, a "red line" is needed, i.e. a common structure that binds the different topics together. Familiar patterns also make it easier for the memory center in our brains to digest and store information.

Finally, new knowledge needs to be put to a practical use, otherwise it remains a solely theoretical framework. I strongly encourage independent study or research projects that are conducted in my or my colleagues labs and that tie the theoretical knowledge to practical applications. This creates a win-win scenario, as students gain lab experience while enhancing the research program of the supervising professor. In many cases, the work can lead to a publication, which improves students' curriculum vitae and their chances of getting a position in the industry. Alternatively, it may encourage them to pursue graduate studies.

Honors and Awards

- Outstanding Teacher Award 2007, College of Natural Resources and the Environment, University of Massachusetts, Amherst
- Outstanding Faculty Award – Under five year service, 2002, Department of Food Science and Technology, UT, awarded by the student Food Science Club.
- Outstanding Advisor Award – Under five year service, 2002, Department of Food Science and Technology, UT, awarded by the student Food Science Club.
- Outstanding Faculty Award – Under ten years service, 2001, Department of Food Science and Technology, UT, awarded by the student Food Science Club

Courses Taught

Semester	Course	Involvement	Credits	Students
UNIVERSITY OF TENNESSEE (UT, 1999-2004)				
Fall 2000	FST 510: Instrumental Analysis of Foods	Guest (4 Lec.)	3	13
Spring 2001	FST 590: Food Biophysics	Total	2	4
Spring 2001	FST 340: Food Preservation	Guest (3 Lec.)	3	21
Fall 2001	FST 515: Proteins, Lipids, Carbohydrates	Guest (3 Lec.)	4	9
Spring 2002	FST 410: Food Chemistry	Guest (3 Lec.)	4	26
Fall 2002	FST 501: Food Science Seminar	Total	1	3
Fall 2002	FST 515: Food Carbohydrates, Proteins and Lipids	Team	4	7
Fall 2002	FST 601: Food Science Seminar	Total	1	1
Spring 2003	FST 590: Food Biophysics	Total	2	4
Spring 2003	FST 510: Instrumental Analysis	Team	3	10
Fall 2003	FST 590: Advanced Thermal Analysis	Team	1	8
Spring 2004	FST 510: Instrumental Analysis	Team	3	12
UNIVERSITY OF MASSACHUSETTS (UMASS, 2004- Now)				
Spring 2005	FS 561: Food Processing	Total	4	6
Spring 2005	FS 791F: ST Food Biophysics	Total	2	5
Fall 2005	FS 396: Independent Study	Total	3	3
Fall 2005	FS 265: Survey of Food Science	Team	4	21
Spring 2006	FS 561: Food Processing	Total	4	13
Spring 2006	FS 791F: ST Food Biophysics	Total	2	5
Fall 2006	FS 797R: Research Methods	Team	2	2
Spring 2007	FS 561: Food Processing	Total	4	21
Spring 2007	FS 791F: ST Food Biophysics	Total	2	4
Fall 2007	FS 265: Survey of Food Science	Team	4	24
Spring 2008	FS561: Food Processing	Total	4	14
Spring 2008	FS 791F: ST Food Biophysics	Total	2	1

Description of Courses

UT FST 340 – Food Preservation and Packaging: Undergraduate course that teaches principles, methods and equipment used for preservation of foods. The course has four objectives: (1) to understand the processes and equipment used in processing, packaging, and distribution of foods (2) to understand the effects of various preservation techniques on the quality and safety of food products (3) To understand the role of food packaging in the preservation of food products and (4) to design and evaluate a processing procedure used to preserve a food product.

UT FST 410 – Food Chemistry: Senior level undergraduate and entry level graduate course on organic and inorganic chemistry in the context of agricultural and food systems. The most important reactions of water, proteins, lipids, carbohydrates, mineral, enzymes, vitamins and additives in foods are discussed in detail.

UT FST 501/601 – Graduate Seminar: Graduate course in which seminars are presented by departmental graduate students and outside speakers. Graduate students present information on their research work or related topics. Outside speakers are invited from other universities, industry or governmental organizations. Goal of the course is to keep students and faculty abreast of current topics in food science and technology

UT FST 510 – Instrumental Analysis of Food: Graduate course that teaches modern instrumental methods for control of food manufacturing processes and analysis of complex food systems. The course is divided in three parts, (1) Physic Principles & Spectroscopy (2) Chromatography (3) Biological Methods. The course is a departmental requirement for all graduate students.

UT FST 515 – Food Carbohydrates, Proteins and Lipids: Advanced study of the chemical and physical properties of carbohydrate, protein and lipid components of foods, effects of components on production of safe and consistent quality food products; and changes during processing and/or distribution of food products.

UT FST 590 – Food Biopolymers: Advanced graduate course that teaches a polymer science approach to food science students. Specific topics include, fundamental molecular and colloidal interactions between food biopolymers, colloidal interactions between microscopic food structures, surface and interface science of food biopolymers, advanced rheology of food biopolymers and optical properties of food biopolymers.

UMASS FS 265 – Survey of Food Science: Introduction to Basic Principles in Food Science and Technology with a focus on commodities, and the processing of base commodities to produce the final product. In the first week, a general overview over nutritional needs and food components is given, followed by introductions to cereals, dairy, meats, fats & oils, egg & fish products, fruits & vegetables, sugar & confectionaries, coffee, tea and instant beverages, cocoa & chocolate and finally alcoholic beverages. Finally, the course includes regular sensory testing of products produced or manufactured during laboratories and a number of field trips

UMASS FS 561 – Food Processing: Fundamental Unit Operations and Associated Equipment in Food Processing. Specific topics include raw material preparation, thermal processing, cooling & freezing, evaporation, drying and mechanical processing. Laboratories focus on usage of pilot plant equipment to simulate unit operations.

UMASS FS 791F – Food Biophysics Seminar: Seminar series for food biophysics and nanotechnology related research. Consist of student presentations and experimental design discussions of ongoing project in the laboratory for Food Biophysics and Nanotechnology. Designs for M.S. and Ph.D. students working on their thesis projects.

UMASS FS 797R – Research Methodologies: Essential research skills including experimental design, scheduling of experiments, analysis of results, preparation of manuscripts, review of manuscripts, grant and award research, grant writing and presentation skill.

Table 1. Summary of course evaluations of total or team taught classes (1999 – 2003).

Semester/ Year	Course (credits)	# Students	Score				# of evaluations
			Course Overall	Course Content	Instructor Contribution	Teaching Effectiveness	
S 2000	FST 590 (2)	4	– ²	– ²	– ²	– ²	0
F 2002	FST 515 (3)	9	4.00	3.71	4.33	4.57	7
S 2003	FST 510 (3)	10	3.50	3.33	3.67	3.33	6
S 2003	FST 590	4	– ²	– ²	– ²	– ²	0
S 2005	FS 561 (4)	6	4.33	4.83	4.83	4.66	6
F 2005	FS 265 (4)	21	4.20	4.67	4.73	4.67	15
S 2006	FS 561	13	4.39	3.81	4.42	4.17	13
S 2007	FS 561	21	4.56	4.37	4.53	4.16	19
F 2007	FS 265	24	-	-	-	-	18
S 2008	FS 561	14	4.66	4.45	4.73	4.18	11

¹ Range 5-0: 5=excellent, 0=very poor

² Course too small for formal evaluation, comments to questionnaires attached in the Teaching Addendum.

Most Recent Student Comments (UMASS Excerpts):

FS 561 – Food Processing:

“The lecture gave me a lot of knowledge about food processing and the labs gave us an opportunity to practice the knowledge”

“I enjoyed the thorough explanation of processing procedures that are useful in industry”

“All classes were great!!!” “I would change nothing about the class – materials and topics were optimal”

“It was a great class ... the course website is easy to use and very convenient”

“I liked most about the labs all the great products that were made, beer, cheese, ice cream. It gave me a better understanding of these products” “Overall, great class, fun labs. I got a lot out of it”

“I enjoyed most the material covered, the pace and the professor. The material was very interesting and made more sense than some other classes”. “The pace was good and exams were fair”

“You guys did a wonderful job with this class and you put a lot into it. Any criticism that I have is only constructive criticism because I really did enjoy this course. Thank you.”

“The material will be useful for my career”

“It was great to reference the materials on WebCT whenever we needed. The discussion board helped too.”

“Thank you so much for a fun semester!! Lab was enjoyable!” “I will be bringing this material for internships & career”

“Thank you for everything, this class is truly what I expected”

“I liked the labs and I enjoyed most of the lectures since they were all very practical, that is I was always thinking about how I could use this or that processing operation/equipment”

FS 265 – Survey of Food Science:

“Excellent teaching and inspired me to learn more about my major, Thanks.”

“Your teaching inspired me to learn ore about Food Science. Thank you very much”

“The labs were great, instructions great, & the subject is interesting”

“Really enjoyed the class. With all the guest speakers and professors. Also all the hands on labs made this course really fun”

“The lectures were explained clearly. The powerpoint slides were detailed. WebCT was useful”

Table 2. Advising Activities. Complete list of students from 1999-2008, position that students held, my advising role, university activity took place and the year/period in which advising happened.

Student Name	Student Position	Advising Role	University	Year(s)
POST-DOCTORATE WORKERS				
Amr Edris	Visiting Research Prof.	Principal Supervisor	UMASS	2007-2008
Liwen Chen	Post-Doctoral Associate	Principal Supervisor	UMASS	2007-2008
Yumei Dai	Post-Doctoral Associate	Principal Supervisor	UMASS	2007-2009
Dalal Asker	Post-Doctoral Associate	Principal Supervisor	UMASS	2007-2008
Jun Cao	Post-Doctoral Associate	Co-Advisor	UMASS	2007-2008
Preyatudsaney Prachai	Post-Doctoral Associate	Principal Supervisor	UMASS	2006-2007
Heewon Yang	Post-Doctoral Associate	Principal Supervisor	UMASS	2005-2006
Dario Conesa	Post-Doctoral Associate	Principal Supervisor	UMASS	2005-2007
Lilian Were	Post-Doctoral Associate	Principal Supervisor	UT	2002-2003
Wayne Liao	Research Associate	Principal Supervisor	UT	1999-2001
Ph.D. STUDENTS				
Thananunt	Ph.D. Student	Major Advisor	UMASS	2004-2008
Rojasasithara				
Christina Scheidig / Kriegel	UG Exchange Student	Research Supervisor	UMASS	2005
	Ph.D. Student	Major Advisor		2005-2008
Sarisa Suriyarak	M.S. Student	Major Advisor	UMASS	2005-2008
Sylvia Gaysinsky	UG Exchange Student	Co-Advisor	UT	2002
	M.S. Student	Major Advisor	UT	2003-2004
	Ph.D. Student	Major Advisor	UMASS	2004-2007
Andres Rodriguez	Ph.D. Student	Committee Member	UMASS	2004-2007
Ann Theodore	Ph.D. Student	Committee Member	UMASS	2004-2008
Sinan Imer	Ph.D. Student	Committee Member	UMASS	2004-2007
Dustin Carnahan	Ph.D. Student	Major Advisor	UT	2003-2004
	M.S. Student	Major Advisor	UMASS	2004-2007
Young-Hee Cho	Ph.D. Student	Committee Member	UMASS	2005-2008
Yan Huang	Ph.D. Student	Committee Member	UMASS	2007-2008
Owen Jones	Ph.D. Student	Committee Member	UMASS	2005-2008
Wanlop Chanasatru	Ph.D. Student	Committee Member	UMASS	2006-2008
Rahul Seshadri	M.S. Student	Major Advisor	UT	1999-2001
	Ph.D. Student	Major Advisor	UT	2001-2003
Matt Taylor	Ph.D. Student	Committee Member	UT	2003-2007
Kim Lamar	Ph.D. Student	Committee Member	UT	2000-2003
Valerie Ling	Ph.D. Student	Committee Member	UT	2002-2004
Michael Arlen	Ph.D. Student	Committee Member	UT	2000-2003
Chitsiri Thongson	Ph.D. Student	Committee Member	UT	2003
Demet Güzey	M.S. Student	Major Advisor	UT	2000-2002
	Ph.D. Student	Committee Member	UMASS	2002-2006
M.S. STUDENTS				
Chris Aurand	M.S. Student	Major Advisor	UMASS	2007-2008
Jessica Kornbluth	M.S. Student	Major Sdvisor	UMASS	2005-2006
Maureen Pease	M.S. Student	Major Advisor	UMASS	2005-2007
Lijia Zhao	M.S. Student	Major Advisor	UT	1999-2000
Ibrahim Gülseren	M.S. Student	Major Advisor	UT	2002-2004

Tina Sams	B.S. Student Researcher	Research Supervisor Major Advisor	UT UT	2001-2002 2002-2003
	M.S. Student	Major Advisor	UT	2003-2004
Jeff Boland	M.S. Student	Major Advisor	UT	2001-2003
Kim Stanley	M.S. Student	Committee Member	UT	2002-2004
Shari Baxter	M.S. Student	Committee Member	UT	2002-2004
Shuang Chi	M.S. Student	Committee Member	UT	2002-2004
Haizhou Li	M.S. Student	Committee Member	UT	2001-2003

UNDERGRADUATE STUDENTS

Jeff Stuttsman	B.S. Student	Research Advisor	UMASS	2008
Russell Fortin	B.S. Student	Research Advisor	UMASS	2008
Kaitlin Ewald	B.S. Student	Major Advisor	UMASS	2006-2008
Zachary Priest	B.S. Student	Major Advisor	UMASS	2006-2008
Peter Rowell	B.S. Student	Major Advisor	UMASS	2006-2008
Katherine Schmidt	B.S. Student	Major Advisor	UMASS	2006-2008
Lauren Placzek	B.S. Student	Major Advisor	UMASS	2006-2008
Danielle Kelley	B.S. Student	Major Advisor	UMASS	2004-2007
Thomas Harris	B.S. Student	Major Advisor	UMASS	2004-2007
Edward L. Ryan	B.S. Student	Research Advisor	UMASS	2005-2007
Van Dorian Gray	B.S. Student	Research Advisor	UMASS	2006
Faith Johnson	B.S. Student	Research Supervisor	UT	2002
Mark Jarrard	B.S. Student	Research Supervisor	UT	2003-2004
Kari Russell	B.S. Student	Research Supervisor	UT	2001-2002

EXCHANGE STUDENTS

Celine Laye	UG Exchange Student	Research Supervisor	UMASS	2007
Alessandra Arecchi	Ph.D. Exchange Student	Co-Advisor	UMASS	2007-2008
Arnaud Tesson	UG Exchange Student	Research Supervisor	UMASS	2008
Saowakon Wongsasulak	Ph.D. Exchange Student	Co-Advisor	UMASS	2004-2006
David Rosales	UG Exchange Student	Research Supervisor	UMASS	2005
Lucie Hauff	UG Exchange Student	Research Supervisor	UMASS	2006
Lorraine Doat	UG Exchange Student	Research Supervisor	UMASS	2006
Claudia Basurto	UG Exchange Student	Research Supervisor	UT	2002
Virginia Moreno	UG Exchange Student	Research Supervisor	UT	2002
Guillermo Farriols	UG Exchange Student	Research Supervisor	UT	2000
Liliana Rosas	UG Exchange Student	Research Supervisor	UT	2001
Naibi Chalakani-Anove	UG Exchange Student	Research Supervisor	UT	2003
Schell Marsch	UG Exchange Student	Research Supervisor	UT	2002
Thrandur Helgason	G Exchange Student	Co-Advisor	UMASS	2005-2008
Dirk Lang	G Exchange Student	Research Supervisor	UT	2002-2003
Gunnar Kjartanson	G Exchange Student	Co-Advisor	UT	2003-2004
Miriam Überall	G Exchange Student	Co-Advisor	UT	2000-2001
José Rodriguez	G Exchange Student	Research Supervisor	UT	2003
Keondra Rhee	High School Intern	Research Supervisor	UT	2001
Henry Perry	Laboratory Assistant	Co-Advisor	UT	2003

UG: Undergraduate, G: Graduate

Advising responsibilities include directing thesis and research projects, course selection, cooperative education curriculum plans, discussions regarding graduate studies, writing reference letters, and assistance with graduation applications.

Theses Supervised

1. Seshadri, R. *Effect of Ultrasonic Processing on the Physicochemical Properties of Pectin*, M.S. Thesis, University of Tennessee, Knoxville, TN, 2000.
2. Guzey, D., *Modification of Protein Structure and Functionality Using High-intensity Ultrasound*, M.S. Thesis, University of Tennessee, Knoxville, TN, 2002
3. Boland, J., *Influence of Chelators on the Antimicrobial Activity of Lysozyme Against Escherichia coli O157:H7*, M.S. Thesis, University of Tennessee, Knoxville, TN, 2003
4. Gulseren, I., *High-Intensity Ultrasound Mediated Structure-Function Changes of BSA as Affected by pH*, M.S. Thesis, University of Tennessee, Knoxville, TN, 2004.
5. Gaysinsky, S., *Physicochemical and Antimicrobial Properties of Antimicrobials Encapsulated in Surfactant-Based Nanoparticles*, M.S. Thesis, University of Tennessee, Knoxville, TN, 2004
6. Kjartansson, G., *Ultrasonic-enhanced Extraction of Chitin from Sweetwater and North Atlantic Shrimp*, M.S. Thesis, University of Iceland, Reykjavik, Iceland, 2005
7. Taylor, T.M., *Physicochemical Characterization and Antibacterial Potential of Naturally-Occurring Antimicrobial Polypeptide-Bearing Phospholipid Liposomes Against the Foodborne Pathogens Listeria monocytogenes and Escherichia coli O157:H7*, Ph.D. Thesis, University of Tennessee, Knoxville, TN, 2006
8. Gaysinsky, S., *Emulsions and microemulsions as antimicrobial carrier systems*. Ph.D. Thesis, University of Massachusetts, Amherst, 2007
9. Pease, M., *Influence of preparation and processing conditions on cranberry gel properties*, M.S. Thesis, University of Massachusetts, Amherst, 2007.
10. Carnahan, D. *Metal nanoparticles as antimicrobial carrier systems*, M.S. Thesis, University of Massachusetts, Amherst, 2007.
11. Helgason, T., *Influence of molecular characteristics of chitosan on oil emulsion digestibility in an in vitro digestion model*. M.S. Thesis, University of Iceland, Reykjavik, Iceland, 2006.
12. Wongsasulak, H., *Release Mechanisms of Paprika Oleoresin from Composite Structure of Egg Albumen and Cassava Starch*, King Monkuts University of Technology, Thaiburi, Bangkok, Thailand, 2007
13. Suriyarak, S. *Food colloids as carrier systems for food antimicrobials*. M.S. Thesis, University of Massachusetts, Amherst, 2008.
14. Kriegel, C. *Electrospinning of nanofibers in the presence of surfactants and surfactant aggregates*, Ph.D. Thesis, University of Massachusetts, Amherst, 2008.
15. Rojanasasithara, T. *Lipid oxidation and antimicrobial activity of polyphenols*, Ph.D. Thesis, University of Massachusetts, Amherst, 2008.
16. Kjartansson, G. *Extraction and functional properties of ultrasonicated chitin and chitosan from crustacean byproducts*, Ph.D. Thesis, University of Massachusetts, Amherst, 2008.

SUMMARY OF SERVICE ACTIVITIES

SERVICE TO THE PROFESSION

Professional Affiliations

Institute of Food Technologists (IFT)
American Chemical Society (ACS)
American Oil Chemist' Society (AOCS)
German Engineering Society (VDI)
Tennessee Viticulture and Oenological Society (TVOS)
Gamma Sigma Delta

Activities in Professional Organizations

AOCS Food Structure Division
Co-Chair, Symposium Organizer 2008-2009
IFT International Division
Member at Large, 2003 – 2006
Technical Program Representative 2006-2008
George Stewart International Paper Competition Judge 2005-2007
IFT Student Association
Graduate Paper Competition Judge 2005, 2006, 2008
IFT Web Communications Executive Committee
Member, 2003 – 2004
Chair-Elect 2005
IFT Government Relations Committee
Member, 2005-2009
IFT Annual Scientific Meeting Programming Committee
Member, 2006-2008
IFT Nanotechnology Working Group
Member 2005-2009

Peer Review

Editorial Activities

Associate Editor, Food Biophysics
Contributing Editor, Nutrition Reviews
Editorial Board, Journal of Food Science

Grant Panel Participation

USDA, NRI Panel 71.1 (April 2005)
USDA, National Needs Fellowship (July 2006)

Ad-Hoc Grant Reviews

United States Department of Agriculture, National Research Initiative Program
United States Department of Agriculture, Small Business Innovation Research
Crop Conversion Science and Engineering, USDA/ARS/ERRC
Experiment Station Hatch Proposals (University of Massachusetts, Oklahoma
State University, University of Georgia)

Bi-national Agricultural Research and Development Fund

Journal Article Reviews

Applied and Environmental Microbiology, Critical Reviews in Food Science and Nutrition, Food Biophysics, Food Biotechnology, Journal of Science of Food and Agriculture , Journal of Agricultural and Food Chemistry, Food Hydrocolloids, Journal of the American Oil Chemist' Society, Journal of Food Science, Journal of Food Safety, Journal of Food Quality, Journal of Food Engineering, Journal of Food Chemistry, Journal of Food Protection, Journal of Food Microbiology, Langmuir, Polymer, Macromolecules, Biomacromolecules, Colloids and Surfaces, Food Research International

Short Courses

- “Introduction to polymer rheology”, April 2000, University of Tennessee in collaboration with Paar Physica, USA, 1 Day
- “Introduction to ultrasonic spectroscopy”, June 2003, University of Tennessee in collaboration with Ultrasonic Scientific, Ireland, 1 Day
- “Emulsion Workshop”, October 2005, University of Masachusetts, acted as co-organizer with Dr. McClements, 2 Days
- “Hydrocolloids Short Course”, May 2006, OceanSpray Inc. as co-organizer with Dr. Julian McClements, 1 Day
- “Advanced Emulsion Workshop”, May 2007, University of Masachusetts, acted as co-organizer with Dr. McClements, 2 Days
- “Food Nanotechnology Primer Workshop, July 2007, Chicago, IL, 1 Day (as contributor)
- “Omega-3 Fatty Acids for Health and Wellness Workshop”, October 2007, Shanghai, China, 3 Days (as contributor)

Clinical, Diagnostic and Consulting Services

DuPont, OceanSpray Inc., National Starch & Chemical, Pepsico (NorthAmerica & International), Sara Lee, Charm Sciences, Sensient Technologies, Unity Scientific , Biopolymer Engineering, Inc., Minneapolis, Minnesota, Paar Physica, Howmet Corporation, McKee Foods, Tennessee Eastman Co. , Frito Lay, Vedeqsa, Wesfolk, Inc., Unilever, Nestle, Monanto

SERVICE TO THE UNIVERSITY AND THE DEPARTMENT

University Committee Participation (University of Massachusetts)

- College of Natural Resources and the Environment, Dean Search Committee (Member, 2007)

Departmental Committee Participation (University of Massachusetts)

- Department Head Search Committee (Member, 2008)
- Personnel Committee (Member, 2005-2007)
- Safety Committee (Member, 2005-2007)
- Pilot Plant Committee (Chair, 2005-2008)
- Recruiting Committee (Member, 2006-2008)

- Honors Coordinator (2005-present)
- Food Processing Comprehensive Exam Committee (Chair, 2005; Member 2006; Chair 2007; Member 2008)
- Food Science Club:
 - Advisor (2005)
 - Product Development Team Coach (2004-present)

Departmental Committee Participation (University of Tennessee)

- Newsletter Committee (2000 - Now)
- Department Review Committee (2000 - Now)
- Safety Committee (2000 - 2003)
- Computer Committee (2000), Chair (2001 – Now)
- Use of Innovative Technology - Strategic Planning Committee (2000)
- Graduate Admissions Committee (2002 - Now)
- Food Science Club Service:
 - Junior Advisor (2000, 2003)
 - Senior Advisor (2001)
 - Food Science Club Wine Society, Advisor and Co-founding faculty member with Dr. W.C. Morris (2000 – now)
 - Faculty Coach of the Food Science Club College Bowl Team (2000-Now)
 - Organized Annual Fall Splendor Hikes in the Great Smoky Mountains (2000 – Now)