

## Curriculum Vitae

Notarization. I have read the following and certify that this *curriculum vitae* is a current and accurate statement of my professional record.

Signature  Date 1/26/2017

- **Please organize your CV using the headings and sub-headings in this template.**
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### **I. Personal Information**

#### I.A. UID, Last Name, First Name, Middle Name, Contact Information

**UID:** 110327789

**Last Name:** Wang

**First Name:** Qin

**Address:** 0112 Skinner Building, College Park, MD 20742

**Email:** wangqin@umd.edu

**URL:** <http://www.nfsc.umd.edu/people/faculty/qin-wang-phd>

#### I.B. Academic Appointments at UMD

*Include specific dates*

August 2014- current                      Associate Professor, Department of Nutrition and Food Science,  
University of Maryland, College Park, MD 20742

August 2008- July 2014                      Assistant Professor, Department of Nutrition and Food Science,  
University of Maryland, College Park, MD 20742

#### I.C. Administrative Appointments at UMD

*Include specific dates*

#### I.D. Other Employment

2007 – 2008                                      Post-doctoral Fellow, Philip Morris USA,  
Richmond, VA 23219  
Research Area: research and product development

2004 – 2007                                      Post-doctoral Research Associate, Department of  
Food Science and Human Nutrition, University of  
Illinois, Urbana, IL 61801  
Research Area: food chemistry and food packaging

1998 – 2004	Graduate Research Associate, Department of Food Science, University of Illinois, Urbana, IL 61801 <u>Research Area</u> : protein chemistry and food packaging
1994 - 1997	Research Assistant, Department of Environmental Science and Engineering, Nanjing, P.R. China <u>Research Area</u> : environmental chemistry

### I.E. Educational Background

B.S.	1992	Nanjing University, Environmental Chemistry
M.S.	1997	Nanjing University, Environmental Chemistry Research area: bioavailability of Rare Earth Element
Ph.D	2004	University of Illinois at Urbana-Champaign, Food Science Research area: protein-lipid interaction in zein films

### I.F. Professional Certifications and Licenses

## **II. Research, Scholarly and Creative Activities**

### II.A. Books (include full citation information and ISBN)

II.A.1. Books Authored (*specify original or revised edition*)

II.A.2. Books Edited

1. Padua, G. W., **Wang, Q.**, (ed.). **Nanotechnology Research Methods for Foods and Bioproducts**; original edition, Wiley-Blackwell Publishing, IA 50014, **2012. ISBN: 978-0-8138-1731-6**, 245 pages, 12 chapters.

### II.B. Chapters

II.B.1. Books

(**Underline**, correspondence author; \*, undergraduate, graduate or postdoctoral fellow from Dr. Wang's Lab)

1. Z. Teng\*, **Q. Wang**, Chemistry and Safety of 3-MCPD. In *Food Safety Chemistry: Toxicant Occurrence, Analysis and Mitigation*, Yu, L. L.; Wang, S.; Sun, B.-G., Eds. CRC Press: London, **2014**, pp 90-108
2. Y. Luo\*, **Q. Wang**, **2014**. 'Nanofabrication techniques in Native Polymer-based 3D Substitutes' in *Native Macromolecule-based 3D Tissues Repair*. Edited by Wang J. World Scientific Publishing Co. Pte. Ltd. ISBN: 978-981-4551-92-2, pp. 221-257.
3. **Q. Wang**, B. Zhang\*. 'Self-assembled nanostructures' in *Nanotechnology Research Methods for Foods and Bioproducts*, Ed. G. Padua, Q. Wang, Wiley-Blackwell, Iowa **2012**. pp. 19-41.
4. B. Zhang\*, **Q. Wang**. 'Quartz Crystal Microbalance with Dissipation' in *Nanotechnology Research Methods for Foods and Bioproducts*, Ed. G. Padua, Q. Wang, Wiley-Blackwell, Iowa **2012**. pp.181-195.

5. Luo Y\*, **Q. Wang**, Bioactive Compounds in Corn. In *Cereals and Pulses: Nutraceutical Properties and Health Benefits*. Edited by Yu L, Tsao R, Shahida F. Functional Food Science and Technology Series. Wiley-Blackwell. ISBN: 978-0-8138-1839-9, 2011. pp85-105.
6. G. W. Padua, **Q. Wang**. "Controlled self-organization of zein nanostructures for encapsulation of food ingredients", in *ACS Symposium on Micro/Nano-Encapsulation of Active Food Ingredients*, Eds. Q. Huang, P. Given, M. Qian, ACS symposium 1007, Oxford University Press, Washington DC 2009. pp.143-157.
7. G.W. Padua, **Q. Wang**. "Formation and Properties of Corn Zein Films and Coatings" in *Protein-Based Films and Coatings*, Ed. A. Gennadios, CRC Press, Florida 2002. pp 43-67.

#### II.C. Articles in Refereed Journals

**Underline**, correspondence author; \*, undergraduate, graduate or postdoctoral fellow from Dr. Wang's Lab; Impact Factor (IF)

1. Z. Xiao\*, E.E. Codling, Y. Luo, X. Nou, G.E. Lester, **Qin Wang**. Microgreens of Brassicaceae: Mineral Composition and Content of 30 Varieties. *Journal of Food Composition and Analysis*, 2016, 49, 87-93. [IF: 2.603]
2. R. Xu\*, Z. Teng\*, **Q. Wang**. "Development of tyrosinase-aided crosslinking procedure for stabilizing protein nanoparticles" *Food Hydrocolloids*, 2016, 60, 324-334. [IF: 4.090]
3. Z. Teng\*, Y. Luo\*, Y. Li\*, **Q. Wang**. "Cationic beta-lactoglobulin nanoparticles as a bioavailability enhancer: Effect of surface properties and size on the transport and delivery in vitro" *Food Chemistry*, 2016, 204, 391-399. [IF: 3.900]
4. Z. Xiao\*, G. Bauchan, L. Nichols-Russell, Y. Luo, **Q. Wang**, X. Nou. "Proliferation of Escherichia coli O157:H7 in Soil-Substitute and Hydroponic Microgreen Production Systems" *J of Food Protection*, 2015, 78, 1785-1790. [IF: 1.937]
5. J.A. De Frías\*, Y. Luo, L. Kou, B. Zhou, and **Q. Wang**. Improving spinach quality and reducing energy costs by retrofitting retail open refrigerated cases with doors. *Postharvest Biology and Technology*. 2015, 110:114-120. [IF: 2.411]
6. Y. Li\*, Y. Liu, T. Gao, B. Zhang\*, Y. Song\*, J. Terrell, N. Barber, W. Bentley, I. Takeuchi, G. Payne, **Q. Wang**. "Self-assembly with orthogonal imposed stimuli to impart structure and confer magnetic function to electrodeposited hydrogel" *ACS Applied Materials & Interfaces*, 2015, 7, 10587-10598. [IF: 5.900]
7. B. Zhou\*, Y. Luo, X. Nou, S. Lyu, and **Q. Wang**. Survival dynamics of Salmonella enterica, Listeria monocytogenes, and Escherichia coli in wash water during simulated chlorine depletion and replenishment processes. *Food Microbiology*. 2015, 50:88-96. [IF: 3.374]

8. Z. Xiao\*, **G.E. Lester**, E. Parka, R.A. Saftner, Y. Luo, **Q. Wang**. Evaluation and correlation of sensory attributes and chemical compositions of emerging fresh produce: Microgreens. *Postharvest Biology and Technology*. 2015, 110, 140-148. [IF: 2.411]
9. B. Lin, Y. Luo, Z. Teng\*, B. Zhang\*, B. Zhou\*, **Q. Wang**. "Development of Silver/ Titanium Dioxide/ Chitosan Adipate Nanocomposite as an Antibacterial Coating for Fruit Storage" *LWT-Food Sci. & Technology*, 2015, 63, 1206-1213. [IF: 2.468]
10. Z. Teng\*, R. Xu\*, **Q. Wang**. "Beta-Lactoglobulin-Based Encapsulating Systems as Emerging Bioavailability Enhancers for Nutraceuticals: A Review" *RSC Advances*. Review Article 2015, 5, 35138-35154. [IF: 3.708]
11. B. Zhang\*, Y. Luo, B. Zhou\*, **Q. Wang**, P. Millner. "A novel microfluidic mixer-based approach for determining inactivation kinetics of *Escherichia coli* O157:H7 in chlorine solutions" *Food Microbiology*, 2015, 49, 152-160. [IF: 3.374]
12. Y. Li\*, Z. Teng\*, J. Sun, P. Chen., **Q. Wang**. "Enhancement of aqueous stability of allyl isothiocyanate using nanoemulsions prepared by an emulsion inversion point method", *Journal of Colloid & Interface Science*, 2015, 438, 130-137. [IF: 3.552]
13. B. Zhang\*, Y. Luo, J. Aplin, Y. Liu, G.R. Bauchan, G.F. Payne, **Q. Wang**, X. Nou, P.D. Millner. "Fabrication of Biomimetically-Patterned Surface and Their Application to Probing Plant-Bacteria interactions" *ACS Applied Materials and Interfaces*, 2014, 12467-12478. [IF: 5.008]
14. Z. Xiao\*, **X. Nou**, Y. Luo, **Q. Wang**. "Comparison of the growth of *Escherichia coli* O157: H7 and O104: H4 during sprouting and microgreen production from contaminated radish seeds" *Food Microbiology*, Communication, 2014, 44, 60-63. [IF: 3.374]
15. **Y. Luo**\*, **Q. Wang**. "Zein-based Micro- and Nanoparticles for Drug and Nutrient Delivery: A Review" *J of Applied Polymer Sci.*, Review article 2014, 131, 40696. [IF: 3.543]
16. Y. Liu, B. Zhang\*, V. Javvaji, E. Kim, M. E. Lee, S. R. Raghavan, **Q. Wang**, G. F. Payne. "Tyrosinase-mediated grafting and crosslinking of natural phenols confers functional properties to chitosan" *Biochemical Engineering Journal* 2014, 89, 21-27. [IF: 3.055]
17. R. Gott, Y. Luo\*, **Q. Wang**, W. Lamp. "Development of a biopolymer nanoparticle-based method of oral toxicity testing in aquatic invertebrates" *Ecotoxicology and Environmental Safety*, 2014, 104, 224-230. [IF: 2.203]
18. Z. Teng\*, Y. Li\*, Y. Niu, Y. Xu, L. Yu, **Q. Wang**. "Cationic  $\beta$ -lactoglobulin Nanoparticles 1 as a Bioavailability Enhancer: Comparison between Ethylenediamine and Polyethyleneimine as Cationizers" *Food Chemistry*, 2014, 159, 333-342. [IF: 3.334]

19. Y. Luo\*, **Q. Wang**. “Recent development of chitosan-based polyelectrolyte complexes with natural polysaccharides for drug delivery” *International J of Biological Macromolecules*, Review article, 2014, 64, 353-367. [IF: 2.596]
20. Z. Xiao\*, G. Lester, Y. Luo, Z. Xie, L. Yu, **Q. Wang**. “Effect of light exposure on sensorial quality, concentrations of bioactive compounds and antioxidant capacity of radish microgreens” *Food Chemistry*, 2014, 151, 472-479. [IF: 3.334]
21. B. Zhou\*, Y. Luo, X. Nou, Y. Yang, Y. Wu\*, **Q. Wang**. “Effects of Post-harvest Handling Conditions on Internalization and Growth of *Salmonella enterica* in Tomatoes” *J of Food Protection*, 2014, 77, 365-370. [IF: 1.937]
22. Z. Xiao\*, Y. Luo, G. Lester, L. Kou, T. Yang, **Q. Wang**. “Postharvest Quality and Shelf Life of Radish Microgreens as Impacted by Storage Temperature, Packaging Film, and Chlorine Wash Treatment” *LWT, Food Science & Technology*, 2014, 55, 551-558. [IF: 2.545]
23. Y. Liu, E. Kim, M.E. Lee, B. Zhang\*, Y.A. Elabd, **Q. Wang**, I.M. White, W.E. Bentley, G.F. Payne. “Enzymatic writing to soft films: potential to filter, store and analyze biologically relevant chemical information”. *Advanced Functional Materials*. 2014, 24, 480-491 [IF: 10.179].
24. J. Sun, Z. Xiao\*, Z. Ling, G. Lester, **Q. Wang**, J. Harnly, C. Pei. “Profiling Polyphenols in Five Brassica species Microgreens 1 by UHPLC-PDAESI/HRMSn”. *J of Agricultural and Food Chemistry*, 2013, 61, 10960-10970 [IF: 2.906].
25. Y. Luo\*, Z. Teng\*, T. Wang, **Q. Wang**. “The cellular uptake and transport of zein nanoparticles: Effects of sodium caseinate”. *J of Agricultural and Food Chemistry*, 2013, 61, 7621-7629 [IF: 2.906].
26. Z. Teng\*, Y. Li, Y. Luo\*, B. Zhang\*, **Q. Wang**. “Cationic  $\beta$ -lactoglobulin Nanoparticles as a Bioavailability Enhancer: Protein Characterization and Particle Formation”. *Biomacromolecules*, 2013, 14, 2848-2856. [IF: 5.479]
27. Y. Zhang\*, Y. Niu, Y. Luo\*, M. Ge, Y. Yang, **L. Yu, Q. Wang**. “Fabrication, Characterization and Antimicrobial Activities of Thymol-Loaded Zein Nanoparticles Stabilized by Sodium Casinate-Chitosan Hydrochloride Double Layers”. *Food Chemistry*, 2014, 142, 269-275. [IF: 3.334].
28. B. Zhang\*, A. Feldman\*, **Q. Wang**. “A Novel Insight in Rapid Allergen Detection in Food Systems: from Threshold Dose to Real-World Concentration”. *Sensors & Actuators B: Chemical*, 2013, 186, 597-6.2. [IF: 3.898]
29. Z. Teng\*, Y. Luo\*, **Q. Wang**. “Carboxymethyl Chitosan-Soy Protein Complex Nanoparticles for the Encapsulation and Controlled Release of Vitamin D3”. *Food Chemistry*, 2013, 141, 524-532. [IF: 3.334]

30. Y. Luo\*, Z. Teng\*, T. Wang, P. Chen, J. Sun, **Q. Wang**. “Encapsulation of indole-3-carbinol and 3,3'-diindolylmethane in zein/carboxymethyl chitosan nanoparticles with controlled release property and improved stability”. *Food Chemistry*, 2013, 139, 224-230. [IF: 3.334]
31. Z. Teng\* Y. Luo\*, T. Wang, B. Zhang\*, **Q. Wang**. “Development and application of nanoparticles synthesized with folic acid-conjugated soy protein”. *J of Agricultural and Food Chemistry*, 2013, 61, 2556-2564. [IF: 2.906]
32. Y. Liu, B. Zhang\*, K. Gray, Y. Cheng, E. Kim, G. Rubloff, W.E. Bentley, **Q. Wang**, G. Payne. “Electrodeposition of a Weak Polyelectrolyte Hydrogel: Remarkable Effects of Salt on Kinetics, Structure and Properties”. *Soft Matter*, 2013, 9, 2703-2710. [IF: 4.390]
33. L. Kou, Y. Luo, Z. Xiao\*, G. Lester, **Q. Wang**, Postharvest Biology, Quality and Shelf Life of Buckwheat Microgreens. *LWT-Food Science and Technology*, 2013, 51, 73-78. [IF: 2.545]
34. Y. Luo\*, Z. Teng\*, X. Wang\*, **Q. Wang**. “Development of carboxymethyl chitosan hydrogel beads in alcohol-aqueous binary solvent for nutrient delivery applications”. *Food Hydrocolloids* 2013, 31, 332-339. [IF: 3.473]
35. C. Shen\*, Y. Luo, X. Nou, **Q. Wang**, P. Millner. “The Dynamic Effects of Free Chlorine Concentration, Organic Load, and Exposure Time on the Inactivation of *Salmonella*, *Escherichia coli* O157:H7 and Non-O157 STEC”. *J. of Food Protection* 2013, 76, 386-393. [IF: 1.937]
36. L. Liao\*, **Q. Wang**, M. Zhao. “Functional, conformational and topographical changes of succinic acid deamidated wheat gluten upon freeze- and spray-drying: a comparative study”. *LWT-Food Science and Technology* 2013, 50, 177-184. [IF: 2.545]
37. Y. Li, J. Li, Q. Xia, B. Zhang\*, **Q. Wang**, Q. Huang. “Understanding the Dissolution of  $\alpha$ -Zein in Aqueous Ethanol and Acetic Acid Solutions”. *Journal of Physical Chemistry B*. 2012, 116, 12057-12064. [IF: 3.696]
38. Z. Xiao\*, **G. Lester**, Y. Luo, **Q. Wang**. “Assessment of Vitamin and Carotenoid Concentrations of Emerging Food Products: Edible Microgreens”. *J of Agricultural and Food Chemistry* 2012, 60, 7644-7651. [IF: 2.906]
39. C. Shen\*, Y. Luo, X. Nou, G. Bauchan, B. Zhou, **Q. Wang**, P. Millner. “Fresh Produce Washing Aid, T-128, Enhances Inactivation of *Salmonella* and *Pseudomonas* Biofilms on Stainless Steel in Chlorinated Wash Solutions”. *Applied and Environmental Microbiology* 2012, 78, 6789-6798. [IF: 3.829]
40. Y. Luo, X. Nou, P. Millner, B. Zhou\*, C. Shen\*, Y. Yang, Y. Wu\*, **Q. Wang**, H. Feng, D. Shelton. “A Semi-Commercial Scale Evaluation of a New Process Aid for Enhancing Chlorine Efficacy against Pathogen Survival and Cross-contamination during Produce Wash”. *International Journal of Food Microbiology* 2012, 158, 133-139. [IF: 3.327]

41. B. Zhang\*, **Q. Wang**. “Development of highly-ordered nanofillers in zein nanocomposites for improved tensile and barrier properties”. *J of Agricultural and Food Chemistry* 2012, 60, 4162-4169. [IF: 2.823]
42. Y. Wu\*, Y. Luo, **Q. Wang**. “Antioxidant and antimicrobial properties of essential oils encapsulated in zein nanoparticles prepared by liquid-liquid dispersion method”. *LWT-Food Science and Technology* 2012, 48, 283-290. [IF: 2.545]
43. Z. Teng\*, Y. Luo\*, **Q. Wang**. “Nanoparticles Synthesized from Soy Protein: Preparation, Characterization and Application for Nutraceutical Encapsulation”. *J of Agricultural and Food Chemistry* 2012, 60, 2712-2720. [IF: 2.906]
44. Y. Luo\*, Z. Teng\*, **Q. Wang**. “Development of zein nanoparticles coated with carboxymethyl chitosan for encapsulation and controlled release of vitamin D3”. *J of Agricultural and Food Chemistry* 2012, 60, 836-843. [IF: 2.823]
45. L. Liao\*, Y. Luo\*, **Q. Wang**. “Preparation and characterization of succinic acid deamidated wheat gluten microspheres for encapsulation of fish oil”. *Colloids and Surfaces B: Biointerfaces* 2012, 92, 305-314. [IF: 3.456]
46. Z. Teng\*, **Q. Wang**. “Extraction, identification, and characterization of water-insoluble protein from tobacco biomass”. *J. of the Sci. of Food and Agri.* 2012, 92, 1368-1374. [IF: 1.436]
47. L. Liao\*, **Q. Wang**, M. Zhao. “Investigation of the susceptibility of acid-deamidated wheat gluten to in vitro enzymatic hydrolysis using Raman spectra and free amino acid analysis”. *J. of the Sci. of Food and Agri.* 2012, 92, 1865-1873. [IF: 1.436]
48. Y. Luo\*, Z. Xiao\*, **Q. Wang**, B. Li, B. Li. “Antioxidant Activities and Inhibitory Effects of Auricularia Auricular and Its Functional Formula Diet Against Vascular Smooth Muscle Cell in vitro”. *Food and Nutrition Science*, 2011, 2, 265-271. [IF: N/A]
49. B. Zhang\*, Y. Luo, **Q. Wang**. “Development of silver/ $\alpha$ -lactalbumin nanocomposites: a new approach to reduce silver toxicity”. *International J. of Antimicrobial Agents*, 2011, 38, 502-509. [IF: 4.128]
50. Z. Xiao\*, Y. Luo\*, Y. Luo, **Q. Wang**. “Combined effect of sodium chlorite dip treatment and chitosan coatings on quality of fresh-cut An’jou pears”. *Postharvest Biology and Technology* 2011, 62, 319-326. [IF: 2.411]
51. Y. Luo\*, B. Zhang\*, M. Whent, L. Yu, **Q. Wang**. “Preparation, characterization of zein/chitosan complex for encapsulation of  $\alpha$ -tocopherol and in vitro controlled release study”. *Colloids and Surfaces B: Biointerfaces* 2011, 85, 145-152. [IF: 3.456]
52. S. Zhang, Y. Luo\*, H. Zeng, **Q. Wang**, F. Tian, J. Song, W.-H. Cheng. “Encapsulation of selenium in chitosan nanoparticles improves selenium availability and protects cells from selenium-induced DNA damage response”. *J Nutritional Biochemistry* 2011, 22, 1137-1142. [IF: 3.891]

53. B. Zhang\*, Y. Luo\*, **Q. Wang**. “Effect of Acid and Base Treatments on Structural, Rheological, and Antioxidant Properties of Alpha-Zein”. *Food Chemistry* 2011, 124, 210-220. [IF: 3.334]
54. Y. Li, Y. Luo\*, G. Chen, Z. Xiao\*, **Q. Wang**, L. Zhao, B. Ji. “Comparison of protective effects between oat  $\beta$ -glucan and phenol-rich extracts in hyperlipidemic ICR mice” *J of Food and Drug Analysis* 2011, 19: 49-57 [IF: 0.643]
55. B. Zhang\*, Y. Luo\*, **Q. Wang**. “Development of Silver-Zein Composites as a Promising Antimicrobial Agent”. *Biomacromolecules* 2010, 11, 2366-2375. [IF: 5.479]
56. Y. Luo\*, B. Zhang\*, W.-H. Cheng, **Q. Wang**. “Preparation, Characterization and Evaluation of Selenite-Loaded Chitosan/TPP Nanoparticles with or without Zein Coating”. *Carbohydrate Polymers*, 2010, 82, 942-951. [IF: 3.628]
57. W. Liu, Z. Xie, B. Zhang\*, **Q. Wang**, W. Yao, X. Gao, L. Yu. “Effects of Hydroxypropylation on the Functional Properties of Psyllium”. *J of Agricultural and Food Chemistry*, 2010, 58, 1615-1621. [IF: 2.906]
58. W. Liu, B. Zhang\*, **Q. Wang**, X. Gao, W. Yao, L. Yu. “Effects of Sulfation on the Physicochemical and Functional Properties of Psyllium”. *J of Agricultural and Food Chemistry*, 2010, 58, 172–179. [IF: 2.906]
59. Z. Cheng, J. Blackford, **Q. Wang**, L. Yu. “Acid Treatment to Improve Psyllium Functionality”. *J of Functional Foods*, 2009, 1, 44-49. [IF: 2.446]
60. **Q. Wang**, L. Yin, G. W. Padua. "Effect of Hydrophilic and Lipophilic Compounds on Zein Micro-Structures". *Food Biophysics*, 2008, 3, 174-181. [IF: 2.187]
61. **Q. Wang**, W. Xian, S. Li, C. Liu, G. W. Padua. “Topography and Biocompatibility of Patterned Hydrophilic/Hydrophobic Zein Layers”. *Acta Biomaterialia*, 2008, 4, 844-851. [IF: 4.865]
62. Y. Wang, **Q. Wang**, W. E. Artz, G. W. Padua. “Fourier Transform Infrared Spectra of Drying Oils Treated by Irradiation”. *J. Agriculture and Food Chemistry*, 2008, 56, 3043-3048. [IF: 2.906]
63. S. Li, T. Dellinger, **Q. Wang**, S. Szegedi, C. Liu. “Pneumatic Actuated Elastomeric Device for Nanoscale Surface Patterning”. *Applied Physics Letters*, 2007, 91, 023109. [IF: 3.794]
64. **Q. Wang**, Q. Wang, X. Wang, G.W. Padua. “Zein Dynamic Adsorption to Carboxylic and Alkyl Coated Surfaces”. *J of Agricultural and Food Chemistry*, 2006, 54, 517-522. [IF: 2.906]
65. **Q. Wang**, G.W. Padua. “Properties of Zein Films Coated with Drying Oils”. *J of Agricultural and Food Chemistry*, 2005, 53, 3444-3448. [IF: 2.823]



66. **Q. Wang**, J-F Wang, P. H. Geil, G.W. Padua. "Zein Adsorption to Hydrophilic and Hydrophobic Surfaces Investigated by Surface Plasmon Resonance". *Biomacromolecules*, 2004, 5, 1356-1361. [IF: 5.479]
67. **Q. Wang**, P. Geil, G.W. Padua. "Role of Hydrophilic and Hydrophobic Interactions in Structure Development of Zein Films". *J of Polymers and the Environment*, 2004, 12, 197-202. [IF: 1.349]
68. **Q. Wang**, A. R. Crofts, G. W. Padua. "Protein-Lipid Interactions in Zein Films Investigated by Surface Plasmon Resonance". *J of Agricultural and Food Chemistry*, 2003, 51, 7439-7444. [IF: 2.906]
69. A.M. Rakotonirainy, **Q. Wang**, G.W. Padua. "Behavior of Zein Films as Modified Atmosphere Packaging for Fresh Broccoli". *J of Food Science*, 2001, 66(8): 1108-1111. [IF: 1.658]
70. H. Sun, X. Wang, **Q. Wang**, H. Wang, Y. Chen, L. Dai, M. Cao. "The Effect of Chemical Species on Bioaccumulation of Rare Earth Elements in Rice Grown in Nutrient Solution". *Toxicological and Environmental Chemistry*, 1999, 69: 75-85. [IF: 2.809]
71. H. Sun, X. Wang, **Q. Wang**, L. Wang, Y. Chen, L. Dai, Z. Li, M. Cao. "The Species of Spiked Rare Earth Elements in Sediment and Potential Bioavailability to Algae (*Chlorella Vulgarize Beijerinck*)". *Chemosphere*, 1998, 36(2): 329-337. [IF: 3.206]
72. H. Sun, X. Wang, **Q. Wang**, H. Wang, L. Wang, Y. Chen, L. Dai, M. Cao. "The Effect of Chemical Species on Bioaccumulation of Rare Earth Elements in Wheat Grown in Nutrient Solution". *Chemosphere*, 1997, 35(8): 1699-1707. [IF: 3.206]
73. **Q. Wang**, H. Sun, X. Wang, L. Wang. "The Species of Spiked Rare Earth Element La and Its Bioavailability" (in Chinese). *Environmental Chemistry*, 1997, 16(2): 109.
74. **Q. Wang**, H. Sun, H. Wang, X. Wang. "Bioaccumulation of Two Speciations of Rare Earth Elements in Wheat Seedlings" (in Chinese). *J of Nanjing University*, 1997, 33(4):70.
75. **Q. Wang**, H. Sun, H. Wang, X. Wang. "Bioaccumulation of Two Speciations of Rare Earth Elements in Rice Seedlings" (in Chinese). *Environmental Science*, 1997, 18(6):56.

#### II.D. Published Conference Proceedings

##### II.D.1. Refereed Conference Proceedings

1. **Q. Wang**, L. Yin, G. W. Padua. "Zein Controlled Micro- and Nano- Structures for Food Applications". AICHE Proceedings, Salt Lake City, November, 2007
2. **Q. Wang**, W. Xian, S. Li, C. Liu, G.W. Padua. "Cell Growth on Micropatterned Zein Surfaces". Oral presentation in AICHE Proceedings, San Francisco, November, 2006
3. G.W. Padua, A.M. Rakotonirainy, **Q. Wang**. "Zein-based Biodegradable Packaging for Frozen Foods" in Proceedings of the Food Biopack Conference, Copenhagen, Denmark, Pp84-88, Aug. 27-29, 2000.

4. X. Wang, H. Sun, **Q. Wang**, H. Wang. "The Distribution of Different Species of Rare Earth Elements in Plants and Cells". *The Second Sina-Dutch Workshop on the Environmental Behavior and Ecotoxicology of Rare Earth Elements and Heavy Metals*, Holland, 1997.

#### II.E. Conferences, Workshops, and Talks

##### II.E.1. Keynotes

##### II.E.2. Invited Talks

1. **Q. Wang**, Y. Li\*, Y. Guan\*, G. Payne, W. Bentley. Integrating Synthetic Biology and Signal Processing for the Rapid Assessment of Food Pathogens. Penn State University, PA, June 2016.
2. **Q. Wang**, Z. Teng\*, Y. Luo, P. Millner, B. Zhang, B. Zhou. Validation of chlorine level in sanitization system to avoid cross-contamination. Seattle, WA, June 2016.
3. **Q. Wang**, Z. Teng\*. "Cationic  $\beta$ -lactoglobulin nanoparticles as a bioavailability enhancer" *IFT annual meeting*, New Orleans, LA, June 2014.
4. **Q. Wang**, Y. Luo\*, T. Wang. "Encapsulation of I3C and DIM in zein/carboxymethyl chitosan complex nanoparticles for improved stability and controlled release". *ISNFF Annual Meeting*, December, Kona, HI, 2012.
5. **Q. Wang**, Y. Luo\*. "Development of zein - carboxymethyl chitosan complex nanoparticles for encapsulation and controlled release of vitamin D3". *American Chemical Society Annual Meeting*, San Diego, CA, March 2012.
6. **Q. Wang**, Z. Xiao\*, Y. Luo. "Sodium chlorite treatment with and without chitosan coatings on fresh-cut pears". *2<sup>nd</sup> Environment, Food, and Public Health International Conference*, Kunming, China, July 2011
7. **Q. Wang**, B. Zhang\*. "Zein self-assembled structures affected by pH and surfactants". *American Chemical Society Annual Meeting*, Washington DC, August 2009.
8. **Q. Wang**, B. Zhang\*. "Nanotechnology and Food". *Environment, Food, and Public Health International Conference*, Xi'an, China, June 2009.
9. **Q. Wang**, B. Zhang\*. "Zein Self-Assembled Nano- and Micro-Scale Structures". *Conference of Food Engineering Annual Meeting*, Columbus, OH, April 2009.
10. **Q. Wang**, L. Yin, G. W. Padua. "Zein Controlled Micro- and Nano- Structures for Food Applications". *AIChE Annual Meetings*, Salt Lake City, November 2007
11. **Q. Wang**, W. Xian, S. Li, C. Liu, G.W. Padua. "Cell Growth on Micropatterned Zein Surfaces". Oral presentation in *AIChE Annual Meeting*, San Francisco, CA, November 2006

##### II.E.3. Refereed Presentations

##### II.E.4. Refereed Abstracts

1. Y. Song\*, Y. Li\*, Z. Teng\*, **Q. Wang**. Tuning the Size and Magnetic Property of Fe<sub>3</sub>O<sub>4</sub> Particles by Poly(Acrylic Acid) for Pathogen Capture. *IFT Annual Meeting*, Chicago, IL, July, 2016.
2. Z. Xiao\*, E. Park, Y. Luo, X. Nou, G.E. Lester, **Qin Wang**. Consumer Preference Study of Microgreens as a Healthy Food/Snack Ingredient. IFT annual meeting, Chicago, IL, July 2016.
3. **Q. Wang**, Y. Luo, P. Millner, B. Zhang\*, B. Zhou\*. Validation of chlorine level in sanitization system to avoid cross-contamination. *Center for Produce Safety, Produce Research Symposium*, Hyatt Grand Atlanta, Buckhead GA, June, 2015.
4. Y. Li\*, **Q. Wang**, G. Payne, W. Bentley, Y. Liu. Self-assembly with Orthogonal Imposed Stimuli to Impart Structure and Confer Magnetic Function to Electrodeposited Hydrogel. *Gordon Research Conference*, Boston, MA, June, 2015.
5. Y. Liu, H. Wu, E. Kim, W.E. Bentley, **Q. Wang**, G.F. Payne. Biofabrication for Molecular Communication Systems. *Gordon Research Conference*, Boston, MA, June, 2015.
6. Z. Teng\*, Y. Li\*, **Q. Wang**, Insight into Curcumin-loaded  $\beta$ -lactoglobulin Nanoparticles: Incorporation, Particle Stability and Releasing Profiles, *IFT annual meeting*, Chicago, IL, July, 2015.
7. Z. Teng\*, Y. Luo\*, Y. Li\*, **Q. Wang**, Surface Properties, Transport, and Delivery of Biopolymer-based Drug Carriers: Using Cationic  $\beta$ -lactoglobulin as a Model System, *IFT annual meeting*, Chicago, IL, July, 2015.
8. R. Y. Xu\*, Z. Teng\*, **Q. Wang**. Potential Low Toxicity Crosslinker for Protein-based Nanoparticles. *IFT Annual Conference*. Chicago, IL; July, 2015.
9. Y. Luo, B. Zhang\*, **Q. Wang**, X. Nou, P. Millner. "Fabrication of biomimetically patterned plant surfaces and their application to probing bacteria-food matrices interactions", *International Union of Food Science and Technology*, Montreal, Canada. August, 2014.
10. B. Zhang\*, Y. Luo, **Q. Wang**, X. Nou, P. Millner. Fabrication and potential application of biomimetic surface for probing plant-bacteria interactions, *International Association of Food Protection*, Indianapolis, IN, August 2014.
11. E. Park, Z. Xiao\*, G. Lester, R. safner, Y. Luo, **Q. Wang**. "Evaluation of sensory attributes, chemical compositions, and phytonutrient concentrations of microgreens" IFT annual meeting, New Orleans, LA, June 2014.
12. Y. Li\*, Z Teng\*, **Q. Wang**. "Self-assemble nanoemulsions and zein-nanoparticles for the stabilization of allyl isothiocyanate in aqueous dispersion". *IFT annual meeting*, New Orleans, LA, June 2014.

13. Z. Teng\*, B. Zhang\*, Y. Li\*, **Q. Wang**. “Cationic  $\beta$ -lactoglobulin Nanoparticles as a Bioavailability Enhancer: Protein Characterization and Particle Formation” *IFT annual meeting*, New Orleans, LA, June 2014.
14. Z. Teng\*, Y. Li\*, **Q. Wang**. Cationic  $\beta$ -lactoglobulin nanoparticles as a bioavailability enhancer: application of polyethyleneimine as a cationizer”. *IFT annual meeting*, New Orleans, LA, June 2014.
15. Z. Xiao\*, X. Nou, Y. Luo, **Q. Wang**. “Growth of *Escherichia coli* O157: H7 and O104: H4 during Sprouting and Microgreen Production from Inoculated Radish Seeds” *International Association of Food Protection*, Indianapolis, IN, August 2014.
16. R. Gott, W. Lamp, **Q. Wang**. “Development of a biopolymer-based Tier-1 assay for effects of plant-incorporated protectants (PIPs) on leaf-consuming shredders in aquatic systems”. *Ecological Society of American (ESA)’s 61st Annual Meeting*, Austin, TX, November 2013.
17. Z. Teng\*, Y. Luo\*, **Q. Wang**. “Development and application of nanoparticles synthesized with folic acid-conjugated soy protein”. ACS Annual Meeting, Indianapolis, IN, September 2013.
18. Z. Teng\*, Y. Luo\*, **Q. Wang**. “Carboxymethyl chitosan-soy protein complex nanoparticles for the encapsulation and controlled release of vitamin D<sub>3</sub>”. ACS Annual Meeting, Indianapolis, IN, September 2013.
19. B. Zhang\*, A. Feldman\*, Y. Luo, **Q. Wang**. “Rapid Allergen Detection in Food Systems Using Microfluidic Device: from Threshold Dose to Real-World Concentration”. *IFT annual meeting*, Chicago, IL, July 2013.
20. Z. Xiao\*, Y. Luo, G. Lester, L. Kou., T. Yang\*, **Q. Wang**. “Postharvest Quality and Shelf Life of Radish Microgreens as Impacted by Storage Temperature, Packaging Film, and Chlorine Wash Treatment”. *IFT annual meeting*, Chicago, IL, July 2013.
21. Y. Luo\*, Z. Teng\*, T. Wang, **Q. Wang**. “The cellular uptake and transport of zein nanoparticles: effect of sodium caseinate”. *IFT annual meeting*, Chicago, IL, July 2013.
22. Y. Luo\*, Z. Teng\*, X. Wang, **Q. Wang**. “Development of carboxymethyl chitosan hydrogel beads in alcohol-aqueous binary solvent for nutrient delivery applications”. *IFT annual meeting*, Chicago, IL, July 2013.
23. Y. Luo\*, T. Wang, Z. Teng\*, C. Pei, J. Sun, **Q. Wang**. “Characterization and evaluation of zein-carboxymethyl chitosan complex nanoparticles for encapsulation of phytochemicals to improve their stabilities”. *IFT annual meeting*, Chicago, IL, July 2013.
24. Z. Teng\*, **Q. Wang**. “Carboxymethyl chitosan-soy protein complex nanoparticles for the

- encapsulation and controlled release of vitamin D3”. *IFT annual meeting*, Chicago, IL, July 2013.
25. Z. Teng\*, **Q. Wang**. “Development and application of nanoparticles synthesized with folic acid-conjugated soy protein”. *IFT annual meeting*, Chicago, IL, July 2013.
  26. B. Zhou\*, Y. Luo, Y. Yang, Y. Wu\*, X. Nou, **Q. Wang**. Fate of infiltrated Salmonella cells in tomatoes during storage. *International Association of Food Protection Annual Meeting*, Charlotte, NC, 2013.
  27. Y. Luo\*, **Q. Wang**. “Encapsulation of biopharmaceuticals in zein/carboxymethyl chitosan complex nanoparticles improves their stabilities and provides controlled release”. *20<sup>th</sup> International Conference on Bioencapsulation*, August, Ontario, Canada, 2012.
  28. C. Shen\*, Y. Luo, X. Nou, G. Bauchan, B. Zhou, **Q. Wang**, P. Millner. “Fresh produce washing aid, T-128, enhances inactivation of *Salmonella* and *Pseudomonas* biofilms on stainless steel coupons in chlorinated wash solutions”. *IAFP Annual Meeting*, Providence, RI, July 2012.
  29. C. Shen\*, Y. Luo, X. Nou, **Q. Wang**, P. Millner. “Enhanced inactivation of *Salmonella*, *Escherichia coli* O157:H7 and *Pseudomonas* biofilms using fresh produce washing aid, T-128, on cantaloupe rinds with chlorinated wash solutions”. *2012 IAFP Annual Meeting*, Providence, RI, July 2012.
  30. C. Shen\*, Y. Luo, X. Nou, **Qin Wang**, P. Millner. “Inactivation of *Salmonella*, *Escherichia coli* O157:H7 and Non-O157 STEC by hypochlorite solutions with high organic loads”. *IAFP Annual Meeting*, Providence, RI, July 2012.
  31. B. Zhou\*, Y. Luo, Y. Yang, Y. Wu\*, Y. Paul, X. Nou, **Q. Wang**. Effects of Some Post-harvest Practice Conditions on Internalization of Salmonella Newport in Tomatoes. *International Association of Food Protection Annual Meeting*, Providence, RI, July 2012.
  32. Y. Wu\*, Y. Luo, **Q. Wang**. “Preparation of zein nanoparticles encapsulated with essential oil by liquid-liquid dispersion and their antioxidant and antimicrobial property”. *IFT Annual Meeting*, Las Vegas, NV, June 2012.
  33. B. Zhang\*, **Q. Wang**. “Development of well-ordered biopolymer-based nanocomposites using external magnet induced in situ nanofillers reorientation for improved tensile and barrier properties.” *IFT Annual Meeting*, Las Vegas, NV, June 2012.
  34. Z. Teng\*, Y. Luo\*, **Q. Wang**. “Nanoparticles Synthesized from Soy Protein: Preparation, Characterization, and Application in Nutraceutical Encapsulation” *IFT Annual Meeting*, Las Vegas, NV, June 2012.
  35. Z. Xiao\*, G. Lester, Y. Luo, **Q. Wang**. “Survey on ascorbic acids, phylloquinone, carotenoids and tocopherols concentrations of 25 microgreens”. *IFT Annual Meeting*, Las

Vegas, NV, June 2012.

36. Y. Luo\*, **Q. Wang**. “Development of zein nanoparticles coated with carboxymethyl chitosan for encapsulation and controlled release of vitamin D3”. *IFT Annual Meeting*, Las Vegas, NV, June 2012.
37. Y. Luo\*, **Wang, Q.** Application of food-based biopolymers to develop delivery systems for nutraceuticals. ACS Middle Atlantic Regional Meeting (MARM), Baltimore, MD, June. 2012.
38. Y. Luo\*, **Q. Wang**. “Development of Zein/Chitosan nanocomplex for Encapsulation and Controlled Release of Nutrients”. *11<sup>th</sup> International Hydrocolloids Conference*, Purdue University, IN, May 2012.
39. B. Zhang\*, **Q. Wang**. “The preparation of silver/alpha-lactalbumin composites and their applications as an antiseptic agent with enhanced biocompatibility and silver retaining capabilities”. *IFT Annual Meeting*, New Orleans, LA, June 2011.
40. Y. Luo\*, **Q. Wang**. “Preparation and characterization of zein/chitosan nanocomplex for encapsulation of  $\alpha$ -tocopherol”. *IFT Annual Meeting*, New Orleans, LA, June 2011.
41. Z. Teng\*, **Q. Wang**. “Extraction and Identification of the Water-insoluble Proteins from Tobacco Biomass”. *IFT Annual Meeting*, New Orleans, LA, June 2011.
42. L. Liao\*, Y. Luo\*, **Q. Wang**. “Preparation, characterization, and evaluation of fish oil nano/micro-particles encapsulated by deamidated wheat gluten with or without chitosan coatings”. *IFT Annual Meeting*, New Orleans, LA, June 2011.
43. Z. Xiao\*, **Q. Wang**. “Combined effects of sodium chlorite dip treatment and edible coatings on the quality of fresh-cut d’Anjou pears”. *IFT Annual Meeting*, New Orleans, LA, June 2011.
44. Y. Luo\*, B. Zhang\*, W-H. Cheng, **Q. Wang**. “Preparation, Characterization and Evaluation of Selenite-Loaded Chitosan/TPP Nanoparticles”. *IFT Annual Meeting*, Chicago, IL, July 2010.
45. B. Zhang\*, **Q. Wang**. “Zein Self-Assemble Structures Affected by pH, Surfactants, and Solvent Type”. *IFT Annual Meeting*, Anaheim, CA, June 2009
46. **Q. Wang**, C. Liu, A.R. Crofts, G.W. Padua. “Zein Self-Assembled Nanoscale Structures”. Poster in *IFT Annual Meeting*, Orlando, FL, June 2006
47. **Q. Wang**, C. Liu, A.R. Crofts, G.W. Padua. “Zein Self-Assembly on Nanopatterned Surfaces”. Poster in *Nanotechnology Industry Workshop*, University of Illinois at Urbana-Champaign, IL, May 2006

48. **Q. Wang**, C. Liu, A.R. Crofts, G.W. Padua. “Nanofabricated Zein Biomaterials”. Poster in *Nanotechnology Industry Workshop*, University of Illinois at Urbana-Champaign, IL, May 2005
49. **Q. Wang**, G.W. Padua. “Effect of Surface Polarity on Zein Adsorption at a Solid-Liquid Interface”. Oral presentation in *IFT Annual Meeting*, Las Vegas, NV, July 2004
50. **Q. Wang**, P. Geil, G.W. Padua. “Structural Development in Zein-Oleate Sheets”. Oral presentation in *11<sup>th</sup> Annual Meeting of BioEnvironmental Polymer Society*, Denver, CO, August 2003
51. **Q. Wang**, G.W. Padua. “Protein-Lipid Interactions in Zein Films Investigated by Surface Plasmon Resonance”. Technical poster in *IFT Annual Meeting*, Chicago, IL, July 2003
52. **Q. Wang**, G.W. Padua. “Structure of Zein Layers at Protein-Lipid Interfaces”. Poster in *Nanotechnology Industry Workshop*, University of Illinois at Urbana-Champaign, IL, May 2003
53. **Q. Wang**, G.W. Padua. “Effect of Ionizing Radiation on Tensile Properties of Zein Films”. Poster in *IFT Annual Meeting*, New Orleans, LA, June 2001, pp181

#### II.E.9. Non-Refereed Posters

1. L. Mei\*, Q. Wang, The development and application of silver nanocluster embedded PMAA films as antimicrobial coating materials, NFSC Annual Research Day, held at the National Agricultural Library (NAL), Beltsville, MD; May, 2016.
2. L. Mei\*, Q. Wang, The development and application of silver nanocluster embedded PMAA films as antimicrobial coating materials, College of Agriculture & Natural Resources (AGNR) Open House, held at Clarksville Facility, Elicott City, MD; October, 2016.
3. Y. Li, E. Kim, Y. Liu, Y. Song, G. F. Payne, C-Y Tsao, Z. Teng, T. Gao , W. E. Bentley, Y. Guan, L. Mei, Q. Wang. Dual-Functional Magnetic and Redox-Active Film for Bio-Capture and Biosensing, Maryland NanoDay 2016, held at The Jeong H. Kim Engineering Building, College Park, MD; May, 2016
4. Y. Song\*, Y. Li\*, Z. Teng, Q. Wang, Tuning the Size and Magnetic Property of Fe<sub>3</sub>O<sub>4</sub> Particles by Poly(Acrylic Acid) for Pathogen Capture, NFSC annual Research Day, held at the National Agricultural Library (NAL), Beltsville, MD; May, 2016.
5. Y. Song\*, Y. Li\*, Z. Teng, Q. Wang, Tuning the Size and Magnetic Property of Fe<sub>3</sub>O<sub>4</sub> Particles by Poly(Acrylic Acid) for Pathogen Capture, Maryland NanoDay 2016, held at The Jeong H. Kim Engineering Building, College Park, MD; May, 2016.
6. R. Y. Xu\*, Z. Teng\*, **Q. Wang**. Potential Low Toxicity Crosslinker for Protein-based Nanoparticles. NFSC annual Research Day, held at the National Agricultural Library (NAL), Beltsville, MD; May, 2015.

7. Z. Teng\*, Y. Li\*, **Q. Wang**, Insight into Curcumin-loaded  $\beta$ -lactoglobulin Nanoparticles: Incorporation, Particle Stability and Releasing Profiles, NFSC annual Research Day, held at the National Agricultural Library (NAL), Beltsville, MD; May, 2015.
8. Y. Song, Y. Li, Z. Teng, **Q. Wang**. Surface Functionalization and Bioconjugation of Fe<sub>3</sub>O<sub>4</sub> Magnetic Nanoparticles. NFSC annual Research Day, held at the National Agricultural Library (NAL), Beltsville, MD; May, 2015.
9. **Q. Wang**, Z. Teng\*. Cationic  $\beta$ -lactoglobulin Nanoparticles as a Bioavailability Enhancer: Protein Characterization and Particle Formation. Nano Day held at University of Maryland, College Park, MD; June 2014.
10. Z. Teng\*, Y. Li\*, **Q. Wang**. Cationic  $\beta$ -lactoglobulin Nanoparticles as a Bioavailability Enhancer: Using Polyethyleneimine as Cationizer. Nano Day held at University of Maryland, College Park, MD; June 2014.
11. **Q. Wang**, Z. Teng\*. Cationic  $\beta$ -lactoglobulin Nanoparticles as a Bioavailability Enhancer: Protein Characterization and Particle Formation. NFSC annual Research Day, held at the National Agricultural Library (NAL), Beltsville, MD; May, 2014.
12. Z. Teng\*, Y. Li\*, **Q. Wang**. Cationic  $\beta$ -lactoglobulin Nanoparticles as a Bioavailability Enhancer: Using Polyethyleneimine as Cationizer. NFSC annual Research Day, held at the National Agricultural Library (NAL), Beltsville, MD; May, 2014.
13. Z. Teng\*, Y. Luo\*, B. Zhang\*, **Q. Wang**. Development and Application of Nanoparticles Synthesized with Folic Acid-Conjugated Soy Protein. Chemical Society of Washington Travel award Recipient Poster Presentation held at the ACS headquarter, Washington DC, Mar 2014.
14. Z. Teng\*, Y. Luo\*, **Q. Wang**. Carboxymethyl chitosan–soy protein complex nanoparticles for the encapsulation and controlled release of vitamin D<sub>3</sub>. Chemical Society of Washington Travel award Recipient Poster Presentation held at the ACS headquarter, Washington DC, Mar 2014.
15. Z. Xiao\*, G. E. Lester, Y. Luo, Z. Xie, L. Yu, **Q. Wang**. Effect of light exposure on sensorial quality, concentrations of bioactive compounds and antioxidant capacity of radish microgreens during low temperature storage. USDA-ARS Annual Beltsville Area Poster Day, held at the National Agricultural Library (NAL), Beltsville, MD; April, 2014.
16. Z. Xiao\*, X. Nou, Y. Luo, **Q. Wang**. Comparison of the Growth of Escherichia coli O157: H7 and O104: H4 during Sprouting and Microgreen Production from Contaminated Radish Seeds. USDA-ARS Annual Beltsville Area Poster Day, held at the National Agricultural Library



(NAL), Beltsville, MD; April, 2014.

17. B. Zhang, Y. Luo, **Q. Wang**, X. Nou, P. Millner. Development of a Microfluidic Device Incorporating a Biomimetic Interface to Assay Plant-Microorganism Interactions Critical to Food Safety of Fresh-Cut Produce, USDA BARC Poster Day, Beltsville, MD. Apr, 2013.
18. Z. Xiao\*, Y. Luo, G. E. Lester, L. Kou, T. Yang, **Q. Wang**. Postharvest quality and shelf life of radish microgreens as impacted by storage temperature, packaging atmosphere, and chlorine wash treatment. NFSC Annual Research Day, held at the National Agricultural Library (NAL), Beltsville, MD; May, 2013.
19. Z. Xiao\*, Y. Luo, G. E. Lester, L. Kou, T. Yang, **Q. Wang**. Postharvest quality and shelf life of radish microgreens as impacted by storage temperature, packaging atmosphere, and chlorine wash treatment. USDA-ARS Annual Beltsville Area Poster Day, held at the National Agricultural Library (NAL), Beltsville, MD; April, 2013.
20. Z. Xiao\*, G. Lester, Y. Luo, **Q. Wang**. Assessment of Phytonutrient Concentrations of Emerging Food Products: Edible Microgreens. AGNR Open House, held at Central Maryland Research & Education Center - Clarksville Facility, Ellicott City, MD; October, 2012.
21. Y. Luo\*, **Wang, Q.** Development of zein nanoparticles coated with carboxymethyl chitosan for encapsulation and controlled release of vitamin D3. NFSC Annual Poster Competition, National Agricultural Library (NAL); Beltsville, MD; May, 2012.
22. Z. Xiao\*, G. Lester, Y. Luo, **Q. Wang**. Assessment of Phytonutrient Concentrations of Emerging Food Products: Edible Microgreens. NFSC Annual Research Day, held at the National Agricultural Library (NAL), Beltsville, MD; May, 2012.
23. Z. Xiao\*, G. Lester, Y. Luo, **Q. Wang**. Assessment of Phytonutrient Concentrations of Emerging Food Products: Edible Microgreens. USDA-ARS Annual Beltsville Area Poster Day, held at the National Agricultural Library (NAL), Beltsville, Maryland; April, 2012.
24. Z Teng, Y Luo, Q Wang. Nanoparticles Synthesized from Soy Protein: Preparation, Characterization and Application. NFSC annual Research Day, held at the National Agricultural Library (NAL), Beltsville, MD; May, 2012.
25. B. Zhang\*, **Q. Wang**. Development of well-ordered biopolymer-based nanocomposites using external magnet induced in situ nanofillers reorientation for improved tensile and barrier properties.. NFSC annual Research Day, National Agricultural Library (NAL); Beltsville, MD; May, 2011.
26. Z. Xiao\*, Y. Luo\*, Y. Luo, **Q. Wang**. Combined effects of sodium chlorite dip treatment and edible coatings on the quality of fresh-cut d'Anjou pears. Maryland Section IFT Poster Contest, held at the Marriott Hunt Valley Ballroom, Hunt Valley, MD; November, 2011.
27. Y. Luo\*, **Q. Wang**. Preparation, characterization of zein/chitosan complex for encapsulation

- of  $\alpha$ -tocopherol, and its *in vitro* controlled release study. Central Maryland Research & Education Center - Clarksville Facility, Ellicott City, MD; October, 2011.
28. Z. Xiao\*, Y. Luo\*, Y. Luo, **Q. Wang**. Combined effects of sodium chlorite dip treatment and edible coatings on the quality of fresh-cut d'Anjou pears. AGNR Open House, held at Central Maryland Research & Education Center - Clarksville Facility, Ellicott City, MD; October, 2011.
  29. Y. Luo\*, **Q. Wang**. Preparation, characterization of zein/chitosan complex for encapsulation of  $\alpha$ -tocopherol, and its *in vitro* controlled release study. NFSC annual Research Day, National Agricultural Library (NAL); Beltsville, MD; May, 2011.
  30. Z. Xiao\*, Y. Luo\*, Y. Luo, **Q. Wang**. Combined effects of sodium chlorite dip treatment and edible coatings on the quality of fresh-cut d'Anjou pears. NFSC Annual Research Day, held at the National Agricultural Library (NAL), Beltsville, MD; May, 2011.
  31. Z. Xiao\*, Y. Luo\*, Y. Luo, **Q. Wang**. Combined effects of sodium chlorite dip treatment and edible coatings on the quality of fresh-cut d'Anjou pears. USDA-ARS Annual Beltsville Area Poster Day, held at the USDA-ARS National Visitor Center, Beltsville, MD; April, 2011.
  32. Z. Xiao\*, Y. Luo\*, Y. Luo, **Q. Wang**. Combined effects of sodium chlorite dip treatment and edible coatings on the quality of fresh-cut d'Anjou pears. Graduate Research Interaction Day (GRID), Stamp Student Union, University of Maryland, College Park, MD; April, 2011.
  33. Z. Teng\*, **Q. Wang**. Extraction, Identification and Characterization of Tobacco Biomass Proteins. NFSC annual Research Day, National Agricultural Library (NAL), Beltsville, MD; May, 2011.
  34. Y. Luo\*, B. Zhang\*, W.H. Cheng, **Q. Wang**. Preparation, characterization and evaluation of selenite-loaded chitosan/TPP nanoparticles. NFSC annual Research Day, National Agricultural Library (NAL); Beltsville, MD; May, 2010.
  35. Y. Luo\*, **Q. Wang**. Development of zein nanoparticles coated with carboxymethyl chitosan for encapsulation and controlled release of vitamin D3. Central Maryland Research & Education Center - Clarksville Facility, Ellicott City, MD; October, 2012.
  36. Y. Luo\*, **Q. Wang**. Preparation, characterization of zein/chitosan complex for encapsulation of  $\alpha$ -tocopherol, and its *in vitro* controlled release study. Poster Contest of Maryland IFT, Timonium, MD; Nov., 2010.
  37. B. Zhang\*, **Q. Wang**. Silver Zein Composites as a Novel Antimicrobial Agent, Bioscience Day, College Park, MD. November, 2010.
  38. B. Zhang\*, **Q. Wang**. The preparation of silver/alpha-lactalbumin composites and their applications as an antiseptic agent with enhanced biocompatibility and silver retaining capabilities. NFSC annual Research Day, National Agricultural Library (NAL); Beltsville,

MD; May, 2010.

39. B. Zhang\*, **Q. Wang**. Zein structures affected by pH, surfactant, and zein purity, Graduate Research Interaction Day, College Park, MD. April, 2009.

#### II.I Significant Works in Public Media

*Specify the following – Title, Publication/Media Name, Contributors, Types (Print, online, broadcast, video, documentary)*

##### II.I.5. Other

Assessment of Phytonutrient Concentrations of Emerging Food Products: Edible Microgreens.

1. Z. Xiao\*, G. Lester, Y. Luo, **Q. Wang**. Many trendy 'microgreens' are more nutritious than their mature counterparts, American Chemical Society (ACS) Weekly PressPac, online.  
<http://www.acs.org/content/acs/en/pressroom/presspacs/2012/acs-presspac-august-29-2012/many-trendy-microgreens-are-more-nutritious-than-their-mature-counterparts.html>
2. Z. Xiao\*, G. Lester, Y. Luo, **Q. Wang**. Introducing Microgreens: Younger, And Maybe More Nutritious, Vegetables, National Public Radio (NPR) News, online.  
<http://www.npr.org/blogs/thesalt/2012/08/29/160274163/introducing-microgreens-younger-and-maybe-more-nutritious-vegetables>
3. Z. Xiao\*, G. Lester, Y. Luo, **Q. Wang**. Tiny Microgreens Packed With Nutrients, Web MD, online. <http://www.webmd.com/diet/news/20120831/tiny-microgreens-packed-nutrients>
4. Z. Xiao\*, G. Lester, Y. Luo, **Q. Wang**. Microgreens Have More Nutrients Than Mature Vegetables, Study Suggests, Huffington post, online.  
[http://www.huffingtonpost.com/2012/08/31/microgreens-nutrients-mature-vegetables\\_n\\_1846601.html](http://www.huffingtonpost.com/2012/08/31/microgreens-nutrients-mature-vegetables_n_1846601.html)
5. Z. Xiao\*, G. Lester, Y. Luo, **Q. Wang**. Microgreens considered super vegetables, ABC 7 affiliated TV-WJLA, video  
<http://www.wjla.com/articles/2012/10/microgreens-considered-super-vegetables-81088.html>
6. Z. Xiao\*, G. Lester, Y. Luo, **Q. Wang**. The Mighty Power of Mini Greens, O, the Oprah Magazine, video <http://www.oprah.com/health/Mini-Greens-New-Leafy-Veggies>
7. Z. Xiao\*, G. Lester, Y. Luo, **Q. Wang**. Specialty Greens Pack a Nutritional Punch, Agricultural Research Magazine of USDA-ARS, online.  
<http://www.ars.usda.gov/is/AR/archive/jan14/greens0114.html>
8. Z. Xiao\*, G. Lester, Y. Luo, **Q. Wang**. The New Super Food: Why Microgreens Are All the Rage, Altnet, video <http://www.altnet.org/food/microgreens-powerful-plants>

9. Z. Xiao\*, G. Lester, Y. Luo, **Q. Wang**. Mighty Microgreens, College of Agricultural and Natural Resources (AGNR) of UMD News & Events, online.  
<http://agnr.umd.edu/news/mighty-microgreens>
10. Z. Xiao\*, G. Lester, Y. Luo, **Q. Wang**. Microgreens have up to 40 times more nutrients, researchers discover, The Diamondback, print.  
[http://www.diamondbackonline.com/news/campus/article\\_6c24bbb8-fc93-11e1-81c7-0019bb30f31a.html](http://www.diamondbackonline.com/news/campus/article_6c24bbb8-fc93-11e1-81c7-0019bb30f31a.html)
11. Z. Xiao\*, G. Lester, Y. Luo, **Q. Wang**. Microgreens pack nutritional punch, Terp Magazine, print. [http://issuu.com/umaryland/docs/terp\\_w2013/39](http://issuu.com/umaryland/docs/terp_w2013/39)

## II.J. Sponsored Research

*List source, title, amount awarded, time period and role (i.e. principal investigator or co-investigator) in reverse chronological order or its inverse. If there are co-investigators, please list these.*

### II.J.1. Grants

2010, January 01/27/2010- 12/31/2010	\$18,000	Maryland Grain Producers Utilization Board “Enhancing MD-Grown Soft Wheat Consumption for Health Promotion and Disease Prevention” Co-Principal Investigator; PI: Liangli Yu
2010, July 08/01/2010- 08/31/2012	\$7,000	NewAgriculture Inc. “Recovery of insoluble cell wall proteins from tobacco leaf biomass” Principal Investigator
2010, September 08/01/2010- 07/31/2011	\$30,000	MAES Competitive Grants Program (CGP), AGNR “Enhancing the value-added utilization of Maryland grown blue crab and corn: development of micro-capsules from chitosan and corn zein for improved antioxidant property and storage stability of two synergistic antioxidant compounds” Principal Investigator
2011, May 01/05/2011- 04/30/2012	\$20,000	NSF ADVANE program Seed Grant “Developing value-added novel nanomaterials from chitosan and soy protein for targeted delivery and controlled release of bioactives” Principal investigator, Co-PI: Liangli Yu & Tongtong Wu

2012, June 07/01/2012- 06/30/2013	\$30,000	MAES Competitive Grants Program (CGP), AGNR “Development of antimicrobial nanoparticles for construction of novel coatings to enhance food safety for ready-to-eat meat product and fresh produce” Principal Investigator
2012, December 12/20/2012- 02/19/2013	\$7,600	Enzyvia, LLC “Development of fast-release coating for extruded enzyme particles using zein and chitosan” Principal Investigator
2013, December, 12/01/2013- 11/30/2017	\$491,750	USDA-NIFA-AFRI (Federal Competitive Grant) “Biosensor development for detection of food borne pathogen based on nanomaterials and bioMEMS devices” Principal Investigator (Co-PI: Gregory Payne and William Bentley)
2014, September, 09/01/2014- 08/31/2017	\$499,717	USDA-NIFA-BRAG (Federal Competitive Grant) “Risk Assessment for Plant Incorporated Insecticidal Products on Non-Target Aquatic Invertebrates” Co-Principal Investigator (PI: William Lamp)
2015, January 01/01/2015- 21/31/2016	\$161,947	Center for Produce Safety (Competitive Grant) “Validation of chlorine level in sanitization system to avoid cross-contamination” Principal Investigator
2016, January 01/01/2016- 12/31/2019	HK\$540,824	“Natural biodegradable prodrug self-assembled nanoparticles for stimuli-responsive targeted anticancer drug delivery against multidrug resistance” Co-Principal Investigator (PI: Yi Wang)
2017, January 01/01/2017- 06/30/2018	\$30,000	MAES Competitive Grants Program (CGP), AGNR “Investigation and validation of chlorine-based fresh produce washing procedures using novel experimental platforms” Principal Investigator

## II.J.2. Contracts

2010, August 09/01/2010- 12/31/2012	\$121,173	Cooperative Agreement with USDA-BARC “Integrated Approaches to Produce Safety and Quality” Principal Investigator
2010, December 01/13/2011- 09/30/2013	\$120,626	Cooperative Agreement with USDA-BARC “Evaluating the impact of fresh-cut produce wash operation on food quality and safety” Principal Investigator
2012, June 06/18/2012- 08/31/2012	\$3,520	Research Support Agreement with USDA-BARC “Acquisition of Goods and Service – Microgreen Evaluation” Principal Investigator
2013, January 01/08/2013- 07/30/2014	\$256,430	Specific cooperative Agreement with USDA- BARC “Novel sanitizing treatment of fresh produce to inactivate food-borne pathogens” Principal Investigator
2013, May 05/01/2013- 09/30/2013	\$14,575	Research Support Agreement with USDA-BARC “Acquisition of Goods and Service – Microgreen Evaluation” Principal Investigator
2014, February 02/03/2014- 02/02/2015	\$19,800	Research Support Agreement with USDA-BARC “Acquisition of Goods and Service – Safety and Quality of Microgreens and Sprouts” Principal Investigator
2014, January 12/01/2013- 05/31/2014	\$15,407	Research Support Agreement with USDA-BARC “Acquisition of Goods and Service – Nutrient Analysis” Principal Investigator
2014, June 06/01/2014- 05/31/2019	\$468,605	Cooperative Agreement with USDA-BARC “Improving Food Quality and Shelf Life Through New Technology Development and Process Optimization ins Supply Chain” Principal Investigator

### II.J.3. Other

### II.K. Fellowships, Gifts and Other Funded Research

#### II.K.1. Fellowships

## II.K.2. Gifts

2011, December      \$4,339      New Leaf Food Safety Solutions  
Industry Gift

## II.K.3. Other

### II.L. Submissions and Works in Progress

*List press, journal, or granting agency.*

#### II.L.1. Current Grant Applications

2016, August

01/01/2017-12/31/2019      \$499,660.12      NIFA-USDA, Food Safety, “Investigation and Validation of Chlorine-based Fresh Produce Washing Procedures using Novel Experimental Platforms”

Principal Investigator

### II.N. Patents

1. L. Yu, W. Liu, Z. Xie, **Q. Wang**, B. Zhang\*. 2015. Sulfated Psyllium Derivative for Reducing the Risk of Chronic Human Diseases and Method for Preparation. Patent number: US9,206,118 B2.

#### II.N. Provisional patents:

1. **Q. Wang**, B. Zhang\*. Development of Silver- $\alpha$ -Lactalbumin Composites as a Promising Silver-Based Antiseptics. Provisional US patent application, No. 61/443,777. Filed in 2011.
2. **Q. Wang**, Y. Luo\*. Encapsulation of Vitamin D3 in Zein/Carboxymethyl Chitosan Complex Nanoparticles. Provisional US patent application, No. 61/578094. Filed in 2011.
3. **Q. Wang**, B. Zhang\*. Development of Identical-Oriented Nanofillers in Biopolymer Nanocomposites for Improved Tensile and Barrier Properties. Provisional US patent application, No. 61/620822. Filed in 2012

### II.O. Other Research/Scholarship/Creative Activities

1. Attended a workshop sponsored by NIH and USDA on Using Nanotechnology to Improve Nutrition through Enhanced Bioavailability and Efficacy, November 29-30, 2011, Bethesda, MD.
2. Attended a workshop of NIH for grantsmanship and writing winning proposals, organized by S. Russell & D. Morrison, October, 2010, Bethesda, MD.
3. Attended and participated in the University of Maryland’s (UMD) Faculty meeting with the USDA-NIFA National Program Leaders’ (NPL), organized by Dr. Adel

Shirmohammadi, Associate Dean for Research and Associate Director for Maryland Agricultural Experiment Station (MAES), AGNR, University of Maryland, held at NIFA's Water Front Center in Washington D.C.; August 2009.

4. Attended 4<sup>th</sup> Annual Symposium on Nanomedicine, organized by American Academy of Nanomedicine, Potomac, MD, September 4-7, 2008.
5. Attended a workshop on Grantsmanship Workshop, organized by USDA/CSREES, Arlington, VA, September 30-October 1, 2008.
6. Invited and participated at the University of Maryland's (UMD) New Faculty 3-day Orientation organized by the College of AGNR, College Park, August 2008.

### **III. Teaching, Mentoring and Advising.**

#### III.A. Courses Taught

*Include courses taught in the last five years. Indicate approximate enrollments and any unusual formats.*

##### NFSC112 Food: Science and Technology (co-teach with Dr. Abani Pradhan)

Fall 2014, 187 students  
Fall 2015, 186 students  
Fall 2016, 180 students

##### NFSC388 Honors Thesis Research (3-6 credits)

Fall 2012, 1 student  
Spring 2013, 1 student  
Spring 2014, 1 student

##### NFSC498A Individual Study (1-3 credits)

Spring 2012, 4 students  
Spring 2013, 5 students  
Spring 2014, 4 students  
Spring 2015, 3 students  
Fall 2015, 1 student  
Spring 2016, 1 student  
Fall 2016, 1 student

##### NFSC688 Seminar in Nutrition and Food Science (1-3 credits)

Spring 2012, 26 students

##### NFSC398 Seminar for undergraduate Food Science student (1 credit)

Spring 2012, 12 students  
Spring 2013, 17 students  
Spring 2014, 17 students  
Spring 2015, 20 students  
Spring 2016, 15 students  
Spring 2017, 14 students



NFSC 386 Experiential Learning (3-6 credits)

Spring 2011, 1 student  
Fall 2011, 1 student  
Spring 2013, 1 student

NFSC 422 Food Research and Product Development (3 credits, with lab)

Fall 2009, 10 students  
Fall 2010, 11 students  
Fall 2011, 13 students  
Fall 2102, 19 students  
Fall 2013, 18 students  
Fall 2014, 18 students  
Fall 2015, 17 students  
Fall 2016, 17 students

NFSC 633/679P Food Polymer Science (3 credits)

Spring 2010, 7 students  
Spring 2011, 7 students  
Spring 2013, 4 students  
Spring 2014, 3 students  
Spring 2016, 7 students

NFSC 699 Problems in Nutrition and Food Science (1-4 credits)

Fall 2008, 1 student  
Fall 2009, 1 student  
Summer 2010, 1 student  
Fall 2010, 4 students  
Spring 2011, 2 students  
Fall 2011, 3 students  
Spring 2012, 3 students  
Fall 2012, 3 students  
Spring 2013, 1 student  
Fall 2014, 1 student  
Spring 2015, 2 students  
Fall 2015, 2 students  
Spring 2017, 2 students

NFSC 799 Master Thesis Research with weekly group/individual research meetings

Fall 2012, 1 student  
Spring 2013, 1 student  
Fall 2015, 2 students

NFSC 898 Doctoral (Pre)Dissertation Research with weekly group/individual research meetings

Fall 2008, 1 student  
Spring 2009, 1 student  
Fall 2009, 2 students  
Spring 2010, 2 students  
Fall 2010, 2 students  
Spring 2011, 2 students  
Fall 2011, 1 student  
Spring 2012, 2 students  
Fall 2012, 2 students  
Spring 2013, 1 student

NFSC 899 Doctoral Dissertation Research with weekly group/individual research meetings

Fall 2011, 1 student  
Spring 2012, 2 students  
Fall 2012, 2 students  
Spring 2013, 1 student  
Fall 2013, 2 students  
Spring 2014, 1 student  
Fall 2014, 1 student  
Spring 2015, 1 student

III.B.5. Course or Curriculum Development

NFSC 422 Food Research Product Development (3 credits)

Fall 2009

I designed the course syllabus, revised the course content, and developed relevant course materials.

NFSC 679P Food Polymer Science (3 credits)

Spring 2010

This is a brand new course for graduate students in Food Science program. I developed the course curriculum and course materials, and prepared study guide. Students are required to conduct literature search and write a technical paper on a selected food polymer, and present their findings to the class.

III.B.6. Historical Innovations (10+ years ago)

III.B.7. Other

III.C. Advising: Research or Clinical

*This refers to students whose projects the faculty has supervised as adviser, committee chair, or committee member (indicate role). The name of student, academic year(s) involved, and the name of institution if other than UMD should be indicated, as well as placement of the student(s), if the project is completed. List completed work first.*

III.C.1. Undergraduate

Haoying Wang	2010-2011	Protein modification with enzymes
Xiangnan Wang	2012	Hydrogel development

Binkun Wang	2012	Metal organic frame for encapsulation of essential oils
Keri Fuller	2012	Microfluidic device, iron oxide synthesis
Ariella Feldman	2012-2013	Microfluidic device, iron oxide synthesis
Douglas T. Koziol	2012	Wet chemistry on leafy green sanitization
Vivian Nguyen	2012	Microgreen characterization
Dan Li	2013	Antimicrobial packaging development
Kelsey	2014	Metal organic frame for encapsulation of hydrogen
Anya	2014	Metal organic frame for encapsulation of hydrogen
Li Karen	2014	Metal organic frame for encapsulation of hydrogen
Lin Chen	2016	Microfluidic device for validating sanitizer in washing water

### III.C.2. Master's

#### Committee Chair (Major Advisor):

1. 2014-2015 Ruoyang Xu, Food Science, University of Maryland  
Thesis: Potential Low Toxicity Cross-linker for Protein-based Nanoparticles.
2. 2014-2016 Yingying Song, Food Science, University of Maryland  
Thesis: Development of chitosan films with magnetic nanoparticles to facilitate the pathogen detection in food product
3. 2010-2013 Yunpeng Wu, Food Science, University of Maryland  
Thesis: Development of Encapsulation Systems from Zein and Metal-Organic Frameworks (MOFs) for Improved Functional Properties of Essential Oils

#### Committee Members:

1. 2013-2015 Shuai Tang, Food Science, University of Maryland  
Thesis: Genomic Analysis of Bacteriophages from non-O157 Shiga Toxin-Producing *Escherichia Coli*
2. 2009-2010 Su Zhang, Major in Nutrition, University of Maryland  
Thesis: Roles of selenium on genomics maintenance in colon cancer and aging brain
3. 2008-2009 Ansu Cherian, Major in Food Science, University of Maryland  
Thesis: Feasibility of soluble leaf proteins as carrier for vitamin E

### III.C.3. Doctoral

#### Major advisor:

1. 2008-2012 Boce Zhang, Food Science, University of Maryland

Dissertation: The Development of Food Polymer-Based Nanocomposites as Novel Antimicrobial Agents and Sustainable Packaging Materials  
Current position: Post-doctoral research associate at University of Maryland at College Park.

2. 2009-2012 Yangchao Luo, Food Science, University of Maryland  
Dissertation: Development of food polymer-based colloidal delivery systems for nutraceuticals  
Current position: Post-doctoral research associate at University of Tennessee at Knoxville.
3. 2010-2013 Zhenlei Xiao, Food Science, University of Maryland  
Dissertation: Nutrition, quality, safety, and sensory evaluation of the emerging produce: microgreens
4. 2010-2015 Zi Teng, Food Science, University of Maryland  
Dissertation: Food protein modification by enzymatic and chemical methods for better physical and chemical properties
5. 2015- Lei Mei, Food Science, University of Maryland  
Dissertation: Antimicrobial coatings and films from Ag cluster for fresh fruits and vegetables
6. 2015- Jinglin Zhang, Food Science, University of Maryland  
Dissertation: Food protein based delivery systems for bioactive components

#### Committee Members

1. 2008-2011 Margaret Slavin, Major in Food Science, University of Maryland  
Dissertation: Value-added factors in soybeans
2. 2008-2011 Patrick Williams, Major in Food Science, University of Maryland  
Dissertation: Characterization of physicochemical properties of xanthan/curdlan hydrogel complex for applications in frozen food products
3. 2008-2011 Pavan Soma, Major in Food Science, University of Maryland  
Dissertation: Xanthan chitosan polyionic hydrogels for microencapsulation of probiotics

4. 2010-2013      Wenting Ju, Major in Food Science, University of Maryland  
Dissertation: Prevalence and Characterization Shiga toxin-producing Escherichia Coli in retail ground meat
5. 2010-2014      Guojie Cao, Major in Food Science, University of Maryland  
Dissertation: Salmonella Newport: genetic diversity and phylogenetic analysis
6. 2009-2013      Monica Whent, Major in Food Science, University of Maryland  
Dissertation: Nutraceutical Properties of Soybeans with Modified Traits
7. 2012-2014      Setareh Shiroodi, Major in Food Science, University of Maryland  
Dissertation: Characterization of interaction between whey protein isolate and xanthan/curdlan hydrogel to improve freeze-thaw stability
8. 2012-            Reem Albassam, Major in Nutrition, University of Maryland  
Dissertation: Obesity problem in Saudi Arabia
9. 2013-2015      Arnetta Fletcher, Major in Nutrition, University of Maryland  
Dissertation: Effects of cruciferous vegetable bioactives on the modulation of prostate cancer
10. 2013-2015     Haiwen Li, Major in Food Science, University of Maryland  
Dissertation: Effects of grape pomace on metabolic syndrome: diabetes and obesity
11. 2013-2015     Changhui Zhao, Major in Nutrition, University of Maryland  
Dissertation: Investigation of sugar intake on energy control
12. 2013-2017     Michael Wiederoder, Major in Bioengineering, University of Maryland  
Dissertation: Microfluidic Biosensor Techniques for Point of Care Diagnostics in Resource Limited Environments using Porous Volumetric Capture Elements

13. 2013-2016 Abhinav Mishra, Major in Food Science, University of Maryland  
Dissertation: Development and Application of Predictive Models for Survival, Growth and Death of Enteric Pathogens in Leafy Greens Supply Chain

#### III.C.4. Post-doctoral

1. 2016- Sam van haute  
Project title: Improving food quality and safety on fresh and fresh-cut produces and evaluating interaction between surfactants and sanitizers.
2. 2016- Yongguang Guan  
Project title: Biosensor development for detection of food borne pathogen based on nanomaterials and bioMEMS devices
3. 2015- Zi Teng  
Project title: Validation of chlorine level in sanitization system to avoid cross-contamination
4. 2014-2016 Ying Li  
Project title: Biosensor development for detection of food borne pathogen based on nanomaterials and bioMEMS devices
5. 2011-2012 Cangliang Shen  
Project title: Integrated approaches to produce safety and quality
6. 2013-2015 Boce Zhang  
Project title: Mechanism elucidation on pathogen adhesion, colonization, and internalization on fresh and fresh-cut produces
7. 2011-2015 Bin Zhou  
Project title: Evaluating the impact of fresh-cut produce wash operation on food quality and safety

#### III.C.5. Other Research Directions (*K-12 Interactions*)

##### Visiting Scholar:

1. 2010-2011 Lan Liao  
Project title: Encapsulation of omega-3 fish oil in deaminated wheat gluten

2. 2016-2017      Zhao Xu, Ph.D  
Project title: encapsulation of antimicrobial agents with food proteins

### III.D. Mentorship

III.D.1. Junior Faculty

III.D.2. Other

### III.E. Advising: Other than Research Direction

III.E.1. Undergraduate

From '09-'16, I advised about 20-25 undergraduate food science students per semester. In addition, I have been asked every year to provide letters of recommendation to about 6 students applying for graduate programs or jobs.

I have hosted more than 10 undergraduate students and 1 high school senior student doing research projects in my lab since 2008. One undergraduate student (Xiang Wang) received an Undergraduate Summer Research Fellowship from UMD, the most competitive undergraduate fellowship, to support her work as a full-time assistance in my lab during the summer of 2012.

III.E.2. Master's

III.E.3. Doctoral

III.E.4. Post-doctoral

III.E.5. Other Advising Activities

*(Include advising student groups, special assignments, recruiting, etc.)*

Advised 2 student groups (4 members for each group) for new food product competitions (i.e. Disney Nutritious Food for Kids Product Development Competition, Danisco Knowledge Award New Product Competition (4<sup>th</sup> place))

### III.G. Other Teaching Activities

Teaching seminars attended: offered by Center for Teaching Excellent (CTE) at University of Maryland:

- “The New Faculty Workshop”, Fall 2009
- “Engaging All Students, Body and Soul”, Spring 2010
- “Blended Learning: The 21st Century Learning Environment” Fall 2010
- “Grading smarter, faster, and more fairly... designing strong rubrics” Fall 2016
- “Can we actually teach students how to be critical thinkers? (Yes!)” Fall 2016

Meetings offered by Office of Undergraduate Studies and the Scholarship in Practice Faculty Board

- Discussion on the assessment of General Education learning outcomes using the General Education Rubrics and the ELMS Speedgrader tool. 2016

## IV. Service and Outreach

### IV.A. Editorships, Editorial Boards, and Reviewing Activities

*Include participation for journals and other learned publications (print and electronic).*

#### IV.A.1. Editorships

#### IV.A.2. Editorial Boards

1. Foods (<http://www.mdpi.com/journal/foods/editors>)
2. Journal of Food Processing and Beverages  
(<http://www.avensonline.org/biotechnology/food-processing-beverages/editorial-board-25/>)
3. Austin Journal of Nutrition and Food Sciences

#### IV.A.3. Reviewing Activities for Journals and Presses

##### **Reviewer for following journals:**

Journal of Agricultural and Food Chemistry

Journal of Food Science

Food Chemistry

Food Hydrocolloids

Biomacromolecules

Carbohydrate Polymers

Lebensmittel-Wissenschaft und-Technologie (LWT)

Journal of Food Processing and Preservation

Natural Product Communications

Food Research International

Molecules

Journal of Physical Chemistry

Drug Development and Industrial Pharmacy

Biotechnology and Bioprocess Engineering

Langmuir

Journal of Functional Foods

Colloids and Surfaces B: *Biointerfaces*

African Journal of Food Science

International Journal of Biological Macromolecules

#### IV.A.4. Reviewing Activities for Agencies and Foundations



Proposal review:

USDA-NIFA proposal review panel (15 proposals for Nanotechnology program), Oct 2015

Alberta Innovates - Bio Solutions, Alberta, Canada (3 proposals)

Binational Agricultural Research and Development (BARD)-ISUS, (5 proposals)

Portuguese Foundation for Science and Technology (FCT), Portuguese (2 proposals)

Singapore National Research Foundation, (1 proposal)

IV.A.5. Reviewing Activities for Conferences

Abstracts reviewing:

Institute of Food Technologists (IFT), 2013, 2015

IV.A.6. Historical Editorships, etc. (10+ years ago)

IV.A.7. Other

IV.B. Committees, Professional & Campus Service

IV.B.1. Campus Service – Department

Food Science Graduate Student Admission Committee  
Member, 2008-2011

Librarian Representative  
Member, 2011-

Curriculum Committee for Food Science  
Member, 2011-

Scholarship and Awards Committee  
Member, 2011-

Search Committee  
February-May 2012

Departmental Column Marshall  
College Graduation Ceremony, Winter 2010

Graduate Handbook Review Committee  
December 2012-2013

Search Chair for Food Processing position  
October 2013-July 2014

IFT food science curriculum chair  
April 2014-

Lyterati Department Contact  
August 2014-2016

IV.B.2. Campus Service – College

AGNR Programs, Curricula, and Courses (PCC)  
2013-2016

Proposal review for Maryland Agricultural Experimental Station (MAES)  
Competitive Grants Program: 2011

Doctoral Column Marshall  
College Graduation Ceremony, Spring 2013

AGNR focus group  
2014

IV.B.3. Campus Service – University

Student Honor Boards  
Member, 2010-2016

Poster Judge for Bioscience day  
2009 & 2010

IV.B.4. Campus Service - Special Administrative Assignment

IV.B.5. Campus Service - Other

IV.B.6. Offices and Committee Memberships

IV.B.7. Leadership Roles in Meetings and Conferences

**V. Awards, Honors and Recognition**

V.1. Research Fellowships, Prizes and Awards

1. 2017 Summer Research and Support Award, RASA, UMD, \$9,000
2. 2013 Semester Teaching Support Award, RASA, UMD, \$10,000
3. 2010 Summer Research and Support Award, RASA, UMD, \$9,000
4. 2003-2004 Larson Academic Fellowship, UIUC, \$3,000

5. 2002-2003 Ruth A. Wardall Fellowship, UIUC, \$2,000
6. 2001-2002 Strunk Fellowship, UIUC, \$2,000
7. 2000-2001 Dean Memorial Food Science Fellowship, UIUC, \$1,500

Nomination for Dr. Qin Wang

Nominated for 2014 “AGNR Alumni Chapter-Excellence in *Outstanding Alumnus Early Career Award*” from College of Agriculture and Natural Resources (AGNR) Alumni Chapter at the University of Maryland, College Park. February, 2014.

Nominated for 2013 “AGNR Alumni Chapter-Excellence in *Outstanding Alumnus Early Career Award*” from College of Agriculture and Natural Resources (AGNR) Alumni Chapter at the University of Maryland, College Park. February, 2013.

Award obtained by Dr. Qin Wang’s students:

- |      |   |
|------|---|
| 2014 | Zi Teng, Ann G. Wylie Dissertation Fellowship, Graduate School, UMD   |
| 2013 | Zhenlei Xiao, Ann G. Wylie Dissertation Fellowship, Graduate School, UMD  |
| 2013 | Zhenlei Xiao, ACS National Annual Meeting Travel Award  |
| 2013 | Zi Teng, ACS National Annual Meeting Travel Award   |
| 2013 | Yunpeng Wu, Distinguished Teaching Assistant, Graduate School, UMD  |
| 2012 | Yangchao Luo, ACS National Annual Meeting Travel Award  |
| 2012 | Xiangan Wang, Undergraduate student, Maryland Summer Scholars award   |
| 2012 | Zhenlei Xiao, 2 <sup>nd</sup> place, Poster Competition, Annual NFSC Research Day, UMD                            |
| 2012 | Zhenlei Xiao, 1 <sup>st</sup> place, Poster Completion, 23 <sup>rd</sup> Annual BARC Poster Day, USDA-ARS         |
| 2012 | Zi Teng, 1 <sup>st</sup> place, Poster Competition, AGNR open house, UMD  |
| 2012 | Zi Teng, Goldhaber Travel Award, Graduate School of UMD   |
| 2011 | Boce Zhang, 2 <sup>nd</sup> place, Poster section in Food Packaging Division at annual IFT meeting in New Orleans |

2011 Boce Zhang, 1<sup>st</sup> place, Chinese American Food Society (CAFS) Graduate Student Scholarship

2011 Yangchao Luo, Summer Research Fellowship, Graduate School, UMD

2011 Zhenlei Xiao, 1<sup>st</sup> place at Annual NFSC Poster competition

2011 Zhenlei Xiao, Goldhaber Travel Award, Graduate School of UMD

2011 Yangchao Luo, 1<sup>st</sup> place at Poster Contest of Maryland IFT

2010 Yangchao Luo, 1<sup>st</sup> place at Annual NFSC Poster competition

2010 Yangchao Luo, 1<sup>st</sup> place at Poster Contest of Maryland IFT

2010 Yangchao Luo, Goldhaber Travel Award, Graduate School of UMD

2010 Yunpeng Wu, Dean's Fellowship, AGNR, UMD (PhD student)

2010 Zhenlei Xiao, Dean's Fellowship, AGNR, UMD (PhD student)

2010 Zi Teng, Dean's Fellowship, AGNR, UMD (PhD student)

2010 Zi Teng, Facchina Graduate Fellowship, Facchina Fund (PhD student)

2009 Boce Zhang, Goldhaber Travel Award, Graduate School of UMD