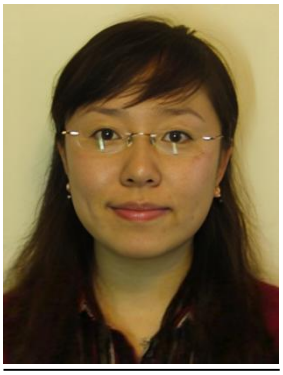
Resume of Nan YANG

Basic Information



School :	School of Life and Health Sciences
Gender：	Female
Date of Birth：	197910
Title：	Professor
Education：	Ph.D of Philosophy
Tutor：	Doctoral supervisor
Interest of research:	Food Soft Matter and Colloids

Academic Background

From September 1999 to July 2003, Jilin University, Bachelor's degree in Optical Information Science and Technology;
From September 2003 to July 2006, Jilin University, Master's degree of Condensed Matter Physics;
From September 2006 to July 2011, University of Western Ontario, Ph.D of Condensed Matter Physics.

Oversea visiting

2017/12-2018/12, Visiting Professor, Johns Hopkins University, USA;

Enrollment Information

1. Enrollment Discipline: Master and Doctor Program of Food Science
2. Research direction: Plant protein self-assemble, Food colloids at liquid-liquid, Food soft matter physics, Food oral processing
3. Enrollment Year: 2024-2025

Representative Projects

1. Hubei Province International Science and Technology Cooperation Project “Study on the Mechanical Properties of Plant Protein Assembly Simulating Meat Myofibril Structure”, China, Co-Project leader;

2. Outstanding Youth Grant of Natural Science Foundation of Hubei Province “The mechanism and regulation of pH- responsive microgel interface using interfacial microrheology”, China, Project leader;

3. Key Science and Technology Research Program of Hubei Provincial Department of Education, Interfacial microrheology of different protein assemblies at oil/water interface, China, Project leader;

4. Hubei University of Technology Green Industry Leading Program - Outstanding Talent Fund “Key Technologies for the Structure and Functional Utilization of Protein

Self assembling Aggregates", China, Project leader;

5. The Funding of the Key Laboratory of Fermentation Engineering of Ministry of Education, Effect of Polysaccharides on the Stability of Natural Oils Bodies, China, Project leader;

6. National Scholarship Council (CSC) Visiting Scholar Program, Active interfacial microrheology of protein assemblies at oil-water interface using magnetic tweezers, China, Project leader;

7. Natural Science Foundation of China-General Project (NSFC), Micromechanical properties of natural oil bodies using atomic force microscopy, China, Project leader;

8. Natural Science Foundation of China for Young Scientist (NSFC), Microrheology of typical food emulsion system, China, Project leader;

9. Outstanding Youth Scientist Foundation of Hubei University of Technology, Microstructure and mechanical properties of natural oil body emulsion-gels, China, Project leader;

Representative Articles

1. Fusheng Sun‡, Zhenzhen Li‡, Songmei Kong, Yantao Liu, **Nan Yang***, Linear and Nonlinear Interfacial Rheology of Responsive Microgels at Oil-Water Interface, *Food Hydrocolloids*, **2024**, 110479.
2. Xuxi Ma, Sonemei Kong, Siyu Zhen, Fusheng Sun, **Nan Yang***, Effect of cross-linking density on the rheological behavior of ultra-soft chitosan microgels at the oil-water interface, *Journal of Colloids and Interface Sccience*, **2024**, 672, 574-588.
3. **Nan Yang***, Minhui Huang, Chao Gao, Yantao Liu, Katsuyoshi Nishinari, Preparation and drug release performance of different polysaccharide-β lactoglobulin fiber composite gels, *International Journal of Biological Macromolecules*, **2024**, 132003.
4. Bao Zhang, Ruisheng Jiang, Kexin Dong, Jing Li, Yan Zhang, Behrouz Ghorani, Bahareh Emadzadeh, Katsuyoshi Nishinari, **Nan Yang***. Controlling solvent polarity to regulate protein self-assembly morphology and its universal insight for protein self-assembly mechanism, *Langmuir*. **2024**, 40, 14, 7733-7746.
5. Chengxin Zhu, Yantao Liu, Jinhui Ma, Yongjia Chen, Xianwei Pan, Katsuyoshi Nishinari, **Nan Yang***. New insight in characterization of red wine astringency using soft tribology method, *Journal of Texture Studies*, **2024**, 55(1), e12820, 1-17.
6. Fusheng Sun, Chuanxin Pan, YanTao Liu, **Nan Yang***, Carboxymethyl tamarind seed polysaccharide/chitosan complexes through electrostatic interaction stabilize high internal phase emulsions: Roles of the mass ratio and oil-water interfacial activity, *LWT- Food Science and Technology,* 195, 2024, 115833.
7. Danial Dehnad, Behrouz Ghorani*, Bahareh Emadzadeh, Fuyuan Zhang, **Nan Yang**, Seid Mahdi Jafari*. Electrospinning of legume proteins: Fundamentals, fiber production, characterization, and applications with a focus on soy proteins, *Food Hydrocolloids* 151, **2024**, 109795.
8. Katsuyoshi Nishinari*, Sayaka Ishihara, Makoto Nakauma*, Takahiro Funami, Chengxin Zhu, Ke Zhang, **Nan Yang**, Chaiwut Gamonpilas, Yapeng Fang*, et al., Rheology of bolus as a wet granular matter-Influence of saliva on rheology of polysaccharide gel beads. *Food Hydrocolloids*, **2024**, 150, 109704.
9. Danial Dehnad, Bahareh Emadzadeh*, Behrouz Ghorani, Elham Assadpour, **Nan Yang**, Seid Mahdi Jafari*, The influence of high hydrostatic pressure on different properties of legume proteins with an emphasis on soy proteins: a comprehensive review, *Food Hydrocolloids*, **2024**, 146, 109188.
10. Katsuyoshi Nishinari, Marie-Agnes Peyron, **Nan Yang**, et al. The role of texture in the palatability and food oral

processing. *Food Hydrocolloids*, **2024**, 147, 109095.

11. Jing Li, Zhen Zhen Li, Congcong Xu, Yan Zhang, Behrouz Ghorani, Bahareh Emadzadeh, **Nan Yang***, Katsuyoshi Nishinari, Interfacial properties of protein nanofibrils with different morphology prepared using aqueous solvent with ethanol: Part II. Effect of oil phase hydrophobicity. *Food Hydrocolloids*, **2023**, 143, 108879.
12. **Nan Yang***, Jing Li, Bao Zhang, Yongqi Huang, Behrouz Ghorani, Bahareh Emadzadeh, Katsuyoshi Nishinari, Interfacial properties of protein nanofibrils with different morphology prepared using aqueous solvent with ethanol: Part I. Preparation and characterization, *Food Hydrocolloids*, **2023**, 142, 108754.
13. **Nan Yang***, Yuemei Zhang, Chunxia Su, Junji Jia, Katsuyoshi Nishinari, The effect of ALG on the nanomechanical properties and interaction between oil body droplets studied using atomic force microscopy, *Food Hydrocolloids*, **2023**, 140, 108587.
14. Yan Zhang, Yantao Liu, Fusheng Sun, **Nan Yang***, 3D heteroatom-doped graphene-wrapped flexible carbon fiber microsensor for real-time hydrogen peroxide detection in live cancer cells, *Analytica Chimca Acta*, **2023**, 611(A), 155655.
15. Fusheng Sun, Qian Wang, Chao Gao, Hong Xiao, **Nan Yang***, Effect of extraction pH and heat treatment on the composition and interfacial properties of peanut oil bodies, *Colloids and Surfaces A*, **2023**, 656(A), 130351.
16. Jing Li, Bao Zhang, Jing Ye, Yantao Liu, **Nan Yang***, Katsuyoshi Nishinari， Nonlinear dilatational rheology of different protein aggregates at the oil-water interface, *Soft Matter*, **2022**, 18, 2383-2393.
17. Chen Huang, Fusheng Sun, Xuxi Ma, Chao Gao, **Nan Yang***, Katsuyoshi Nishinari, Hydrophobically modified chitosan microgels stabilize high internal phase emulsions with high compliance, *Carbohydrate Polymers*, **2022**, 288, 119277.
18. Ping Huang, Chen Huang, Xuxi Ma, Chao Gao, Fusheng Sun, **Nan Yang***, Katsuyoshi Nishinari, Yapeng Fang, Effect of pH on the mechanical, interfacial, and emulsification properties of chitosan microgels, *Food Hydrocolloids*, **2021**, 121, 106972.
19. **Nan Yang***, Jing Ye, Jing Li, Bing Hu, Robert L. Leheny*, Katsuyoshi Nishinari, Yapeng Fang*, Interfacial behaviour of β-lactoglobulin aggregates at the oil–water interface studied using particle tracking and dilatational rheology, *Soft Matter*, **2021**,17: 2973-2984.
20. **Nan Yang**, Younan Feng, Chuanxia Su, Yuemei Zhang, Qian Wang, Yanhong Wei, Meng Zhao, Katsuyoshi Nishinari and Yapeng Fang, Structure and tribology of κ-carrageenan gels filled with natural oil bodies, *Food Hydrocolloids*, **2020**, 105945.
21. **Nan Yang**, Chuanxia Su, Yuemei Zhang, Junji Jia, Robert L. Leheny, Katsuyoshi Nishinari, Yapeng Fang and Glyn. O. Phillips, "In situ nanomechanical properties of natural oil bodies studied using atomic force microscopy", *Journal of Colloid and Interface Science*, **2020,** 570, 362-374.
22. Yao Xu‡, **Nan Yang**‡, Jixin Yang, Jing Hu, Ke Zhang, Katsuyoshi Nishinari, Glyn O. Phillips, Yapeng Fang*, Protein/Polysaccharide Intramolecular Electrostatic Complex as Superior Food-Grade Foaming Agent, *Food Hydrocolloids*, **2020**, 101, 105474.
23. **Nan Yang,** Ruihe Lv, Junji Jia, Katsuyoshi Nishinari and Yapeng Fang*, "Application of microrheology in Food Science", *Annual Review of Food Science and Technology*, **2017**, 8(23) 493-521.