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Research Interest

My main research area is on protein (most from egg) modifications and changes in molecular functionality induced by physical, chemical and biological modification with a particular emphasis on food and health. My research vision is to improve protein functionality in food and biological systems through increased molecular understanding of protein modifications and hereby make it possible to develop healthy foods of high quality and stability. The role of ultrasound, oxidants, reducing sugars, polyphenols, enzymes and different processes on protein modification is investigated, and how these modifications influence flavour, functionality, loss of enzyme activity, accumulation of damaged materials, decrease in nutritional value, and more recently also adverse effects on health and disease. By understanding the mechanisms behind protein modifications in food, it will be possible to predict, control and modulate the reactions during production and their subsequent health effects.

Education & Working Experience

2015.7-Now	Huazhong Agricultural University	Staff member
2010.9-2015.7	China Agricultural University	Food Biotechnology, PhD
2007.9-2010.7	Huazhong Agricultural University	Food Science, Master
2003.9-2007.7	Huazhong Agricultural University	Food Quality and Safety, Bachelor,

Publications

(1) Fu, X.; Liu, Q.; Tang, C.; Luo, J.; Wu, X.; Lu, L.; Cai, Z. Study on Structural, Rheological and Foaming Properties of Ovalbumin by Ultrasound-Assisted Glycation with Xylose. *Ultrason. Sonochem.* **2019**, *58*. https://doi.org/10.1016/j.ultsonch.2019.104644.

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(12) Yu, Z.; Mao, C.; Fu, X.; Ma, M. High Density Lipoprotein from Egg Yolk (EYHDL) Improves Dyslipidemia by Mediating Fatty Acids Metabolism in High Fat Diet-Induced Obese Mice. *Food Sci. Anim. Resour.* **2019**, *39* (2), 179–196. https://doi.org/10.5851/kosfa.2018.e38.

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