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2011-Present Professor，Jiangnan University，PRC
2006-2007 Visiting Scholar，ENSIA，France
2003-2011 Associate Professor，Jiangnan University，PRC
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Research of Special Interest

Over the years, for the current impact on the basic research on food processing safety and critical control technology, Prof. Yao devotes to developing technologies to detect food safety with low-cost and high-throughput; relating to food packaging pollutants, banned food additives, food additives and other substances, Prof. Yao committed herself to building surface-enhanced Raman spectroscopy (SERS) detection technology, meanwhile, Prof. Yao dedicated her life to studying linkage detection technologies to combine multiple indicators such as sample pretreatment, detection methods, equipment, components and reagents with food safety. Besides, Prof. Yao studies the food safety control technologies combining biological control methods with chemical prevention and control methods which are based on food processing technologies which can applied toreduce the harm to human body resulted from biotoxin and food packaging pollutants. Futhermore, the current development of food safety SERS detection technologies are at the top of the world, and the biological toxin control techniques are characterized with Chinese tradition, obviously.

For her outstanding achievements, Prof. Yao was awards several times: 1) one the 2nd prize for the Science and Technology Progress; 2) three the 2nd provincial prizes; 3) two the 3rd provincial prizes and 11 invention patents (one for U.S. Patent). Prof. Yao has published more than 160 articles(SCI 60) in the international journals; completed presiding over 7 the national Science and technology support programs, 2 in research and 3 provincial projects, moreover, there were more than 10 scientific projects have achieved industrialization.

Publications *Correspondence Author

1) Ying Zhang, Jie Kong, Fei Huang,Yunfei Xie, Yahui Guo, Yuliang Cheng, He Qian and WeirongYao*. Hexanal as a QS inhibitor of extracellular enzyme activity of Erwinia carotovora and Pseudomonas fluorescens and its application in vegetables. Food Chemistry, 2018, 255: 1-7.

2) Ying Zhang, Jie Kong, Yunfei Xie, Yahui Guo, Yuliang Cheng, He Qian and Weirong Yao*. Essential oil components inhibit biofilm formation in Erwinia carotovora and Pseudomonas fluorescens via anti-quorum sensing activity. LWT - Food Science and Technology, 2018, 92: 133-139. https://doi.org/10.1016/j.lwt.2018.02.027
3) Ling Zhang , Guantian Li , Weirong Yao *, Fan Zhu*. Unit and internal chain profiles of maca amylopectin. Food chemistry, 2018, 242: 106-112. DOI: 10.1016/j.foodchem.2017.09.024.
4) Jian Ju, Xiaomiao Xu Yunfei Xie, Yahui Guo, Yuliang Cheng, He Qian, Weirong Yao*. Inhibitory effects of cinnamon and clove essential oils on mold growth on baked foods. Food Chemistry, 2018, 240: 850-855.
5) Yunfei Xie, Qi Hu, Mengyao Zhao, Yuliang Cheng, Yahui Guo, He Qian and Weirong Yao*. Simultaneous Determination of Erythromycin, Tetracycline, and Chloramphenicol Residue in Raw Milk by Molecularly Imprinted Polymer Mixed with Solid-Phase Extraction. Food Analytical Methods, 2018, 11(2): 374-381. DOI: 10.1007/s12161-017-1008-x.
6) Yuliang Cheng, Wenhan Kang,Yahui Guo,Chao Du,Yunfei Xie, Yi Chen, Weirong Yao, He Qia*. Visual detection of Cu2+ based on fluorescence quenching of green-synthesized gold nanoclusters using soy protein as template. Food and Agricultural Immunology, 2017, 28(5): 848-858.
7) Minping Wei, Heng Wu, Yahui Guo, Yunfei Xie, He Qian, Yi Chen and Weirong Yao*. In vitro antimicroorganism activity and Detergency of Sapindus mukorossi Extract Based on Its Surfactivity. Journal of the Taiwan Institute of Chemical Engineers, 2017,80:1-9. DOI:10.1016/j.jtice.2017.06.015
8) Yan Cui, Yuliang Cheng, Yahui Guo, Yunfei Xie, Weirong Yao, Weiguo Zhang, He Qian. Evaluating the hepatoprotective efficacy of Aloe vera polysaccharides against subchronic exposure of aflatoxins B1. Journal of the Taiwan Institute of Chemical Engineers, 2017, 76: 10-17.
9) Ling Zhang, Qunying Lei, Yuliang Cheng, Yunfei Xie, He Qian, Yahui Guo, Yi Chen, and Weirong Yao*. Study on the Removal of Cadmium in Rice Using Microbial Fermentation Method. Journal of Food Science, 2017, 82 (6): 1467–1474. DOI: 10.1111/1750-3841.13734
10) Yunfei Xie, Mengyao Zhao, Qi Hu, Yuliang Cheng,Yahui Guo, He Qian and Weirong Yao* .Selective detection of chloramphenicol in milk based on a molecularly imprinted polymer–surface-enhanced Raman spectroscopic nanosensor. Journal of Raman Spectroscopy, 2017, 48 (2): 204-210. DOI: 10.1002/jrs.5034
11) Ling Zhang , Guantian Li , Sunan Wang , Weirong Yao *, Fan Zhu*. Physicochemical properties of maca starch. Food chemistry, 2017, 218: 56-63.
12) Yahui Guo, Qingmin Chen, Yiting Qi, Yunfei Xie*, He Qian, Weirong Yao*, Renjun Pei. Label-free ratiometric DNA detection using two kinds of interaction-responsive emission dyes. Biosensors and Bioelectronics, 2017,87: 320-324 . doi:10.1016/j.bios.2016.08.041
13) Yafang Guo, Yahui Guo, Yunfei Xie, Yuliang Cheng, He Qian, and Weirong Yao*. Regeneration of tert-butylhydroquinone by tea polyphenols. Food Research International, 2017, 95: 1-8.
14) Ying Zhang, Yun-Fei Xie, Ya-Hui Guo, Yu-Liang Cheng, He Qian, Wei-Rong Yao*. The mechanism about the resistant dextrin improving sensorial quality of rice wine and red wine. Journal of Food Processing and Preservation. 2017, 41(6): 1-10.
15) Yahui Guo, Weirong Yao, Yunfei Xie, Xiaodong Zhou, Jiming Hu*, Renjun Pei*. Logic gates based on G-quadruplexes: principles and sensor applications. Microchimica acta， 2016, 183(1): 21-34.
16) Xiao-Wen Zhu, Min-Ping Wei, De-Ping Xu, Ya-Hui Guo, Yun-Fei Xie, Wei-Rong Yao*. In vitro and in vivo Antitumor Effects of the Extract of Sapindus spp. Journal of the Taiwan Institute of Chemical Engineers, 2016, 66: 27-32 .
17) Hong Wang,Yanli Cui*, Rong Zou, Zhaodong Cheng, Weirong Yao*, Yangyi Mao, Yongmin Zhang. Synthesis of oligosaccharides using per-O-trimethylsilyl-glycosyl iodides as glycosyl donor [J]. Carbohydrate Research，

2016, 247: 1-5.

18) Weirong Yao, Yanli Cui*, Peipei Wang, and Yangyi Mao. Catalyst-Free Aldol Reaction in a Water Medium. Letters in Organic Chemistry, 2016, 13: 293-296.

19) Jie Kong, Yun-Fei, Xie, Ya-Hui Guo, Yu-Liang Cheng, He-Qian, Wei-Rong Yao*. Biocontrol of postharvest fungal decay of tomatoes with a combination of thymol and salicylic acid screening from 11 natural agents. LWT - Food Science and Technology, 2016, 72: 215-222.

20) Wu Heng, Zhang Ling, Wang Na, Guo Youzhi, Weng Zhen, Sun Zhiyong, Xu Deping, Xie Yunfei, Yao Weirong*. Extraction and fermentation-based purification of saponins from Sapindus mukorossi Gaertn. Journal of Surfactants and Detergents, 2015, 18(3): 429-438.

21) Lijun Ji, Yingying Sun, Yunfei Xie, Heya Wang, He Qian, Li Wang, Weirong Yao. Weirong Yao. Density functional theory and surface-enhanced Raman spectroscopy studies on endocrine-disrupting chemical, dimethyl phthalate. Vibrational Spectroscopy, 2015, 79: 44-51. DOI: http://dx.doi.org/doi:10.1016/j.vibspec.2015.05.002

22) Xie Yunfei, Bao Yang, Wang Heya, Cheng Yuliang, Qian He, Yao Weirong *. Release of Bisphenols from Can Coatings into canned beer in China market. Journal of the Science of Food and Agriculture, 2015,95(4):764-70. doi: 10.1002/jsfa.6862.

23) Guo Yahui, Sun Yahui, Shen Xiaoqiang, Chen Xing, Yao Weirong, Xie Yunfei, Hu Jiming, Pei Renjun.Quantification of Zn2+ using a label-free sensor based on graphene oxide and G-quadruplex[J]. Anal. Methods, 2015, 7: 9615-9618.

24) Wu Heng, Yao Weirong *, Zhang Ling, Wang Na, Guo Youzhi, Weng Zhen, Sun Zhiyong, Xu Deping, Xie Yunfei. Analysis of the Bioactive Components of Sapindus saponins. Industrial Crops and Products, 2014, 61:422-429

25) Cui Yan, Wang Heya, Yao Weirong, Qian He. Hepatoprotective Potential of Aloe vera Polysaccharides against Chronic Alcohol-induced Hepatotoxicity in Mice. Journal of the Science of Food and Agriculture,2014,94(9):1764-1771.

26) Cui Yan, Wang Heya, Yao Weirong, Qian He. Aloin protects against chronic alcoholic liver injury via attenuating lipid accumulation, oxidative stress and inflammation in mice.Archives of Pharmacal Research, 2014, 37(12): 1624-33 .

27) Cui Yan, Wang Heya, Yao Weirong, Qian He. Hepatoprotective effect of Aloe vera polysaccharides against aflatoxin B1-induced hepatotoxicity in rats. Fresenius Environmental Bulletin, 2014, 23(7): 1635-1642 .

28) Xie Yun-Fei, Chen Ting, Cheng Yuliang, Wang Heya, Qian He, Yao Weirong *. SiO2@Au nanoshells-based SERS method for detection of sunset yellow and chrysoidine. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 2014,132:355-360.

29) WangNa, Wang Heya, Weng Zhen, Zhang Cui, Wu Heng, Guo Youzhi, Sun Zhiyong, Yao Weirong. Decolorization of sapindus pericarps extract by hydrogen peroxide and a comparison of basic characteristics before and after decolorization. Journal of surfactants and detergents, 2014, 17(5): 1003-1011.

30) Ji Wei, Wang Li, Qian He, Yao Weirong*. Quantitative Analysis of Amoxicillin Residues in Foods by Surface-enhanced Raman Spectroscopy. Spectroscopy Letters, 2014, 47: 1-7.

31) Sankhon Abdoulaye, I Amado ssoufouu, Yao Wei-Rong *, Wang Heya, Qian He, Sangare Moustapha. Comparison of Physicochemical and Functional Properties of Flour and Starch Extract in Different Methods From Africa Locust Bean (Parkia Biglobosa) Seeds. African Journal of Traditional Complementary and Alternative Medicines , 2014, 11(2):264-272.

32) Sankhon A, Amadou I, Yao WR*, Wang H, Qian H and Mlyuka E. Effect of different heat-moisture

treatment on the physicochemical properties of African locust bean (Parkia biglobosa) starches. Journal of Agricultural Science and Technology, 2014, 16:331-342.

33) Yunfei Xie , Li Xu , Yiqian Wang , Jingdong Shao , Li Wang , Heya Wang , He Qian and Weirong Yao*. Label-Free Detection of Foodborne Pathogens of Enterobacteriaceae by Surface-Enhanced Raman Spectroscopy. Analytical methods, 2013, 5(4), 946-952.

34) Sankhon, A., Yao, W.R., Amadou, I., Wang, H., Qian, H and Sangare, M. Effect of Pyrodextrinization, Cross-linking and Heat-Moisture Treatment on In vitro Formation and Digestibility of Resistant Starch from African Locust Bean (Parkia biglobosa). Tropical Journal of Pharmaceutical Research, 2013, 12(2): 173-179.

35) SANKHON, L. Wang, W. YAO, I. AMADOU, H. WANG, H. QIAN1 and M. SANGARE. Mechanism of the Formation, Properties and Molecular Structure of Slowly Digestible Starch from the African Locust bean Parkia biglobosa Collected from Conakry, Guinea. Asian Journal of Chemistry, 2013, 25(13): 7277-7282.

36) Yunfei Xie, Pei Li, Jin Zhang, Heya Wang, He Qian, Weirong Yao. Comparative Studies by IR, Raman, and Surface-Enhanced Raman Spectroscopy of Azodicarbonamide, Biurea and Semicarbazide Hydrochloride.. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy. 114 (2013) 80–84.

37) Shen, Xiaofang; Liu, Yong; Pang, Yuehong; Yao, Weirong. Conjugation of graphene on Au surface by pi-pi interaction and click chemistry. Electrochemistry Communications, 2013, 30: 13-16.

38) Ying-Ying Sun, Yun-Fei Xie, He-Ya Wang, He-Qian, Wei-Rong Yao*. Adsorption of 2,6-di-t-butyl-p-hydroxytoluene (BHT) on gold nanoparticles: assignment and interpretation of surface-enhanced Raman scattering. Applied Surface Science, 2012， 261:431-435.

39) Yunfei Xie, Yan Li, Li Niu, Heya Wang, He Qian, Weirong Yao. A Novel Surface-Enhanced Raman Scattering Sensor to Detect Prohibited Colorants in Food by Graphene/Silver Nanocomposite. Talanta, 2012,100: 32-37.

40) Yun-Fei Xie, Xin-Yu Zhu, He-Ya Wang, He-Qian, Wei-Rong Yao*. Rapid Detection Method for Nitrofuran Antibiotic Residues by Surface-Enhanced Raman Spectroscopy. European Food Research and Technology, 2012, 235(3): 555-561.

41) Yunfei Xie, Godelieve Mukamurezi, Yingying Sun, Heya Wang, He Qian, Weirong Yao*. Establishment of Rapid Detection method of Methamidophos in vegetables by Surface Enhanced Raman Spectroscopy . European Food Research and Technology, 2012, 234, 6:1091-1098

42) Yunfei Xie; Yan Li; Yingying Sun; Heya Wang; He Qian; Weirong Yao*. Theoretical Calculation (DFT), Raman and Surface-Enhanced Raman scattering (SERS) Study of Ponceau 4R. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy. 2012，96:600-604.

43) Abdoulaye Sankhon, Wei-Rong Yao, Heya Wang, He Qian and Moustapha Sangare. The yield improvement of resistant starches from Africa locust (parkia biglobosa): The influence of Heat moisture, autoclaving-cooling and cross-linking treatments. American Journal of Food Technology,2012,17(7):386-397.

44) Weirong Yao*, Shitao Wang, Yi Chen and Heya Wang. Composition and Antibacterial Aativity of Essential Oils of Flos Sophorae Immaturus. International Journal of Food Properties, 2011,14(4):903-913.

45) Wei Rong Yao*, He Ya Wang, Shi Tao Wang, Shi Lei Sun, Jie Zhou, and Yun Yun Luan. Assessment of the Antibacterial Activity and the Anti-diarrheal Function of Flavonoids from Bayberry Fruit. Journal of Agricultural and Food Chemistry, 2011, 59(10):5312-5317.

46) Weirong Yao*, Yingying Sun, Yunfei Xie, Shitao Wang, Lijun Ji, Heya Wang,He Qian. Development and evaluation of a surface-enhanced Raman scattering (SERS) method for the detection of the antioxidant butylated hydroxyanisole. European food research and technology, 2011, 233(5): 835-840.

47) Wang, HY; Qian, H; Yao, WR. Melanoidins produced by the Mail lard reaction: Structure and biological activity. Food Chemistry,2011,573-584.

48) Samuel Edgar TINYIRO, Cuthbert WOKADALA, Dan XU, Weirong YAO*. Adsorption and Degradation of Zearalenone by Bacillus strains. Folia Microbiologica, 2011,56:321-327.
49) Wei-Rong Yao, Yin-zhu Zhang, Yi Chen, Zhi-Ping Yang. Aroma enhancement and characterization of the absolute Osmanthus fragrans Lour. Journal of essential oil research, 2010，22（2）：97-102
50) Weirong Yao, Chunguang Liu, Xiaojie Xi, and Heya Wang. Impact of Process Conditions on Digestibility of Pea Starch. International Journal of Food Properties, 2010, 13(6): 1355 – 1363.
51) Odilon Djakpo, Weirong Yao*. Rhus chinensis and Galla Chinensis - folklore to modern evidence: review. Phytotherapy Research, 2010, 24(12):1739-1747. doi: 10.1002/ptr.3215.
52) Ladislaus M. kasankala, Yan xue, Yao Weilong, Sun D. Hong, Qian He. Optimization of gelatine extraction from grass carp (Catenopharyngodon idella) fish skin by response surface methdology. Bioresource Tecnology 98 (2007):3338-3343.
53) Yang Zhiping, Yao Weirong *, Qian He. Studies on vapor phase extraction of rose oil enhanced by β-glucosidase, Flavour and Fragrance Journal,,2006, 21(5): 776 – 782
54) Qingrong Liang, He Qian* and Weirong Yao. Identification of flavonoids and their glycosides by high-performance liquid chromatography with electrospray ionization mass spectrometry and with diode array ultraviolet detection, Eur. J. Mass Spectrom. 2005,11(1):93–101.
55) Yao WeiRong, Yao HuiYuan. Adsorbent Characteristics of Porous Starch[J]. Starch/Stärke，2002, 54(6):260-263.

Achievements and Honors