

Appendix 1 List of publications in 2017 and impact factors

IF of 2016

Direction I Analysis and toxicology research of existing, emerging and potential POPs

1. H. Z. Zhao, W. Q. Huo, J. F. Li, X. L. Ma, W. Xia, Z. J. Pang, M. Y. Xie, S. Q. Xu, Z. W. Cai. Exposure to benzophenones, parabens and triclosan among pregnant women in different trimesters. *Science of the Total Environment*. 2017 607, 578-585. 4.9
2. S. J. Wang, K. Poon, Z. W. Cai. Removal and metabolism of triclosan by three different microalgal species in aquatic environment. *Journal of Hazardous Materials*, 2018, 342, 643–650. 6.065
3. H. Li, M. Wang, Q. D. Liang, S. N. Jin, X. J. Sun, Y. Q. Jiang, X. Y. Pan, Y. Q. Zhou, Y. Peng, B. Zhang, A. F. Zhou, Y. M. Zhang, Z. Chen, J. X. Cao, H. L. Zhang, W. Xia, T. Z. Zheng, Z. W. Cai, Y. Y. Li, S. Q. Xu. Urinary metabolomics revealed arsenic exposure related to metabolicalterations in general Chinese pregnant women. *Journal of Chromatography A*, Volume 1479, 6 January 2017, Pages 145–152 3.981
4. G. Cao, X. P. Zhao, D. Hu, R. S. Zhu, F. Ouyang. Development and application of a quantification method for watersoluble organosulfates in atmospheric aerosols. *Environmental Pollution*. 2017;225:316-22. 5.099
5. W. Chen, Y. Y. Li, C. E. Chen, A. J. Sweetman, H. Zhang, K. C. Jones. DGT Passive Sampling for Quantitative in Situ Measurements of Compounds from Household and Personal Care Products in Waters. *Environmental Science & Technology*. 2017;51(22):13274-81. 6.198
6. W. H. Dong, D. D. Wu, J. M. Luo, Q. J. Xing, H. Liu, J. P. Zou, X. B. Luo, X. B. Min, H. L. Liu, S. L. Luo, C. T. Au. Coupling of photodegradation of RhB with photoreduction of CO₂ over rGO/SrTi_{0.95}Fe_{0.05}O₃-delta catalyst: A strategy for one-pot 6.844

- conversion of organic pollutants to methanol and ethanol. *Journal of Catalysis*. 2017;349:218-25.
7. K. P. Lai, J. C. Y. Lee, H. T. Wan, J. W. Li, A. Y. M. Wong, T. F. Chan, C. Oger, J. M. Galano, T. Durand, K. S. Leung, C. C. Leung, R. Li, C. K. C. Wong. Effects of in Utero PFOS Exposure on Transcriptome, Lipidome, and Function of Mouse Testis. *Environmental Science & Technology*. 2017;51(15):8782-94. 6.198
 8. K. P. Lai, H. T. Wan, A. H. M. Ng, J. W. Li, T. F. Chan, C. K. C. Wong. Transcriptomic and Functional Analyses on the Effects of Dioxin on Insulin Secretion of Pancreatic Islets and beta-Cells. *Environmental Science & Technology*. 2017;51(19):11390-400. 6.198
 9. K. P. Lai, J. W. Li, A. Cheung, R. Li, M. B. Billah, T. F. Chan, C. K. C. Wong. Transcriptome sequencing reveals prenatal PFOS exposure on liver disorders. *Environmental Pollution*. 2017;223:416-25. 5.099
 10. R. J. Li, L. F. Zhao, L. Zhang, M. H. Chen, C. Dong, Z. W. Cai. DNA damage and repair, oxidative stress and metabolism biomarker responses in lungs of rats exposed to ambient atmospheric 1-nitropyrene. *Environmental Toxicology and Pharmacology*. 2017;54:14-20. 2.313
 11. R. J. Li, L. F. Zhao, L. Zhang, M. H. Chen, J. Shi, C. Dong, Z. W. Cai. Effects of ambient PM_{2.5} and 9-nitroanthracene on DNA damage and repair, oxidative stress and metabolic enzymes in the lungs of rats. *Toxicology Research*. 2017;6(5):654-63. 1.969
 12. F. Tohidi, Z. W. Cai. Fate and mass balance of triclosan and its degradation products: Comparison of three different types of wastewater treatments and aerobic/anaerobic sludge digestion. *Journal of Hazardous Materials*. 2017;323:329-40. 6.065
 13. Q. Wu, J. Fang, S. F. Li, J. T. Wei, Z. Y. Yang, H. Z. Zhao, C. Zhao, Z. W. Cai. Interaction of bisphenol A 3,4-quinone metabolite with glutathione and ribonucleosides/deoxyribonucleosides in vitro. *Journal of Hazardous Materials*. 2017;323:195-202. 6.065
 14. C. X. Yang, A. P. S. Kong, Z. W. Cai, A. C. K. Chung. Persistent Organic Pollutants as Risk Factors for Obesity and Diabetes. *Current Diabetes Reports*. 2017;17(12). 3.387
 15. M. W. Zhang, S. K. Zhang, G. X. Feng, H. Su, F. Z. Zhu, M. Z. Ren, Z. W. Cai. Indoor airborne particle sources and outdoor haze days 3.835

effect in urban office areas in Guangzhou. *Environmental Research*. 2017;154:60-5.

16. Y. H. Zhong, Z. F. Chen, S. S. Liu, X. X. Dai, X. P. Zhu, G. M. Zheng, S. G. Liu, G. G. Liu, Z. W. Cai. Analysis of azole fungicides in fish muscle tissues: Multi-factor optimization and application to environmental samples. *Journal of Hazardous Materials*. 2017;324:535-43. 6.065

Direction II Establishment of integrated platform of proteomics and metabolomics to study human disease associated with the POPs

1. H.M. Luan, X. Wang, Z. W. Cai. Mass spectrometry-based metabolomics: Targeting the crosstalk between gut microbiota and brain in neurodegenerative disorders. *Mass Spectrom Rev*. 2017 Nov 12. doi: 10.1002/mas.21553. 9.373
2. G. D. Cao, D. L. Ruan, Z. B. Chen, Y. J. Hong, Z. W. Cai. Recent developments and applications of mass spectrometry for the quality and safety assessment of cooking oil. *Trac-Trends in Analytical Chemistry*. 2017;96:201-11. 8.442
3. T. T. Cao, S. H. Lin, L. Fu, Z. Tang, C. M. Che, L. Y. Zhang, X. Y. Ming, T. F. Liu, X. M. Tang, B. B. Tan, D. Xiang, F. Li, O. Y. Chan, D. Xie, Z. W. Cai, X. Y. Guan. Eukaryotic translation initiation factor 5A2 promotes metabolic reprogramming in hepatocellular carcinoma cells. *Carcinogenesis*. 2017;38(1):94-104. 5.105
4. J. Fang, Q. Wu, Y. Zhao, H. Z. Zhao, S. Q. Xu, Z. W. Cai. Comparison of different mass spectrometric approaches coupled to gas chromatography for the analysis of organochlorine pesticides in serum samples. *Journal of Chromatography B-Analytical Technologies in the Biomedical and Life Sciences*. 2017;1040:180-5. 2.603
5. E. N. Y. Lei, M. S. Yau, C. C. Yeung, M. B. Murphy, K. L. Wong, M. H. W. Lam. Profiling of Selected Functional Metabolites in the Central Nervous System of Marine Medaka (*Oryzias melastigma*) for Environmental Neurotoxicological Assessments. *Archives of Environmental Contamination and Toxicology*. 2017;72(2):269-80. 2.467
6. S. F. Li, L. Xiang, Z. W. Cai. Untargeted screening of acylcarnitines in urine by ultra-high performance liquid chromatography coupled 1.798

- with triple quadrupole mass spectrometry. *Chinese Journal of Chromatography*. 2017;35(1):80-5.
7. X. N. Li, C. C. Wong, Z. Tang, J. L. Wu, S. F. Li, Y. Qian, J. Y. Xu, Z. Y. Yang, Y. Shen, J. Yu, Z. W. Cai. Determination of amino acids in colon cancer cells by using UHPLC-MS/MS and U-C-13(5) - glutamine as the isotope tracer. *Talanta*. 2017;162:285-92. 4.162
 8. C. M. Wong, C. L. Au, S. Y. Tsang, C. W. Lau, X. Q. Yao, Z. W. Cai, A. C. K. Chung. Role of inducible nitric oxide synthase in endothelium- independent relaxation to raloxifene in rat aorta. *British Journal of Pharmacology*. 2017;174(8):718-33. 5.491
 9. L. Xiang, J. T. Wei, X. Y. Tian, B. Wang, W. Chan, S. F. Li, Z. Tang, H. S. Zhang, W. S. Cheang, Q. Zhao, H. Z. Zhao, Z. Y. Yang, Y. J. Hong, Y. Huang, Z. W. Cai. Comprehensive Analysis of Acylcarnitine Species in db/db Mouse Using a Novel Method of High-Resolution Parallel Reaction Monitoring Reveals Widespread Metabolic Dysfunction Induced by Diabetes. *Analytical Chemistry*. 2017;89(19):10368-75. 6.32
 10. L. Zhang, Y. X. Zhong, X. Liu, Y. Bao, Y. F. Zhao, Y. N. Wu, Z. W. Cai, J. G. Li. Determination of polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans, and dioxin-like polychlorinated biphenyls in human serum using programmable-temperature vaporization gas chromatography with high-resolution mass spectrometry. *Journal of Separation Science*. 2017;40(17):3453-61. 2.557
 11. X. O. Zhang, J. H. Niu, X. T. Zhang, R. Xiao, M. H. Lu, Z. W. Cai. Graphene oxide-SiO₂ nanocomposite as the adsorbent for extraction and preconcentration of plant hormones for HPLC analysis. *Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences*. 2017;1046:58-64. 2.603
 12. Zhao, Z. Tang, J. C. Yan, J. Fang, H. L. Wang, Z. W. Cai. Bisphenol S exposure modulate macrophage phenotype as defined by cytokines profiling, global metabolomics and lipidomics analysis. *Science of the Total Environment*. 2017;592:357-65. 4.9
 13. X. Zhong, Y. J. Tu, Y. Li, P. Zhang, W. Wang, S. S. Chen, L. Li, A. C. K. Chung, H. Y. Lan, H. Y. Chen, G. S. Li, L. Wang. Serum levels of WNT1-inducible signaling pathway protein-1 (WISP-1): a noninvasive biomarker of renal fibrosis in subjects with chronic

kidney disease. *American Journal of Translational Research*.
2017;9(6):2920-+.

14. Y. Zhou, A. C. K. Chung, R. R. Fan, H. M. Lee, G. Xu, B. Tomlinson, J. C. N. Chan, A. P. S. Kong. Sirt3 Deficiency Increased the Vulnerability of Pancreatic Beta Cells to Oxidative Stress-Induced Dysfunction. *Antioxidants & Redox Signaling*. 2017;27(13):962-76. 6.337

Direction III Development and application of new biosensing and bioimaging techniques for research on environmental pollution and human health

1. F. F. Ji, H. M. Luan, Y. Y. Huang, Z. W. Cai, M. Li. MS-Based Metabolomics for the Investigation of Neuro-Metabolic Changes Associated with BDE-47 Exposure in C57BL/6 Mice. *Journal of Analysis and Testing*. 2017, 1: 233. N/A
2. R. Liu, Z. W. Cai, B. J. Xu. Characterization and quantification of flavonoids and saponins in adzuki bean (*Vigna angularis* L.) by HPLC–DAD–ESI–MSn analysis. *Chemistry Central Journal*, 2017, 11:93. 2.442
3. R. Liu, Y. N. Zheng, Z. W. Cai, B. J. Xu. Saponins and Flavonoids from Adzuki Bean (*Vigna angularis* L.) Ameliorate High-Fat Diet-Induced Obesity in ICR Mice. *Frontiers in Pharmacology* 2017, 8. 4.4
4. Z. T. Chen, S. S. Hu, X. Y. He, L. H. Guo, B. Qiu, Z. Y. Lin, G. N. Chen, Z. W. Cai. Spectroscopy study of the interaction between endocrine disruptor 4-OH-2,2',3,4'-BDE and human serum albumin. *Anal. Methods*, 2017, 9, 3338-3346. 1.9
5. C. Y. Zhou, X. M. Chen, Z. Du, G. K. Li, X. H. Xiao, Z. W. Cai. A hybrid monolithic column based on boronate-functionalized graphene oxide nanosheets for online specific enrichment of glycoproteins. *Journal of Chromatography A* 2017: 1498, 90-98. 3.981
6. H. M. Luan, L. Yang, F. F. Ji, Z. W. Cai. PCI-GC-MS-MS approach for identification of non -amino organic acid and amino acid profiles. *Journal of Chromatography B*. 2017: 1047, 180-184. 2.603
7. P. S. Xie, Y. J. Zhan, M. Wu, L. H. Guo, Z. Y. Lin, B. Qiu, G. N. Chen, Z. W. Cai. The detection of melamine base on a turn-on fluorescence of DNA-Ag nanoclusters. *Journal of Luminescence*. 2017;186:103-8. 2.686

8. P. Chen, F. L. Wang, Z. F. Chen, Q. X. Zhang, Y. H. Su, L. Z. Shen, K. Yao, Y. Liu, Z. W. Cai, W. Y. Lv, G. G. Liu. Study on the photocatalytic mechanism and detoxicity of gemfibrozil by a sunlight-driven TiO₂/carbon dots photocatalyst: The significant roles of reactive oxygen species. *Applied Catalysis B-Environmental*. 2017;204:250-9. 9.446
9. P. Chen, F. L. Wang, Q. X. Zhang, Y. H. Su, L. Z. Shen, K. Yao, Z. F. Chen, Y. Liu, Z. W. Cai, W. Y. Lv, G. G. Liu. Photocatalytic degradation of clofibric acid by g-C₃N₄/P-25 composites under simulated sunlight irradiation: The significant effects of reactive species. *Chemosphere*. 2017;172:193-200. 4.208
10. H. G. Li, R. F. Lan, C. F. Chan, G. C. Bao, C. Xie, P. H. Chu, W. C. S. Tai, S. Zha, J. X. Zhang, K. L. Wong. A luminescent lanthanide approach towards direct visualization of primary cilia in living cells. *Chemical Communications*. 2017;53(52):7084-7. 6.319
11. X. Li, W. Luo, T. W. Ng, P. C. Leung, C. F. Zhang, K. C. F. Leung, L. J. Jin. Nanoparticle-encapsulated baicalein markedly modulates pro-inflammatory response in gingival epithelial cells. *Nanoscale*. 2017;9(35):12897-907. 7.367
12. G. Lin, C. H. Gao, Q. Zheng, Z. X. Lei, H. J. Geng, Z. Lin, H. H. Yang, Z. W. Cai. Room-temperature synthesis of core-shell structured magnetic covalent organic frameworks for efficient enrichment of peptides and simultaneous exclusion of proteins. *Chemical Communications*. 2017;53(26):3649-52. 6.319
13. L. J. Liu, W. H. Wang, S. Y. Huang, Y. J. Hong, G. D. Li, S. Lin, J. L. Tian, Z. W. Cai, H. M. D. Wang, D. L. Ma, C. H. Leung. Inhibition of the Ras/Raf interaction and repression of renal cancer xenografts in vivo by an enantiomeric iridium(III) metal-based compound. *Chemical Science*. 2017;8(7):4756-63. 8.668
14. Z. Z. Liu, N. Banaei, K. N. Ren. Microfluidics for Combating Antimicrobial Resistance. *Trends in Biotechnology*. 2017;35(12):1129-39. 11.126
15. Z. Z. Liu, H. Sun, K. N. Ren. A Multiplexed, Gradient-Based, Full-Hydrogel Microfluidic Platform for Rapid, High-Throughput Antimicrobial Susceptibility Testing. *Chempluschem*. 2017;82(5):792-801. 2.797

16. M. H. Lu, X. Q. Yang, Y. X. Yang, P. Qin, X. R. Wu, Z. W. Cai. 3.553
Nanomaterials as Assisted Matrix of Laser Desorption/Ionization
Time-of-Flight Mass Spectrometry for the Analysis of Small
Molecules. *Nanomaterials*. 2017;7(4).
17. R. Xiao, X. T. Zhang, X. Zhang, J. H. Niv, M. H. Lu, X. H. Liv, Z. W. 4.162
Cai. Analysis of flavors and fragrances by HPLC with Fe₃O₄@GO
magnetic nanocomposite as the adsorbent. *Talanta*. 2017;166:262-7.

Other

1. A. Karkhanis, Y. J. Hong, E. C. Y. Chan. Inhibition and inactivation 4.581
of human CYP2J2: Implications in cardiac pathophysiology and
opportunities in cancer therapy. *Biochemical Pharmacology*.
2017;135:12-21.
2. 51. J. J. Liu, L. Yang, H. Zhang, J. F. Wang, Z. F. Huang. Ultraviolet- 8.643
Visible Chiroptical Activity of Aluminum Nanostructures. *Small*.
2017;13(39).
3. 52. Z. F. Huang, J. J. Liu. Chiroptically Active Metallic Nanohelices 8.643
with Helical Anisotropy. *Small*. 2017;13(43).