

WENWEI ZHONG

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Education

PH.D. IN CHEMICAL ENGINEERING | NOV 2017 | UNSW AUSTRALIA|AUSTRALIA

GRADUATE DIPLOMA IN DATA SCIENCE| AUG 2017 | THE UNIVERSITY OF SYDNEY|AUSTRALIA

BACHELOR IN ENGINEERING (1ST CLASS HONOURS) | MAR 2014 | UNSW AUSTRALIA|AUSTRALIA

- Recipient of Taste of Research 2012 from UNSW Engineering
- Dean's List of 2012 and 2013 from the Faculty of Engineering
- Exchange program at The University of Texas at Austin (USA) (Jan-Jun 2012)

BACHELOR IN CHINESE MATERIA MEDICA | JUL 2024 | SOUTHERN MEDICAL UNIVERSITY|CHINA

Publications/Conferences/Patents

PUBLISHED PEER-REVIEWED PAPERS (SCI INDEXED)

1. J. Xiong, X. Li, G. Li, H. Zeng, J. Chen, Y. Wang, L.Guo, **W. Zhong***. “Co-encapsulation of quercetin and bakuchiol in PCL microspheres via membrane emulsification: preparation, release and biological effects”. *Journal of Drug Delivery Science and Technology*, 2025, 114: 107431. (Sole corresponding author)
2. G. Li, X. Li, J. Xiong, H. Zeng, J. Chen, Y. Wang, L. Guo, **W. Zhong***. “Unraveling the role of shell hydrophilicity of core-shell microspheres on fibroblast cell bioactivity as biostimulators”. *International Journal of Pharmaceutics*, 2025, 681: 125815. (Sole corresponding author)
3. **W. Zhong**, X. Cao, H. Zeng, M. Tang, G. Li, J. Xiong, Y. Wang, L.Guo*, J. Ji*. “Baicalin loaded monodispersed polycaprolactone (PCL) microspheres preparation by polyvinylidene fluoride (PVDF) membrane emulsification for wound healing in dermal fibroblasts”. *Journal of Biomaterials Applications*, 2025, 39(10): 1143-1155. (Sole first author)
4. M. Tang, **W. Zhong***, L. Guo, H. Zeng, Y. Pang*. “Role of borneol as enhancer in drug formulation: A review”. *Chinese Herbal Medicines*, 2025, 17: 473-483.
 - Co-corresponding author, co-supervisor for master student M. Tang
 - JCR Q1, IF 8.9
5. **W.Zhong**, L.Long, J.Ji*, L.Guo, Y. Wang*, J. Chen. “Microencapsulated bufalin: From membrane preparation to microspheres tailoring, and sustained release”. *Food and Bioproducts Processing*, 2023, 140: 60-71.
 - First author, IF 3.5, JCR Q2, 2 citations
6. S. Tan, Q. Li, L. Guo*, Y. Wang*, **W. Zhong***. “Investigation of foaming behavior in herbal extracts via the characterization of solution environment for reverse osmosis concentration”. *Food and Bioproducts Processing*, **2023**, 137: 28-44.
 - Corresponding author, IF 3.5, JCR Q2, 3 citations

- S. Tan was an undergraduate student from UNSW Australia working in my lab in 2021
7. L.Long¹, W. Zhong^{1,*}, L. Guo, J. Ji, H. Nie*. “Effect of Bufalin-PLGA microspheres in the alleviation of neuropathic pain via CCI model”. *Frontiers in Pharmacology*. 2022, 13:910885. doi: 10.3389/fphar.2022.910885.
 - Co-first author, co corresponding author, IF 4.4, JCR Q1, 10 citations
 - L. Long was a master student from Jinan University where I supervised her on completing her thesis and paper writing
 8. W. Li, Q. Li, L. Guo, J. Liu, K. Wang, **W. Zhong**, “*Traditional Chinese medicine extract properties incorporated energy analysis for membrane concentration processes.*” *Membranes* **2021**, 11: 673
 - Corresponding author, IF 3.3, JCR Q2, 7 citations
 - W. Li was an undergraduate student from USYD working in my lab in 2020
 9. **W. Zhong**, L. Guo, C. Ji, G. Dong, S. Li, “*Membrane distillation for zero liquid discharge during treatment of wastewater from the industry of traditional Chinese medicine: a review*”. *Environmental Chemistry Letters* **2021**, 19: 2317-2330.
 - First author, IF 15.0, JCR Q1, 34 citations
 10. **W. Zhong**, Y. Zhao, S. Chen, J. Zhong, L. Guo, D. Zheng, C. Xie, C. Ji, Y. Guo, G. Dong, F. Zhang, A. An, S. Li, “*Resources recycle of traditional Chinese medicine (TCM) wastewater I: Effectiveness of the UF-MD hybrid system and MD process optimization.*” *Desalination*, **2021**, 504, 114953.
 - First author, IF 8.3, JCR Q1, 9 citations
 11. **W. Zhong**, J. Hou, H. Li, V. Chen, “*Fouling mitigation in submerged VMD for the treatment of brackish groundwater concentrates with transverse vibration and crystallizer*”. *Desalination*, **2018**, 426, 32-41.
 - First author, IF 8.3, JCR Q1, 20 citations
 12. **W. Zhong**, H-C. Yang, J. Hou, V. Chen, “*Superhydrophobic membrane via bio-inspired mineralization with enhanced long-term stability in vacuum membrane distillation*”, *Journal of Membrane Science*, **2017**, 540, 98-107.
 - First author, IF 8.4, JCR Q1, 59 citations
 13. H-C. Yang¹, **W. Zhong**¹, J. Hou, V. Chen, Z-K. Xu, “*Janus hollow fiber membrane with a mussel-inspired coating on the lumen surface for direct contact membrane distillation.*” *Journal of membrane science*, **2017**, 523, 1-7.
 - Co-first author, IF 8.4, JCR Q1, 141 citations
 14. **W. Zhong**, H. Li, Y. Ye, V. Chen, “*Evaluation of silica fouling for coal seam gas produced water in a submerged vacuum membrane distillation system.*” *Desalination*, **2016**, 393, 52-64.
 - First author, IF 8.3, JCR Q1, 37 citations
 15. Q. Li , L-J. Beier, J. Tan, C. Brown, B. Lian, **W. Zhong**, Y. Wang, C. Ji, P. Dai, T. Li, P. Le Clech, H. Tyagi; X. Liu, G. Leslie, R. A. Taylor, “*An integrated, solar-driven membrane distillation system for water purification and energy generation.*” *Applied Energy*, **2019**, 237, 534-548.
 - IF 10.1, JCR Q1, 158 citations
 16. Q. Li, B. Lian, **W. Zhong**, A. Omar, A. Razmjou, P. Dai, J. Guan, G. Leslie, R.A. Taylor, “*Improving the Performance of Vacuum Membrane Distillation Using a 3D-printed Helical Baffle and a Superhydrophobic Nanocomposite Membrane.*” *Separation and purification technology*, **2020**, 248, 117072.
 - IF 8.1, JCR Q1, 36 citations

WORKING PAPERS

1. **W. Zhong**, H. Zeng, L. Guo*, “Microencapsulation of large microspheres by membrane emulsification”, manuscript preparation.
2. **Wenwei Zhong**, Xiang Cao, Haoran Zeng, Manqun Tang, Guizhen Li, Jia Xiong, Yunong Wang, Liwei Guo*, Jing Ji*. “Baicalin loaded monodispersed polycaprolactone (PCL) microspheres preparation by polyvinylidene fluoride (PVDF) membrane emulsification for wound healing in dermal fibroblasts”, under review, *Colloids and Surfaces B: Biointerfaces*.

BOOK CHAPTER/BOOK

1. J. Liu, L. Guo, **W. Zhong**. (eds) (2024) *Nano and Microscale Drug Delivery for TCM: Research and Application*. Science Press, Shanghai.
2. L. Guo, J. Liu, **W. Zhong**. (eds) (2023) *Separation Process for Traditional Chinese Medicine Manufacturing: Principles and Applications*. Science Press, Shanghai.
3. **W. Zhong**, Q. Li, X. Zhao, S. Chen. (2020) *Membrane Preparation for Unconventional Desalination by Membrane Distillation and Pervaporation*. In: Zhang Z., Zhang W., Lichtfouse E. (eds) *Membranes for Environmental Applications. Environmental Chemistry for a Sustainable World*, vol 42. Springer, Cham. (First author and corresponding author)

CONFERENCES

1. **W. Zhong**, L. Guo. “Pharmaceutical processing of traditional Chinese medicine with integrated membrane-based technologies under the ‘dual-carbon’ policy – real case study in Yu-Ping-Feng-San decoction and Si-Jun-Zi decoction”. Oral presentation at 2022 Traditional Medicine Research International Summit Forum and Seminar, Tianjin, China, May 16-17, 2022.
2. **W. Zhong**, L. Guo, S. Li, “Wetting by Naturally Existing Surfactants in Traditional Chinese Medicine (TCM) Solution by Direct Contact Membrane Distillation”. Oral presentation at 5th International Conference on Desalination using Membrane Technology (MEMDES), Shanghai, China, November 14-17, 2021.
3. **W. Zhong**, H-C. Yang, J. Hou, V. Chen, "*Superhydrophobic membrane via bio-inspired mineralization with enhanced long-term stability in vacuum membrane distillation*". Oral presentation at 9th International Membrane Science and Technology Conference (IMSTEC), Adelaide, South Australia, Australia, December 5-8, 2016.
4. **W. Zhong**, H. Li, V. Chen, "*Evaluation of silica fouling in novel submerged membrane distillation for produced water treatment*". Oral presentation at 25th North American Membrane Society (NAMS) Annual Meeting 2015, Boston, Massachusetts, USA, June 1-3, 2015.
5. **W. Zhong**, H. Li, V. Chen, "*Treatment of brackish groundwater concentrates using vacuum membrane distillation*". Poster presentation at the 5th International Water Association Regional Conference on Membrane Technology (IWA-RMTC), Kunming, Yunnan, China August 22-24, 2016.
6. **W. Zhong**, H. Li, V. Chen, "*Silica fouling in coal seam gas water treatment by submerged membrane distillation*". Poster presentation at Chemeca, Melbourne, Victoria, Australia, September 27 – October 1, 2015.
7. Y-C Hsu, **W. Zhong**, S. Meng, Y. Ye, V. Chen, "*Transverse Vibration enhanced Vacuum Membrane Distillation for Coal-Seam Gas Wastewater Treatment Applications*". Poster presentation at 10th International Congress on Membranes and Membrane Processes (ICOM) 2014, Suzhou, Jiangsu, China July 20-25, 2014.

PATENTS

1. **ZHONG Wen-wei**, GUO Li-wei, LI Wan-yu, 2021, *Membrane distillation material concentration dynamic energy consumption calculation method, electronic equipment and computer readable storage medium*, CN202110337285.8A (P.R. China).
2. **ZHONG Wen-wei**, XU Xiao-jin, CHEN Shun-quan, 2018, *Method for rapidly preparing oleophobic hydrophobic membrane*, ZL 201810858521.9 (P.R. China, Granted).

AWARDS

1. **Award of Excellence** at the 1st China Post-doctoral Innovation & Entrepreneurs Competition, 'Key techniques for the production of microspheres with sustained release', 2021. 12, Foshan, China.

Experience

ASSISTANT PROFESSOR | MACAU UNIVERSITY OF SCIENCE AND TECHNOLOGY | 2025.09-PRESENT

ASSOCIATE PROFESSOR | GUANGDONG PHARMACEUTICAL UNIVERSITY| 2022.06 - 2025.06

- Research interest: Functional product development derived from Chinese medicine resources, engineering principles and applications of advanced separation membrane technology based TCM processing, membrane emulsification processing for TCM micro and nano drug delivery system, resource recovery from TCM wastewater and downstream processing using membrane
- Published 2 books entitled "*Separation Process for Traditional Chinese Medicine Manufacturing: Principles and Applications*"& "*Nano and Microscale Drug Delivery for TCM: Research and Application*"
- Supervising 4 postgraduate students in TCM drug delivery system particularly for wound healing via membrane emulsification
- Course instructor and lectured 4 undergraduate courses in Traditional Chinese medicine resources, particularly in their related product development and application

POST-DOCTORAL RESEARCHER | GUANGZHOU NANSHA INFORMATION TECHNOLOGY PARK POST-DOCTORAL SCIENTIFIC RESEARCH STATION | 2019.08 - 2022.02

- Supervisor: Prof Liwei Guo (Nanjing University of Chinese Medicine)
- Project entitled 'Study in the concentration process of TCM via an integrated RO-MD membrane process with data-driven approaches'
- Guangdong OVERSEAS POST-DOC PROGRAM
- Recipients of 2 grants from China Postdoctoral Science Foundation Program

ADJUNCT ASSISTANT PROFESSOR | GUANGZHOU ADVANCED TECHNOLOGY INSTUTTE, CHINESE ACADEMY OF SCIENCE| 2019.09 - 2021.12

- Lead investigator for a sub-task in 2019 NATIONAL KEY RESEARCH AND DEVELOPMENT PROGRAM OF CHINA (TCM modernization specifically)

Funding

13TH CHINA POSTDOCTORAL SCIENCE FOUNDATION SPECIAL PROGRAM| AUG 2020 - AUG 2021| ¥180,000 CNY

- Lead investigator, 768 selected nationwide with approx. 20% approval rate
- Janus membrane for the traditional Chinese medicine concentration process by membrane distillation

67TH CHINA POSTDOCTORAL GENERAL PROGRAM| JUL 2020 - AUG 2021| ¥80,000 CNY

- Lead investigator
- Wetting and fouling mechanism of traditional Chinese medicine concentration by membrane distillation

2019 NATIONAL KEY RESEARCH AND DEVELOPMENT PROGRAM OF CHINA| DEC 2019 – DEC 2021| ¥8,250,000 CNY

- Contribution of the conceptualization on the Janus hydrophobic-hydrophilic membrane for the wetting and fouling mechanism in TCM concentration by membrane distillation
- Principal investigator for the sub-task and is in charge of ¥500,000 CNY fund
- The only project approved for the same category nationwide

RESEARCH ON KEY TECHNOLOGIES AND INDUSTRY STANDARDS OF GREEN MANUFACTURING OF TRADITIONAL CHINESE MEDICINE BASED ON MEMBRANE PROCESS| DEC 2020 – DEC 2021| ¥300,000 CNY

- Principal investigator
- Funded by industrial partner of Guangzhou Hanfang Pharmaceutical Co., Ltd (subsidiary company of Guangzhou Pharmaceuticals Corporation, the 3rd largest pharmaceutical company in China)

2019 SCIENCE AND TECHNOLOGY PROGRAM OF GUANGZHOU GENERAL PROGRAM| APR 2019 - MAR 2021| ¥200,000 CNY

Teaching Experience

- Course instructors and lectured 4 undergraduate courses in mandarin, including TCM utilization and products development, Comprehensive TCM product development in practice, Scientific paper writing and Innovation and entrepreneurship theory at Guangdong Pharmaceutical University (in Mandarin)
- Tutored undergraduate chemical engineering courses at UNSW Australia, including Energy System and Thermodynamics, Reaction Engineering and Sustainable Product Design (in English)

Major Conference Organizations

- Co-chair, 2021 5th International Conference on Desalination using Membrane Technology

Professional Services

Reviewer for Journal of Food Engineering, Desalination, Separation & Purification Technology

ECR editorial board and reviewer for Chinese Traditional and Herbal Drugs (in Chinese)

钟文蔚 博士简历

wenwei.rachel.zhong@hotmail.com

教育背景

2014 – 2017 | PhD | UNSW Australia, Australia (澳大利亚, 新南威尔士大学, 排名 2022 QS 19 名)

化学工程: 膜分离专业

Membrane separation (chemical engineering)

师从澳大利亚工程院院士 Prof Vicki Chen

博士论文《Membrane Distillation for the Treatment of Concentrated Saline Effluents - Mechanism and Mitigation of Membrane Fouling and Wetting》

2016 – 2017 | Graduate Certificate | The University of Sydney, Australia (悉尼大学)

数据科学 Data Science

2012 | 本科生交流项目 | The University of Texas at Austin, USA (美国德克萨斯大学奥斯汀分校)

2010 – 2014 | BEng | UNSW Australia, Australia

化学工程: 一级荣誉

Chemical engineering: 1st Class Honors

工作经历

2025.09 至今 | 助理教授 | 澳门科技大学

2022.06 至 2025.06 | 副研究员, 研究生导师 | 广东药科大学

- 研究方向: 中药资源开发与利用, 基于膜分离技术的中药制药过程和植物提取过程工程原理和应用, 基于膜乳化的微纳米制剂技术, 以及基于膜过程的中药制药废水处理和资源利用
- 入职以来以第三主编, 在科学出版社出版两部专著《中药制药分离过程: 工程原理与技术应用》、《微纳米中药制剂研究与应用》
- 指导 4 位研究生, 研究方向为基于膜乳化的大颗粒微球制备技术及其在伤口愈合的功能测试和应用
- 主讲 4 门中药资源开发与利用专业本科课程

2019.08 至 2022.02 | 中药制药学博士后 | 广州南沙资讯科技园博士后科研工作站

- 博士后合作导师: 郭立玮教授 (南京中医药大学)
- 研究题目: 基于“数据驱动”策略的中药“反渗透-膜蒸馏”集成技术浓缩应用研究
- 广东省海外博士后引进计划
- 两项中国博士后基金 (面上及特别资助)

2019.09 至 2021.12 | 客座助理研究员，中药研发部副主任| 广州中国科学院先进技术研究所

- 科技部中药现代化重点专项“质量评价导向的特种膜中药绿色制造技术与装备研究”子课题任务负责人

2017.09 至 2019.08 | 助理研究员| 广州中国科学院先进技术研究所

科研项目

1. 2023.03 – 2025.03, 广州百奥格林生物科技有限公司技术委托项目, 项目负责人, 该项目经费 2 万元人民币。
2. 2020.12 – 2021.12, 广州白云山汉方现代药业有限公司技术委托项目, 项目负责人, 该项目经费 30 万元人民币。
3. 2020.09 – 2021.10, 中国博士后科学基金第 13 批特别资助, 项目编号 2020T130130, 项目负责人, 项目编号 2020T130130, 项目经费 18 万人民币 (获批人数全国仅约 700 人)。
4. 2020.08 – 2021.10, 中国博士后科学基金面上资助第 67 批, 2020M672575, 项目负责人, 项目经费 8 万人民币。
5. 2019.12 – 2021.12, 参与科技部中药现代化重点专项“质量评价导向的特种膜中药绿色制造技术与装备研究”, 项目编号: No. 2019YFC1711300, 配合博士后合作导师郭立玮教授作为重点专项的主要设计者及执行者, 并作为课题一实际负责人兼课题二任务负责人, 项目经费 825 万人民币。
6. 2019.04 – 2021.03, 广州市科学研究计划一般项目专题, 201904010054, 项目负责人, 该项目经费 20 万人民币。

学术成果

论文

1. J. Xiong, X. Li, G. Li, H. Zeng, J. Chen, Y. Wang, L. Guo, **W. Zhong***. “Co-encapsulation of quercetin and bakuchiol in PCL microspheres via membrane emulsification: preparation, release and biological effects”. *Journal of Drug Delivery Science and Technology*, 2025, 114: 107431. (Sole corresponding author)
2. G. Li, X. Li, J. Xiong, H. Zeng, J. Chen, Y. Wang, L. Guo, **W. Zhong***. “Unraveling the role of shell hydrophilicity of core-shell microspheres on fibroblast cell bioactivity as biostimulators”. *International Journal of Pharmaceutics*, 2025, 681: 125815. (Sole corresponding author)
3. **W. Zhong**, X. Cao, H. Zeng, M. Tang, G. Li, J. Xiong, Y. Wang, L. Guo*, J. Ji*. “Baicalin loaded monodispersed polycaprolactone (PCL) microspheres preparation by polyvinylidene fluoride (PVDF) membrane emulsification for wound healing in dermal fibroblasts”. *Journal of Biomaterials Applications*, 2025, 39(10): 1143-1155. (Sole first author)
4. M. Tang, **W. Zhong***, L. Guo, H. Zeng, Y. Pang*. “Role of borneol as enhancer in drug formulation: A review”. *Chinese Herbal Medicines*, 2025, 17: 473-483.
 - 共同通讯作者, 第一作者唐漫群 (广东药科大学研究生) 的副导师
 - JCR Q1, IF 4.7
5. **W. Zhong**, L. Long, J. Ji*, L. Guo, Y. Wang*, J. Chen. “Microencapsulated bufalin: From membrane preparation to microspheres tailoring, and sustained release”. *Food*

- and Bioproducts Processing, 2023, 140: 60-71. (第一作者, JCR 一区, 中科院二区, IF=4.6)
6. S. Tan, Q. Li, L. Guo*, Y. Wang*, **W. Zhong***. “Investigation of foaming behavior in herbal extracts via the characterization of solution environment for reverse osmosis concentration”. Food and Bioproducts Processing, **2023**, 137: 28-44.
7. L.Long¹, **W.Zhong^{1,*}**, L.Guo, J.Ji, H.Nie*. “Effect of Bufalin-PLGA microspheres in the alleviation of neuropathic pain via CCI model”. Frontiers in Pharmacology. 2022, 13:910885. doi: 10.3389/fphar.2022.910885.
8. 龙利娜, **钟文蔚***, 周丹, 郭立玮, 聂红*. “基于药效权重评价的杜仲叶-刺五加复方‘湿法超微提取-膜澄清耦合’工艺筛选研究”. 中草药, 2022, 53(7):2053-2063. (共同通讯, 北大核心)
9. W.Li, Q. Li, L. Guo, J. Liu, K. Wang, **W. Zhong**. “Traditional Chinese Medicine Extract Properties Incorporated Energy Analysis for Membrane Concentration Processes”. Membranes. **2021**,11(9):673.
10. **钟文蔚¹**, 郑东阳¹, 邹洪荟, 卓泽伟, 郭立玮. “基于中药液、固体物料指标成分含量相关性的膜工艺评估方法创新研究——以杜仲叶水提液为例”. 中草药, 2021, 52(11):3234-3238. (第一作者, 北大核心)
11. **钟文蔚**, 黎万钰, 丁菲, 李除夕, 郑东阳, 郭立玮. “基于中药水提液浓缩过程溶液环境特征参数相关性的瞬时能耗计算方法探索——以玉屏风散水提液为例”, 中草药, 2021, 52 (7) : 1937-1944. (第一作者, 北大核心)
12. **W. Zhong**, L. Guo, C. Ji, G. Dong, S. Li, “Membrane distillation for zero liquid discharge during treatment of wastewater from the industry of traditional Chinese medicine: a review”. Environmental Chemistry Letters, 2021, 19: 2317-2330.
13. **W. Zhong**, Y. Zhao, S. Chen, J. Zhong, L. Guo, D. Zheng, C. Xie, C. Ji, Y. Guo, G. Dong, F. Zhang, A. An, S. Li, “Resources recycle of traditional Chinese medicine (TCM) wastewater I: Effectiveness of the UF-MD hybrid system and MD process optimization.” Desalination, 2021, 504, 114953.
14. **钟文蔚**, 纪超, 郭立玮, 李博, 徐雪松. 关于“基于数据科学的中药膜过程研究”的思考与实践, 中草药, 2020, 51 (1), 1-8. (第一作者, 北大核心)
15. **钟文蔚**, 郭立玮, 袁海, 陈顺权. 以“材料化学工程”理念构建“基于膜过程的中药绿色制造工程理论、技术体系”的探索, 中草药, 2020, 51 (14) 3609-3616. (第一作者, 北大核心)
16. **钟文蔚**, 李绍平, 郭立玮, 陈顺权, 袁海, 骆玉凤. “面向中药绿色制造的特征膜技术与专属装备”的研究策略与实践——20 余年中药膜科技研究与应用的回顾、反思与展望, 膜科学与技术, 2020, 40 (1) 361-367. (第一作者, 北大核心)
17. **W. Zhong**, J. Hou, H. Li, V. Chen, “Fouling mitigation in submerged VMD for the treatment of brackish groundwater concentrates with transverse vibration and crystallizer”. Desalination, 2018.426 ,32-41.
18. **W. Zhong**, H-C. Yang, J. Hou, V. Chen, “Superhydrophobic membrane via bio-inspired mineralization with enhanced long-term stability in vacuum membrane distillation”, Journal of membrane science, 2017, 540, 98-107.
19. H-C. Yang[#], **W. Zhong[#]**, J. Hou, V. Chen, Z-K. Xu, “Janus hollow fiber membrane with a mussel-inspired coating on the lumen surface for direct contact membrane distillation”, Journal of membrane science, 2017,523, 1-7.
20. **W. Zhong**, H. Li, Y. Ye, V. Chen, “Evaluation of silica fouling for coal seam gas produced water in a submerged vacuum membrane distillation system”, Desalination, 2016, 393, 52-64.

21. Q. Li , L-J. Beier, J. Tan, C. Brown, B. Lian, **W. Zhong**, Y. Wang, C. Ji, P. Dai, T. Li, P. Le Clech, H. Tyagi; X. Liu; G. Leslie, R. A. Taylor , “An integrated, solar-driven membrane distillation system for water purification and energy generation”, Applied Energy, 2019, 237, 534-548.

22. Q. Li, B. Lian, **W. Zhong**, A. Omar, A. Razmjou, P. Dai, J. Guan, G. Leslie, R.A. Taylor, “Improving the Performance of Vacuum Membrane Distillation Using a 3D-printed Helical Baffle and a Superhydrophobic Nanocomposite Membrane”, Separation and purification technology, 2020, 248, 117072.

发明专利

1. **钟文蔚**, 郭立玮, 黎万钰, 膜蒸馏物料浓缩动态能耗计算方法、电子设备及计算机可读存储介质, 2021.03.29, 中国, 202110337285.8.
2. **钟文蔚**, 许晓瑾, 陈顺权, 一种快速制备疏油疏水膜的方法, 2018.07.31, 中国, 201810858521.9. (已授权)
3. **钟文蔚**, 郭立玮, 陈顺权, 一种杜仲胶提取与浓缩、回收有机溶剂的方法, 2020.06.15, 中国, 202010544424X.

专著

1. 刘菊妍, 郭立玮, 钟文蔚 (主编). (2024) 微纳米中药制剂研究与应用. 中国上海: 科学出版社.
2. 郭立玮, 刘菊妍, **钟文蔚** (主编). (2023) 中药制药分离过程: 工程原理与技术应用. 中国上海: 科学出版社.
3. **W. Zhong**, Q. Li, X. Zhao, S. Chen. (2020) Membrane Preparation for Unconventional Desalination by Membrane Distillation and Pervaporation. In: Zhang Z., Zhang W., Lichtfouse E. (eds) Membranes for Environmental Applications. Environmental Chemistry for a Sustainable World, vol 42. Springer, Cham. (章节, 第七章, 第一作者及通讯作者)

标准

1. 主持起草行业标准《中药液浓缩用膜蒸馏微孔膜》1项, 2022.06 已通过全国分离膜标准化技术委员会答辩与立项和国家工信部立项
2. 参与国家标准《海水或苦咸水淡化用膜蒸馏装置通用技术规范 GB/T 39801-2021》制定, 2021.10.01 已实施

学术会议

多次在中、美、澳、韩等国际学术会议发表大会演讲或分会场报告, 简述如下。

8. **钟文蔚**, 郭立玮. “‘双碳’政策下膜耦合技术的中药绿色制造过程——以玉屏风散汤和四君子汤为例” 大会报告, 2022年(第二届)传统药物研究国际高峰论坛, 天津, 2022.05.16-17.
9. **W. Zhong**, L. Guo, S. Li, “Wetting by Naturally Existing Surfactants in Traditional Chinese Medicine (TCM) Solution by Direct Contact Membrane Distillation”. 分会口头报告 Oral presentation at 5th International Conference on Desalination using Membrane Technology (MEMDES), Shanghai, China, 2021.11.14-17.

10. 钟文蔚, 郭立玮. 2019中国-欧盟膜产业技术创新合作大会, “基于‘数据驱动’策略的中药物料体系流变学特征及其与膜集成浓缩过程的相关性研究方法”大会报告, 山东威海, 2019.5.10-12
11. W. Zhong, H-C.Yang, J. Hou, V. Chen, "*Superhydrophobic membrane via bio-inspired mineralization with enhanced long-term stability in vacuum membrane distillation*". Oral presentation at 9th International Membrane Science and Technology Conference (IMSTEC), Adelaide, South Australia, Australia, 2016.12.5-8.
12. W. Zhong, H. Li, V. Chen, "*Evaluation of silica fouling in novel submerged membrane distillation for produced water treatment*". Oral presentation at 25th North American Membrane Society (NAMS) Annual Meeting 2015, Boston, Massachusetts, USA, 2015.6.1-3.
13. W. Zhong, H. Li, V. Chen, "*Treatment of brackish groundwater concentrates using vacuum membrane distillation*". Poster presentation at the 5th International Water Association Regional Conference on Membrane Technology (IWA-RMTC), Kunming, Yunnan, China, 2016.8.22-24.
14. W. Zhong, H. Li, V. Chen, "*Silica fouling in coal seam gas water treatment by submerged membrane distillation*". Poster presentation at Chemeca, Melbourne, Victoria, Australia, 2015.9.27-10.1.
15. Y-C Hsu, W. Zhong, S. Meng, Y. Ye, V. Chen, "*Transverse Vibration enhanced Vacuum Membrane Distillation for Coal-Seam Gas Wastewater Treatment Applications*". Poster presentation at 10th International Congress on Membranes and Membrane Processes (ICOM) 2014, Suzhou, Jiangsu, China, 2014.7-20-25.

教学经验

1. 主讲4门本科课程, 包括中药资源综合利用与产品开发, 科技论文写作, 创新创业基础, 中药资源综合利用与产品开发强化实训(国语授课)。本人负责“中药资源综合利用与产品开发强化实训”课程的课程大纲设计、实验设计等, 指导本科学生在2天实训课程中开发一款中药化妆品及市场营销。
2. 在UNSW Australia期间, 担任化学工程和工程学科助教, 参与主要负责科目包括: Fluid and Particle Mechanics 流体力学(80学时)教学, (60学时)批改考试试卷, Energy System and Thermodynamics 热动力学(14学时)教学(包括4学时辅导学生设计项目 Methanol production from natural gas 采用天然气生产甲醇), Reaction Engineering 反应工程学(12学时)教学, Sustainable Product Design 可持续产品设计(12学时)教学(全英授课)

荣誉奖励

1. 2022年10月入选澳中杰出年轻校友候选人, 12月获得澳中杰出年轻校友 Judge's Commendation
2. \2021年12月, 入围首届全国博士博士后创新创业大赛——揭榜领题赛优胜奖, 参赛项目: 基于膜乳化过程的粒径可调控微纳米给药系统制备共性关键技术
3. 2021年11月, 第五届国际脱盐膜技术 5th International Conference on Desalination using Membrane Technology (MEMDES) 'Membrane Distillation' Session Chair 分会主持
4. 2021年10月, 获得全国中医疫病防治博士后学术论坛征文一等奖, 论文题目: 中药制造技术的颠覆性创新对中医时疫防治的贡献——以莲花清瘟胶囊与膜分

离技术为例

5. 2020 至今，中国膜工业协会医药用膜专业技术委员会委员
6. 2020 至今，北大中文核心期刊《中草药》青年编委
7. 国际著名期刊 *Journal of Food Engineering, Separation & Purification Technology, Desalination* 等审稿人
8. 2014 – 2017，国家留学资金资助出国留学资格
9. 2013 年 UNSW Australia 澳大利亚新南威尔士大学 Dean's Honours List Engineering“优秀学生”荣誉称号
10. 2012 年 UNSW Australia 澳大利亚新南威尔士大学 Dean's Honours List Engineering“优秀学生”荣誉称号