



基本資料 |

姓名 | 劉炳嵐

職稱 | 教授兼理工學院院長

學歷 | 英國埃色克斯大學生物化學博士

研究室 | G-410 · E-420.1

實驗室 | G-911

分機 | 4306 · 7571

信箱 | binglan@cyut.edu.tw

專長 | 蛋白質分離純化、農業微生物發酵與製劑開發、天然物分離與檢測、酵素技術、食品化學技術

期刊論文 | (2019-2024)

1. Wen, H.-Y., Le, Q.-V., Liu, B.-L., Srinophakun, P., Chiu, C.-Y., Wang, C.-Y., Ng, I-S.*, Chen, K.-H.*, Chang, Y.-K.* (2024) Alginate and chitosan-based polyamide 56 modified nanofiber membrane for highly effective capture of Escherichia coli: Antibacterial and cytotoxicity studies. *International Journal of Biological Macromolecules* 279: 135464. (2024/09/07) (SCI) <https://doi.org/10.1016/j.ijbiomac.2024.135464>.
2. Zhang, Y.-C., Le, Q.-V., Gnoumou, E., Liu, B.-L., Srinophakun, P., Wang, C.-Y., Chiu, C.-Y., Ng, I-S.*, Chen, K.-H.*,
3. Chang, Y.-K.* (2024) Fabrication and characterization of antibacterial nanofiber membranes modified with chitosan and imidazolidinyl urea for potential use in biological waste treatments. *International Journal of Biological Macromolecules* 279: 135364. (2024/09/07) (SCI) <https://doi.org/10.1016/j.ijbiomac.2024.135364>.
4. Chang, Y.-C., Yang, S.-Y., Lin, J.-Y., Nguyen, T.D.H., Srinophakun, P., Chiu, C.-Y., Liu, B.-L., Ng, I-S.*, Chen, K.-H.*, and Chang, Y.-K.* (2024) Scaling down recombinant carbonic anhydrase isolation with immobilized metal ion chromatography (IMAC): Harnessing enzymatic carbon dioxide capture and mineralization. *Journal of the Taiwan Institute of Chemical Engineers*, 165: 105727 (2024/08/24) (SCI) <https://doi.org/10.1016/j.jtice.2024.105727>.
5. Nguyen, T.D.H., Liu, B.-Lan., Srinophakun, P., C.-Y. Wang, Chiu, C.-Y., Tsai, S.-L.* , Chen, K.-H.* , and Chang, Y.-K.* (2024) Long-term and high-efficiency capture of Escherichia coli using cellulose acetate nanofiber membrane functionalized with reactive 19 dye and polyhexamethylene biguanide. *Biochemical Engineering Journal*, 211: 109474.

(2024/08/22) (SCI) <https://doi.org/10.1016/j.bej.2024.109474>.

6. Nguyen, T.D.H., Chen, K.-H., Srinophakun, P., Liu, B.-L., Chiu, Ch.-Y., Tsaia, S.-L.*, Cheng, Y.-H.*, and Chang, Y.-K.* (2024) Estimation and error analysis of breakthrough curves for CO₂ adsorption in packed-bed columns using polyethyleneimine-modified NaY zeolite under ambient conditions by single-component adsorption models. *Journal of the Taiwan Institute of Chemical Engineers*, 164: 105681. (2024/08/01) (SCI) <https://doi.org/10.1016/j.jtice.2024.105681>.
7. Tran, T.T.A., Gnoumou, E., Liu, B.-L., Srinophakun, P., Chiu, C.-Y., Wang, C.-Y.*, Chen, K.-H.*, and Chang, Y.-K.* (2024) Highly efficient capture of *Escherichia coli* using chitosan-lysozyme modified nanofiber membranes: Potential applications in food packaging and water treatment. *Biochemical Engineering Journal*, 210: 109411. (2024/07/04) (SCI) <https://doi.org/10.1016/j.bej.2024.109411>.
8. Chen, Y.-R., Dinh, T.H.T., Tran, T.P.Q., Liu, B.-L., Srinophakun, P., Chiu, C.-Y., Chen, K.-H.*, and Chang, Y.-K.* (2024) The utilization of chicken egg white waste-modified nanofiber membrane for anionic dye removal in batch and flow systems: Comprehensive investigations into equilibrium, kinetics, and breakthrough curve. *Membranes*, 14(6), 128. (2024/06/03) (SCI) <https://doi.org/10.3390/membranes14060128>.
9. Dinh, T.M.H., Wang, C.-Y., Chen, P.-Y., Ooi, C.W., Thew, X.E.C., Liu, B.-L., Chiu, C.-Y., Tsai, S.-L.*, Chen, K.-H.*, and Chang, Y.-K.* (2024) Immobilization of poly(hexamethylene biguanide) to cellulose acetate- and cellulose-based nanofiber membranes for antibacterial and cytotoxic studies. *Biochemical Engineering Journal*, 205: 109256. (2024/05/24) (SCI) <https://doi.org/10.1016/j.bej.2024.109256>.
10. Gnoumou, E., Tran, T.T.A., Srinophakun, P., Liu, B.-L., Chiu, C.-Y., Lee, H.-C., Wang, C.-Y.*, Chen, K.-H.*, and Chang, Y.-K.* (2024) Optimization of lysozyme-modified ion exchange nanofiber membrane for efficient capture of *Escherichia coli*: Antibacterial and cytotoxic studies. *Journal of the Taiwan Institute of Chemical Engineers*, 157: 105400. (2024/04/01) (SCI) <https://doi.org/10.1016/j.jtice.2024.105400>.
11. Nguyen, T.D.H., Shih, J.-Y., Chen, K.-H., Srinophakun, P., Chiu, C.-Y., Liu, B.-L., Tsai, S.-L.*, Cheng, Y.-H., Chang, Y.-K.* (2024) Dynamic kinetic studies of CO₂ capture using polyethyleneimine-modified cylindrical NaY zeolite in packed beds under ambient conditions. *Journal of the Taiwan Institute of Chemical Engineers*, 156: 105366. (2024/03/12) (SCI) <https://doi.org/10.1016/j.jtice.2024.105366>.
12. Le, Q.-V., Liu, B.-L., Srinophakunc, P., Shih, J.-Y., Wang, C.-Y., Chiu, C.-Y., Tsai, S.-L.*, Chen,

- K.-H.*, and Chang, Y.-K.* (2024) Highly efficient capture of *E. coli* using amidoximated polyacrylonitrile nanofiber membrane immobilized with reactive green 19 dye/polyhexamethylene biguanide: Antibacterial and cytotoxicity studies. *Separation and Purification Technology*, 338: 126514. (2024/01/19) (SCI) <https://doi.org/10.1016/j.seppur.2024.126514>.
- 13.** Lin, S.-T., Nguyen, T.D.H., Ooi, C.W., Thew, X.E.C., Liu, B.-L., Chiu, C.-Y., Lee, H.-C., Chen, K.-H., and Chang, Y.-K.* (2024) Removal of protein wastes by amidoximated polyacrylonitrile nanofiber membrane decorated with dye wastes in batch and flow modes. *Biochemical Engineering Journal*, 201: 109119. (2024/01/01) (SCI) <https://doi.org/10.1016/j.bej.2023.109119>.
- 14.** Lai, C.-C., Zhou, X., Wang, H.-K., Lin, Y.-C., Lin, H.-Y., Way, T.-D., and Liu, B.-L.* (2022) *Vernonia amygdalina* extract induces apoptosis and inhibits epithelial-mesenchymal transition in Hep 3B cells through the inhibition of PI3k/Akt signaling pathway. *International Journal of Applied Science and Engineering*, 19(1): 2021086. (2022/03/01) (Scopus) [https://doi.org/10.6703/IJASE.202203_19\(1\).002](https://doi.org/10.6703/IJASE.202203_19(1).002).
- 15.** Chang, Y.-K.*, Cheng, H.-I., Ooi, C.W., Song, C.P., and Liu, B.-L.* (2021) Adsorption and purification performance of lysozyme from chicken egg white using ion exchange nanofiber membrane modified by ethylene diamine and bromoacetic acid. *Food Chemistry*, 358: 129914. (2021/10/01) (SCI) <https://doi.org/10.1016/j.foodchem.2021.129914>.
- 16.** Cheng, T.-H., Sankaran, R., Show, P.L., Ooi, C.W., Liu, B.-L., Chai, W.S., and Chang, Y.-K.* (2021) Removal of protein wastes by cylinder-shaped NaY zeolite adsorbents decorated with heavy metal wastes. *International Journal of Biological Macromolecules*, 185: 761-772. (2021/08/31) (SCI) <https://doi.org/10.1016/j.ijbiomac.2021.06.177>.
- 17.** Lee, P.-X., Liu, B.-L., Show P.L., Ooi, C.W., Chai, W.S., Munawaroh, H.S.H., and Chang, Y.-K.* (2021) Removal of calcium ions from aqueous solution by bovine serum albumin (BSA)-modified nanofiber membrane: Dynamic adsorption performance and breakthrough analysis. *Biochemical Engineering Journal*, 171: 108016. (2021/07/15) (SCI) <https://doi.org/10.1016/j.bej.2021.108016>.
- 18.** Xu, F.-X., Ooi, C.W., Liu, B.-L., Song, C.P., Chiu, C.-Y., Wang, C.-Y., and Chang, Y.-K.* (2021) Antibacterial efficacy of poly(hexamethylene biguanide) immobilized on chitosan/dye-modified nanofiber membranes. *International Journal of Biological Macromolecules*,

181: 508-520. (2021/06/30) (SCI) <https://doi.org/10.1016/j.ijbiomac.2021.03.151>.

- 19.** Wu, J.-Y., Ooi, C.W., Song, C.P., Wang, C.-Y., Liu, B.-L., Lin, G.-Y., Chiu, C.-Y., and Chang, Y.-K.* (2021) Antibacterial efficacy of quaternized chitosan/poly (vinyl alcohol) nanofiber membrane crosslinked with blocked diisocyanate. *Carbohydrate Polymers*, 262: 117910. (2021/06/15) (SCI) <https://doi.org/10.1016/j.carbpol.2021.117910>.
- 20.** Lin, T.-Y., Chai, W.S., Chen, S.-J., Shih, J.-Y., Koyande, A.K., Liu, B.-L.*, and Chang, Y.-K.* (2021) Removal of soluble microbial products and dyes using heavy metal wastes decorated on eggshell. *Chemosphere*, 270: 128615. (2021/05/01) (SCI) <https://doi.org/10.1016/j.chemosphere.2020.128615>.
- 21.** Show, P.L., Ooi, C.W. Song, C.P., Chai, W.S., Lin, G.-T., Liu, B.-L.*, and Chang, Y.-K.* (2021) Purification of lysozyme from chicken egg white by high-density cation exchange adsorbents in stirred fluidized bed adsorption system. *Food Chemistry*, 343: 128543. (2021/05/01) (SCI) <https://doi.org/10.1016/j.foodchem.2020.128543>.
- 22.** Lee, S.Y., Liu, B.-L., Wu, J.-Y., and Chang, Y.-K.* (2021) Egg white lysozyme purification by a stirred cell contactor equipped with a weak ion-exchange nanofiber membrane: Process development and scale-up. *Food Chemistry*, 338: 128144. (2021/02/15) (SCI) <https://doi.org/10.1016/j.foodchem.2020.128144>.
- 23.** Pakalapati, H., Show, P.L., Chang, J.-H., Liu, B.-L.*, and Chang, Y.-K.* (2020) Removal of dye waste by weak cation-exchange nanofiber membrane immobilized with waste egg white proteins. *International Journal of Biological Macromolecules*, 165(B): 2494-2507. (2020/12/15) (SCI) <https://doi.org/10.1016/j.ijbiomac.2020.10.099>.
- 24.** Dinh, T.M.H., Liu, B.-L., Chai, W.S. Show, P.L., Tsai, S.-L., and Chang, Y.-K.* (2020) Highly efficient dye removal and lysozyme purification using strong and weak cation-exchange nanofiber membranes. *International Journal of Biological Macromolecules*, 165(A): 1410-1421. (2020/12/15) (SCI) <https://doi.org/10.1016/j.ijbiomac.2020.10.034>.
- 25.** Song, C.P., Ooi, C.W. Tey, B.T., Lu, C.-X., Liu, B.-L.*, and Chang, Y.-K.* (2020) Direct recovery of enhanced green fluorescent protein from unclarified *Escherichia coli* homogenate using ion exchange chromatography in stirred fluidized bed. *International Journal of Biological Macromolecules*, 164: 4455-4465. (2020/12/01) (SCI) <https://doi.org/10.1016/j.ijbiomac.2020.09.051>.
- 26.** Show, P.L., Ooi, C.W., Lee, X.J., Yang, C.-L., Liu, B.-L.*, and Chang, Y.-K.* (2020) Batch and dynamic adsorption of lysozyme from chicken egg white on dye-affinity nanofiber

membranes modified by ethylene diamine and chitosan. *International Journal of Biological Macromolecules*, 162: 1711-1724. (2020/11/01) (SCI) <https://doi.org/10.1016/j.ijbiomac.2020.08.065>.

27. Liu, B.-L., Ooi, C.W., Ng, I.-S., Show, P.L., Lin, K.-J., and Chang, Y.-K.* (2020) Effective purification of lysozyme from chicken egg white by tris(hydroxymethyl)aminomethane affinity nanofiber membrane. *Food Chemistry*, 327: 127038. (2020/10/15) (SCI) <https://doi.org/10.1016/j.foodchem.2020.127038>.
28. Liu, B.-L., Chai, W.S., Show, P.L., Chen, J.-Y., and Chang, Y.-K.* (2020) Evaluation of dynamic binding performance of C-phycoerythrin and allophycoerythrin in *Spirulina platensis* algae by aminated polyacrylonitrile nanofiber membrane. *Biochemical Engineering Journal*, 161: 107686. (2020/09/15) (SCI) <https://doi.org/10.1016/j.bej.2020.107686>.
29. Ng, I.-S., Ooi, C.W., Liu, B.-L., Peng, C.-T., Chiu, C.-Y., and Chang, Y.-K.* (2020) Antibacterial efficacy of chitosan- and poly(hexamethylene biguanide)-immobilized nanofiber membrane. *International Journal of Biological Macromolecules*, 154: 844-854. (2020/07/01) (SCI) <https://doi.org/10.1016/j.ijbiomac.2020.03.127>.
30. Lee, M.-J.*, Liu, B.-L., Kuo, H.-R., Chen, C.-J., Chang, K.-M., and Chang, C.-A. (2019) *Streptomyces* spp. culture filtrates reduced T4 infectivity to *E. coli*. *IOP Conference Series: Earth and Environmental Science (EES)*, 346: 012041. (2019/10/01) (Scopus) <https://doi.org/10.1088/1755-1315/346/1/012041>.
31. Lee, M.-J.*, Liu, B.-L., Chen, C.-J., Chang, K.-M., Huang, S.D., and Chang, C.-A. (2019) *Streptomyces* spp. culture filtrates deconstruct *Odontoglossum* ringspot virus (ORSV) and *Cymbidium* mosaic virus (CymMV) virus coat. *IOP Conference Series: Earth and Environmental Science (EES)*, 346: 012078. (2019/10/01) (Scopus) <https://doi.org/10.1088/1755-1315/346/1/012078>.

研討會論文 | (2019-2024)

1. Qiu, W.-J., and Liu B.-L. (2024) Study on bioconversion of onion by *Bifidobacterium longum*. Th 29th BEST Conference & International Symposium on Biotechnology and Biochemical Engineering, June 21~24, 2024, Penghu, Taiwan.
2. Qiu, W.-J., and Liu B.-L. (2023) Study on the biosynthesis of quercetin in onions by *Bifidobacterium longum*. 2023 TwChE 台灣化學工程學會70週年年會暨國科會化學工程學門成果發表會，2023年12月9~10日。國立台灣大學 台北。

3. 羅霆、姜智竣、蕭安洛、吳孟哲、劉炳嵐 (2023) 羊角豆成份分離純化與降血糖活性試驗。2023 TwIChE 台灣化學工程學會70週年年會暨國科會化學工程學門成果發表會，2023年12月9~10日。國立台灣大學 台北。
4. Liu, B.-L., and Chang, H.-R. (2109) Separation of isothiocyanate from Raphanus sativus extract and its biological activity test. The 25th Young Asian Biochemical Engineers' Community Symposium (YABEC2019), November 22~24, 2019, Seoul, Korea.
5. Tsai, K.-C., Liu, B.-L., Lee, M.-J., and Chang, C.-A. (2019) The antiviral activity of Streptomyces spp. against orchid odontoglossum ringspot virus (ORSV). 8th Congress of European Microbiologists (FEMS 2019), July 7~11, 2019, Glasgow, Scotland.
6. Luo, J.-K., and Liu, B.-L. (2019) Preliminary study on separation, purification and immobilization of pineapple peel bromelain. 2019 9th Green Sustainable Biotechnology Symposium, January 17~18, 2019, Tainan, Taiwan.
7. Li, J.-H., and Liu, B.-L. (2019) The antioxidant activity study of guava and okra. 2019 9th Green Sustainable Biotechnology Symposium, January 17~18, 2019, Tainan, Taiwan.

產學研究計畫 | (2019-2024)

計畫名稱	起迄年月	補助或委託機構
乳酸菌及雙歧桿菌發酵洋蔥中芸香苷生物轉換之探討	2024/08~2025/07	國科會
乳酸菌及雙歧桿菌發酵薑黃素生物轉換之探討	2023/08~2024/07	國科會
農業微生物製劑-固氮菌之篩選開發	2023/04~2025/03	大元國際投資有限公司
紅麴倍半萜類成分之分析開發	2023/04~2024/07	堂庭檢驗科技股份有限公司
牛樟芝原料之安全性研析-三萜類及多醣體檢驗分析	2023/03~2023/12	農業部農業藥物試驗所
羊角豆萃取物之生物活性探討	2022/08~2023/07	科技部
食安醫藥與農業生技之細胞與動物實驗平臺服務聯盟 (2/3)	2022/02~2023/01	科技部
牛樟芝菌絲體與子實體之安全評估-三萜類及多醣體檢驗分析	2022/01~2022/12	農委會農業藥物毒物試驗所
鳳梨釀酒酵母菌分離與純化計畫	2021/09~2023/03	哈兔比企業社
何首烏與首烏藤指標成分分析方法開發計畫	2021/04~2022/12	振泰檢驗科技股

計畫名稱	起迄年月	補助或委託機構
		份有限公司
111年度校級重點特色計畫-有機及產銷履歷農產品驗證 加值計畫(第四年)	2022/02~2023/01	朝陽科技大學
新型土壤改良微生物產品開發計畫	2021/01~2022/12	大稻生物科技有 限公司
110年度校級重點特色計畫-有機及產銷履歷農產品驗證 加值計畫(第三年)	2021/02~2022/01	朝陽科技大學
食安醫藥與農業生技之細胞與動物實驗平臺服務聯盟 (1/3)	2021/02~2022/01	科技部
農用透氣袖套之篩選與農藥滲透分析	2021/01~2021/12	中華農藥協會
109年度校級重點特色計畫-有機及產銷履歷農產品驗證 加值計畫(第二年)	2020/02~2021/01	朝陽科技大學
優化技職校院實作環境計畫-第三年環境友善植保資材及 農產檢測人才培育	2020/01~2020/12	教育部
109年大學社會責任實踐計畫-新農復穀-雜糧壯遊-同耕共 學-擴散計畫	2020/01~2020/12	教育部
108年度校級重點特色計畫-有機及產銷履歷農產品驗證 加值計畫(第一年)	2019/03~2020/01	朝陽科技大學
土壤改良生物製劑開發計畫	2019/12~2020/12	大稻生物科技有 限公司
優化技職校院實作環境計畫-第二年環境友善植保資材及 農產檢測人才培育	2019/01~2019/12	教育部