

## 五年內著作目錄-發表文章

1. **Chang, P.-H.**, Chen, C.-Y., Raj M., Chen, W., Tzou\*, Y.-M., Binoy S., (2022). Novel MOF-808 metal–organic framework as highly efficient adsorbent of perfluorooctane sulfonate in water. *J. Colloid Interface Sci.*, Accepted. <https://doi.org/10.1016/j.jcis.2022.05.050>  
**32 /162; Q1; Chemistry, Physical; IF:8.128; top.**
2. **Chang, P.-H.**, Li, Z., Jiang, W.-T., (2022). Mechanisms of Ethidium Bromide Removal by Ca-montmorillonite. *Desalin. Water Treat.*, 1–14. doi: 10.5004/dwt.2022.28298.  
**110/143; Q4; Engineering, Chemical; IF: 1.254**
3. **Chang, P.-H.\***, Guo, J., Li, J., Li, Z., Li, X., (2022). Seizing forbidden drug ranitidine by illite and the adsorption mechanism study. *Colloids Surf. A - Physicochem. Eng. Asp.* 639, 128395.  
**64/162; Q2; Chemistry, Physical; IF: 4.539**
4. Ng, K.H., Liu, Y.-T., Chang, C.-T., Chiang, P.-N., Teah, H.Y., **Chang, P.-H.**, Tzou, Y.-M., (2021). Inhibitory effects and mechanisms of low-molecular-mass organic acids (LMMOAs) toward Cr(III) oxidation. *J. Clean. Prod.*, 313, 127726.  
**18 / 274; Q1; Environmental Sciences; IF: 9.297; top.**
5. **Chang, P.-H.\***, Liu, P., Binoy S., Raj M., Yang, Q.-Y., Tzou, Y.-M., Zhong, B., Li, X., Gary O., (2021). Unravelling the mechanism of amitriptyline removal from water by natural montmorillonite through batch adsorption, molecular simulation and adsorbent characterization studies. *J. Colloid Interface Sci.*, 598, 379–387.  
**32 /162; Q1; Chemistry, Physical; IF:8.128; top.**
6. **Chang, P.-H.\***, Binoy S., (2021). Mechanistic insights into ethidium bromide removal by palygorskite from contaminated water. *J. Environ. Manage.*, 278, 111586.  
**34 / 274; Q1; Environmental Sciences; IF:6.789; top.**
7. **Chang, P.-H.**, Li, Z., Jiang, W.-T., (2020). Calcination of hydrotalcite to enhance the removal of perfluorooctane sulfonate from water. *Appl. Clay Sci.*, 190, 105563.  
**1 / 30; Q1; Mineralogy; IF: 5.467; top.**
8. Li, Z., **Chang, P.-H.**, Jiang, W.-T., Liu, Y., (2020). Enhanced removal of ethidium bromide (EtBr) from aqueous solution using rectorite. *J. Hazard. Mater.*, 384, 121254.  
**10 / 274; Q1; Environmental Sciences; IF:10.588; top.**

9. **Chang, P.-H.**, Jiang, W.-T., Binoy S., Wang, W., Li, Z., (2019). The triple mechanisms of atenolol adsorption on Ca-montmorillonite: Implication in pharmaceutical wastewater treatment, *Materials*, 12, 2858.

**102 / 293; Q2; Materials Science; Multidisciplinary; IF: 3.623**

10. Li, Z., **Chang, P.-H.**, Jiang, W.-T., (2019). Mechanisms of Cu<sup>2+</sup>, triethylenetetramine (TETA), and Cu-TETA sorption on rectorite and its use for metal removal via metal-TETA complexation, *J. Hazard. Mater.*, 373, 187-196.

**10 / 274; Q1; Environmental Sciences; IF:10.588; top.**

11. Li, Z., **Chang, P.-H.\***, Jiang, W.-T., (2019). The multi-mechanisms and interlayer configurations of metoprolol uptake on montmorillonite. *Chem. Engineer. J.*, 360, 325-333. (以通訊作者發表)

**7 / 279; Q1; Chemical Engineering; IF:13.273; top.**

12. **Chang, P.-H.**, Jiang, W.-T., Li, Z., (2019). Removal of perfluorooctanoic acid from water using calcined hydrotalcite – A Mechanistic Study. *J. Hazard. Mater.*, 368, 487-495.

**10 / 274; Q1; Environmental Sciences; IF:10.588; top.**

13. **Chang, P.-H.**, Jiang, W.-T., Li, Z., (2018). Mechanism of tyramine adsorption on Ca-montmorillonite. *Sci. Total Environ.*, 642, 198-207.

**6 / 146; Q1; Environmental Engineering; IF:7.963; top.**

14. Lv, G., **Chang, P.-H.**, Xing, X., Jiang, W.-T., Jean, J.-S., Li, Z., (2017). Investigation of intercalation of diphenhydramine into the interlayer of smectite by XRD, FTIR, TG-DTG analyses and molecular simulation, *Arabian J. Chem.*, 10, 855-861.

**54 / 178; Q2; Chemistry, Multidisciplinary; IF:5.165**

### 其他代表性成果

#### 1、著作（書籍）

| 著作名稱   | 出版單位     | 作者  | 出版年度 |
|--|----------|---|------|
| Modified clay and zeolite nanocomposite materials: Environmental and pharmaceutical applications.<br>(Chapter 7: <b>Clay minerals for pharmaceutical waste water treatment</b> ) | Elsevier | Chapter Authors:<br><b>Po-Hsiang, Chang</b> ; Wei-Teh, Jiang; Zhaohui, Li.; Binoy, Sarkar | 2019 |

## 2、專利

| 專利號或申請號                 | 專利名稱                               | 類別   | 授權國家 | 專利所有者           |
|-------------------------|------------------------------------|------|------|-----------------|
| 201910798396.1<br>(已授權) | 一種水滑石及其製備方法和水滑石在吸附水體裡 PFOS 污染物中的應用 | 發明   | 中國   | 張博翔、李朝輝、江威德、王文東 |
| 2020211577352<br>(已授權)  | 一種便於隨身攜帶的環境原水淨水裝置                  | 實用新型 | 中國   | 張博翔             |

## 3、獲獎

| 獲獎或榮譽名稱                                     | 頒發機構                      | 獲獎等級   | 獲獎年份 | 排名 | 主要合作者  |
|---|---------------------------|--------|------|----|--|
| 西安交通大學第三十一屆騰飛杯創新創業大賽                        | 西安交通大學                    | 一等獎    | 2020 | 無  | 指導大學生獲獎  |
| 研究生創新論壇                                     | 人居學院                      | 二等獎    | 2019 | 無  | 指導研究生獲獎  |
| 103 年度科技部博士後研究人員學術著作獎                       | 科技部/<br>臺灣                | 特等     | 2015 | 第一 | <b>Po-Hsiang, Chang,</b><br>Wei-Teh Jiang*,<br>Zhaohui Li**, Chung-Yih Kuo, Jiin-Shuh Jean, Wan-Ru Chen, Guocheng Lv |
| 國際研討會優秀展版獎                                  | 中山大學/<br>臺灣               | 第二名    | 2013 | 第一 | <b>Po-Hsiang, Chang,</b><br>Wei-Teh Jiang*, Zhaohui Li**, Chung-Yih Kuo, Jiin-Shuh Jean, Wan-Ru Chen, Guocheng Lv    |
| 高被引文章 (Highly Cited Paper、Most Cited Paper) | Thomson Reuters/<br>U.S.A | Top 1% | 2012 | 第一 | <b>Po-Hsiang, Chang,</b><br>Zhaohui Li*, Jiin-Shuh Jean, Wei-Teh Jiang, Chih-Jen Wang, Kao-Hung Lin                  |
| 地質年會暨學術研討會聯合學生論文比賽                          | 地質學會/<br>臺灣               | 優等     | 2012 | 第一 | <b>Po-Hsiang, Chang,</b><br>Zhaohui Li*, Jiin-Shuh Jean, Wei-Teh Jiang, Chih-Jen Wang, Kao-Hung Lin                  |

|      |                      |   |      |    |  |
|------|----------------------|---|------|----|--|
| 引用文章 | Elsevier/<br>Holland | Top-<br>50<br>most<br>cited<br>articl<br>es | 2011 | 第二 | Zhaohui Li*, Po-Hsiang,<br>Chang, Jiin-Shuh Jean,<br>Wei-Teh Jiang, Chih-Jen<br>Wang |
|------|----------------------|---|------|----|--|

#### 4、參與的科研專案

| 起止時間              | 項目名稱  | 經費來源及額度                      | 申報人的具體職位<br>和任務     |
|-------------------|---|------------------------------|---------------------|
| 2021.3-<br>2023.2 | 地質材料移除環境污染物的<br>吸附機理                        | 陝西省土地工程<br>建設集團/¥ 40 萬       | 副教授/項目主持人 (剛<br>獲得) |
| 2019.6~2<br>020.6 | 陝西省大學生創新訓練項<br>目 (國家級項目)                    | 陝西省/¥ 3000 元                 | 指導老師                |
| 2019.6-2<br>022.5 | 鈣蒙脫石吸附陽離子型吸<br>附質的快速吸附驅動機制                  | 西安交通大學新<br>教師支持計畫<br>/¥ 15 萬 | 副教授/項目主持人           |
| 2018.8~<br>2019.7 | 107 年地球化學貴重儀器<br>維護與服務平臺計畫: 南部<br>地球化學研究平臺  | 科技部<br>/NT\$ 8,245,000       | 博士後助理研究員/從<br>事科學研究 |
| 2017.8~<br>2018.7 | 106 年地球化學貴重儀器<br>維護與服務平臺計畫: 南部<br>地球化學研究平臺  | 科技部<br>/NT\$ 7,245,000       | 博士後助理研究員/從<br>事科學研究 |
| 2016.8~<br>2017.7 | 105 年地球化學貴重儀器<br>維護、服務及管理平臺計<br>畫: 南部地球化學   | 科技部<br>/NT\$ 7,220,000       | 博士後助理研究員/從<br>事科學研究 |
| 2015.8~<br>2016.7 | 104 年地球化學貴重儀器<br>維護、服務及管理平臺計<br>畫: 南部地球化學   | 科技部<br>/ NT\$ 6,900,000      | 博士後研究員/從事科<br>學研究   |
| 2014.8~<br>2015.7 | 103 年地球化學貴重儀器<br>維護、服務及管理平臺計<br>畫: 南部地球化學   | 科技部<br>/ NT\$ 6,622,000      | 博士後研究員/從事科<br>學研究   |
| 2013.8~<br>2014.7 | 地球化學貴重儀器維護、服<br>務及管理平臺計畫—子計<br>畫二: 地球化學平臺之二 | 國家科學委員會<br>/ NT\$ 9,000,000  | 博士後研究員/從事科<br>學研究   |
| 2013.2~<br>2013.7 | 地球化學貴重儀器維護、服<br>務及管理平臺計畫                    | 國家科學委員會<br>/ NT\$ 9,500,000  | 博士後研究員/從事科<br>學研究   |

#### 5、學術組織任職、重要學術報告

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| 學術組織任職情況:<br>1. 客座主編 (Journal Editor: Lead Guest Editor) |
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期刊名稱 (Journal name) : Advances in Chemistry.

Improved Materials, Removal Technologies and Biological Impacts for contaminants as medical drugs. (SPECIAL ISSUE, Publication Date: Friday, 6 January 2017)

2. 期刊顧問委員 (**Journal Editorial Advisory Board**)

期刊名稱 (Journal name) : Environmental and Earth Sciences Research Journal.

### **CONFERENCE PROCEEDINGS (first author is the participant)**

1. 張博翔, 比利時-中國環保創新合作論壇, 2019。
2. 劉盼, 譚琛, 孫小燕, 田雨, 張博翔。鈉蒙脫石吸附安米替林之機理。中國環境科學學會科學技術年會, 西安, 2019。
3. **Chang, P.-H.** (2019). BIT's 9 th Annual World Congress of Nano Science & Technology-2019 (Nano S&T-2019), Suzhou, China. Oral (Session Keynote Speech at Track 3: Nanomedicine at our event.).
4. **Chang, P.-H.**, Jiang, W.-T., Li, Z., (2018). Mechanism of PFOS adsorption on hydrotalcite. **Geological Annual Congress**, National Chung Cheng University, Chiayi, Taiwan. Oral.
5. **Chang, P.-H.**, Jiang, W.-T., Li, Z., Chen, W.-R., Jean, J.-S, (2017). Tyramine adsorption on Ca-montmorillonite. **The 16<sup>st</sup> international clay conference**, Granada, **Spain**. Oral.
6. **Chang, P.-H.**, Jiang, W.-T., Li, Z., Chen, W.-R., Jean, J.-S, (2017). Themechanism of tyramine adsorption on Ca-montmorillonite. **The 3<sup>st</sup>international conference on emerging contaminants**, National Sun Yat-Sen University, Kaohsiung, **Taiwan**. Poster.
7. Tsai, Y.-L., **Chang, P.-H.**, Gao, Z.-Y., Xu, X.-Y., Chen, Y.-S., Wang, Z.-H., Chan, X.-Y., Yang, Z.-Y., Wang, Z.-H., Jean, J.-S., Li, Z., Jiang, W.-T., (2015) Amitriptyline removal using palygorskite (PFI-1), **The 2<sup>st</sup> international conference on emerging contaminants**, National Sun Yat-sen University, Kaohsiung, Taiwan. **Poster Competition**.
8. **Chang, P.-H.**, Jiang, W.-T., Li, Z., Jean, J.-S., (2015) Potential and mechanism of pharmaceutical adsorption onto halloysite nanotubes, **Geological Annual Congress**, Chinese Culture University, Taipei, Taiwan. **Oral**.
9. **Chang, P.-H.**, Jiang, W.-T., Li, Z., Jean, J.-S, (2015) Mechanisms of atenolol and metoprolol adsorption on Ca-montmorillonite (SAz-2), **Euroclay2015**-International conference on clay science and technology, Edinburgh University, Edinburgh, **U.K**. **Oral**.
10. **Chang, P.-H.**, Jiang, W.-T., Li, Z., Wu, Q.-F., Jean, J.-S., Lv, G., Kuo. C.-Y., (2014) Adsorption and interaction of ciprofloxacin and probe compounds with palygorskite, **51<sup>st</sup> annual meeting of the clay minerals society**, Texas T&M University, college station, Texas, **U.S.A**. **Oral**.

11. **Chang, P.-H.**, Jiang, W.-T., Li, Z., Kuo. C.-Y., Jean, J.-S., (2014) Adsorption of tetracycline on montmorillonite: Influence of solution pH, temperature and ionic strength, **Geological Annual Congress**, National Dong Hwa University, Hualien, Taiwan. **Oral**.
12. **Chang, P.-H.**, Jiang, W.-T., Li, Z., Kuo. C.-Y., Jean, J.-S., Chen, W.-R., Lv, G., (2013) Mechanism of amitriptyline adsorption on Ca-montmorillonite, **The 1<sup>st</sup> international conference on emerging contaminants**, National Sun Yat-sen University, Kaohsiung, Taiwan. **Poster Competition. (Best Poster Award- the Second Place)**
13. **Chang, P.-H.**, Jean, J.-S., Li, Z., Jiang, W.-T., (2013) Sorption and intercalation of tetracycline on montmorillonite, **2<sup>st</sup> Annual Meeting and Conference of Medical Geology Association-Taiwan Chapter**, National Cheng Kung University, Tainan, Taiwan. **Poster**.
14. **Chang, P.-H.**, Jean, J.-S., Li, Z., Jiang, W.-T., (2012) Adsorption of tetracycline on 2:1 layered non-swelling clay mineral illite, **Geological Annual Congress**, National Central University, Taoyuan, Taiwan. **Poster Competition. (Outstanding Student Paper Award)**
15. **Chang, P.-H.**, Jean, J.-S., Li, Z., Jiang, W.-T., Wu, Q.-F., Lin, K.-H., (2012) Influences of present cations  $Al^{3+}$ ,  $Ca^{2+}$ ,  $Na^{+}$ , and other cationic drugs on tetracycline desorption from montmorillonite: an indication of intercalation stability, **1<sup>st</sup> Annual Meeting and Conference of Medical Geology Association-Taiwan Chapter**, National Cheng Kung University, Tainan, Taiwan. **Oral**.
16. **Chang, P.-H.**, Jean, J.-S., Li, Z., Jiang, W.-T., (2011) The research of adsorption/desorption behavior between clay minerals and antibiotic-tetracycline, **GEOMED 4<sup>th</sup> International Conference on Medical Geology**, Sheraton hotel, Bari, Italy. **Oral**.
17. **Chang, P.-H.**, Jean, J.-S., Li, Z., (2011) Sorption and intercalation of tetracycline on montmorillonite, **Geological Annual Congress**, National Taiwan University of Science and Technology, Taipei, Taiwan. **Poster**.
18. **Chang, P.-H.**, Jean, J.-S., Li, Z., Jiang, W.-T., (2010) Sorptive removal of tetracycline from water by palygorskite, **Geological Annual Congress**, National Taiwan University, Taipei, Taiwan. **Oral**.
19. **Chang, P.-H.**, Li, Z., Jean, J.-S., (2008) Sorption and intercalation of tetracycline on rectorite, **Geological Annual Congress**, National Cheng Kung University, Tainan, Taiwan. **Poster**.