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研究專長：海洋化學，生物地球科學，海洋環境化學

研究領域：海洋碳循環，颱風，智能水產養殖，海洋酸化對海洋生物的影響

個人研究影音報導(Personal research news)

1. [生物幫浦 颱風成助力](#)
2. [颱風催動生物幫浦可增三倍吸碳量](#)
3. [養蝦不怕暴雨水濁](#)
4. [物聯網 24hr 監控魚塭 漁民在家一指靈！](#)
5. [海洋科學系教授洪慶章與資訊工程學系教授黃英哲跨域攜手 AI 高科技養蝦](#)
6. [AI 晶片軟硬兼施 中山大學成功養殖活跳健康 AI 蝦](#)

歷年研究計畫 (Research Projects over the years)

| 計畫年度 | 執行期間 | 計畫名稱 |
|------------|--------------------------|---|
| <u>110</u> | 110/08/01~ 111/07/31 | 颱風與內波對南海北部生物地球化學作用之衝擊(II)－總計畫及子計畫：南海北部顆粒有機碳輸出通量之研究(3/3) (MOST 108-2611-M-110 -019 -MY3) |
| <u>109</u> | 109/11/23 ~ 111/06/30 | 智慧災防新南向執行推動辦公室暨新南向國家地球科學重點科技合作研究深耕計畫(3/4)-中央研究院 (MOST109-2119-M-001-011) 共同主持人 |
| <u>109</u> | 109/11/01~ 110/10/31 | 臺斯環境變遷海外科研中心維運計畫 (3/3)(MOST 109-2927-I-110-001-)共同主持人 |
| <u>109</u> | 109/10/01~ 110/09/30 | 底棲性水產養殖之智慧化監測及管理技術--底棲性水產養殖之智慧化監測及管理技術(2/2)(MOST 109-2321-B-110-001-)共同主持人 |
| <u>109</u> | 109/08/01~ 110/07/31 | 國家新研究船船隊貴重儀器及資料庫使用中心--子計畫：新海研 3 號研究船貴重儀器使用中心補助計畫 (1/5)(MOST 109-2740-M-110-001-) |
| <u>109</u> | 109/08/01~ | 航向藍海(1/2) (MOST 108-2119-M-019-002- MY2) 共同主持人 |

| 計畫年度 | 執行期間 | 計畫名稱 |
|------------|-------------------------|---|
| | 110/07/31 | |
| <u>109</u> | 109/08/01~ 110/7/31 | 颱風與內波對南海北部生物地球化學作用之衝擊(II)-總計畫及子計畫：南海北部顆粒有機碳輸出通量之研究(2/3) (MOST 108-2611-M-110 -019 -MY3) |
| <u>109</u> | 109/07/01~ 110/06/30 | 智慧災防新南向執行推動辦公室暨新南向國家地球科學重點科技合作研究深耕計畫(3/4)(MOST 109-2119-M-001-011-)共同主持人 |
| <u>109</u> | 109/1/01~ 109/12/31 | 高整合度低耗電之水下觀測裝置(3/4) (MOST 109-2634-F-110-001) 共同主持人 |
| <u>108</u> | 108/11/01~ 109/10/31 | 臺斯(LK)國合計畫-臺斯環境變遷海外研究中心維運計畫(2/3) MOST 108-2911-I-110-301 共同主持人 |
| <u>108</u> | 108/10/01~ 109/09/30 | 底棲性水產養殖之智慧化監測及管理技術-底棲性水產養殖之智慧化監測及管理技術(1/2) (MOST 108-2321-B-110-002) 共同主持人 |
| <u>108</u> | 108/10/01~ 109/07/31 | 航向藍海(1/2) (MOST 108-2119-M-019-002- MY2) 共同主持人 |
| <u>108</u> | 108/08/01~ 109/07/31 | 海研三號研究船貴重儀器使用中心補助計畫 (MOST 108-2611-M-110-024) 共同主持人 |
| <u>108</u> | 108/08/01~ 109/07/31 | 台灣海岸帶變遷與海陸交互作用研究：科學基礎與社會關連-台灣海岸帶變遷與海陸交互作用研究：科學基礎與社會關連(MOST 108-2621-M-110-001) |
| <u>108</u> | 108/08/01~ 109/07/31 | 颱風與內波對南海北部生物地球化學作用之衝擊(II)-總計畫及子計畫：南海北部顆粒有機碳輸出通量之研究(1/3) (MOST 108-2611-M-110 -019 -MY3) |
| <u>108</u> | 108/01/01~ 108/12/31 | 高整合度低耗電之水下觀測裝置(2/4) (MOST 108-2634-F-110-001) 共同主持人 |
| <u>107</u> | 107/11/01~ 108/10/31 | 臺斯(LK)國合計畫-臺斯環境變遷海外研究中心維運計畫(1/3) MOST 107-2911-I-110-301 共同主持人 |
| <u>107</u> | 107/08/01~ 108/07/31 | 台灣海岸帶變遷與海陸交互作用研究：科學基礎與社會關連-台灣海岸帶變遷與海陸交互作用研究：科學基礎與社會關連(MOST |

| 計畫年度 | 執行期間 | 計畫名稱 |
|------------|-------------------------|---|
| | | 107-2621-M-110-002) |
| <u>107</u> | 107/08/01~ 108/07/31 | 颱風與內波對南海北部生物地球化學作用之衝擊－總計畫及子計畫：颱風與內波對南海北部顆粒有機碳輸出通量之影響(3/3) (MOST 105-2119-M-110 -005 -MY3) |
| <u>107</u> | 107/07/01~ 108/06/30 | 底棲性水產養殖之智慧化監測及管理技術-底棲性水產養殖之智慧化監測及管理技術(MOST 107-2321-B-110-001) 共同主持人 |
| <u>107</u> | 107/01/01~ 107/12/31 | 高整合度低耗電之水下觀測裝置(1/4) (MOST 107-2634-F-110-001) 共同主持人 |
| <u>106</u> | 106/08/01~ 107/07/31 | 台灣海岸帶變遷與海陸交互作用研究－科學基礎與社會關連－減緩海岸帶地層下陷-建立離岸養殖船 (MOST 106-2621-M-110-001) |
| <u>106</u> | 106/08/01~ 107/07/31 | 颱風與內波對南海北部生物地球化學作用之衝擊－總計畫及子計畫：颱風與內波對南海北部顆粒有機碳輸出通量之影響(2/3) (MOST 105-2119-M-110 -005 -MY3) |
| <u>105</u> | 105/08/01~ 106/07/31 | 颱風與內波對南海北部生物地球化學作用之衝擊－總計畫及子計畫：颱風與內波對南海北部顆粒有機碳輸出通量之影響(1/3) (MOST 105-2119-M-110 -005 -MY3) |
| <u>104</u> | 104/08/01~ 105/07/31 | 全球變遷對西北太平洋臺灣海域海洋生物地球化學與生態系統影響之長期觀測與研究(II)-子計畫：全球變遷因子對台灣附近及西北太平洋海域顆粒有機碳通量的影響 (MOST 104-2611-M-110-020) |
| <u>104</u> | 104/01/01~ 105/03/31 | 量化台灣西南海域甲烷溢出總量及評估其對環境之影響(2/2)(MOST 104-3113-M-110-002) |
| <u>103</u> | 103/08/01~ 104/07/31 | 全球變遷對西北太平洋臺灣海域-海洋生物地球化學與生態系統影響之長期觀測與研究(I)-子計畫：全球變遷因子對東海及西北太平洋黑潮海域顆粒有機碳通量的影響(3/3) (NSC 101-2611-M-110 -015 -MY3) |
| <u>103</u> | 103/04/01~ 104/03/31 | 量化台灣西南海域甲烷溢出總量及評估其對環境之影響(1/2)(MOST 103-3113-M-110-003) |
| <u>102</u> | 102/08/01~ 103/07/31 | 全球變遷對西北太平洋臺灣海域-海洋生物地球化學與生態系統影響之長期觀測與研究(I)-子計畫：全球變遷因子對東海及西北太平 |

| 計畫年度 | 執行期間 | 計畫名稱 |
|------------|-------------------------|--|
| | | 洋黑潮海域顆粒有機碳通量的影響(2/3) (NSC 101-2611-M-110-015 -MY3) |
| <u>102</u> | 102/01/01~ 102/12/31 | 高碳氫化合物排放對環境穩定度所造成潛在衝擊的評估(I)(NSC 102-3113-P-002 -011) 共同主持人 |
| <u>102</u> | 102/11/01~ 103/10/31 | 科學傳播漫畫人才培育與教材發展計畫(2/2) (NSC 102-2515-S-263 -001) 共同主持人 |
| <u>102</u> | 102/01/01~ 102/06/30 | 海研五號首航 - 南海科學巡禮研究 (NSC 102-2119-M-008 -002) 共同主持人 |
| <u>101</u> | 101/08/01~ 102/07/31 | 颱風通過南海後之生地化反應(NSC 101-2116-M-110 -001) |
| <u>101</u> | 101/08/01~ 102/07/31 | 全球變遷對西北太平洋臺灣海域-海洋生物地球化學與生態系統影響之長期觀測與研究(I)-子計畫:全球變遷因子對東海及西北太平洋黑潮海域顆粒有機碳通量的影響(1/3) (NSC 101-2611-M-110-015 -MY3) |
| <u>101</u> | 101/08/01~ 102/07/31 | 全球變遷對西北太平洋臺灣海域-海洋生物地球化學與生態系統影響之長期觀測與研究全球變遷因子對東海及西北太平洋黑潮海域顆粒有機碳通量的影響 (NSC 101-2811-M-110 -014) |
| <u>101</u> | 101/11/01~ 102/10/31 | 科學傳播漫畫人才培育與教材發展計畫(1/2) (NSC 101-2515-S-263 -001 -MY2) 共同主持人 |
| <u>100</u> | 100/08/01~ 101/07/31 | 東海長期觀測與研究(IV)-子計畫:有機碳命運與環境變遷之關係(3/3) NSC100-2119-M-110-003 |
| <u>100</u> | 100/10/01~ 101/09/30 | 台灣海洋科學傳播動漫人才培育計畫 NSC100-2515-S-263 -001 共同主持人 |
| <u>99</u> | 99/08/01~ 100/09/30 | 東海長期觀測與研究(IV)子計畫:有機碳命運與環境變遷之關係(2/3) NSC 99-2628-M-110 -001 |
| <u>98</u> | 98/08/01~ 99/07/31 | 東海長期觀測與研究(IV)子計畫:有機碳命運與環境變遷之關係(1/3) NSC 98-2628-M-019 -011 |
| <u>97</u> | 97/08/01~ | 東海長期觀測與研究(III):河川與大氣輸送物質對生物地球化學作用之影響--顆粒性有機碳及多醣類在東海的通量 |

| 計畫年度 | 執行期間 | 計畫名稱 |
|-----------|-----------------------|--|
| | 100/07/31 | NSC 97-2745-M-019 -001 |
| <u>96</u> | 96/08/01~ 97/07/31 | 使用工業廢污水培育高油脂藻類以提煉為生質柴油之燃料及引擎特性研究 NSC 96-2221-E-019 -013 共同主持人 |
| <u>96</u> | 96/08/01~ 97/07/31 | 東海長期觀測與研究(III): 河川與大氣輸送物質對生物地球化學作用之影響--子計畫: 顆粒性有機碳及多醣類在東海的通量 NSC 96-2611-M-019 -011 |
| <u>96</u> | 96/08/01~ 99/07/31 | 台灣主要河川流量及水體品質的改變對近海基礎生產力與台灣民眾健康之潛在性風險影響評估研究--以淡水河為起始研究案例--總計畫: 台灣主要河川流量及水體品質的改變對近海基礎生產力與台灣民眾健康之潛在性風險影響評估研究--以淡水河為起始研究案例 NSC 96-2621-Z-019 -001 -MY2 共同主持人 |
| <u>95</u> | 95/08/01~ 96/07/31 | 東海長期觀測與研究(III): 河川與大氣輸送物質對生物地球化學作用之影響--顆粒性有機碳及多醣類在東海的通量 NSC 95-2611-M-019 -001 |
| <u>94</u> | 94/08/01~ 95/11/30 | 總計畫: 台灣主要河川流量及水體品質的改變對近海基礎生產力與台灣民眾健康之潛在性風險影響評估研究--以淡水河為起始研究案例(I) NSC 94-2621-Z-019 -002 共同主持人 |

建教合作計畫 (Industry cooperation projects over the years)

| 計畫年度 | 計畫名稱 |
|------------|---|
| <u>104</u> | 蝦類生態養殖系統研究(鎮儀企業有限公司) |
| <u>106</u> | 台江國家公園管理處(子計畫三)-台江國家公園海域生態系生物資源調查與多樣性保育研究(2/4)(台江國家公園管理處) |
| <u>106</u> | 冬天魚塭保溫實驗 I (高雄市政府海洋局) |
| <u>106</u> | 蝦貝類餌料之研發-I(真義有限公司) |
| <u>107</u> | 冬天魚塭保溫實驗 II (高雄市政府海洋局) |
| <u>107</u> | 台江國家公園海域生態系生物資源調查與多樣性保育研究(3/4)(台江國家公園管理處) |

| 計畫年度 | 計畫名稱 |
|------------|---|
| <u>108</u> | 台江國家公園海域生態系生物資源調查與多樣性保育研究(4/4)(台江國家公園管理處) 08P180033 |
| <u>108</u> | (財)金屬工業研究發展中心-興達港周邊產業活化發展可行性評估 08Q230343 |
| <u>109</u> | (財)金屬工業研究發展中心-智能養殖技術建置與養殖示範 09Q230313 |
| <u>110</u> | 華侖生技股份有限公司-納豆菌對蝦類生長之影響-前導實驗 I 10Q210061 |
| <u>110</u> | 南六企業股份有限公司-海洋化妝品系列開發案-子計畫 2 10Q210384-2 |

發表著作 (Recent Representative Publications)

1. Chen, C.-C., G. C. Gong, K. P. Chiang, F. K. Shiah, **C. C. Chung** and C. C. Hung, 2021: Scaling effects of a eutrophic river plume on organic carbon consumption. *Limnology and Oceanography*, Scaling effects of a eutrophic river plume on organic carbon consumption. 66, 1867-1881, DOI:org/10.1002/lno.11729
2. Yan, Q., T. Cheng, J. Song, J. Zhou, **C.-C. Hung** and Z. Cai, 2021: Internal nutrient loading is a potential source of eutrophication in Shenzhen Bay, China. *Ecological Indicators*, Internal nutrient loading is a potential source of eutrophication in Shenzhen Bay, China. 127, 107736, DOI: org/10.1016/j.ecolind.2021.107736
3. Chen, H.-S., K.-S. Chen, C.-Y. Chen, **C.-C. Hung**, P.-J. Meng, PhD, M.-H. Chen* (2021) Spatiotemporal distribution of shrimp assemblages in the western coastal waters off Taiwan at the Tropic of Cancer, Western Pacific Ocean. *Estuarine, Coastal and Shelf Science*, 255, DOI:https://doi.org/10.1016/j.ecss.2021.107356.
4. Shih, Y.-Y., **C.-C. Hung***, S.-H. Tuo, H.-J. Shao, C.-H. Chow, F.L.L. Muller and Y.-H. Cai (2020) The impact of eddies on nutrient supply, diatom biomass and carbon export in the northern South China Sea. *Frontiers in Earth Science*, 8: 537332, DOI: 10.3389/feart.2020.537332.
5. Tai, J.-H., W.-C. Chou*, **C.-C. Hung**, K.-C. Wu, Y.-H. Chen, T.-Y. Chen, G.-C. Gong, F.-K. Shiah, C.H. Chow (2020) Short-term variability of biological production and CO₂ system around Dongsha Atoll of the northern South China Sea: impact of topography-flow interaction. *Frontiers in Marine Science*, 7:511, DOI: 10.3389/fmars.2020.00511.
6. Shih, Y.-Y., **C.-C. Hung***, S.-Y. Huang, F.L.L. Muller, Y.-H. Chen (2020) Biogeochemical variability of the upper ocean response to typhoons and storms in the northern South China Sea. *Frontiers in Marine Science*, 7:151, DOI: 10.3389/fmars.2020.00151.

7. Shih, Y.-Y., H.-H. Lin, D. Li, H.-H. Hsieh, **C.-C. Hung***, C.-T. A. Chen (2019) Elevated carbon flux in deep waters of the South China Sea. *Scientific Reports*, 9:1496, DOI: 10.1038/s41598-018-37726-w.
8. Huang I.-J., **C.-C. Hung**, S.-R. Kuang, Y.-N. Chang, K.-Y. Huang, C.-R. Tsai and K.-L. Feng (2018) The Prototype of a Smart Underwater Surveillance System for Shrimp Farming. 2018 IEEE International Conference on Advanced Manufacturing (IEEE ICAM 2018), ISBN: 978-1-5386-5609-9.
9. Chou*, W.-C., H.-C. Chu, Y.-H. Chen, R.-W. Syu, **C.-C. Hung**, K. Soong (2018) Short-term variability of carbon chemistry in two contrasting seagrass meadows at Dongsha Island: Implications for pH buffering and CO₂ sequestration. *Estuarine, Coastal and Shelf Science*, 210, 36-44.
10. Li, D., W.-C. Chou, Y.-Y. Shih, G.-Y. Chen, Y. Chang, C. H. Chow, T.-Y. Lin, and **C.-C. Hung*** (2018) Elevated particulate organic carbon export flux induced by internal waves in the oligotrophic northern South China Sea. *Scientific Reports*, 8:2042, DOI:10.1038/s41598-018-20184-9.
11. Matsuno, T., [N. Hirose](#), J. Zhang, Y.-K. Cho, DK Chen, DL Yuan, **C.-C. Hung**, S. Jan (2017) Recent progress in Pacific-Asian Marginal Seas (PAMS) studies, *Continental Shelf Research*, 143, 89-90.
12. **Hung***, **C.-C.**, Y.-F. Chen, S.-C. Hsu, K. Wang, J. F. Chen, D. J. Burdige (2016) Using rare earth elements to constrain particulate organic carbon flux in the East China Sea. *Scientific Reports*, 6:33880, DOI: 10.1038/srep33880. (IF: 5.228, Times cited: 1)
13. **Hung***, **C.-C.**, S.-C. Tsao, K.-H. Huang, J.-P. Jang, H.-K. Chang, F. C. Dobbs (2016) A highly sensitive underwater video system for use in turbid aquaculture ponds. *Scientific Reports*, 6:31810, DOI: 10.1038/srep31810. (IF: 5.228, Times cited: 2)
14. Hung, C.-W., K.-H. Huang, Y.-Y. Shih, Y.-S. Lin, H.-H. Chen, C.-C. Wang, C.-Y. Ho, **C.-C. Hung***, D. J. Burdige (2016) Benthic fluxes of dissolved organic carbon from gas hydrate sediments in the northern South China Sea. *Scientific Reports*, 6:29597, DOI: 10.1038/srep29597. (IF: 5.228, Times cited: 0)
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中文期刊

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