

# Lab. of Marine Environmental Chemistry and Eco-Toxicology

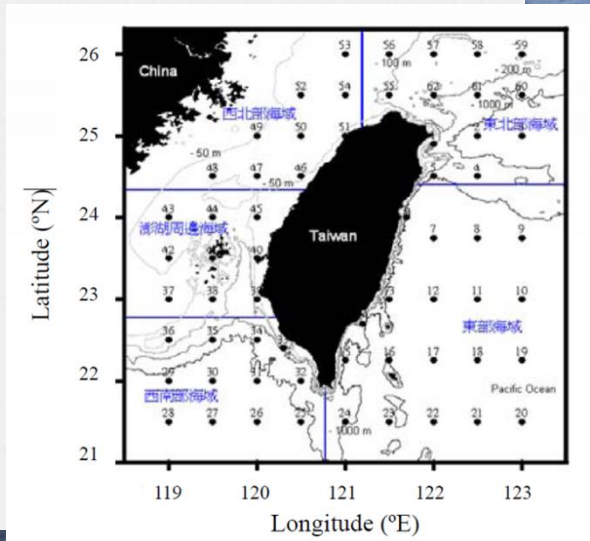
- Their researches include ecological survey and ecotoxicological studies.
- In the ecological survey, they investigated nutrients, chlorophyll a and primary production around Taiwan surrounding waters in different seasons since 2007. This survey proposed to monitor those environmental parameters under the global changes.
- Oil and Heavy metal are the major contaminants of marine pollution in coastal and offshore waters.
- Another research in this lab focus on the physiological and toxicological responses that fish and shellfish exposed to oil or heavy metals environments. In these studies, we measured the accumulation, elimination, stress, metabolism and immune responses under the oil or heavy metal exposure.



Dr. Sha-Yen Cheng,  
Professor



*Mugil cephalus* exposed to 0 and 20 ppm  $Pb^{2+}$  after 20 days, gill is bright red and light red. (Fig. A and B)

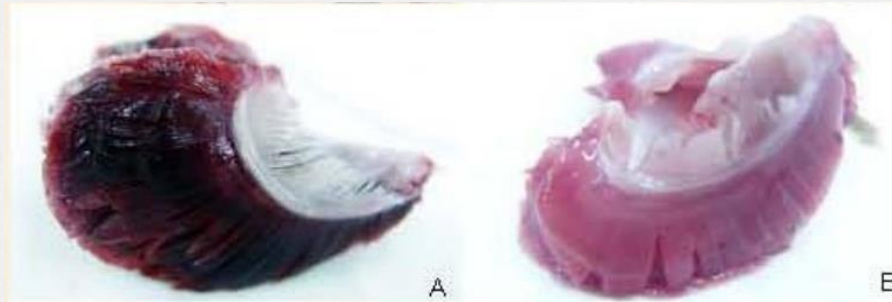


# 環境化學與生態毒理學研究室

- 研究方向包括**環境調查**與**生態毒理學**的研究。
- 環境調查的部分包括針對台灣周邊海域的營養鹽、業綠素以及基礎生產力的調查，以瞭解沿近海漁業在全球氣候變遷下的變動。
- 油與重金屬是沿近海相當主要的污染種類，此類的污染會進入食物鏈中造成人類身體危害。
- 另一個方向是瞭解海洋生物暴露在油及重金屬的環境下的蓄積、排除、代謝及免疫等生理與毒理反應。



鄭學淵 教授



烏魚尚未暴露於鉛溶液下，鰓部呈現鮮紅色( A圖)，暴露於鉛 20 ppm 十天後，鰓部呈現淡紅色( B圖)

