Title: 2026 International Symposium on Ecophysiology of Hydrothermal Vent Marine Organisms (2026 EHVMO)

海洋熱泉極端環境海洋生物生理生態國際研討會

（簡稱:2026 海洋熱泉生理生態國際研討會）

Symposium Outline 研討會議程

Symposium Title: "2026 International Symposium on Ecophysiology of Hydrothermal Vent Marine Organisms (2026 EHVMO)"

Time: November 17-19, 2026

Venue: Center of Excellence for the Oceans (CEO), National Taiwan Ocean University (NTOU), Keelung, Taiwan

Organizing Committee: Sylvie DUFOUR, Tin-Yam CHAN, Gwo-Ching GONG, Ching-Fong CHANG (Center of Excellence for the Oceans, National Taiwan Ocean University, Keelung, Taiwan)

Organizers:

1. Center of Excellence for the Oceans, NTOU
2. Taiwan Marine Biotechnology Society (TMBS)

The symposium date and Location

Day 1 (November 17): conference (9:30 am- ; Administration Building 2F, NTOU)

Day 2 (November 18): conference (9:20 am- ; Life Science Building 3F, NTOU)

Day 3 (November 19): conference (9:20 am- ; The Conference Hall of PI, NTOU)

Symposium Program and Schedule

Day 1: November 17 (Tuesday) **Administration Building 2F (行政大樓 2 講)**

Opening remarks (09:30 – 10:00) **Chair: Ching-Fong CHANG**

FOIT Representative 法國在台協會代表

Mr. Cédric GUILLERME 李思德 & Maëlle LEFEVRE 李美樂

Academician Prof. Chen-Tung Arthur CHEN (陳鎮東院士)

Prof. Sylvie DUFOUR

Prof. Hong-Yi GONG (TMBS)

Prof. Li-Li CHEN (CEO)

Coffee and tea (10:00 – 10:30)

Group photo and Tea/coffee

State-of-the-Art Lecture SOA 1 (10:30 – 11:00) **Chair: Gwo-Ching GONG & Li-Li CHEN**

Chen-Tung Arthur CHEN (NSYSU, Kaohsiung)

Title: Tide-influenced acidic hydrothermal system offshore NE Taiwan

SOA 2 (11:00 – 11:30)

Sylvie DUFOUR (MNHN/CNRS, France)

Title: The Ocean and its biodiversity in the face of climate change

SOA 3 (11:30 – 12:00)

Pei-Chi HO (NTU, Taipei)

Title: Activity of microbial dark carbon fixation along the gradient of hydrothermal plume inflow by subtropical shallow-water vents

Luncheon (12:00 – 12:50) and visit the CEO-1st Floor (12:50-13:40)

SOA 4 (13:40 – 14:10) **Chair: Jen-Leih WU**

Tin-Yam CHAN (NTOU, Keelung)

Title: Revision of the shallow-water hydrothermal vent crab genus *Xenograpsus* Takeda & Kurata, 1977 (Crustacea: Brachyura: Thoracotremata: Xenograpsidae)

SOA 5 (14:10 – 14:40)

Magali ZBINDEN (Sorbonne Univ, France)

Title: How life finds its way: orientation strategies in lightless and highly dynamic environments

Coffee and tea (14:40 – 15:00)

SOA 6 (15:00 – 15:30) **Chair: Sylvie DUFOUR**

Hiromi Kayama WATANABE (JAMSTEC, Japan)

Title: Connectivity and biogeography of the hydrothermal vent crustaceans and molluscs in the northwestern Pacific

SOA 7 (15:30 – 16:00)

Nadine Le BRIS (Sorbonne Univ, France; online presentation)

Title: Hydrothermal habitats as "natural experimental microcosms" to investigate foundation species responses to multiple stressors

Coffee/Tea Break (16:00-16:20)

Poster section-exhibition and discussion (16:20 – 17:30)

Day 2: November 18 (Wednesday) Life Science Building (room 307; 生科館 307 會議室)

SOA 8 (9:20 – 9:50) **Chair: Hiromi Kayama WATANABE**

Takuya YAHAGI (University of Tokyo, Japan)

Title: Larval migration between deep-sea hydrothermal vents via surface waters

SOA 9 (9:50 – 10:20)

Benny Kwok-Kan CHAN (AS, Taipei)

Title: Trophic Ecology and Activity Patterns of the Shallow-Water Hydrothermal Vent Crab, *Xenograpsus testudinatus* (= *novaeinsularis*), at Kueishan Island, Taiwan

Coffee and tea (10:20 – 10:40)

SOA 10 (10:40 – 11:10) **Chair: Magali ZBINDEN**

Jiang-Shiou HWANG (NTOU, Keelung)

Title: Multilevel Ecophysiological Responses and Resilience of Marine Organisms in a Shallow-Water Hydrothermal Vent Ecosystem

SOA 11 (11:10 – 11:40)

Guan-Chung WU (NTOU, Keelung)

Title: Functional characterization of sulfide detoxification pathways underlying hydrothermal vent adaptation in *Xenograpsus testudinatus*

Luncheon (11：40 – 13：00)

SOA 12 (13:00 – 13:30) **Chair: Bon-chu CHUNG**

Hans-Uwe DAHMS (KMU, Kaohsiung)

Title: Can Nanotechnology assist ecophysiological research at HVs?

SOA 13 (13:30 – 14:00)

Francois LALLIER (Sorbonne Univ, France)

Title: Ecophysiology of symbiosis in Bathymodiolin deep-sea mussels: pros and cons of *in vivo* experimental approaches.

SOA 14 (14:00 – 14:30)

Ying-Ning HO (NTOU, Keelung)

Title: Shallow-water hydrothermal vent microbiomes as a source of climate-resilient microbial functions: From coral holobionts to genome-guided cultivation

Coffee and tea (14:30-14:50)

SOA 15 (14:50-15:20) **Chair: Pung-Pung HWANG**

Yung-Che TSENG (AS, Taipei)

Title: Physiological plasticity and holobiont adaptation in a shallow-water hydrothermal vent crab

SOA 16 (15:20 – 15:50)

Pierre METHOU (IFREMER, France; online presentation)

Title: Symbioses in Alvinocarididae vent shrimps – Evolutionary convergence, continuum of trophic strategies and new protists epibionts

SOA 17 (15:50 – 16:20)

Vianney DENIS (NTU, Taipei)

Title: From feeding to reef building: Trait-based energy trade-offs and emergent reef dynamics

Day 3: November 19 (Thursday) The Conference Hall of PI 畢東江博士國際會議廳

SOA 18 (09:20 – 09:50) **Chair: Jen-Leih WU**

Ching-Fong CHANG (NTOU, Keelung)

Title: The ecophysiology and adaptation of marine organisms (crab and coral) in the shallow-water of hydrothermal vent ecosystem off Kueishan Island, Taiwan

SOA 19 (09:50-10:10)

Chih-Ching CHUNG (NTOU, Keelung)

Title: Microbial carbon fixation in the mixing zone between a shallow-sea hydrothermal plume and Kuroshio Waters off Taiwan

Coffee and Tea (10:10-10:30)

Invited Oral (IO) speech **Chair: Hong-Yi GONG & Francois LALLIER**

IO 1 (10:30-10:50)

Stéphane De PALMAS (AS, Taipei)

Living at the edge: how sea anemones thrive at shallow-water hydrothermal vents in Taiwan and Japan

IO 2 (10:50-11:10)
Chi CHEN (NTOU, Keelung)
Title: Multiple metabolic adaptations for the survival of the shallow-water hydrothermal vent crab, *Xenograpsus testudinatus*

IO 3 (11:10-11:30)
Pei Wen TANG (NTOU, Keelung)
Title: Stress responses and potential adaptive mechanisms in coral *Tubastraea aurea* of hydrothermal vent, Kueishan Island, Taiwan

IO 4 (11:30-11:50)
Wai-Kwan CHU (NTOU, Keelung)
Title: From genomic and epigenetic insights into ecophysiology of hydrothermal vent coral *Tubastraea aurea*

IO 5 (11:50-12:10)
Subramani THIRUNAVUKKARASU (NTOU, Keelung)
Title: Shallow hydrothermal vents as natural laboratories for marine biodiversity, biological adaptation and ecosystem resilience

IO 6 (12:10-12:30)
Priyanka MUTHU (AS, Taipei)
Title: Beyond plastic surfaces: microbial ecology and functional signatures across contrasting marine environments

Luncheon (12:30-13:30)

Poster oral presentation (7 min each for 10 oral presentation) (13:30-14:40)
Chair: Tin-Yam CHAN & Takuya YAHAGI

Poster 1 Chi CHEN (poster; NTOU, Keelung)
Title: Multiple metabolic adaptations contribute to the survival of the shallow-water hydrothermal vent crab, *Xenograpsus testudinatus*, in sulfide-rich and hypoxic environments

Poster 2 Pei Wen TANG (poster; NTOU, Keelung)
Title: Expression of transient receptor potential (TRP) ion channels of scleractinian coral *Tubastraea aurea* adapted to shallow-water hydrothermal vent environment

Poster 3 Pei Wei Tang (poster; NTOU, Keelung)
Title: Stress tolerance of scleractinian coral, *Tubastraea aurea* (Dendrophylliidae) adapted to the acidic hydrothermal vent ecosystem off Kueishan Island

Poster 4 Montserrat SALAZAR-MARTINEZ (poster oral presentation; NTOU, Keelung)
Title: Temporal dynamics of asexual growing in isolated polyps of *Tubastraea aurea* following colony fragmentation

Poster 5 Ting-Yu HUANG (poster oral presentation; NTOU, Keelung)
Title: Reproductive biology and aquaculture of vent crab *Xenograpsus testudinatus* in the hydrothermal vent ecosystem off Kueishan Island, Taiwan

Poster 6 Wai-Kwan CHU (poster; NTOU, Keelung)
Title: Coordinated asexual and sexual reproduction underlies population expansion in hydrothermal vent-origin *Tubastraea aurea*

Poster 7 Ritwika PAUL (poster oral presentation; NTOU, Keelung)
Title: DNA Methylation patterns as a potential regulator of environmental adaptation in the crab *Xenograpsus testudinatus* from shallow-water hydrothermal vent off Kueishan Island,

Northeastern Taiwan

Poster 8 Sourav MUKHERJEE (poster oral presentation; NTOU, Keelung)

Title: DNA Methylation pattern and its potential role in environmental adaptation in the hydrothermal vent scleractinian coral *Tubastraea aurea*, off Kueishan Island, Northeastern Taiwan

Poster 9 Pei-Lu CHIN (poster; NTOU, Keelung)

Title: Calcification of the scleractinian coral, *Tubastraea aurea* (Dendrophyllidae), in the acidified hydrothermal vent environment off Kueishan Island in Northern Taiwan

Poster 10 Muhammad Bilal KHAN (poster oral presentation; KMU, Kaohsiung)

Title: Green-Synthesized Sulfur and Nitrogen Co-Doped Graphene Quantum Dots: A Sustainable Fluorescent Nanosensing Platform for Ultrasensitive Fe^{3+} Detection

Poster 11 Johnthini Munir AHAMED (poster oral presentation) (KMU, Kaohsiung)

Title: Selenium nanoparticles conjugated with exopolysaccharides from marine hydrothermal vent crab-associated actinomycete Pseudonocardia alni SCSW01 and their antioxidant, antibacterial, and antibiofilm activities

Poster 12 Pei-An CHIANG (poster oral presentation; NTOU, Keelung)

Title: Confocal Laser Scanning Microscopy (CLSM) images on the larvae of the commercially important crucifix crab *Charybdis feriata*

Poster 13 Murugan VASANTHAKUMARAN (poster oral presentation; NTOU, Keelung)

Title: Combined effects of ocean acidification and warming on the eco-physiology of the hydrothermal vent crab *Xenograpsus testudinatus*: antioxidant defence and oxidative damage

Poster 14 Gowri KRISHNA (poster oral presentation; NTOU, Keelung)

Title: Active Calcifying Fluid pH Upregulation Facilitates Resilience of the Coral Tubastraea aurea to Ocean Acidification

Poster 15 Anitha Mary DAVIDSON (poster oral presentation; NTU, Taipei)

Title: Oxidative and genotoxic responses of pelagic copepods to multiple environmental stressors in shallow hydrothermal vent ecosystems

Poster 16 Jishnu Panamoly AYYAPPAN (poster; NTOU, Keelung)

Title: Behavioral differences between juvenile and adult size classes of the male hydrothermal vent crab *Xenograpsus testudinatus*: a laboratory open-field study

Poster 17 Mark June S. CONSIGNA (poster; NTOU, Keelung)

Title: Can an Extremophile Withstand Modern Pollution? Polyethylene Microplastic and Lead Co-exposure in a Shallow-Water Vent Crab
Taiwan

Coffee and Tea (14:40-15:55)