

作品編號

Project Number

000222

P1

作品名稱

Project Name

微生物溝通系統 Microbial Communication System

作品概述

Project description

隨著奈米機器人技術將日漸成熟，人類開始能與微生物進行交流，這項技術除了改善生活，也能促成雙向的溝通、建立人與不同尺度的非人物種間平等對話的機會。

As nanorobot technology matures, humans are beginning to communicate with microorganisms. This technology not only improves our lives but also enables two-way communication and provides opportunities to establish equal dialogues between humans and different-scale non-human species.

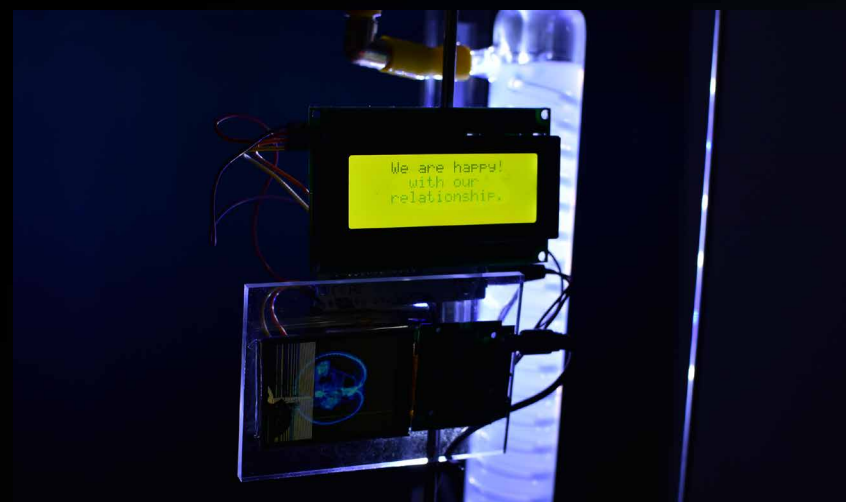
作者

Designer

王懷遠 Mark

微生物溝通系統

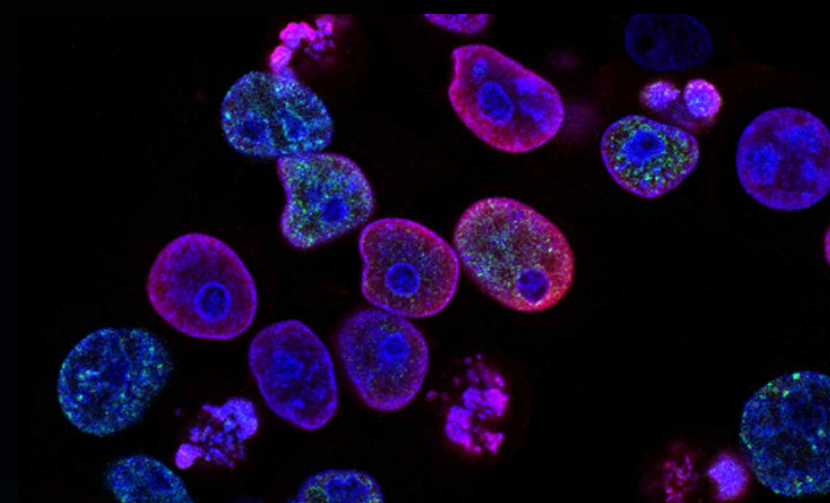
Microbial Communication System



轉化為語言顯示 Translate into language and display



讀取生物訊號 Read biological signals



待測微生物樣本 Read biological signals



奈米機器人 Nanorobot

作品內容說明

Description Of Project Content

P3

在未來，透過分子機器和奈米馬達等技術，奈米機器人將會得以實現，它們能夠進入微觀的尺度中探索、執行任務，也能在探查我們未知的情報，甚至與微生物（包含原生動物、細菌、病毒等）進行交流，將他們的訊息提取、傳達給人類。

微生物作為默默影響世界的一群生物，其重要性遠遠超出我們的想像，它們負責完成生命與食物鏈的循環、提供了全球超過50% 氧氣、主宰著地球環境的系統，甚至默默影響著動物的演化、操縱人類免疫系統、腸道的健康、同時間接影像人的思維與情緒。他們對人類文明或是自然都極其重要，也有著劇烈的影響。

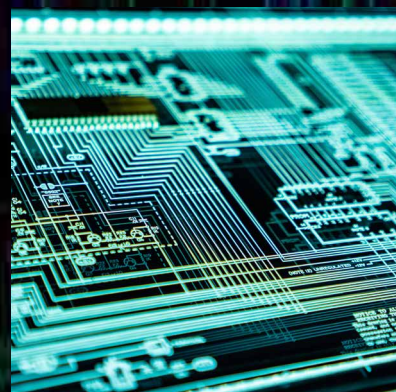
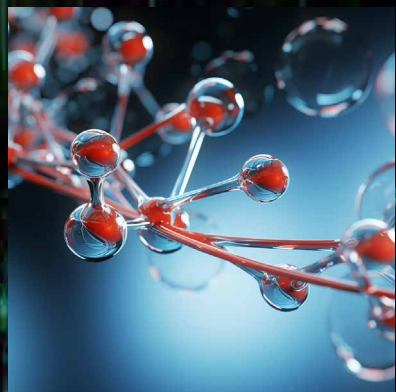
透過奈米機器人，我們可以更好的與微生物進行交流，它們的感知將成為被偵測的訊號，人類可以藉由這項技術得知我們的環境信息、微生物的生存情況、甚至是自身的身體訊息。在這項技術成熟的同時，我們可以與微觀尺度的他們進行交流，將他們的情況轉化成人類能理解的語言，真正的實現與微生物進行對話，這樣的革新除了改善生活，也能促成雙向的溝通、建立人與不同尺度的非人物種間平等對話的機會。

In the future, with technologies like molecular machines and nanomotors, nanorobots will become a reality. They will be capable of entering the microscale to explore and perform tasks, as well as gather unknown information. They will also be able to communicate with microorganisms, including protozoa, bacteria, viruses, etc., extract their messages, and convey them to humans.

Microorganisms, as a group of organisms silently shaping the world, have significance far beyond our imagination. They are responsible for completing the cycles of life and the food chain, providing over 50% of the world's oxygen, governing Earth's environmental systems, quietly influencing animal evolution, manipulating the human immune system, influencing gut health, and simultaneously affecting human thoughts and emotions. They play an extremely vital role in both human civilization and nature, exerting profound effects.

Through nanorobots, we can better communicate with microorganisms. Their perceptions will become detectable signals, allowing humans to gain insights into environmental information, the survival status of microorganisms, and even our own bodily signals. As this technology matures, we can communicate with them on a microscale, translating their conditions into a language understandable to humans. This innovation not only improves our lives but also facilitates two-way communication and creates opportunities for equal dialogues between humans and different-scale non-human species.

運用技術 / 原理 Apply Techniques/Principles



奈米機器人是一種可以和奈米級別物體進行精確交互的機器人，或者是一種能夠以奈米級精度製造的機器人，它們通常在納米尺度（也就是約一億分之一公尺的大小）製造，並具有精密的控制和操作能力。

Nanorobots are a type of robot that can engage in precise interactions with nanoscale objects or are robots manufactured with nanoscale precision. They are typically constructed at the nanometer scale, which is approximately one billionth of a meter in size, and possess intricate control and manipulation capabilities.

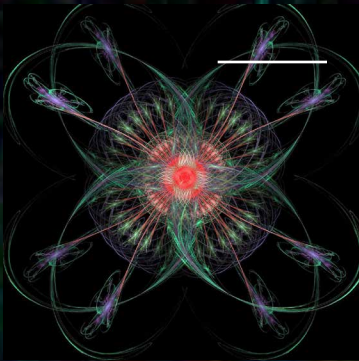
使用情境 User Scenarios



Put microorganisms from oceans and rivers into containers

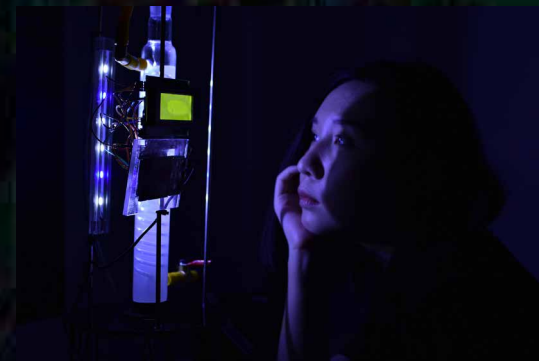


Put human microorganisms into containers



Communicate with nanobots and convert information into language

顯示在屏幕上
Show on screen



正面的結果
Positive results



正面的結果
Negative result

