

# Innovative Plastic Technologies for Food Packaging, Household Products and Medical Devices

## 用於食品包裝、家庭用品及醫療儀器的嶄新塑料技術



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15:00-16:30



Cantonese 廣東話



Plastics are indispensable materials in our daily life. To cope with consumer quest for cost-effective and high performance materials, NAMI has developed a series of cutting-edge technologies for different types of plastic materials, and in joint effort with our industrial partners to turn our technologies into products. In this webinar, we will introduce three plastic-related technology platforms and their potential applications in the healthcare and medical industries.

塑膠製品充斥著我們的日常生活。為了滿足消費者對高性價比和高性能材料的需求，NAMI針對不同類型的塑料開發了一系列尖端技術，並與業界合作夥伴共同努力把技術商品化，轉化成新產品。我們將在是次研討會介紹三項與塑料相關的平台技術，及其在保健和醫療行業的潛在應用。



### Antifouling Germ-Spike Technology – A Long-lasting Antimicrobial Solution 防污微生物刺穿技術 – 長效抗菌方案

**Dr. Joe Yu 余偉航博士**  
Senior Engineer 高級工程師  
NAMI



### Functional Silicone for Healthcare and Medical Applications 用於醫療保健的功能性矽膠

**Dr. Tommy Tong 湯永賢博士**  
Project Leader 項目主任  
NAMI



### 'Click PlaSMo' – Innovative Technology for Creating Functional Plastic Surfaces 「Click PlaSMo 塑膠換新裝」 – 嶄新納米科技改性塑料表面

**Dr. Shawn Tang 唐盛昌博士**  
Project Leader 項目主任  
NAMI

✉ [hectorhui@nami.org.hk](mailto:hectorhui@nami.org.hk)

☎ +852 3749 1537

🌐 [www.nami.org.hk](http://www.nami.org.hk)

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## Antifouling Germ-Spike Technology – A Long-lasting Antimicrobial Solution 防污微生物刺穿技術 – 長效抗菌方案

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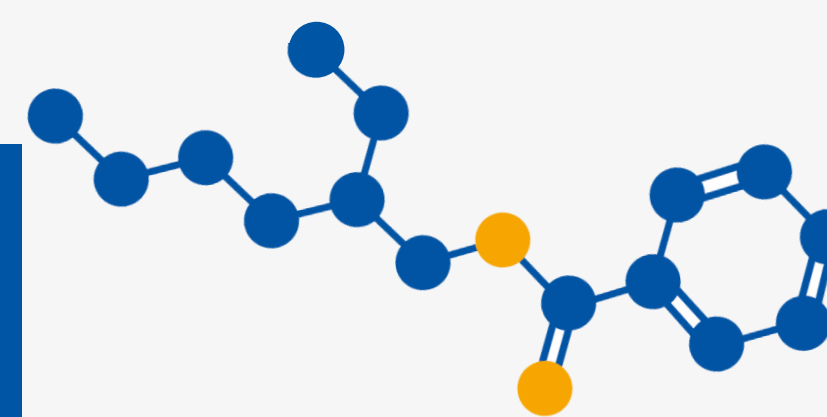
There is a continuous demand for long-lasting antimicrobial materials. Without the use of leachable biocides, NAMI has invented a novel built-in antifouling germ-spike technology, which achieves antibacterial and antiviral effects via physically killing and prevents surface attachment of microbial debris. This anti-fouling germ-spike technology is non-toxic, leach-free, safe-to-use and long-lasting. It is compatible with common industrial manufacturing processes and has wide applications on sanitary equipment, food packaging & containers, medical devices, home appliances and other consumer products.

市場對效能持久的抗菌材料存在持續的需求。在不使用釋出殺菌劑的情況下，NAMI發明了一種新型的自身防污微生物刺穿技術，可通過物理殺滅並防止微生物物質殘骸附在表面來達至抗菌和抗病毒功效。此技術無毒、無釋出、使用安全且持久，並且與常用的製造工藝兼容，能廣泛應用在衛生設備、食品包裝和容器、醫療儀器、家用電器，以及其他消費產品上。



## Functional Silicone for Healthcare and Medical Applications 用於醫療保健的功能性矽膠

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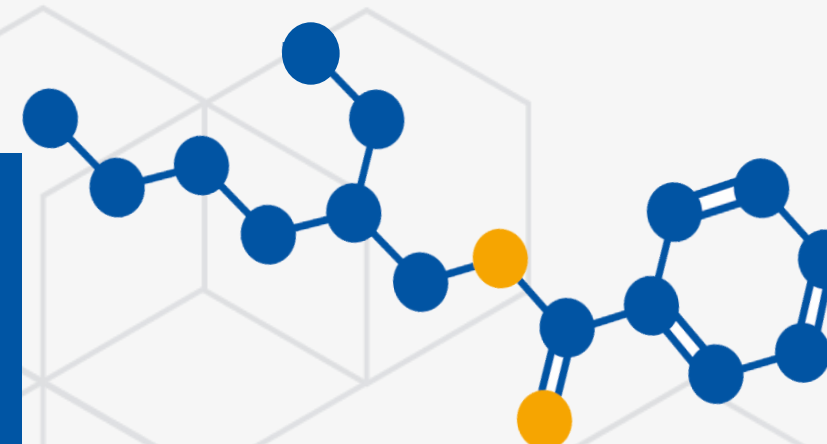
Silicone is a popular elastomer for various high-performance products such as personal care products, household utensils, consumer products and medical devices. Silicone of different grades in the market may not be able to catch up with the ever-growing requirements in product functionalities. In this webinar, we will introduce the diverse functionalities of NAMI's versatile silicone modifiers, in addressing the limitations of silicone materials such as lack of self-adhesiveness, high cost and low mechanical strength. Through case studies, we will illustrate how NAMI's functionalized silicone helps in enhancing product competitiveness.

矽膠是一種彈性體物料，常廣泛用於製造各種高性能產品，如個人護理用品、家用器具、各種消費品和醫療儀器。市場上不同等級的矽膠，未必能夠滿足用家對產品功能越趨複雜的要求。我們將於研討會介紹NAMI的多用途矽膠改性劑，針對解決現有矽膠的不同問題，如缺乏自粘性、成本高和機械強度不足等。我們亦會舉例說明NAMI多用途功能化矽膠能如何協助業界提高競爭力。



## 'Click PlaSMo' – Innovative Technology for Creating Functional Plastic Surfaces 「Click PlaSMo 塑膠換新裝」 – 嶄新納米科技改性塑料表面

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Surface chemical properties of plastics play an important role in their applications. NAMI's novel technology – 'Click PlaSMo' – creates a chemically stable surface function on plastics in a highly efficient and cost-effective manner, thereby achieving long-lasting desirable functions that many conventional coating approaches fail to deliver. Importantly, this modification does not alter the mechanical, thermal and optical properties of the bulk plastics. We will demonstrate the unique advantages of 'Click PlaSMo' with its various applications, including medical devices that suppress non-specific adsorption of biomolecules, anti-fogging packaging and personal protective equipment, and hydrophilic nonwovens for personal care products.

塑料的表面化學性質在其應用中起著重要作用。NAMI的創新技術 - 「Click PlaSMo」 - 是以高效且具有成本效益的方式在塑料上建立化學穩定的表面功能，從而實現許多傳統塗層無法提供的持久理想功能。重要的是，這種改性技術不會改變塑料本體的機械、熱和光學特性。我們將透過介紹此技術的各種應用以展示其獨特優勢，包括抑制生物分子非特異性吸附的醫療器械、防霧包裝和個人保護設備，以及用於個人護理產品的親水無紡布。

