第269回 IBBセミナー

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Zwitterionic Polymer Membranes for Advanced Medical Applications

演者: Prof. Yung Chang

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場所：22号館 1階 第2会議室

講演概要

Zwitterionic materials are the latest advancements in nonfouling interfaces and membranes, outperforming poly(ethylene glycol) derivatives due to their stronger interactions with water molecules. This presentation will summarize our laboratory's key developments in the functionalization of interfaces and membranes using zwitterionic materials. We will review molecular designs of zwitterionic polymers and copolymers, such as sulfobetaine-based, carboxybetaine-based, and phosphobetaine-based materials. Techniques for functionalizing surfaces and membranes, including coating, grafting, and in situ modification, will be discussed. The focus will be on their critical roles in medical applications like enhancing transfusion safety, improving disease diagnostics, and advancing therapeutic treatments. Finally, we will outline future directions in molecular design and functionalization processes, emphasizing the importance of zwitterionic biomaterials in advancing medical technology and patient care.

References

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