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PVC-Coated Beads and Magnetized Tips for Robotic Handling of Solid Substrates in Microbiome Research

PVC-coated beads and magnetized tips let liquid-handling robots manipulate solid substrates, automating biofilm and hydroponic microbiome workflows.

Researchers at Purdue University have developed a PVC-coated stainless-steel beads and magnetized pipette tips that enables the adaptation of liquid-handling robotics to also handle solid materials for research related to biofilms formation and function, especially in the hydroponics microbiome field. With this invention, researchers can use liquid-handling robots to enable the propagation and selection for microbial agents that grow in colonies on solid surfaces, which are traditionally not achievable with these common liquid-handling robots.

Technology Validation:

This technology has been validated through experiments with video showing the ability of liquid-handing robot utilizing this invention.

Advantages:

-Can be utilized on liquid-handling robot

-Enable work with solid substrates

-Efficient automation

Applications:

-Water systems

-Hydroponic/aquaponic systems

-Biofilms

TRL: 5

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Category
Robotics & Automation/Automation & Control
Materials Science & Nanotechnology/Materials Testing & Characterization Tools

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