Chemspeed Automated Chemistry Platform

Chemspeed

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Tool Type: Robotic Polymer Synthesis Platform **Manufacturer:** Chemspeed Technologies

Location: Elings Hall 2411

Principal Scientist

Morgan Bates

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About

The BioPACIFIC MIP automated chemistry platform combines robotics with multiple parallel reactors for polymerization or reaction screening, formulation testing, and material library construction. This workstation is enclosed within an acrylic hood that mimics a glove-box with front-facing neoprene gloves and side-mounted antechamber under a continuous purge of house nitrogen. Robotic tools mount to a motorized arm known as the axis and move in a linear x, y and subsequent z pattern among the various vial racks and reactors to perform a series of unique tasks (Figure 1). These tasks include screw-capping, the transfer of viscous (GDU-V) and non-viscous liquids (4-needlehead, 4-NH), the dispense of solids (GDU-P(fd)), and the transport of vials, well-plates, and vial racks (also referred to as microtiter plates or MTPs).

Modular Toolheads



Depiction of the main robotic tools on the platform. Additional tools not shown include grippers for transporting vials, vial racks, and well-plates and for opening/closing the iSynth reactor drawers.

Detailed Specifications

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