bi.FLOW systems GmbH
biofluidic integration

Assembling of spotted, pre-cut COP sensor foil with DNA-microarray on a microfluidic hybridization cartridge

Introduction

Hybridization assays on microarrays can run fully-automatically on integrated microfluidic cartridges available from BiFlow. Examples are the cartridge types "onsite.flow" and "na.flow1", which provide both pumping functionality and heating capability in the sensor/microarray region.
A microarray which contains specific probes to bind fluorescence-labeled DNA strands can be spotted on a 3D-epoxy-coated polymer foil (PolyAn). The polymer foil comes pre-cut in a format which fits to BiFlow's cartridges. After spotting (Fraunhofer IZI-BB) the spotted sensor foil can be detached from a carrier-foil and easily mounted on the cartridge.

Assembling of spotted microarray foil

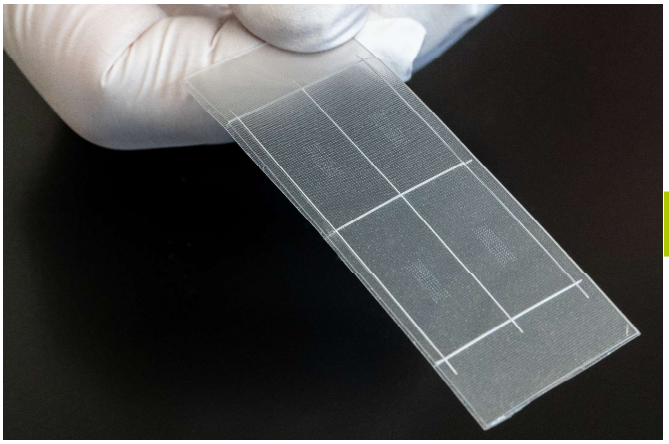

Fig 1: Spotted micrarrays on precut COP sensor foil

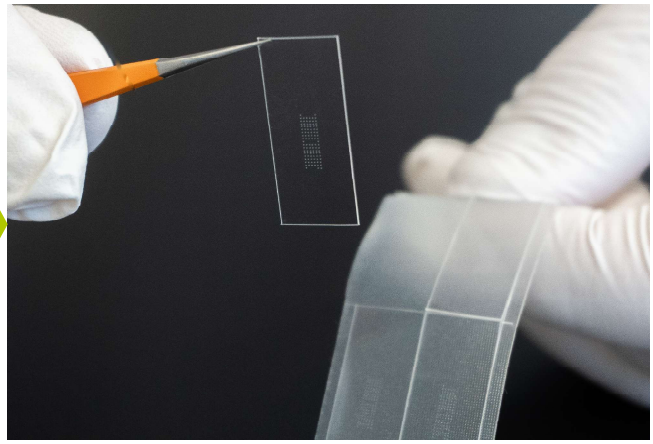

Fig 2: Detachement of microarray sensor foil from carrier foil

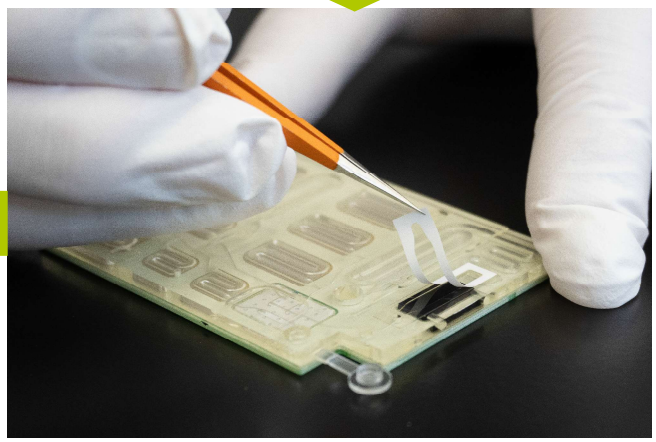

Fig 3: Removal of protection layer of flow-cell adhesive tape on cartridge

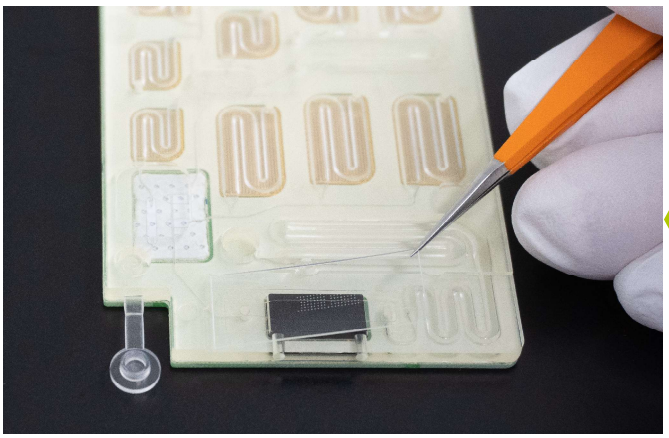

Fig 4: Placement of microarray sensor foil on flow-cell adhesive tape on cartridge