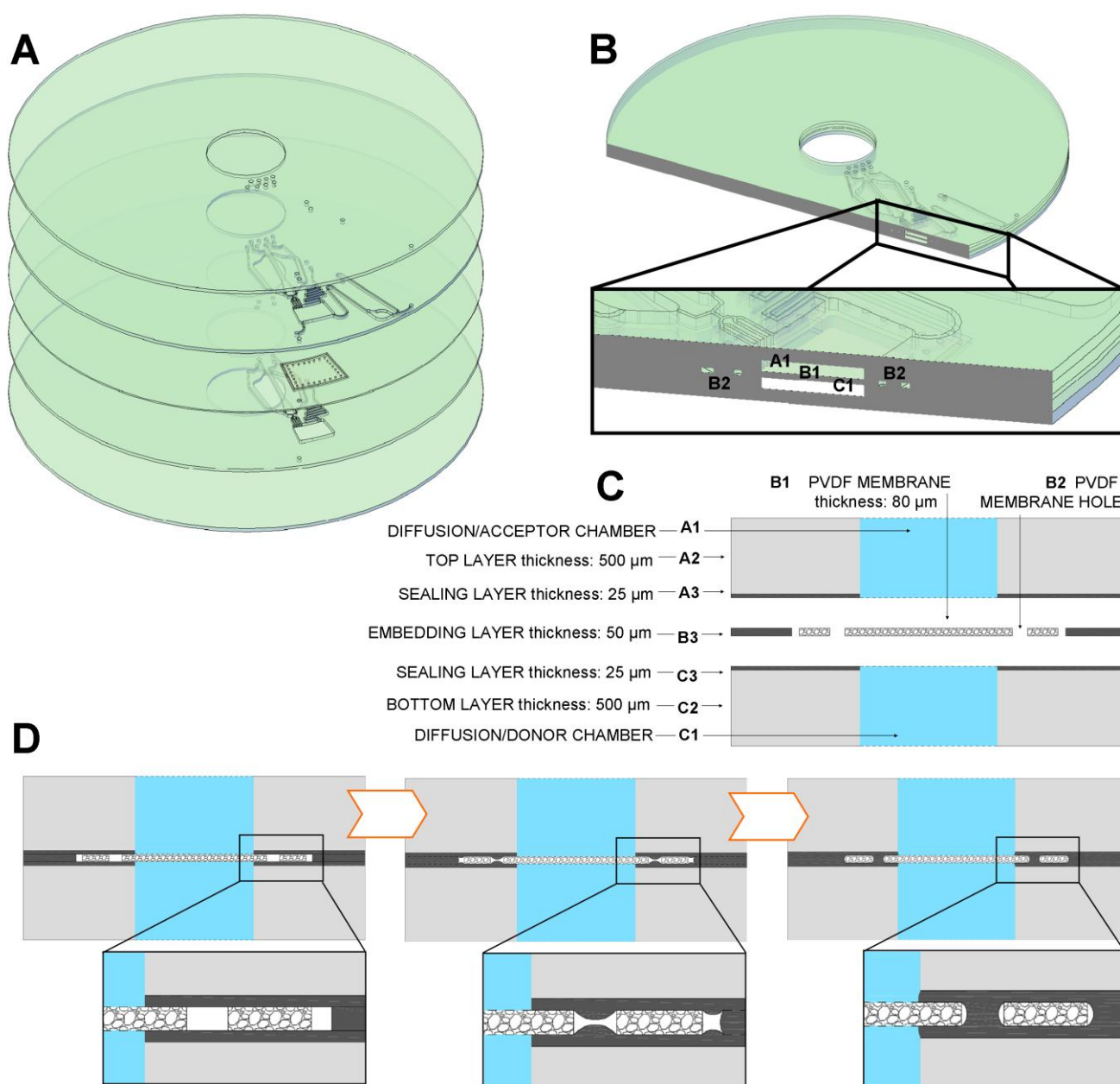


## Supplementary Information



**Fig. S1.** A) Schematic illustration that shows the different layers of the disc. Only one of the ten microfluidic systems or subunits is represented in order to facilitate the interpretation. B) Schematic illustration of the cross section of the CD, which shows in detail the region of interest of the membrane into the diffusion chamber. C) Schematic illustration of the front view of its cross section, which shows the elements (substrate layers and membrane) involved in the membrane integration process. D) Steps of the membrane (B1) integration process during lamination, where sealing layers (A3, B3 and C3) melt into the membrane holes (B2) and ensure contact between the surrounding layers (A2 and C2).