

August 25, 2023

Ilakkuvaselvi Manoharan
CEO, Bubbles & Café
CEO, Curious & Connected
990 Shoreline Dr,
Aurora, IL 60504

Subject: PNF Use

Dear Ilakkuvaselvi Manoharan,

The Pritzker Nanofabrication Facility (PNF) is an open use facility that is available for use for all trained users in accordance with the terms of our user agreements.

The Pritzker School for Molecular Engineering (PME) at the University of Chicago operates the PNF as a shared, user-fee based cleanroom facility, comprising 12,000 square feet of class 100 cleanroom space in a bay/chase arrangement, all housed in the first basement of the W. Eckhardt Research Center. In addition, the PNF also has about 15,000 square feet of disposable space for cleanroom operations and storage. The cleanroom is fully operational, with a full suite of lithographic, deposition and etching tools at the disposal of all cleanroom users. The tools include: Plasma ICP etchers using chlorine and fluorine gases for etching metals and dielectrics; ICP plasma deposition tools including 100% and 5% silane gas for Si, SiN and SiO₂ growth; metal and dielectric sputter tools; ebeam evaporators for metals and dielectrics; a 6 inch wafer-compatible furnace for oxide and nitride thermal growth, including LPCVD; contact and stepper optical lithography tools; a high resolution, state-of-the-art electron beam lithography system; inspection tools including SEM, optical microscopy, AFM, profilometers, ellipsometers, white light interferometers. A FIB-SEM is planned for later purchase. The facility includes (to date) six full-time staff that operate, train, and maintain the suite of tools, all on a recharge basis. The tools that are available in this facility more than suffice to perform all the fabrication necessary for most nanofabrication needs.

Sincerely,

Michelle Dassinger
PNF Business Administrator