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Formation of Glassy Polymer Films by Matrix Assisted Pulsed Laser Evaporation RODNEY PRIESTLEY, YUNLONG GUO, Department of Chemical and Biological Engineering, Princeton University, CRAIG ARNOLD, Department of Mechanical and Aerospace Engineering, Princeton University — The properties of glasses strongly depend on the path to glass formation. The most common method of making polymer glasses is by cooling from the liquid state. Recently, it has been shown that alternative routes to the vitreous state can lead to dramatically improved glassy-state stability. In this talk, we present our initial work on the thermal and kinetic stability of glassy polymer films prepared by Matrix Assisted Pulsed Laser Evaporation (MAPLE). In comparison to glassy films prepared by spin coating, MAPLE-deposited glassy films can exhibit higher glass transition temperatures and greater kinetic stability.

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