Van der Waals forces are responsible for successful \textit{ex situ} lift out (EXLO) and micromanipulation of FIB specimens. These forces may be maximized by providing the largest surface area possible between the probe and the specimen or may be enhanced using vacuum assisted micromanipulation. Recent advances in techniques, semi-automated instrumentation, and applications will be presented and summarized. In particular, it will be shown that EXLO is preferred for specimen manipulation to MEMS carrier devices; EXLO specimens can be further ion milled if necessary; and plan view specimens can be easily prepared and manipulated using EXLO methods.