

MAR11-2010-002030

Abstract for an Invited Paper
for the MAR11 Meeting of
the American Physical Society

Prize for Industrial Applications of Physics Talk: Low energy spread Ion source for focused ion beam systems-Search for the holy grail
BILL WARD

In this talk I will cover my personal experiences as a serial entrepreneur and founder of a succession of focused ion beam companies (1). Ion Beam Technology, which developed a 200kv (FIB) direct ion implanter (2). Micrion, where the FIB found a market in circuit edit and mask repair, which eventually merged with FEI corporation. and (3). ALIS Corporation which develop the Orion system, the first commercially successful sub-nanometer helium ion microscope, that was ultimately acquired by Carl Zeiss corporation. I will share this adventure beginning with my experiences in the early days of ion beam implantation and e-beam lithography which lead up to the final breakthrough understanding of the mechanisms that govern the successful creation and operation of a single atom ion source.