



Scott P. Carpenter, Vactronix Scientific

Biography: Scott began his career in Nitinol starting in 1985. Scott joined Raychem in 1988, initially involved in developing aerospace avionics connectors that involved Nitinol and a variety of other high-tech materials. In 1992, Scott transitioned to Raychem's newly-formed medical group, developing Nitinol-based products for US Surgical. In 1996, when Memry purchased the Raychem Medical group, Scott moved with the technology. At Memry, Scott helped to further develop the company's Nitinol tubing. Later Scott headed the Advanced Development R&D group, working with scores of companies to develop prototype and production devices, primarily in the medical field. Scott moved to Nitinol Devices and Components in 2005, where he developed retrievable IVC filters and motion preserving orthopedic implant devices. In 2010, Scott joined Palmaz Scientific where he directed and participated in the efforts in Physical Vapor Deposition (PVD) and PVD-based device and process development. Palmaz Scientific restructured in 2016 and reemerged as Vactronix Scientific as an OEM supplier. Today, Scott is the Senior Director of Product Development at Vactronix with similar duties to those held at Palmaz Scientific.

Abstract: Thick film PVD device talk abstract

Physical vapor deposition (aka PVD), is an atomic scale additive manufacturing process that is being used to make thick films of superelastic Nitinol, as well as other alloys and materials, for the production of medical device components. The PVD process has some benefits for reduced process steps, tighter dimensional tolerances and higher material properties than devices made using traditional reductive wrought material processing. This talk will introduce the PVD process and illustrate some differences compared to traditional device materials and fabrication.